AMERICAN MATHEMATICAL SOCIETY
EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES
MAY 21-22, 2004
ANN ARBOR, MICHIGAN

MINUTES

A joint meeting of the Executive Committee of the Council (EC) and the Board of Trustees (BT) was held Friday and Saturday, May 21-22, 2004, at the Campus Inn Hotel in Ann Arbor, Michigan.

The following members of the EC were present: James G. Arthur, Robert J. Daverman, David Eisenbud, and Paul J. Sally, Jr. David R. Morrison was present on Saturday, May 22. Walter Craig and Hugo Rossi were unable to attend.

The following members of the BT were present: John B. Conway, David Eisenbud, John M. Franks, Eric M. Friedlander, Linda Keen, Donald E. McClure, and Jean E. Taylor. Carol S. Wood was present on Saturday, May 22.

Also present were the following AMS staff members: Gary G. Brownell (Deputy Executive Director), Kevin F. Clancey (Executive Editor Designate, Mathematical Reviews), John H. Ewing (Executive Director and Publisher), Ellen H. Heiser (Assistant to the Executive Director [and recording secretary]), Elizabeth A. Huber (Deputy Publisher), Jane E. Kister (Executive Editor, Mathematical Reviews), James W. Maxwell (Associate Executive Director, Meetings and Professional Services), Constance W. Pass (Chief Financial Officer), and Samuel M. Rankin (Associate Executive Director, Government Relations and Programs). Diane M. Saxe (Director of Meetings and Conferences) was present on Saturday morning, May 22.

President David Eisenbud presided over the EC and ECBT portions of the meeting (items beginning with 0, 1, or 2). Board Chair John Conway presided over the BT portion of the meeting (items beginning with 3).

Items occur in numerical order, which is not necessarily the order in which they were discussed at the meeting.

0	**CALL TO ORDER AND ANNOUNCEMENTS**

0.1 **Opening of the Meeting and Introductions.**

President Eisenbud convened the meeting and everyone introduced themselves.

0.2 **Housekeeping Matters.**

Executive Director Ewing informed the ECBT about several housekeeping matters related to the present meeting.

| 1I | EXECUTIVE COMMITTEE |
| | INFORMATION ITEMS |

1I.1   Secretariat Business by Mail. ==Att. #29==.

Minutes of Secretariat business by mail during the months November 2003 – May 2004 are attached (==#29==).

| 2 | EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES |
| | ACTION/DISCUSSION ITEMS |

2.1   Report on MREC.

The ECBT was informed that the Mathematical Reviews Editorial Committee had not met since the last ECBT meeting, and there was nothing new to report. The next meeting is scheduled for October 18, 2004.

2.2   Report on Committee on Publications (CPub).

The ECBT was informed that CPub had not met since the last ECBT meeting. The 2003 annual report on CPub activities was filed with the January 2004 Council and posted on the AMS website at www.ams.org/ams/cpub-rpt-03.pdf. The Committee has a new Chair, Jonathan Wahl, and the next meeting is scheduled for October 1-2, 2004, in Chicago.

2.3   Report on Committee on the Profession (CoProf).

The ECBT was informed that CoProf had not met since the last ECBT meeting. The 2003 annual report on CoProf activities was filed with the January 2004 Council and posted on the AMS website at www.ams.org/ams/Coprof-rpt2003.pdf. The next meeting is scheduled for October 2-3, 2004, in Chicago.

2.4   Report on Committee on Education (COE).

The ECBT received the following report:

The next COE meeting will be October 22-23, 2004 in Washington, DC.

COE is currently planning a Special Session at the Joint Mathematics Meetings in Atlanta in January 2005. This session is being formulated now and will likely be on the topic of mathematics and education reform, or on education in research departments, and will require a five hour time slot consisting of a number of short presentations made by speakers in these subject areas. This special session will be in addition to the annual COE panel discussion held on Saturday morning during the Joint Meetings.

2.5 **Report on Committee on Meetings and Conferences (COMC).** <mark>Att. #2.</mark>

The ECBT received the attached report (<mark>#2</mark>) on the April 24, 2004, COMC meeting.

2.6 **Report on Committee on Science Policy (CSP).** <mark>Att. #3</mark>.

The ECBT received the attached report (<mark>#3</mark>) on the April 1-3, 2004, CSP meeting.

2.7 **Washington Office Report.** <mark>Att. #4</mark>.

The ECBT received the attached report (<mark>#4</mark>) on Washington office activities.

2.8 **Report on Long Range Planning Committee (LRPC).**

LRPC Chair Eisenbud reported on the May 21, 2004 LRPC meeting as follows:

The LRPC discussed the question of term limits for the secretary, treasurer, associate secretaries, and associate treasurer. The consensus was this would not be worthwhile, but this led to a discussion of the procedures followed by the ECBT Nominating Committee (ENC). The LRPC voted to recommend to the ECBT that the following instructions be added to the ENC's charge:

The ECBT Nominating Committee should produce a written record of its proceedings. These should contain:

a) communications between the Committee and the candidates;

b) a summary report of its recommendations.

This should be a sealed record deposited with the Secretary and made available to the next ECBT Nominating Committee. Each Committee passes on to the next whatever it feels relevant to future deliberations.

The ECBT approved this recommendation.

The LRPC also discussed ideas for drawing upon the willingness of unsuccessful presidential candidates to volunteer their service to the Society, possibly by appointing them as vice president. This led to a discussion of the composition of the Council, particularly the balance between elected and appointed members. At its next meeting, the LRPC will discuss these matters in depth and may have a recommendation for the November 2004 ECBT.

2.9 **Joint Policy Board for Mathematics.**

The ECBT was informed that the Joint Policy Board for Mathematics (JPBM) continues to operate with two meetings each year, spring and fall, with responsibilities shared by the constituent societies.

Last year, JPBM voted to add a fourth member society, the American Statistical Association (which has participated as an observer for the past several years). Members also voted to switch to an annual rotation of responsibilities and fixed the meeting dates as the last Monday in April and October of each year.

Meetings continue to focus on policy along with various issues of common concern to the four member societies.

2.10 2005 Journal Pages and Prices.

The ECBT approved the following numbers of pages, and the BT approved the following prices, for 2005 journal subscriptions:

	2005 pages	2005 list prices
Abstracts of Papers Presented to the AMS*	670*	$123
Bulletin of the AMS	640	$390
Conformal Geometry and Dynamics	200	$25
Current Mathematical Publications*	4,759*	$642
Electronic Research Announcements	200	free
Journal of the AMS	1,000	$268
Mathematical Reviews*		
Issue pages	10,868*	
Annual index pages	6.561*	
Total MR pages	17,429*	
MR Products		
Paper		$547
MR Sections		$156
Data Access Fee		$7,107
MathSciDisc		$2,078
MathSciNet		$2,078
MathSciNet & MathSciDisc		$2,896
Mathematics of Computation	2,000	$453
Memoirs of the AMS	3,200	$606
Notices of the AMS	1,550	$417
Proceedings of the AMS	3,520	$992
Representation Theory	500	$25
St. Petersburg Mathematical Journal*	1,208*	$1,608
Sugaku Expositions	240	$180
Theory of Probability and Mathematical Statistics*	324*	$616
Transactions of the AMS	5,000	$1,628
Transactions of the Moscow Mathematical Society*	259*	$435
*the numbers of pages for these journals are not completely within the staff's control, so they are currently the staff's best estimates and were included in the version of the 2005 budget presented at this meeting.		

2.11 <u>**Report on the AMS Book Program**</u>. **Att. #6**.

The ECBT received the attached report on the AMS book program (**#6**).

2.12 <u>**Citations in the Mathematical Reviews Database (MathSciNet): an Update**</u>. **Att. #7**.

The ECBT received the attached report on the addition of reference lists to the MR Database and MathSciNet (**#7**).

2.13 <u>**Copyright: Amicus Curiae Filing by JSTOR**</u>. **Att. #8**.

The issues surrounding copyright have become more important for the Society's publications in recent years. As options for publishing and archiving material have increased, copyright has the potential to prevent the Society from taking advantage of new formats and opportunities, diminishing the value of the Society's publications.

The ECBT was informed that JSTOR is about to file an *amicus curiae* in litigation that directly pertains to these issues. A summary of the issues and an explanatory memo from the JSTOR attorney, Nancy Kopans, were presented (**#8**). JSTOR has asked the Society to sign a letter of support for their position, and the ECBT agreed that the Society should do so.

2.14 <u>**2005 Individual Member Dues**</u>.

The ECBT set 2005 individual dues at $152 for the ordinary high dues category. The break point between low and high level dues will remain at $80,000 for 2005.

2.15 <u>**2005 Institutional Member Dues**</u>.

The ECBT approved an average increase in dues of 3% for North American institutional members for 2005.

2.16 <u>**Proposal to Adopt a New Procedure for Setting Individual Dues**</u>.

The November 2003 ECBT considered a staff recommendation that the traditional formula-based procedure for determining individual dues be replaced by a new procedure based on five principles to be followed each year in setting dues. The ECBT did not act on the recommendation as presented. Although it was agreed that dues should be set based on a collection of principles, rather than a formula that is tied to faculty salaries, it was decided that the precise collection of principles needed further study by an ad hoc subcommittee of the ECBT.

Members of the subcommittee were Linda Keen (Chair), Robert Daverman, John Franks, John Conway, Gary Brownell, and James Maxwell.

The BT approved the subcommittee's recommendation to use the following principles as guidelines for setting dues (instead of the current formula), and the EC voted to recommend them to the January 2005 Council. Assuming Council approval, this change will take effect when setting dues for 2006.

Principle 1: The total revenue from individual dues should exceed the total net direct costs of the following membership related areas: privilege journals, members-only services, membership development, membership administration and governance, as reported to the Board of Trustees.

Principle 2: When an increase in dues rates is deemed to be appropriate, the following factors should guide the Council and the Board of Trustees in establishing the new dues rates:

- The current rate of inflation.
- The recent rate of growth in faculty salaries.
- The rate of growth in the net direct costs of the membership related areas listed in Principle 1.

Principle 3: A single increase in dues rates substantially beyond the level of the factors listed in Principle 2 should be avoided in favor of several successive moderate annual increases.

It is noted for the record that these principles (if adopted by the Council) will require staff and leadership to begin the process for setting dues a little earlier than is now the case. The following set of procedures provides for the necessary discussions and complies with the requirements of the Bylaws:

To change the dues rate for year X+2, the following discussions and actions will be required:

1. November of year X – The ECBT discusses the need for a dues increase, following the principles described above. If it appears that an increase is appropriate, the ECBT recommends a dues rate to the Council.

2. January of year X+1 – The Council reviews the ECBT recommendation and sets the dues rate for year X+2.

3. May of year X+1 – The Board of Trustees approves the dues set by Council.

2.17   **Proposal to Establish a "Retired" Dues Category.** **Att. #12.**

The BT approved establishing a retired dues category, as outlined in Att. #12, and the EC voted to recommend approval to the January 2005 Council. Assuming Council approval, this change will take effect for the 2006 membership year.

2.18   **Proposal to Change the Title of "Ordinary" Dues Category.**

One of the suggestions made in the 2003 Focused Planning on Membership Report was that the use of the term "ordinary" in the names of various dues rates is awkward and confusing and should be changed.

It was explained that the term "ordinary" is used in two ways in connection with dues:

The AMS Bylaws refer to two classes of individual members: *ordinary* and *contributing*.

Within that broad class of *ordinary* members described in the Bylaws, many dues categories exist ; e.g., Ordinary-High, Ordinary-Low, Ordinary-Entry, Reciprocity, Life, Emeritus, Category S, Student.

No change in the use of the word *ordinary* in the Bylaws as the name for the class of almost all individual members was suggested. Instead, it was suggested that the word *ordinary* be eliminated from the description of any particular dues category.

The ECBT voted to replace the word *ordinary* in the description of any dues category with *regular*. It was also decided to change the name of the *Category S* level to *Affiliate*. This new terminology will be introduced with the 2006 dues renewals.

2.19 **Proposal to Make Some Part of *Notices* Available Only to Members.** **Att. #14.**

One of the conclusions of the 2003 Focused Planning on Membership Report was that the value of *Notices* as a member benefit has been diminished by allowing open electronic access to it. Currently, each *Notices* issue is posted online up to a week before members receive paper copies.

The Focused Planning documents suggested several schemes to limit non-members' access to some portion of the online *Notices*, and the Council discussed the matter at its April 2004 meeting. While there was considerable support for making access to back issues of the *Notices* a member-only benefit, the Council's discussion eventually focused on an intermediate step -- asking users (members or not) to log in to their accounts in order to use the *Notices*. Background information and further elaboration of the recommendation are attached (#14).

The ECBT approved the Council's recommendation that access to the *Notices* and the *Bulletin* should require users to log into the AMS website using their AMS user name/password (which any mathematician can create). In the log-in process, users will be reminded (tastefully) that both journals are supported by member dues.

Staff will implement this new log-in procedure by the end of 2004.

2.20 **Registration Fees for the January, 2005 Joint Mathematics Meetings.**

The ECBT reviewed budget summaries for the January 2005 Atlanta Joint Meetings and exhibits. Based on this information, the BT voted to advise the Joint Meetings Committee that the member pre-registration fee for this meeting be set at $199.

2.21 **Centennial Fellowships for 2005-2006.**

The ECBT approved awarding two Centennial Fellowships for 2005-06, each in the amount of $62,000, and each with an expense allowance of $3,000.

2.22   Focused Planning on Meetings. Att. #1.

The interim report on the focused planning effort on meetings currently underway is attached (#1). Focused planning on meetings was selected by the May 2002 ECBT as the second planning area to be addressed as part of a series of focused planning efforts to be conducted over the five year period 2003-2008. The steering committee for the current planning effort consists of

Robert Daverman, Secretary
John Ewing, Executive Director
James Maxwell, Associate Executive Director
Diane Saxe, Director of Meetings and Conferences

The following is a summary of the discussion that took place at the ECBT meeting:

A large part of the discussion centered on sectional meetings. Should there be more? Should there be less? Should the format be changed? It was suggested that the purpose and goals of sectional meetings should be defined and agreed upon first, and then adjustments to frequency, format, etc. can be made, if needed, to meet those goals. It was also suggested that more data, such as the demographics of sectional meeting participants, would inform further discussion.

Various aspects of annual meetings were discussed, such as the length of the meeting, the average length of a participant's stay at the meeting, the scientific and non-scientific parts of the program, and the Employment Center.

Staff was encouraged to think creatively about all aspects of AMS meetings and to investigate all possibilities.

The question of possibly reviving the three-week summer institute was raised.

Trustee Jean Taylor mentioned that she will be running a focus group on behalf of the Committee on Meetings and Conferences at the January 2005 annual meeting and asked if anyone had questions to put before the focus group. The following questions were suggested: What parts of the program do you participate in – AMS, MAA, or both? Do you think having organized social events is valuable?

The summer research conferences were discussed separately in executive session (see item 2E.4 of the executive session minutes of this meeting).

It was noted that the final report on the meetings planning effort will be presented at the November 2004 ECBT meeting.

2.23   2005 ABC and ECBT Meetings.

The ECBT approved the following dates and sites for 2005 ABC and ECBT meetings:

ABC	March 18, 2005 (Friday)	by conference call
ECBT	May 20-21, 2005 (Friday-Saturday)	Providence, Rhode Island
ABC	October 7, 2005 (Friday)	Providence, Rhode Island
ECBT	November 18-19, 2005 (Friday-Saturday)	Providence, Rhode Island

It was noted that the members of the ABC in 2005 will be: James Arthur, Robert Daverman, John Franks, Donald McClure, and Carol Wood.

2.24   Motions of the Secretary.

The following motion was approved by acclamation:

Be it resolved that the Executive Committee and Board of Trustees of the American Mathematical Society accept the retirement of Jane E. Kister with deep appreciation for her exceptional service to the American Mathematical Society and to all mathematicians.

During the past twenty-five years, Jane has served as Associate Editor, Associate Executive Editor, and Executive Editor of Mathematical Reviews. These were years of dramatic change in scholarly publishing, and Mathematical Reviews adapted to that change in spectacular ways. MathSciNet changed the way mathematicians do research. The MR Database was enriched with far more information. The day-to-day operation of Mathematical Reviews itself was vastly improved. Mathematical Reviews is now an enormously successful part of the AMS publication program, and Jane played a key role in every part of its success.

Jane's wisdom, skill, diplomacy, and dedication have been a great asset to the American Mathematical Society. In the highest and broadest sense, she has fulfilled the Society's mission to further the interests of mathematical research and scholarship.

The members of the Executive Committee and Board of Trustees appreciate all that she has accomplished for the Society and for the greater mathematical community, and offer Jane their special thanks and heartfelt good wishes for a happy and well-deserved retirement.

2C	EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES CONSENT ITEMS

2C.1   November 2003 ECBT Meeting.

The ECBT approved the minutes of the meeting of the Executive Committee and Board of Trustees, held November 21-22, 2003, in Providence, Rhode Island, which had been distributed separately. These minutes include:

- ECBT open minutes prepared by the Secretary of the Society,
- ECBT "open" executive session minutes prepared by the Secretary of the Society,
- BT closed executive session minutes prepared by the Secretary of the Board.

2I	EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES INFORMATION ITEMS

2I.1   AMS Points System (Expanded).

For many years, the Society has given certain credits to those who provide services -- reviewers received two coupons for each review (worth $8 each), editorial committee members received $200 to be used for AMS publications, etc. Several years ago, we replaced the Math Reviews coupon system with a "points" system, similar to airline frequent flier programs. Recipients receive regular statements about their accumulated credits as well as instructions for their use. All transactions can be done electronically.

During the past year, the points system has been extended to include almost all programs in which credits are provided to volunteers. Awarding and using the points is far simpler than the previous arrangement. In addition, the Society is now able to offer special promotions to certain groups of members (for example, first-time members). The points system brings more control to our various programs for awarding credits, and additionally makes the credits more valuable (because they are easier to use).

2I.2   State of the AMS. Att. #22.

The Executive Director's annual report to the Council is attached (#22). This year's report focuses on Mathematical Reviews.

2I.3   Changes in Registration Fees for Conferences, Employment Center or Short Course. Att. #23.

The Executive Director is authorized to make changes in these registration fees and then inform the ECBT. Att. #23 describes the changes made since the last report.

2I.4   AMS Presence at the Annual Meeting of SACNAS. Att. #24.

The AMS has provided $5,000 toward support of the mathematics program at the past five national meetings of the Society for Advancement of Chicanos and Native Americans in

Science (SACNAS). The first two years of AMS support came from the Program Development Fund. This outreach activity is now reviewed as a part of the regular annual budgeting process and support is built into the annual budget. Associate Executive Director Maxwell and Public Awareness Officer Emerson represented the AMS at the most recent meeting held in October 2003 in Albuquerque. SACNAS provided the attached report (#24) on the mathematical activities at this meeting.

SACNAS is highly effective at nurturing talented undergraduates from within their target communities to successful completion of graduate degrees in science and mathematics. AMS's presence at the SACNAS national meetings since 1997 has built strong ties within this community of scholars committed to excellence.

2I.5   Report on Awards from the Epsilon Fund for the Young Scholars Programs. Att. #25.

The Young Scholars Awards Committee, chaired by Joe Gallian, evaluated eight applications for support from the Society's Epsilon Fund. A total of $80,000 was available for awards for young scholars programs in the summer of 2004, the fifth year of this AMS program. $17,000 had already been committed to two programs given two-year awards in the 2003 evaluation cycle. Six additional programs were selected for awards ranging from $2,500 to $15,000. The programs funded for summer 2004 are listed in Att. #25.

2I.6   Report on AAAS Meeting. Att. #26.

A report on the AMS-supported activities at the 2004 annual meeting of the American Association for the Advancement of Science (AAAS) is attached (#26).

2I.7   AAS-AMS-APS Public Service Award.

The three societies will choose the recipients for the 2004 awards later this spring.

2I.8   AAAS-AMS Mass Media Fellowship.

The Mass Media Fellowship program is organized by the American Association for the Advancement of Science (AAAS) and is intended to strengthen the connections between science and the media, to improve public understanding of science, and to sharpen the ability of the fellows to communicate complex scientific issues to non-specialists. The program is available to college or university students (in their senior year, or in any graduate or post graduate level) in the natural, physical, health, engineering, computer, or social sciences or mathematics with outstanding written and oral communication skills and a strong interest in learning about the media.

Lisa DeKeukelaere has been awarded the 2004 AMS-sponsored AAAS Mass Media Fellowship. Lisa is a graduate student in applied mathematics at Brown University. She will be working at *Scientific American* for ten weeks over the summer under the sponsorship of the AMS.

2I.9 <u>**Schoenfeld/Mitchell Bequest.**</u>

During 2002, the Society was notified that it was recognized in the will of Professor Lowell Schoenfeld. Professor Schoenfeld (SUNY, Buffalo) was predeceased by his wife, Professor Josephine Mitchell, who was also a mathematician. The estate includes her assets, and the Society has been informed that he incorporated her desires into his estate distributions. The November 2002 BT agreed to accept the bequest as an endowment with no restrictions as to the use of its income. The final payment has been received, and the total amount of the bequest is $573,447.

2I.10 <u>**2004-2005 AMS Centennial Fellowships.**</u>

The AMS Centennial Fellowship Committee has announced fellowship awards granted to Nitu Kitchloo (Johns Hopkins) and Jinho Baik (University of Michigan). Both have accepted. The amount of each 2004-2005 fellowship award will be $60,000, with an additional expense allowance of $1,700.

2I.11 <u>**Note from Cathleen Morawetz.**</u>

The following note addressed to the ECBT was received at AMS Headquarters in January 2004:

January 22, 2004

To the Executive Committee and Board of Trustees of the American Mathematical Society,

I received with enormous pleasure your tribute to me on the occasion of my eightieth birthday. It was an expression of affection and honor which I am mindful is usually reserved for members of the community much older than me. I hope to live as long as they and meanwhile to serve, as best I can, this wonderful organization for mathematics and mathematicians.

Many, many thanks,

Yours sincerely,

Cathleen Synge Morawetz

(cf. November 2003 ECBT minutes, item 2I.3.)

2I.12 <u>**Actions of the Agenda and Budget Committee (ABC).**</u>

At its March 26, 2004, meeting by conference call, the ABC took the following action:

The ABC set the schedule for the May 2004 ECBT meeting.

3	BOARD OF TRUSTEES
	ACTION/DISCUSSION ITEMS

3.1 <u>Discussion of Fiscal Reports.</u>

The BT received and discussed various fiscal reports. Approval of the 2005 budget will be requested at the November 2004 ECBT meeting.

3.2 <u>Capital Expenditures - 2004 Capital Purchase Plan.</u>

The BT received a report on the 2004 capital purchase plan. It was noted that it is expected that the capital budget will be exceeded in 2004, as certain of the heating-ventilation-air conditioning (HVAC) equipment in the Providence building needs to be replaced in 2004. One of the 30-year old units has sprung leaks and must be addressed this year, at an estimated cost of approximately $60,000. Additionally, the controls for the system need to be replaced as parts for the current system are no longer being manufactured and the current system does not allow for the level of control desired. A preliminary estimate for replacement of the control system is $60,000. A comprehensive replacement plan for the remainder of the HVAC equipment is being developed.

3.3 <u>Capital Expenditures - Approval of Specific Purchases.</u>

No requests for authorization to make specific large purchases (items costing $100,000 or more) were made at this meeting.

3.4 <u>Audit Committee Meeting.</u> Att. #31.

The Audit Committee met on May 21, 2004 with the auditors to hear a report on the 2003 audit and to review the audited financial statements for the years ended December 31, 2003 and 2002. Several staff members attended part of the meeting, and the Committee also met privately with the auditors.

The BT approved the Audit Committee's recommendation to accept the audited financial statements for December 31, 2003 and 2002 (Att. #31).

The BT voted to make the incoming Chair of the Board (aka the third-year Trustee) a member of the Audit Committee.

It was agreed that, starting in May 2007, the entire Board will meet with the auditors every four years.

It was suggested that, in the future, Audit Committee meetings should be scheduled as close to the start of the ECBT meeting as possible, so that it is maximally convenient for any interested Trustee to attend.

3.5   Economic Stabilization Fund Increment.

The BT was informed that there were no additions to the base or supplemental portions of the Economic Stabilization Fund (ESF) in 2003. A report was presented showing the current and projected status of the base portion of the ESF, and indicating that no additional funds are required for the base portion to meet its target.

Chief Financial Officer Pass advised the BT that the Society's operating funds have operating investments in excess of foreseeable needs, and that the ratio of current assets to current liabilities will be maintained at a financially prudent level with the transfer of $3,000,000 to the supplemental portion of the ESF. Since the operating funds already have approximately $700,000 invested in the long-term investment portfolio (as of March 31, 2004), this addition to the supplemental portion of the ESF will require the transfer of approximately $2,200,000 to the long-term investment portfolio.

The BT voted to add $3,000,000 to the supplemental portion of the ESF, and to follow the Investment Committee's recommendation that this money all go to equities (in particular, the Vanguard Total Stock Market Index Fund).

3.6   Investment Committee Report.

Investment Committee Chair John Franks reported on the May 21, 2004 meeting as follows:

The Committee reviewed the performance of the AMS's investment managers, the current asset allocation policy, and the total return concept and the current spending rate. No changes were made. The Committee advised the BT on the transfer of funds from operations to long-term investments, and floating rate mutual funds (see items 3.5 and 3.7).

3.7   Short-term Investments. Att. #28.

The BT received the attached report (#28) summarizing the Society's cash management policies and short-term investment performance during 2003.

The BT followed the Investment Committee's advice and approved expanding the authorized investment vehicles for the operating investment portfolio to include floating rate mutual funds, with a limit upon such investments of $2,000,000.

3.8   Trustee Reports on Divisions.

Section VI (Report on Projects and Activities) of the 2003 Operating Plan had been sent to the BT separately, and each Trustee reported on the Division(s) with which he or she has liaison. The Trustees were favorably impressed with the activities of every division and were in agreement that things are going very smoothly.

Now that the 2003 Operating Plan is complete, a copy of it is attached to the record copies of these minutes (Att. #32).

3.9   Meeting of MR, Inc.

In 1983, when the building that currently houses Mathematical Reviews was purchased, a Michigan non-profit corporation was formed in order to obtain exemption from local property taxes in Ann Arbor and from sales and use taxes in Michigan. In order to maintain these exemptions, the corporation (MR, Inc.) must be maintained by holding an annual meeting at which the Officers and Directors of the corporation are elected.

The AMS Board of Trustees meeting was therefore temporarily adjourned, and the AMS Trustees convened as the Board of Directors of MR, Inc.

The Board of Directors of MR, Inc. elected the following officers:

President of the Corporation: John B. Conway
Treasurer of the Corporation: John M. Franks
Secretary of the Corporation: Donald E. McClure
Directors of the Corporation: David Eisenbud
                                Eric M. Friedlander
                                Linda Keen
                                Jean Taylor
                                Carol Wood

The meeting of the Board of Directors of MR, Inc. adjourned and the meeting of the AMS Board of Trustees reconvened.

3C	BOARD OF TRUSTEES
	CONSENT ITEMS

3C.1   Procedures for the Appeals for Discounted Subscriptions.

The BT approved the continued use of the following guidelines, for 2005, which staff follow in responding to appeals for discounted subscriptions. It was noted that, over the years, this method of obtaining discounts has been used less and less. In addition to the appeals process, the Society offers a National *Mathematical Reviews* Subscription Program (described at www.ams.org/bookstore/mathsciprice#NMRSP) for institutions in the poorest countries. Institutions that do appeal are usually directed to a MathSci consortium if one is available; this is usually the best way for such institutions to meet their needs.

- Minimum price for MR Data Access Fee (DAF) of $200 applicable to institutions in countries found in the two poorest World Bank country listing. Staff can provide this level of discount even if the country does not have a national DAF.
- The discounted price for MR DAF for domestic institutions would not be lower than the greater of 40% of a list price DAF or 40% of the institution's mathematical sciences serials budget, not to exceed regular list price for a DAF.
- The discounted price for MR DAF for non-domestic institutions not included in the first category above would not be lower than 40% of a DAF. To the extent possible, information

about serials budgets would also be collected, and, if desired, staff would provide information on publishing activity at the institution.

- For MR derived products, allowable prices would be regular list price for paper, 50% of list for MathSciDisc (provided SilverPlatter goes along), and lowest published price for MathSciNet.
- For other AMS journals, the lowest allowable price would be marginal cost, applicable to the most desperate cases.

3I **BOARD OF TRUSTEES**
    INFORMATION ITEMS

3I.1 **Transfer from Temporarily Restricted Net Assets to Operations.**

In 2003 the long-term investment portfolio recovered a significant portion of the losses suffered in 2001 and 2002. In those prior years, transfers from operations to the long-term investment portfolio were necessary in order to maintain some of the more recently created true endowment funds at their original gift amount. The total so transferred was approximately $230,600. With the improved investment performance in 2003, operations recouped approximately $163,200 of those prior years' transfers.

3I.2 **Changes in Fringe Benefits.**

The November 1996 BT authorized the Executive Director to approve changes in benefit plans (except for those changes which would significantly enhance or degrade the Society's financial health or relations with its employees) and asked that these changes be reported to the Board of Trustees when appropriate.

There were no such changes to report at this meeting.

3I.3 **Cost of Health Benefits.** **Att. #30.**

The BT received the attached report (**#30**) on the cost of health insurance.

Respectfully submitted,

Robert J. Daverman, Secretary
Knoxville, Tennessee
July 7, 2004

Interim Report on Focused Planning for Meetings and Conferences

Table of Contents

A Guide to the Interim Report on Focused Planning for Meetings and Conferences

Introduction

Staff first proposed that the AMS undertake special planning efforts at the meeting of the Executive Committee and Board of Trustees (ECBT) held in May, 2002. Five areas of Society operations were selected for what is termed focused planning. Focused planning has a more limited scope than the long range planning effort conducted by the Society at the start of the 1990's but an expanded scope when compared to the operational planning conducted annually in each division of the Society. The ECBT approved the outline of the planning process and charged staff to proceed with planning in four designated areas: meetings, membership, publication production, and (corporate) data collection and delivery. They selected membership and meetings as the first two areas for focused planning. A report on the focused planning effort on membership was presented to the Fall 2003 meeting of the ECBT.

A component of the staff proposal for focused planning was a preliminary work plan for each of the areas to be addressed. The preliminary work plan for meetings was reviewed by the Committee on Meetings and Conferences at its March 2003 meeting, and there was a general discussion of issues to be addressed during the planning process. Comments on the work plan along with suggestions of issues to be addressed were incorporated into the work plan. Early in 2004 a Steering Committee was formed to lead the planning effort. Members of the steering committee are Jim Maxwell, Diane Saxe, John Ewing and Robert Daverman. A copy of the updated work plan appears in Appendix A.

An Interim Report

The Steering Committee has approached the task of focused planning for meetings by first asking itself numerous questions. These questions serve to frame the issues that are central to the task of thinking deeply about the current and future role of meetings in the Society's fulfillment of its mission. As a first step in addressing these questions, the staff has prepared draft reports that either respond directly to the questions or provide background for a discussion by the Society's leadership as they explore answers to the questions. These draft reports have been organized into an Interim Report as follows:

What role have meetings played in the history of the AMS? Section 1 of the Interim Report provides a review of the history of national and sectional meetings since the founding of the Society. Timelines of significant historical events are also included for national, sectional and international meetings.

How do AMS meetings compare with those of other scientific and academically centered professional societies? Section 2 provides a comparison of key aspects of the Society's meetings with those of nine other professional societies. (This section will be available at the COMC meeting.)

How do current winter meetings differ from those held ten years ago? Which areas of the program have expanded and which have contracted? Section 3 provides a quantitative review of the various major components of the program and activities of the winter meetings for 1970, 1993, 1999 and 2004. A similar review is also provided for the sectional meetings.

What role does the Society's meetings activities play in the finances of the Society? Section 4 provides an overview of the financial side of the AMS meetings program over the past eight years.

What is the current state of the AMS research conference program and what form should this long-standing Society activity take going forward? Section 5 provides a review of the recent history of the Society's conference program and poses some options for the future.

Three Key Questions for COMC

The Steering Committee would like to focus the initial COMC discussion on three questions that are central to focus planning for meetings. These three are:

1. Should there be more sectional meetings?

2. In what form should the AMS seek to continue its research conference program?

3. What role should the meetings activities play in the overall finances of the Society?

Time will be reserved for other questions that members of COMC would like to discuss.

Next Steps

The Interim Report will be included in the agenda for May 2004 ECBT meeting, along with feedback from COMC. The Steering Committee will use the feedback received from COMC and ECBT as it works over the summer and fall to prepare a final report for presentation to the November ECBT. The COMC Subcommittee appointed in March of 2003 will be consulted for advice and feedback as the various components of the final report are being developed. The members of this Subcommittee are: Edward Barbeau, Jr.,

Tepper Gill, Craig Huneke, Irena Peeva and Susan Friedlander. Should the need arise, a special meeting of COMC to review the developing final report could be scheduled for the fall.

More Questions to Guide Your Review of the Interim Report

There are a number of questions (beyond those listed above) that raise policy issues for consideration by the Society's leadership. These questions are listed below, grouped according to the component of the Society's meetings activity to which they apply. As you peruse the Interim Report, I encourage you to keep these additional questions in mind. The Steering Committee welcomes feedback at any time.

The Winter Meeting:
- How do you view the shifts in the various types of activities at the national meeting?
- Which types of activities do you view as most valuable to the meeting participants, which of least value? How do you measure the value?
- Where might the current trends in meeting activities take us over the next five years?
- How would you view extending the meeting to five days, as it was until 1987?

The Sectional Meetings:
- Has the role of sectional meetings in furthering the mission of the Society changed significantly from their role thirty years ago? Twenty years ago?
- Are sectional meetings currently structured optimally?
- Should there be more sectional meetings? If so, what would be the best way to accomplish this: more meetings per (current) section or more sections?
- If we added more sectional meetings each year, could we maintain the quality of the programs? Could we find schools to host them?

The International Meetings:
- How should we measure the value of international meetings to the Society's program of meetings? Is this purely an outreach activity?
- What do typical AMS members think about the international meeting, and is this a valid aspect of measuring their value to the Society?
- Are international meetings structured correctly?
- Are we holding the right number of meetings? In the right locations?

The Meetings Program as a Whole:
- Should the AMS meetings program make a contribution to the AMS's bottom line income? To the Society's overhead?
- Or should it be viewed solely as an outreach activity to our members and potential members?
- What is the right balance between these two ends of the spectrum?

- Are there new forms of meetings that the AMS should consider adding to its current lineup of national, sectional and international meetings?

NSF-sponsored Research Conferences
- How has the changing infrastructure for research support in the US affected the conference activity in the US? The conference activity of the AMS?
- Are there specific types of conference and workshops that are currently underutilized in the US? If so, what segment of the mathematical community is adversely affected? Can the AMS address this underserved population? Should it?

Jim Maxwell
Associate Executive Director
April 8, 2004

National Meetings

The Early Years: 1894-1945

By the year 1894 many changes had taken place with the New York Mathematical Society. Nationalization of the Society was accomplished by changing the name to the American Mathematical Society. It was also a signal to both the membership and to the world of the expansion taking place and of the proposed role of the Society. In addition to the name change, there were important changes in the organization and in the scientific program as well. The Council recommended "the Council be somewhat enlarged and divided into classes one of which shall be retired each year, that there shall be delivered before the Society a series of presidential addresses, and that provision be made for occasional meetings of the Society as a whole in cities other than New York."

As a result, the first Summer Meeting of the AMS was a two-day meeting that was held in one of the lecture rooms of Polytechnic Institute in Brooklyn, New York, on August 14 and 15, 1894. It was held in conjunction with the mathematics section of the American Association for the Advancement of Science (AAAS). The thought was that the influence of AAAS would bring to the New York meeting many members of the Society from remote parts of the country who would welcome the opportunity of attending a meeting of the Society. The first Winter Meeting of the AMS was held at Columbia College in New York, on December 28, 1894 and lasted one day.

Basic Facts

The Summer Meetings were always scheduled in August while the Winter Meetings were held between Christmas and New Year, due to many institutions running two semesters from September to June, with a break of a week or two over Christmas and New Year. This put the Winter Meeting naturally between Christmas and New Year's Day. This period was rigidly fixed in the By-Laws until 1924 when the interval was changed to "between December 15 and January 15". The holiday schedule often had an important benefit: when held on a university campus, economical housing could be obtained in students' dormitory rooms and facilities were often free.

The meetings were usually held at universities, particularly in New York at Columbia College. Other colleges used were John Hopkins and MIT. The first Winter Meeting held outside New York, simply for variety, was in 1918 in Chicago.

During this time period, attendance at both meetings was small, usually less than 100, since the membership of the Society was small. The first Summer Meeting with more than 100 participants was held in 1925. The first Winter Meeting with more than 100 participants was held in 1916. This was partly due to the meeting being held jointly with AAAS and the recently formed (in December 1915) Mathematical Association of America (MAA).

Also, the meetings were originally at no cost to the participant. But in 1934 the first observed registration fee was $.50. By 1938 the registration fee was $2.00. The first committee on the meetings was created in 1938 and it was called the "Joint Committee on Places of Meetings". Their primary purpose was to make decisions on the locations.

Scientific Program

The scientific program at the 1894 Winter Meeting consisted of three scientific items, including the first Presidential Address by Dr. J. Emory McClintock. During the first three meetings no papers were read. Beginning with a single paper at the fourth meeting, this feature of the program developed into the chief attraction for the general membership. In 1897 the first Colloquium of the Society was held contiguous to the Summer Meeting. It was composed of two mathematicians each presenting six lectures. By 1901 it became a regular part of the Summer Meeting. By the 1930's, the winter program consisted of the Gibbs Lecture, which was established in 1923, one or two invited addresses, a retiring president's address and contributed ten-minute papers, numbering more than fifty. There were general sessions with no competing events and two or three simultaneous sessions based on broad classifications of subject matter.

In the early years, particularly the first 25 years, there were a large number of papers, in order of magnitude from one-third to one-half the attendance which meant that a high proportion of participants gave talks. It is important to note that being listed on the program was the only way of giving advance notice of work done or in progress. Moreover it was possible to offer more than one paper. In the early sixties, this changed to only one paper per person.

The nature of programs changed with time. For many years it was possible to set up a program with little or no conflict. The Winter Meeting became a two-day meeting in 1901. One could accommodate thirty or forty papers and a couple of lectures before concurrent sessions became necessary. This meant that the individual mathematicians could hear a greater diversity of papers than is now reasonable with as many as ten simultaneous sessions in narrowly defined fields. However there were complaints that programs were too crowded, with not enough time for discussion.

1946-1996

Over the next fifty years attendance at the winter meetings became significantly larger relative to the attendance at summer meetings. Winter Meetings moved away from university sites; there was a considerable broadening of the schedule at AMS meetings to include special sessions (1963) and joint invited talks with MAA (1987). There was a decrease in the importance of contributed papers and a decline in their scientific merit.

Basic Facts

In 1958, an amendment to the AMS bylaws expanded the interval for Winter Meetings to be from December 15 - February 10. This change occurred partly in recognition of

changing academic calendars and also in wanting to move travel to the meeting away from the glut of travel around the Christmas and New Year's holidays. In 1973, it was decided that future winter meetings should be set so that each of the three weeks in January receive equal attention.

The activities of the Joint Committee on Places of Meetings gradually increased to include governance and overseeing all phases of the conduct of the winter and summer meetings. In 1978, the name was changed to "Joint Meetings Committee (JMC)" in order to indicate the broader scope of this committee's authority.

The Summer Meetings were first scheduled in August and continued as such through the years. In 1980, the Joint Meetings Committee (the former Joint Committee on Places of Meetings) decided that there should be no summer meetings scheduled after August 15. This remained in effect until joint summer meetings were discontinued in 1996.

The winter and summer meetings were held on university campuses until 1960. Hotels then became the preference for the Winter Meetings. This shift was due to the unsuitability of university sites for large meetings and time conflicts with the regular schedules of universities. In 1976, convention centers were looked at as alternative locations since meeting space in hotels was often limited. From that point on, the location of the Winter Meeting was either in convention sized hotels or convention centers.

Climate also became a factor in choosing locations and in 1984 it was agreed that winter meetings should be held in warmer climates. In 1977, it was agreed that the meetings would alternate between sites in the east and west.

By 1953, attendance at the Winter Meeting was 600 and the Summer Meeting was 700. In 1960, the numbers increased to 1325 and 760, respectively.

	Winter	Summer
1955	400	800
1960	1325	760
1965	2095	1470
1970	3558	928
1975	3415	903
1980	2391	1225

In 1973, a decision was made to publicize the meetings outside of membership to increase attendance. That year, the attendance at the Winter Meeting was 3162 and the attendance at the Summer Meeting was 571. Thus, attendance at the winter meetings was becoming much larger relative to the attendance at summer meetings.

Other Organizations

During 1946 to 1996, both summer and winter meetings were held jointly with MAA. Other organizations that met jointly were AAAS (first met in 1894), Association for Symbolic Logic (ASL) (first met in 1975), National Council for Teachers in Mathematics (NCTM) (first met in 1975), Association for Women in Mathematics (AWM) (first met in 1971), Society for Industrial and Applied Mathematics (SIAM) (met in 1979 and 1980), and NAM (first met in 1987). The last meeting with AAAS was held in 1986. The Winter Meeting was moved to January and this was not a convenient time for AAAS to meet. ASL decided to have its own meeting in 1988 and was deleted off of the block schedule. They were put back on the block schedule in 1997.

Name Change

The name of the Winter Meeting was often changed to reflect which organizations were meeting jointly. For example, the name of the meeting in 1975 was "AMS-ASL-MAA-NCTM Annual Meeting". In 1976, the name was permanently changed to "Joint Mathematics Meetings".

Also in 1976, the Summer Meeting was renamed the "Joint Mathematics Meetings". But in 1991, it was changed to "MathFest". The concept behind the MathFest meeting was that there would not be any conflicts with the major talks.

Scientific Program

In 1963, the scientific program of the Winter Meeting started to change. The trend was a decrease in the importance of contributed papers and a decline in their scientific merit. The JMC decided to broaden the schedule to include AMS special sessions and joint invited talks with MAA. Changes made were as follows:

1. In 1963, the style of the program was altered to include five Special Sessions, each devoted to a single topic. The special sessions started out as informal gatherings and evolved into 20 minute papers invited by an individual selected by the Program Committee. This feature grew in both size and popularity at the Winter Meeting until it sometimes became necessary to limit the number of special sessions, the number of talks within a session.

2. In 1971, the number of hour long invited addresses was increased to four (two AMS and two MAA). Over the years this number was increased again to eight Invited Addresses, four each. This became the norm until 1988 when they were reduced to six each because the program was too crowded.

3. In 1973, one set of Colloquium Lectures was added. There were four lectures in a set. In 1974 when there was no Summer Meeting, there were two Colloquium Lectures and in 1975, there was again only one Colloquium with four lectures. After 1975, the number of sets of Colloquium Lectures was reduced to one, making it four lectures again. This changed in 1990 when the fourth lecture was dropped.

4. There were MAA Poster Sessions in 1978 and 1979. After 1979 poster sessions stopped and did not occur again until 1990.

5. In 1981, the first permanent block schedule was established. This provided a generic overview of the entire meeting that could be used each year.

6. In 1984, MAA mini-courses were established.

7. In 1987, the first Joint AMS-MAA Invited Addresses were established. Initially, there were four. This number was eventually reduced to three until 1995. At that time, the number dropped to two Joint AMS-MAA Invited Addresses scheduled on the first and third days, and a Joint Policy Board for Mathematics (JPBM) Public Policy Address was added on the second day. It also became policy that no conflicting program elements could be scheduled against these three addresses.

8. The Public Policy Address was initially cosponsored by the Joint Policy Board for Mathematics, the AMS Committee on Science Policy, and the MAA Science Policy Committee. In 1997, JPBM was no longer a sponsor.

9. In 1988, it was decided that the maximum amount of special sessions allowed would be equal to the number of rooms available for special sessions and that the number of talks in special sessions would be limited to fourteen. It was agreed that the 50-minute invited addresses could have special sessions and contributed paper sessions opposite them.

10. In 1992, Prize Awards by AMS and MAA, previously separate events, were changed to a Joint Session on Thursday and the two business meetings were put on the fourth day in successive times around noon.

Prior to 1981, as the scientific programs grew, both meetings grew to be five days. A typical program was structured as: first and second day – all AMS, third and fourth day – MAA in the morning and AMS in the evening, and fifth day – all MAA. In 1981, the need to join the programs of AMS and MAA was expressed so that something of interest to all people would be going on at all times. However, nothing was done until 1984 when a four day meeting was tried for the first time with each organization running for the entire four days. This structure worked well and the AMS and MAA programs became officially integrated in 1987. Thus, the first four-day block schedule was established.

1997 – Present: The Winter Meeting

Growth in the size and complexity of the JMM provided the impetus for key policy changes over the next seven years. As more organizations and events were added to the meeting, the need for meeting space increased and the scientific program developed more parallel activities and sessions. This became a concern because the JMC's intent was to put on a rich program that had a lot of options but not an overwhelming number of conflicts, particularly conflicts such as sessions that occurred at the same time and drew the same crowd.

In choosing locations, sufficient space availability soon became an issue. So, the need for a new policy for choosing locations became apparent.

Basic Facts

In 2001, it became evident that the strict East/West alternation policy for choosing locations was limiting the availability of sites. The number of workable sites shrank as many cities did not have the meeting and/or housing space needed to hold the JMM. Thus, this policy was relaxed to allow two meetings in a row on the same side of the Mississippi River.

By 1997, the attendance at the JMM had increased to 3563 participants. The largest meeting occurred in 2003 in Baltimore with an attendance of 4259 participants. The heavy concentration of universities in the East Coast was judged to be a major factor in the record attendance.

Other Organizations.

By 2000, six organizations had been granted slots on the block schedule. They were ASL, AWM, MER, NAM, PME, and RMMC. SIAM became a regular part of the program in 2002.

Scientific Program

The year 2000 brought several changes to the program such as:

1. It was observed that attendance at the AMS Colloquium Lectures had dropped dramatically after the first lecture. It was decided that the first lecture would remain conflict free and the second and third lectures could have conflicts.

2. The crowded program became more prominent in 2000. The block schedule included many events in the evening. One attempt to address this issue was to come up with a way to control the AMS events held in the evening. COMC decided that AMS Special Sessions and Contributed Papers should not be scheduled during the evening hours.

Another attempt to address this issue came about in 2001. It was decided that each Society would reduce the number of its Invited Addresses by one; i.e., from six to five.

Nonscientific Program

The number of social events gradually increased to include networking sessions, a knitting circle, a Fun Run/Walk, and several different types of receptions and banquets. By 2004, 30 social events were held at the meeting.

Sectional Meetings

Although the first meetings of the American Mathematical Society (AMS) were held in New York City, a separate Chicago section soon began. In response to a call issued by several members of the AMS residing in or near Chicago, a mathematical conference was held at the University of Chicago on December 31, 1896 and January 1, 1897. There were two sessions daily, at 10:00 a.m. and 2:30 p.m., respectively. This meeting was organized as the Chicago Section of the AMS.

A committee was formed in 1897 to formulate a plan of permanent organization for a local section of the Society. As a result, a resolution was adopted that said that it was desirable for the members of the Society to hold in Chicago at least two meetings a year for the reading and discussion of mathematical papers, one during Christmas vacation and one in the spring. Thus another conference was held in the spring on April 24, 1897.

Other sections followed in due course. The San Francisco Section (which later became the Far Western Section) was formed in 1902 and the Southwestern Section was formed in 1906.

Sectional Meetings were not considered meetings of the Society until 1913. In October 1913, in appreciation of the Chicago group, the Council voted "the meetings of the Chicago Section, so far as concerns the presentation of scientific papers, will become meetings of the Society". It was further determined that "the Society will hereafter enjoy the possibly unique distinction of holding almost simultaneous meetings in different cities. The Chicago Section will retain its identity unchanged as regards sectional or local matters". Thus the 32nd meeting of the Chicago Section in December 1913 was also "the first regular Western Meeting of the Society."

In 1929, the Southwestern Section became part of the Western Section and the San Francisco Section became the Far Western Section. From 1929 to 1949, there were three sections: East, West, and Far West. This changed in 1950 when a Southeastern Section was formed. From 1951 to the fall of 1982, there were four sections and they were called: Eastern, Southeastern, Western, and Far Western. In the fall of 1982, the Western Section became the Central Section and the Far Western Section became the Western Section.

Currently, there are still four sections and they are: Eastern, Southeastern, Western, and Central holding sectional meetings that occur in the fall and in the spring. The Eastern Section includes states east and north of Pennsylvania; the Southeastern Section includes those states south of Maryland from the east coast to the Mississippi river, plus Arkansas

and Louisiana; the Central Section includes those states west of Pennsylvania and east of Colorado; and the Western Section includes those states west of Nebraska. Each Section has one Associate Secretary, appointed for renewable two-year terms.

Associate Secretaries

In its early days the Chicago Section had a separate secretary, who was not an officer of the Society. In 1923 this position was voted to be an officer of the Society with the new title of Assistant Secretary. In 1927 the Assistant Secretary, Arnold Dresden, had to move east. At that point, the Society thought that his services could be used to help with Eastern Sectional Meetings, so the Society adopted an amendment that replaced the one Assistant Secretary position with two Associate Secretary positions, with the expectation that one would handle the West (sometimes referred to as the Middle West) and the other would handle the East.

A San Francisco Section of the Society had been organized in 1902. After 56 meetings of this Section the Council voted, in December 1928, to grant the request of the Section that meetings on the Pacific Coast should thereafter be designated as regular meetings of the Society. This led to a third Associate Secretary for the Pacific Coast, or the Far Western Section, in 1929. By 1938, the Associate Secretary of the West, M. H. Ingraham, had secured many institutional members for the Society. So he was asked to devote himself largely to problems connected with the membership and financial affairs of the Society. This position became the Associate Secretary for Financial Affairs (from 1938 to 1949) and another Associate Secretary was brought in for the West Section. In 1950, an Associate Secretary was added for the Southeast Section.

Currently, arrangements for East, Southeast, West, and Central Sectional Meetings are made by the cognizant associate secretary, usually in cooperation with a local mathematics department.

Other Organizations

From 1907 to 1954, Sectional Meetings were occasionally held jointly or in conjunction with the American Association for the Advancement of Science (AAAS) (starting in 1907 and ending in 1940) and Mathematical Association of America (MAA) (starting in 1917). During this period, the AMS occasionally held meetings jointly with other organizations as well. They were: the American Physical Society, the American Geophysical Union, the Institute of Mathematical Statistics, the Biometric Society, the Econometric Society, the Society for Industrial and Applied Mathematics (SIAM), the Optical Society of America, and the Association for Symbolic Logic.

In 2003, the MAA and AMS held two Joint Sectional Meetings.

Attendance

Attendance at the Sectional Meetings gradually increased. There were less than 30 participants (17 were members of the Society) at the first Chicago Section conference. In 1906, there were 40 persons in attendance including 28 members of the Society. In 1907, the 22nd meeting was held jointly with Sections A (Mathematics and Astronomy) and D (Mechanical Science and Engineering) of AAAS. Over 150 participants (including 50 engineers) attended this meeting. In April 1922, a Sectional Meeting was held in honor of the 25th anniversary of the Chicago Section. The attendance at this meeting was approximately 150 people of whom 104 were members of the Society. Currently, attendance at the Sectional Meetings generally ranges from 150 to 400 participants, with more than 75% who are members of the AMS.

In 1978, the AMS started charging a registration fee for the sectional meetings.

Scientific Program

The first Sectional Meetings were formed so that members could get together to read and discuss mathematical papers that were supposed to represent the various lines of mathematical activity of those in attendance. There were 14 papers presented at this meeting. By the end of the seventh meeting in 1900, 106 papers had been presented by 41 different persons. In the 1930's and early 1940's, these discussions were referred to as "sessions of the society" or "sessions for the reading of short papers". They were first referred to as "sessions for contributed papers" in 1942 (October New York Meeting).

The first invited address was given by Pierre Boutroux from Princeton University in 1920. He spoke on "On multiform functions defined by differential equations of the first order". For most of the meetings in the 1920's and 1930's, there was one invited address. This started to change in the 1940's when the norm became two. The number increased to three or four in the early 1970's.

Starting in 1917 and lasting until the early 1960's, a "Symposium" on a particular mathematical topic (often applied mathematics) was an occasional element of the Sectional Meeting. The principal papers of the first Symposium were "Integrals of Lebesgue and their applications" by G. A. Bliss, and "Integrals, extensions of and related to Lebesgue" by T. H. Hildebrandt. The last symposium was held in the early 1990's.

The first special session at a Sectional Meeting took place in November 1964 at the 618th meeting in Evanston, Illinois (one year after the first special session at the Joint Mathematics Meetings). It was entitled "Recent developments in ring theory". In the beginning, there were very few special sessions. They did not become popular until the late 1970's.

Sectional Meetings began evolving into their present format in 1972. The March 1972 Sectional Meeting in St. Louis included four Invited Addresses, five Special Sessions, and seven Contributed Paper Sessions. Special Sessions were not the norm in 1972, but by the late 1970's, they had largely eclipsed Contributed Paper Sessions at Sectional Meetings. During most of the past 25 years, the Society has sponsored six to eight

Sectional Meetings per year. At the beginning of this period, the typical meeting offered fewer than 100 talks. That number has more than doubled: the four Spring 1997 Sectional Meetings contained an average of 217 talks each.

Currently, the primary activities at Sectional Meetings are Invited Addresses and Special Sessions. Each meeting includes four invited addresses (usually 50 minutes long), and 8 – 18 Special Sessions (most falling between 11 and 15) with an average of six 20 minutes long talks per half day. Meetings span from two to three days. Unlike the Winter meeting, the Invited Addresses at sectional meetings are plenary talks.

The incorporation in Sectional Meetings of activities other than Special Sessions has been the exception rather than the rule, due to the lack of available time. Usually these meetings run on a two-day or three-day cycle, and between Invited Addresses and Special Sessions, there is very little time left. Several initiatives have been tried in the past, including a meeting of area department chairs in 1995.

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TIME LINE
AMS MEETINGS

JOINT MATHEMATICS MEETINGS

1889   The first Winter meeting was held for New York Mathematical Society (the predecessor to AMS)

1893   The World's Columbian Exposition held in conjunction with International Congress of Mathematicians was the location of the first **Colloquium** on Mathematics in Chicago. This was organized by the mathematicians of the newly formed University of Chicago and showcased some of the best of American mathematics alongside some of the best of European mathematics.

1894   The first **Summer Meeting** of the AMS took place at the Polytechnic Institute in Brooklyn NY in August in conjunction with Section A of the American Association for the Advancement of Science.

1894   The first **Winter Meeting** of the American Mathematic Society was Dec. 28, 1894, in New York at Columbia College. (Prior to this the New York Mathematical Society was established in 1888; the name was changed by an amendment to the constitution in July 1894 shortly before the first Summer Meeting.)

1896   First **Colloquium of the Society** held in September with two mathematicians each giving six lectures and was separate from but contiguous to the Summer Meetings.

1901   **Winter Meeting** became a two day meeting.

1901   The **Colloquium** became a regular part of the summer sessions.

1923   Establishment of the **J. W. Gibbs Lecture.**

1923   Assistant Secretary position became an elected officer of the Society.

1927   Assistant Secretary position changed to 2 Associate Secretaries, one Eastern and one Midwestern.

1930   In the 1930's the Winter Meeting was scheduled between Christmas and New Year's Day and was held on a university campus. Some of the meetings were in conjunction with the meetings of the AAAS.

1934   First observed registration fee at a Society meeting was $.50 in September 1934 at Williams College.

1938 **SemiCentiennial Celebration** took place in September at the 44th Summer
Meeting with an attendance of about 700 including 419 registered members of the
Society. The registration fee was $2.00.

1953 Employment Register: Council approved register consisting only of a file of
academic institutions, industrial firms, and government agencies. In 1958 it
became a staff function of the Providence office.

1958 Winter Meeting time was changed to a period from December 15 to February 10.

1963 First Winter meeting to have Special Sessions.

1964 First Sectional meeting to have Special Sessions

1971 Four one hour long addresses at Winter Meeting. In 1972 the number was eight,
which was the norm for many years and the addresses were no longer free from
competition with other events.

1973 **Short Course** initiated prior to Summer and Winter Meetings at the behest of the
Committee on Employment and Educational Policy.

1974 Commencement of one set of Colloquium Lectures at the Winter Meeting and one
set at the Summer Meeting.

Name of meeting changed to read "Joint Mathematics Meetings"

1978 Consider possibility of setting standard time slots for Colloquium and Gibbs
Begin consideration of reformatting summer meetings due to low attendance-
design program around one central subject area.

1977 Joint SIAM/AMS/MAA meeting discussed "equitable time slots for the programs
of the three organizations." R.L. Graham (Bell Labs) offered to develop computer
program to schedule events at Winter and summer meetings. Discuss possibility of
permanent block schedules for Winter and summer meetings.

1984 Winter and Summer Meeting had been five day meetings with six half days
assigned to AMS and four to MAA, two days in the middle being interlaced. In
1984, four day meetings were tried with each organization running for the entire
four days.

1985 Discussion on merging AMS and MAA programs for the New Orleans (1986)
meeting. Significant changes in scheduling and programming will be necessary to
accomplish this in time for a four day meeting in 1987 in San Antonio.

1986   All future meetings are non smoking. Signers for the deaf will be handled on an as requested basis.

1988   Number of talks in special sessions limited to 14. JMC recommended that rather than setting a cap of twelve sessions to be the rule, the cap will be on the number of rooms available to SS. Colloquium Lectures reduced to three from four.

1988   The Centennial meeting held in August 1988 celebrated the founding of the AMS. There were three talks by senior researchers on the history and development of mathematics. However, the focus was to cover the most important directions of contemporary mathematical research, and the rapid development of the interactions of sophisticated mathematics with physics, fluid dynamics, computational science, biology, statistics, and computer science. The speakers were selected on the basis of their stature in these areas, along with the expectation that they would be major contributors in their areas into the 21st century. The talks were expository in nature for a broader audience understanding.

1989   Agreed not to pursue parallel or joint meetings with AAAS

1990   Reinstitution of Poster Session was successful and will be tried again.

Electronic preregistration offered. 84 preregistrants chose this method.

Joint Program Committee-   AMS will appoint the committee, invite the speakers and locate introducers for the winter meetings and MAA will do so for the summer.

1991   Cut back on number of AMS-MAA Invited Addresses at Winter meetings from four to three.

Change in name from Joint Mathematics Meetings for summer meetings to the MATHFEST concept for summer meetings (all major talks in am, no conflicting sessions or committee meetings;)

1992   MAA abstracts included in the abstracts booklet hand out at the meeting for the first time.

There will be a MathFest in the summer unless there is an International Congress on the North American continent.

1993   Governing bodies of AMS and MAA passed a joint resolution to change of venue for 1995 from Denver CO due to vote regarding discrimination against homosexuals.

1993 Establish AMS-MAA Exhibits Advisory Subcommittee of the JMC-address the concerns of current exhibitors, increase the number of exhibits, generate creative new ideas which will benefit both exhibitors and us.

Establish AMS National Meetings Coordinating Committees –to deal with items on the programs at the January and August meetings not presently addressed by the existing structure

1994 AMS and MAA to resolve the issue to discontinue summer meetings.

1996   Electronic abstract system up and running by end of January

1997 New- Networking Center

Site rotation: Use core group of cities that have higher attendance and/or are good sites – San Diego, San Antonio, San Francisco, New Orleans-idea rejected-but part of policy is to go east to west

1998 Short course before Jan meeting.

1999 New services: Email acknowledgment of registration, web registration form, availability of abstracts on the web, timetable on the web.

2000 Special theme for 2000 World Mathematical Year as designated by International Mathematical Union and UNESCO

SIAM will join 2000 as part of joint sponsorship of the JMM

2001 Change the number of Invited Addresses at JMM from six each to five each.

TIME LINE – SECTIONAL MEETINGS

1896   A mathematical conference was held at the University of Chicago to "support sectional meetings by attendance and by the contribution of papers." This was officially organized as the **Chicago Section** of the American Mathematical Society in 1897.

1902   Formation of **San Francisco Section.**

1906   Formation of **Southwestern Section.**

1913   The Council voted "the meetings of the Chicago Section, so far as concerns the presentation of scientific papers, will become meetings of the Society."

        The first regular **Western Meeting** was held.

1920   The first invited address was given by Pierre Boutroux from Princeton University.

1923   Assistant Secretary position became an elected officer of the Society. This position was asked to arrange Winter meetings as well as respective **sectional meeting.**

1927   The one Assistant Secretary position was changed to two Associate Secretary positions.

1928   The third Associate Secretary position was created.

1929   The Southwestern Section became part of the Western Section and the San Francisco Section became the Far Western Section

1950   Southeastern Section was formed and the fourth Associate Secretary position was created.

1951   From 1951 until the fall of 1982, there were four sections and they were called: Eastern, Southeastern, Western, and Far Western

1964   First special session at a Sectional Meeting took place in November.

1972   Present form was initiated with invited address, special sessions and contributed paper. Usually just the AMS sponsored Sectional Meetings (6-8 per year) but some were joint with MAA and SIAM.

1978   Charge registration for sectional meetings.

1982   The Western Section became the Central Section and the Far Western Section became the Western Section

TIME LINE - JOINT INTERNATIONAL MEETINGS

1992   First Joint meeting of AMS and LMS (London Mathematical Society) held at Cambridge University in England. Registration was 477 of which 220 were from United States.

1993   First Joint Meeting with AMS and DMV (Deutsche Mathematiker-Vereinigung) in Heidelberg, Germany.

1993   First Joint Meeting with AMS and the Sociedad Matematica Mexicana (SMM) in Merida Mexico. In addition to Invited Addresses and Special Sessions there was a workshop on *Technology in the Classroom* and two forums.

1995   First Joint Meeting of AMS and IMU (Israel Mathematical Union) in Jerusalem, Israel. Organizers wished that a Senior AMD officer had been present and that there had been a book display.

1995   Second Joint Meeting of AMS and the Sociedad Matematica Mexicana (SMM) in Guanajuato Mexico. AMS demonstrated and discussed newest electronic products and AMS books available. AMS handled abstracts and program production.

1996   First Joint Meeting of AMS and BeNeLux (Belgium, Netherlands, and Luxemburg) mathematical societies in Antwerp Belgium.

1996   COMC report on international meetings made recommendations concerning guidelines and procedures to facilitate international meetings.

1997   First Joint Meeting of AMS, LMS and South African Mathematical Society in Pretoria, South Africa. Security concerns because of unrest in the country were allayed by information on the web and in NOTICES. There was joint cooperation between the SAMS (based in South Africa) and SAMSA (South African Mathematical Sciences Association (the mathematical society of the neighbouring countries in southern Africa). The meeting introduced a new era of cooperation by participants from traditionally black universities and traditionally white universities.

1997   Third Joint Meeting of AMS and the Sociedad Matematica Mexicana (SMM) in Oaxaca, Mexico.

1999   Fourth International Joint Meeting of the AMS and the Sociedad Matematica Mexicana (SMM), at University of North Texas in Denton Dexas. The first Winter Erdös memorial lecture was held.

1999   First Joint Meeting of AMS and Australian Mathematical Society I Melbourne, Australia.

2000   First AMS and Scandinavivan International Mathematics Meeting in Odense, Denmark. Meeting included a special presentation sponsored by the European Union.

1998   First Joint International meeting between the AMS and the Hong Kong Mathematical Society, in Hong Kong, People's Republic of China.

2001   Fifth International Joint Meeting of the AMS and the Sociedad Matematica Mexicana (SMM), Morelia, Mexico.

2001   First International Joint Meeting with AMS and Société Mathématique de France in École Normale Supérieure de Lyon, Lyon, France

2002   First International Joint Meeting with AMS and Unione Matematica Italiana in Pisa, Italy.

2003   First International Joint Meeting with AMS and Real Sociedad Matemática Española in Seville, Spain.

2003   First International Joint AMS-India Mathematics Meeting in Bangalore, India.

An Investigation of Other Societies

In March and April 2004, a survey effort was conducted to gather meeting information and ideas from nine (9) other professional societies. The nine societies were chosen from the scientific area.

It was decided not to include Societies such as the Association of Women in Math and Mathematical Association of American, since these two societies hold their annual meeting with the American Mathematical Society as part of the Joint Mathematics Meetings.

Since a preliminary report was due at the end of April, timing was an issue. We gathered information for this preliminary report and will continue further discussion with these Societies (and perhaps additional societies) after the CoMC meeting in April.

An appropriate staff member at each society was contacted either via an email survey or telephone to gather this preliminary information.

The nine societies were:

American Anthropological Assn.
American Astronomical Society
American Physical Society
American Political Science Assn
American Sociological Assn
American Statistical Assn
Federation of American Societies for Experimental Biology
International Studies Assn.
Society for Industrial and Applied Mathematics

The Federation of American Societies for Experimental Biology is an umbrella organization for many societies. This organization was eliminated from the survey since they could not answer for just one society. The American Physical Society did not respond either via email or the phone.

The survey questions were about meetings being offered by the individual societies to their members. Asked were questions about what type of meetings they offered, how many, the registration fees and exhibit costs. We also attempted to find out what percent of the society's total income is received from meetings. After reviewing the answers to this question, we decided that we would need to go back and ask this question again, via the phone. We did ask what the annual revenue was from their national meeting.

The attached excel report is a preliminary report on our findings. The department will continue to follow up this survey with additional questions that come out of the CoMC meeting. We will also follow up with similar questions to some other societies including American Physical Society.

	American Astronomical Society	American Sociological Assn	SIAM	American Political Science Association	American Anthropological Assn	AMS	International Studies Association	American Statistical Assn
GENERAL:								
1. Total Membership:	6,200	11,000	8,000	14,000	11,000	28,400	3,000	18,000
Number of meetings per year in each of the following categories:								
1. National	2	1	1	1	1	1	1	1
2. Regional/Sectional Meetings		7	4	6-8 committee mtgs	4 to 6	8	6 or 7	2
3. Specialized Workshops			4	1	35	1	2	
4. Short Courses			3	20-25 during annual mtg				20
2. Average attendance at the meetings per year:			80%	90%	95%		80%	
1. National	600-1,000 spring 600-2,000 winter	5,500	500-1,000	6,000-7,000	5,000	4,500	2,700	5,000
2. Regional/Sectional Meetings	100	100		8-35	150	300	50 to 150	
3. Short Courses				10-50		100		100 each
4. Other								
3. How many days is your annual meeting?	3	5	5	3 1/2 1 day SC/WS	4 1/2	4	4 1/2	5
4. What activities are conducted at the annual meeting?								
Invited addresses	yes	yes	yes			yes		
Workshops		yes	yes	yes	yes		yes	yes
Single track sessions			yes					
Concurrent sessions	8	yes	yes	55	yes	35	35	yes
Technical field trips								
Short Courses			yes	yes		yes		yes
Pre/post Conference		yes			yes	yes		
Other (posters, job center)	posters, job center	yes: panels, posters	SIAG (SIAM Activity Group) Conference runs concurrently	posters, gov comm, panels, job placement service	posters	panels	panels, posters	posters, panels
REGISTRATION:								
1. Average member preregistration and on-site registration fees for annual meetings?	$245/$310	$130/$165	$275/$355	$120/$151	$165/$195	$193/$251	$125/$150	$225/$295
2. Average nonmember preregistration and onsite registration fees?	$330/$408	$240/$295	$385/$465	$225/$280	$240/$295	$299/$389	$150/$175	$330/$385
3. What is included in the registration fee?								
Meeting publication	yes	yes	yes	yes	yes	yes		

	American Astronomical Society	American Sociological Assn	SIAM	American Political Science Association	American Anthropological Assn	AMS	International Studies Association	American Statistical Assn
Luncheon			yes					
Reception/banquet	yes sponsored		yes	some recep			yes	
Other (please explain)	coffee breaks		coffee breaks			entrance to exhibits	workshops, entrance to exhibits	2 mixers and entrance into exhibits
4. If you offer sectionals or short courses, what is				done by chapters			varies	
the preregistration member fee?		varies	varies	$15-25		$40		$200
What is the preregistration nonmember fee?						$60		$400
REVENUE:								
1. For national meetings, the total annual revenue is:	$600,000	$986,000		$905,000	$900,000	$665,000		$1,500,000
What percentage of this total annual revenue comes from each of the following?								
Registration fees		75%		57%	90%	75%		
Sponsorship	(locals raise money) $20,000	0		5%	2%	1%		
Program advertising		12%		11%		3%		
Exhibits		12%		21%	8%	20%		
Other components				6%				
EXHIBIT FEES:								
1. The cost of a 10' x 10' booth:	Members: $1100	$1,650	$850	$1,110-$1,390	$1,650	$580-$1,596	$750	$1,600
	2nd booth: $550							
	Nonmembers: $1425							
	2nd booth: $715							
	Gov't: $1250							
	2nd booth: $615							

A Review of the Various Components of the JMM Program and Activities				
	1970	**1993**	**1999**	**2004**
American Mathematical Society				
Scientific Sessions				
Invited Addresses+A53	2	7	6	5
Special Session Topics		22	18	26
Contributed Paper Topics	10	37	27	19
Panel Discussions	0	5	0	2
Colloquium Lectures**	0	3	3	3
Gibbs Lecture	1	1	1	1
Other:	1	2	2	1
Total AMS Scientific Events:	**14**	**77**	**57**	**57**
Social Events	0	2	2	2
Total All AMS Events:	**14**	**79**	**59**	**59**
Mathematical Association of America				
Scientific Sessions				
Invited Addresses	6	4	7	6
Contributed Paper Sessions		12	13	26
Panel Discussions	2	10	17	32
Minicourses		17	16	16
MAA Invited Paper Sessions				4
Poster Sessions		1	7	4
Other-Misc. Scientific Events	2	16	17	15
Total MAA Scientific Events:	**10**	**60**	**77**	**103**
Social Events	1	4	5	5
Total All MAA Events:	**11**	**64**	**82**	**108**
Joint Sessions				
Scientific Sessions				
Invited Addresses	0	4	3	3
Special Sessions	0	2	5	8
Prize Session	0	1	1	1
Panels	0	1	2	1
Poster Session	0	1	0	0
Total Joint Scientific Events:	**0**	**9**	**11**	**13**
Joint Social Events	0	4	3	3
Total All Joint Events:	**0**	**13**	**14**	**16**
Other Societies, etc.				
Scientific Sessions				
Invited Addresses	0	10	11	15
Contributed Paper Session	0	1	4	3
Workshop	0	1	1	1
Panels	1	4	4	4
Sessions	0	5	1	4
Poster Sessions	0	0	2	1
Minisymposia	0	0	0	4
Business Meeting etc.	1	4	4	4
Total Other Scientific Events:	**2**	**25**	**27**	**36**
Total other Social Events	2	5	12	20
Total all Social Events	**3**	**15**	**22**	**30**
** Colloquium Lectures started at the winter meeting in 1973.				

Scientific programs held in the evening (starting on or after 5:00 p.m. and listed in Program)	AMS Sci	MAA Sci	Other Sci
1993 Night Session Totals	**3**	**14**	**4**
1999 Night Session Totals	**1**	**10**	**2**
2004 Night Session Totals	**1**	**8**	**3**

Section 3

Sectional Statistics				
Year	Sectional Location	Invited Addresses	Special Sessions	Contributed papers
2003				
March 14-16, 2003	Baton Rouge, Louisiana	4	13	1
April 4-6, 2003	Bloomington, Indiana	4	21	1
April 12-13, 2003	New York, New York	4	11	1
May 3-4, 2003	San Francisco, California	4	12	1
October 2-4, 2003	Boulder, Colorado	7	16	1
October 11-12, 2003	Binghamton, New York	4	16	1
October 24-25, 2003	Chapel Hill, North Carolina	4	16	1
1999				
March 12-13, 1999	Gainesville, Florida	4	16	1
March 18-21, 1999	Urbana, Illinois	5	17	1
April 10-11, 1999	Las Vegas, Nevada	4	12	1
April 24-25, 1999	Buffalo, New York	5	9	1
September 25-26, 1999	Salt Lake City, Utah	4	7	1
October 2-3, 1999	Providence, Rhode Island	4	10	1
October 8-10, 1999	Austin, Texas	4	16	1
October 15-17, 1999	Charlotte, North Carolina	4	13	1
1994				
March 18-19, 1994	Lexington, Kentucky	4	10	1
March 25-26, 1994	Manhattan , Kansas	4	12	1
April 8-10, 1994	Brooklyn, New York	4	13	1
June 16-18, 1994	Eugene, Oregon	3	5	1
October 27-28, 1994	Stillwater, Oklahoma	4	12	2
November 11-13, 1994	Richmond, Virginia	3	9	1
1990				
March 16-17, 1990	Manhattan, Kansas	4	11	2
March 23-24, 1990	Fayetteville, Arkansas	4	9	1
April 7-8, 1990	University Park, Pennsylvania	4	3	2
April 19-22, 1990	Albuquerque, New Mexico	6	7	1
October 20-21, 1990	Amherst, Massachusetts	4	9	3
November 2-3, 1990	Denton, Texas	4	11	2
November 10-11, 1990	Irvine, California	3	8	1

Section 3

Sectional Statistics				
Year	Sectional Location	Invited Addresses	Special Sessions	Contributed papers
1980				
March 27-29, 1980	University of Colorado, Boulder	2	3	2
April 11-12, 1980	Indiana University, Bloomington	4	8	3
April 17-18, 1980	Benjamin Franklin Hotel, Philadelphia	4	11	4
April 25-26, 1980	University of California, Davis	2	6	2
June 20-21, 1980	Ellensburg, Washington	1 AMS 1 Joint	0	1
October 18-19, 1980	Providence, Rhode Island	4	8	4
October 31-Nov. 1, 1980	University of Wisconsin, Parkside	4	5	3
November 14, 1980	Knoxville, Tennessee	3	3	3
1970				
March 25-28, 1970	The Waldorf-Astoria, NY	4	0	11
April 14-18, 1970	Univ. of Wisconsin, Madison	4	3	10
April 25, 1970	University of California, Davis	2	0	4
June 20, 1970	Pacific Lutheran U, Tacoma WA	2	0	3
October 31, 1970	George Washington U, Wash. DC	2	0	4
November 20-21, 1970	University of Georgia, Athens	3	0	4
November 21, 1970	Caltech, Pasadena	2	0	4
November 28, 1970	University of Illinois, Urbana	2	2	3
1960				
February 18-20, 1960	University of Arizona, Tucson	1	0	3
February 27, 1960	New York University, NY	1	0	3
April 14-16, 1960	Hotel New Yorker, NY	1	0	5
April 22-23, 1960	Shoreland Hotel, Chicago, IL	2	0	4
April 21-23, 1960	University of California, Berkeley	1	0	4
June 18, 1960	Montana State Univ, Missoula	1	0	1
October 22, 1960	Coll. Of the Holy Cross, Worc. MA	1	0	2
November 18-19, 1960	Vanderbilt Univ, Nashville, TN	1	0	3
November 19, 1960	Caltech, Pasadena	1	0	5
November 25-26, 1960	Northwestern Univ, Evanston IL	1	0	3

Introduction to the Financials for Meetings

The tables presented in pages 2 through 5 provide high level financial views of the meetings activities of the Society. In most cases the information in the tables is a straightforward display of revenue and expenses for each of the major areas of meeting's activities. Page 2, "Overall Meetings Activities," includes two lines for indirect costs which do not appear in the remaining tables: *Divisional indirect* and *General and administrative overhead*.

The Divisional indirect line reflects the assignment to Meetings activities of a portion of the costs of the Meetings and Professional Services Division Department (MPS). This department holds the personnel and operating costs of the AED for this division and his direct support staff, together with other costs allocated to the MPS department, e.g. physical plant costs and computer facilities and services costs. The cost for the MPS department is then distributed across all the other departments and projects within the Division according to the total expenses for each. Since the AED for the division spends a significant portion of his time working with the Meetings and Conferences Department (MCD) on its activities, an allocation of the costs for his department is natural.

The General and Administrative overhead line reflects a similar assignment to the Meetings activities of a portion of the pool of costs for the Fiscal Department, the Executive Director Department, and Society governance, the primary components of the Society's General and Administrative overhead. The activities within the MCD require a significant amount of support from the Fiscal Department, the ED spends a portion of his time in oversight of the activities of the department (especially the national meeting), and the Secretary and Associate Secretaries (part of governance costs) spend very significant amounts of their time on meetings activities. The General and Administrative overhead is distributed across all the other AMS departments and projects according to the total expenses for each.

Overall Meetings Activities
Financial Analysis
In 1000's

	1996	1997	1998	1999	2000	2001	2002	2003
Total meetings-related revenues	729	684	656	793	915	867	873	944
Total meetings-related expenses (1)	724	759	652	754	878	690	789	838
Net	**5**	**(75)**	**4**	**39**	**37**	**177**	**84**	**106**
Indirect costs:								
Divisional indirect	40	45	34	35	26	32	30	33
General and administrative overhead	103	106	99	115	116	104	114	137
Net after indirect costs	**(138)**	**(226)**	**(129)**	**(112)**	**(106)**	**41**	**(60)**	**(64)**

Meetings-related activities in this analysis do not include any grant-supported meetings, such as SRC's. Since these break-even or show a small loss each year, and a large % of the costs is participant travel, their exclusion is considered appropriate for the purpose of this analysis.

(1) Identifiable direct costs of these projects, which include allocated costs.

Joint Winter Meeting
Financial History

	Orlando 1996	San Diego 1997	Baltimore 1998	San Antonio 1999	DC 2000	New Orleans 2001	San Diego 2002	Baltimore 2003
Meeting revenue	430,996	509,062	518,366	517,817	606,479	655,827	619,002	683,054
Operating expenses	129,248	165,998	169,713	121,657	169,585	191,302	172,765	210,177
Allocated expenses	198,305	237,468	264,429	290,487	284,387	280,463	309,974	342,764
Net for meeting	**103,443**	**105,596**	**84,224**	**105,673**	**152,507**	**184,062**	**136,263**	**130,113**
Add: Net from Exhibits	36,942	27,290	42,158	43,412	56,374	65,254	60,786	53,317
Net for meeting and exhibits	**140,385**	**132,886**	**126,382**	**149,085**	**208,881**	**249,316**	**197,049**	**183,430**
Total Registered Attendance	4,404	4,379	4,571	4,405	4,963	5,134	4,665	5,087

Page 3

Section 4

Financial History - Sectional Meetings

Description	1996	1997	1998	1999	2000	2001	2002	2003
Spring Meetings:								
Total revenues	23,992	28,136	30,335	34,445	25,800	34,775	36,065	40,910
Total operating expenses	10,706	11,696	16,797	10,172	13,214	15,018	19,299	22,072
Total allocated expenses	37,200	42,232	42,513	35,093	29,080	29,943	40,759	36,808
Net	**(23,914)**	**(25,792)**	**(28,975)**	**(10,820)**	**(16,494)**	**(10,186)**	**(23,993)**	**(17,970)**
Fall Meetings:								
Total revenues	32,454	33,948	24,719	28,430	43,421	31,220	39,785	35,215
Total operating expenses	11,246	11,974	12,149	14,386	12,855	19,320	14,106	20,824
Total allocated expenses	42,529	46,175	29,915	28,353	31,672	28,831	38,169	28,431
Net	**(21,321)**	**(24,201)**	**(17,345)**	**(14,309)**	**(1,106)**	**(16,931)**	**(12,490)**	**(14,040)**
Combined:								
Total revenues	56,446	62,084	55,054	62,875	69,221	65,995	75,850	76,125
Total operating expenses	21,952	23,670	28,946	24,558	26,069	34,338	33,405	42,896
Total allocated expenses	79,729	88,407	72,428	63,446	60,752	58,774	78,928	65,239
Net	**(45,235)**	**(49,993)**	**(46,320)**	**(25,129)**	**(17,600)**	**(27,117)**	**(36,483)**	**(32,010)**
Number of sectionals held	7	9	8	8	8	8	8	7
Non-Member Reg fee	45	45	45	45	45-60	60	60	60
Member Reg fee	30	30	30	30	30-40	40	40	40
Number of attendees	2,019	2,242	1,965	2,261	2,106	1,848	2,631	2,211

Section 4

Meetings Focused Planning
International Meetings

	1996	1997	1998	1999	2000	2001	2002	2003
1206 - Jt Int'l Mtg	BeNeLux	South Africa		Melbourne	Odense & China	Lyons	Pisa	
Revenues	-	-	-	-	-	-	-	-
Operating Expenses	5,024	3,992	-	8,423	16,070	7,123	10,856	13,950
Allocated Expenses	1,650	4,633	-	2,510	2,971	3,563	3,005	1,209
Net	(6,674)	(8,625)	-	(10,933)	(19,041)	(10,686)	(13,861)	(15,159)
3253 - Jt Mtg - SMM		Oaxaca		Denton		Morelia		
Revenues	-	-	-	29,597	-	-		
Operating Expenses	-	12,443	-	20,168	-	10,972		
Allocated Expenses	-	7,460	-	18,311	-	1,593		
Net	-	(19,903)	-	(8,882)	-	(12,565)		

Page 5

Section 4

Factors affecting sectional meetings expenses.

Expenses for sectional meetings include supplies, printing, space charges (occasionally), a stipend for the host institution, travel, and staff labor. Travel is paid for staff, the associate secretaries, and invited speakers. Often, travel includes site visits in advance of the meeting itself. On a few occasions, more than one trip to the site must be made. Expense for speaker travel can vary significantly from meeting to meeting.

The largest expense is usually staff labor, charged at our standard hourly rate and typically accounting for about 70% of the expenses. These costs can vary significantly from meeting to meeting for a number of reasons. A three-day meeting requires at least five days of staff time for the meeting, including travel and preparation. When the number of speakers increases, extra time is required to process abstracts and to make arrangements and deal with organizers. When large numbers of special session abstracts are rejected, these must be moved to contributed paper sessions. When attendance is large, extra time is required for accounting after the meeting (especially in processing hundreds of credit card transactions).

Some meetings require AMS staff to handle scheduling of sessions. Others require staff time for trouble shooting local arrangements (for example, when hotel accommodations are in short supply). Almost all meetings require special handling for speakers and organizers, who want extra time for sessions or help with abstracts or reassurance about equipment.

When local organizers provide the appropriate information about hotels, transportation, and local dining, the Meetings Department staff must help them organize it – a relatively simple job. When local organizers do not provide the information (or provide only part of it), the staff must step in to produce it for them.

Some of the drop in recorded expenses between 1997 and 1998 to 1999 through 2001 is due to the implementation of online submission of abstracts between 1998 and 1999. This resulted in reduced staff time to process abstracts submitted by paper and in email.

The increase in expenses for 2002 is, in part, the results of two sectional meetings held jointly with MAA, one much larger than usual and both more complex. Registration fees for these joint meetings were negotiated with MAA and were lower than AMS's standard fees. In addition, 2002 failed to have the good fortune of having a couple of break-even sectionals as had occurred in the each of the previous three years.

Jim Maxwell
Associate Executive Director
April 1, 2004

Section 5: Background for a discussion of the AMS-IMS-SIAM Summer Research Conferences

The AMS's Summer Conference Series. Through 1997 the AMS managed three distinct, longstanding, annual summer conference series: The AMS Summer Research Institutes (Institutes), the AMS-SIAM Summer Seminars in Applied Mathematics (Seminars), and the AMS-IMS-SIAM Summer Research Conferences (SRCs). The Institutes began in 1953, were three weeks long, and attendance usually ranged between 125 and 200, with occasional institutes that exceed 350. The programs of the Institutes offered an overview of current state of research in a major areas of mathematics. The most recent Institute was held in 1999. Recently a proposal was submitted to NSF to support an institute in Algebraic Geometry in the summer of 2005.

The Summer Seminars began in 1957, were two weeks long, and attendance ranged between 75 and 150. The programs of the Seminars usually included a first week whose focus was on bringing young mathematicians and established mathematicians that were non-specialist to the forefront of an area of applications. The second week was devoted to presentations at the frontier of current research. The last Seminar was held in 1996.

The Summer Research Conferences (SRCs) are a series of small one-week conferences held each summer on varying topics in mathematics, applied mathematics and statistics. The AMS initiated the series in 1982 and SIAM and the Institute of Mathematical Statistics (IMS) joined as co-sponsors soon afterwards. The AMS has managed the series since its start, supporting the conference selection process, arranging for sites for the conferences, and managing all the logistical arrangements for each conference. The conferences have been funded primarily by grants from NSF with occasional supplementary funding for a specific conference from other federal agencies. Proposals are submitted to the AMS and conference topics are selected by a committee whose members are appointed by the three societies (the Selection Committee). Conferences to be held in the summer of year N are selected from among proposals submitted in February of year N-1.

From their start until the early 1990's, ten conferences were held each summer, reduced to just six conferences in a year with an International Congress. Until 2000, the conference site rotated yearly between locations in the eastern, midwestern, and western US. During the 1990's the number of proposals submitted for consideration for the SRCs declined and the number of conferences held declined accordingly. (See Table 1.)

Table 1: Number of SRC Proposals Submitted, Approved, and Proceedings Published

	92	93	94	95	96	97	98	99	00	01	02	03	04	05
Submitted	17	10	7	7	7	7	5	9	7	14	5	7	6	10
Approved	9	7	6	7	7	7	5	7	6	7	5	6	5	6
Proceedings	4	4	1	5	4	4	4	5	5	6	2	3	-	-

<u>Current Version of the SRCs.</u> During 1998 the AMS and SIAM submitted a proposal for a modified version of the traditional SRCs, modified to include not only small one-week conferences but occasional, longer and larger conferences. This allowed for the possibility that proposals along the lines of the AMS Institutes and the AMS-SIAM Seminars could be included within the "new" SRCs. The proposal provided for the addition of a six-member Scientific Advisory Panel to provide oversight for the series, but the conference proposal review and selection process continued in the hands of the Selection Committee, a committee of twelve mathematicians, six appointed by AMS and three by each of IMS and SIAM. The proposal was funded in 1999 for five years, supporting conferences for the summers of 2000 through 2004. Since the number of conferences held each year has been less than was budgeted, the grant has been extended for a sixth year and will support six conferences for the summer of 2005.

The inclusion of an Advisory Panel within the framework of the SRCs was done in response to "suggestions" from staff within DMS who had required that the SRC proposal be submitted to the research institutes competition underway during 1997-98. Even though the SRCs were finally funded outside the institutes setting, it seemed wise to keep this aspect in the proposal. But the Advisory Panel concept is more natural to a fixed-site institute than to the SRCs: designating specific mathematical theme areas two or three years in advance with proposals solicited almost exclusively in the selected area. With the SRC Selection Committee continuing in its traditional role, the Advisory Panel has not had a major role to play. It did strongly endorse moving the site to a more inviting location, and several of the members have been instrumental in generating some high quality proposals over the past two years.

The conferences were held at Mt. Holyoke College in Hadley, Massachusetts during the summers of 2000, 2001 and 2002. They were moved to the Snowbird Resort outside Salt Lake City for the summer of 2003 and will continue there for the remainder of the current funding cycle.

Lists of the members of the current Selection Committee and Advisory Panel are included in Appendix 1, followed by a list of all the conferences from 2000 through those scheduled for 2005.

<u>Previous COMC Reviews of the SRCs.</u> The SRCs have been a subject of regular review by the Committee on Meetings and Conferences (COMC). In his report to the January 1999 Council, COMC Chair Joel Spencer wrote:

> "The mathematical content of these conferences is not an issue. All who have attended and/or organized such meetings report enthusiastically. Further, the efforts of our Providence office have made organizing relatively easy. Essentially an organizer needs only to determine two things: the scientific program and the amount of support for participants. The AMS Conference Coordinator handles all other aspects concerning logistics and administration of a conference."

And in his report to the January 1998 Council, Spencer, having expressed positive comments on the scientific quality of the conferences, added:

> "The problem is the lack of applications. Over the past three years no proposals were rejected and the committee itself went to considerable effort to get good people to submit proposals.
>
> We are somewhat at a loss to explain the lack of applications. Our general feeling was that it was connected to the great abundance of meetings and workshops that now exist. Both MSRI and IMA run many workshops, as do more specialized centers like DIMACS. Further, there is more opportunity for meetings in other countries. The feeling, though we were not at all certain, was that the AMS program was being crowded out. Then again, perhaps the program has simply run out of steam."

COMC again reviewed the SRCs in 2002. This review reported findings similar to those expressed above. The report of the subcommittee that conducted the review, the CCRS, stated:

> "The CCRS concurs with the 1994 Task Force[1] that the AMS conference program is useful and should be continued, and finds that the SRCs have been quite successful in spite of a steadily low number of proposals submitted. CCRS further finds that while, to a large extent, the conclusions of the 1994 Task Force have been addressed with the re-organization of the SRCs, generating proposals for SRCs is still a problem and diversity in participation is still weak…"

The subcommittee had reviewed demographic data collected on the participants in the 1999, 2000 and 2001 SRCs. The reference to concerns about the "diversity in participation" related to the small number of underrepresented minorities whose attendance was documented. While the numbers were low, in large part it reflects their low numbers within the research community overall. The wide participation of mathematicians in the early stages of their careers was well documented, and the participation of women in the conferences was in line with their proportions within the research community overall. Following this report steps were taken to gather racial information on participants in a more systematic way.

A review of evaluations materials collected from conference organizers and participants provided ample evidence of the very positive impact the conferences had on the research activities of the participants. A selection of the comments received from conference participants over the past three years appears in Appendix 2.

Addressing the Lack of Proposals. As the record of previous reviews of the SRCs show, the lack of proposals has been a constant concern. By the mid-1990's, the members of the Selection Committee were encouraged to recruit proposals, along with members of the Advisory Panel when this group was created in 2000. Without the efforts of some members of these committees, the number of proposals would have been even smaller.

---

[1] An ad hoc committee appointed in 1993 by the AMS President to review the AMS's conference program.

Another possible factor that could contribute indirectly to the lack of SRC proposals is the large number of conferences being held each year. Indeed, there has been a significant number of new outlets for conferences in the past few years. A profile of the average numbers of conferences held annually at the various institutes is provided in Appendix 3, along with an indication of the number of conferences funded directly by the Division of Mathematical Sciences at NSF in recent years.

Efforts to raise the visibility of the SRCs, and thereby increase the number of proposals, have intensified over the past three years. Invitations to submit proposals appear in the member publications of all three sponsoring societies. Added to this traditional means of soliciting proposals, a brochure describing the SRCs and how to submit a proposal are mailed to the AMS leadership and displayed at AMS sectional and national meetings. The brochures, together with a poster featuring the upcoming conferences are mailed each fall to math departments. These same materials are supplied to SIAM and IMS for their use in promoting the conferences. The Meetings page on the AMS web site provides links to information on the straightforward process for submitting a proposal, including several examples of recently successful proposals.

The switch of sites from Mt. Holyoke to Snowbird reflected the conviction of the Scientific Advisory Panel, the Selection Committee, and the AMS staff that problems with Mt. Holyoke were a hindrance to attracting more proposals. While the Mt. Holyoke campus was a very attractive setting and the lecture rooms were excellent, the quality of the housing –1970's era dorms without air conditioning – was a problem. The shift to Snowbird has finally paid off: the number of proposals submitted for consideration for the summer 2005 conferences was ten, an significant increase over the past three years.

An Experimental SRC Held in 2003. A new type of conference was incorporated into the lineup for 2003. Modeled on the successful GAEL (Geometrie Algebrique en Liberte) meetings held in Luminy, the conference participants included approximately 55 "young researchers" (individuals no more than three years beyond the Ph.D.) and five established researchers, all from the field of commutative algebra. The program consisted of half-hour talks by 32 of the recent PhD's, supplemented by five 50-minute lectures delivered by the established researchers. Feedback from the participants was very positive, and a brief summary is provided in Appendix 4, followed by a report from the conference organizers.Another conference of this same type is scheduled for 2004 in the area of algebraic geometry.

The lineup of conferences for 2005 has just been determined, and it includes yet another type of conference new to the SRCs. There will be a two-week long "Summer School" whose participants will be 30 to 40 advanced graduate students. The workshop program will center on "local cohomology and its interactions with algebra, analysis, and geometry".

Some Possible Options Going Forward.

1. Submit a renewal proposal that makes refinements to the way the SRCs are currently working. One could write into the proposal that there would be one or two sessions each summer devoted to advancing the careers of emerging researchers. These conferences could take the form of the 2003 conference for postdocs in commutative algebra or the planned 2005 summer school for advanced graduate students. Particular care would need to be given to recruiting quality proposals for these type of conference. One possible approach would be to have the Advisory Panel and the Selection Committee choose mathematical areas to target for such a conference along with potential organizers that could be approached about submitting a proposal. The targeted areas would need to be selected at least two years in advance of the conferences to ensure sufficient time to recruit organziers. Under this option, room for three or four community-generated one-week conferences would continue to be available.

2. Shift the focus of the SRCs exclusively to workshops devoted to jump starting the careers of emerging researchers. As described in Option 1, recruitment of quality proposals for these workshops would be essential. The role of a merged version of the Advisory Panel and the Selection Committee would become one of soliciting workshop proposals rather than selecting from a pool of unsolicited proposals.

3. "Fold the tent" on summer research conferences. Taking this option would mean the end to one of the long established ways that AMS has served the research community as it worked "to further the interests of mathematical research and scholarship…"

Jim Maxwell
Associate Executive Director
April 8, 2004

Navigating the Appendices

Appendix Number	Title	Page Number
1	Members of the Selection Committee and Advisory Panel and Conferences for 2000 to 2005	7
2	SRC Participant Surveys	13
3	Conference Activity Outlets for U.S. Mathematicians	18
4	Reactions to the 2003 Young Researchers SRC	19
5	Status of Proceedings from 1990 – 2004 SRCs	22
6	AMS Summer Research Institutes, 1953 – 1999	31

Appendix 1: Members of the Selection Committee and Advisory Panel; List of Conferences 2000 to 2005

1. Members of the current SRC Selection Committee

Bjorn Birnir
(2006) SIAM Representative
Department of Mathematics
University of California at Santa Barbara

Tom DiCiccio
(2004) IMS Representative
Department of Social Statistics
Cornell University

Ron Donagi
(2004) AMS Representative
Department of Mathematics
University of Pennsylvania

Michael D. Fried
(2006) AMS Representative
Department of Mathematics
University of California Irvine

William Mark Goldman
(2005) AMS Representative
Department of Mathematics
University of Maryland

Ilse Ipsen
(2006) SIAM Representative
Department of Mathematics
North Carolina State University

Tasso Kaper
(2006) SIAM Representative
Department of Mathematics
Boston University

Ludmil V Katzarkov
(2007) AMS Representative
Department of Mathematics
University of California Irvine

Charles Kooperberg
(2006) IMS Representative
Fred Hutchinson Cancer Research Center
Seattle, Washington

Steven Lalley
(2005) IMS Representative
Department of Statistics
University of Chicago

Hema Srinivasan
(2004) AMS Representative
Department of Mathematics
University of Missouri

J. T. Stafford
(2004) AMS Representative
Department of Mathematics
University of Michigan

Kenneth Stephenson
(2004) AMS Representative and Chair
Department of Mathematics
University of Tennessee

2. Members of the current SRC Scientific Advisory Panel

Sun-Yung Alice Chang
(2005) AMS Representative
Department of Mathematics
Princeton University

Percy Alec Deift
(2004) SIAM Representative
Department of Mathematics
Courant Institute

Persi Diaconis
(2005) IMS Representative
Department of Statistics
Stanford University

Prem K. Goel
(2004) IMS Representative
Department of Statistics
Ohio State University

Bart Ng
(2006) SIAM Representative
Department of Mathematics
Indiana University – Purdue University at
Indianapolis

James Carlson
(2006) AMS Representative
Clay Mathematics Institute

3. List of conference titles and organizing committees of 2000-2005 conference

Conferences run five days unless noted otherwise.

2005:

Quantum Topology - Contemporary Issues and Perspectives

> Louis H. Kauffman (co-chair), University of Illinois at Chicago
> Jozef H. Przytycki (co-chair), George Washington University
> Fernando J. O. Souza (co-chair), University of Iowa

Mathematical Modeling of Novel Optical Materials and Devices

> Peter Kuchment, Texas A&M University
> Leonid Kunyansky, University of Arizona
> Shari Moskow, University of Florida
> Fadil Santosa, University of Minnesota

Quantum Graphs and Their Applications

> Gregory Berkolaiko, Texas A&M University
> Robert Carlson, University of Colorado, Colorado Springs
> Stephen Fulling, Texas A&M University
> Peter Kuchment (Chair), Texas A&M University

Summer School in Commutative Algebra: Local Cohomology and Its Applications (two weeks)

> Anurag K. Singh, Georgia Institute of Technology
> Uli Walther, Purdue University

Control Methods in PDE-Dynamical Systems

> Fabio Ancona, University of Bologna
> Irena Lasiecka, University of Virginia
> Walter Littman, University of Minnesota
> Roberto Triggiani, University of Virginia

Competitive Mathematical Models of Disease Dynamics: Emerging Paradigms and Challenges

  Carlos Castillo-Chavez, Arizona State University
  Dominic P. Clemence (co-chair), North Carolina A&T State University
  Abba B. Gumel (co-chair), University of Manitoba
  Trachette Jackson (co-chair), University of Michigan
  Ronald E. Mickens, Clark-Atlanta University

2004:
String Geometry

  Katrin Becker, University of Utah
  Melanie Becker, University of Maryland
  Aaron Bertram, University of Utah
  Paul Green, University of Maryland
  Benjamin McKay, University of Utah

Complex Dynamics: Twenty-Five Years after the Appearance of the Mandelbrot Set

  Eric Bedford, Indiana University
  Brodil Branner, Technical University of Denmark
  Robert L. Devaney (Co-chair), Boston University
  Linda Keen (Co-chair), CUNY, Herbert H. Lehman College
  Mikhail Lyubick, SUNY, Stony Brook

Algebraic Geometry: Presentations by Young Researchers

  Herb Clemens, Ohio State University
  Rob Lazarsfeld, University of Michigan
  Ravi Vakil, Stanford University

Representations of Algebraic Groups, Quantum Groups, and Lie Algebras

  Brian J. Parshall (chair), University of Virginia
  Georgia Benkart, University of Wisconsin, Madison
  Jens C. Jantzen, Aarhus University, Denmark
  Zongzhu Lin, Kansas State University
  Daniel K. Nakano, University of Georgia

Gaussian Measure and Geometric Convexity (six days)

  Keith Ball, University College London
  Vitali Milman, Tel Aviv University
  Alain Pajor, University of Marne-la-Vallee
  Rolf Schneider, University of Freiburg
  Rick Vitale (chair), University of Connecticut
  Wolfgang Weil, University of Karlsruhe

2003:
Spectral Theory and Inverse Spectral Theory for Jacobi Operators

  Kenneth T.-R. McLaughlin, University of North Carolina, Chapel Hill
  Xin Zhou, Duke University

Machine Learning, Statistics and Discoveries

John D. Lafferty, Carnegie-Mellon University
Xiaotong Shen, Ohio State University
Joseph S. Verducci, Ohio State University

Mathematics of Finance

Wendell H. Fleming, Brown University
Jean-Pierre Fouque, North Carolina State University
Bozenna Pasik-Duncan, University of Kansas
Stan R. Pliska, University of Illinois at Chicago
K. Ronnie Sircar, Princeton University
George Yin (Chair), Wayne State University
Qing Zhang (Co-chair), University of Georgia

Hydrodynamic Stability and Flow Control

Peter J. Schmid, University of Washington
James J. Riley, University of Washington

Integer Points in Polyhedra, Geometry, Number Theory, Algebra, Optimization

Alexander Barvinok, University of Michigan
Matthias Beck (Co-chair), SUNY Binghamton
Christian Haase (Co-chair), Duke University
Bruce Reznick, University of Illinois, Urbana-Champaign
Michele Vergne, Ecole Polytechnique Paris
Volkmar Welker, Philipps-Universitat Marburg

Commutative Algebra: Presentations by Young Researchers

Jurgen Herzog, Universitat Essen
Craig Huneke, University of Kansas
Roger L. Wiegand, University of Nebraska

2002:
Groups, Representations and Cohomolgy (Seven days)

Alejandro Adem (Co-chair), University of Wisconsin, Madison
Jon Carlson (Co-chair), University of Georgia
Geoff Mason, University of California, Santa Cruz
Brian Parshall, University of Virginia
Stephen Smith, University of Illinois at Chicago
Sarah Witherspoon, University of Massachusetts

Advances in Quantum Dynamics

B. Mitchell Baker, US Naval Academy
Palle E.T. Jorgensen, University of Iowa
Paul S. Muhly, University of Iowa
Geoffrey L. Price, US Naval Academy

Waves in Periodic and Random Media

> David Dobson, Texas A&M University
> Alex Figotin, University of California, Irvine
> Peter Kuchment (Co-chair), Texas A&M University
> Stephanos Venakides (Co-chair), Duke University

Graph Coloring and Symmetry

> Karen Collins, Wesleyan University
> Danny Krizanc, Wesleyan University
> Alexander C. Russell, University of Connecticut

Emerging Issues in Longitudinal Data Analysis

> Jane-Ling Wang, University of California, Davis
> Marie Davidian, North Carolina State University
> Xihong Lin, University of Michigan

2001:
Statistics in Functional Genomics

> Francoise Sillier-Moiseiwitsch (Chair), University of North Carolina, Chapel Hill
> Richard Simon, National Cancer Institute, NIH
> Kay Tatsuoka, GlaxoSmithKline Pharmaceuticals

Fluid Flow and Transport in Porous Media: Mathematical and Numerical Treatment

> Zhangxin (John) Chen (Co-chair), Southern Methodist University
> Richard Ewing (Co-chair), Texas A&M University
> Jose Lage, Southern Methodist University
> Raytcho Lazarov, Texas A&M University

The Legacy of Inverse Scattering Transform in Nonlinear Wave Propagation

> Jerry Bona, University of Texas at Austin
> D.J. Kaup, Clarkson University
> S. Roy Choudhury, University of Central Florida

Harmonic Analysis (two weeks)

> William Beckner, University of Texas at Austin
> Alexander Nagel, University of Wisconsin, Madison
> Andreas Seeger, University of Wisconsin, Madison
> Hart Smith, University of Washington

Lusternik-Schnirelmann Category in the New Millennium

> Octav Cornea, Universite de Lille
> Gregory Lupton, Cleveland State University
> John Oprea, Cleveland State University
> Daniel Tanre, Universite de Lille

Fast Algorithms in Mathematics, Computer Science and Engineering

Franklin Luk, Rensselaer Polytechnic Institute
Volker Mehrmann, TU Chemnitz
Vadim Olshevesky (Chair) Georgia State University
Robert Plemmons, North Carolina State University

2000:
Symbolic Computation: Solving Equations in Algebra, Geometry and Engineering

Edward Green, Virginia Tech
Serkan Hosten, Georgia Mason University
Reinhard Laubenbacher, New Mexico State University
Victoria Powers, Emory University

Dispersive Wave Turbulence

Paul Milewski, University of Wisconsin
Leslie Smith, University of Wisconsin
Esteban Tabak, New York University
Fabian Waleffe, University of Wisconsin

Radon Transforms and Tomography

Leon Ehrenpreis. Temple University
Adel Faridani, Oregon State University
Fulton B. Gonzalez, Tufts University
Eric L. Grinberg, Temple University
Eric Todd Quinto (Chair), Tufts University

Noncommutative Geometry (two weeks)

Alain Connes (Chair), IHES
Nigel Higson, Penn State University
John Roe, Penn State University
Guoliang Yu, University of Colorado

Bayes Frequentist and Likelihood Inference: A Synthesis

Gauri Sankar Datta (Co-chair), University of Georgia
Nancy Reid (Co-chair), University of Toranto
Dongchu Sun (Co-chair), University of Missouri
James Berger, Duke University
Malay Ghosh, University of Florida
Elizabeth Slate, Cornell University

Algorithms, Computational Complexity and Models of Computation for Nonlinear
and Multivariate Problems
Eugene Allgower, Colorado State University
Kurt Georg, Colorado State University
Christopher Sikorski (Chair), University of Utah
Frank Stenger, University of Utah

Appendix 2: SRC Participants Surveys

Participants at each of the 2000, 2001, 2002 and 2003 SRCs were asked to complete an email survey approximately a year following their conference. Response rates improved each year, from 26% for 2000 to 46% for 2003. Highlights of these surveys are provided below.

Question 1: On a scale from 1 (weak) to 5 (very strong), what was the level of influence of the conference on your career and research?

Frequency of responses: (1, 2, 3, 4, 5) = (4%, 9%, 28%, 37%, 23%)

Comments:

2000 conferences

This conference was innovative and ahead of its time, in that it attempted to bring two very different branches of statistics together to promote better cross-area research. I got a lot of ideas about what should be changed or eliminated in future activities of this type.

The answer here is definitely 5. The main reason for this is that I had studied NCG in more or less isolation, and the conference showed me a) a broader perspective into which my studies fit and b) confirmed that I had understood what was going on and was not crazy.

2001 conferences

I am new in the area of this conference; I am impressed by the caliber of researchers that were represented at this conference; and I am continuing work in the area motivated at least in part by the quality of the people and the quality of the research problems in the area.

Hard to say, since I'm still a graduate student and I was only in my third year when attending the conference. However, I was exposed to a wealth of interesting ideas, and if the question can be interpreted as how useful this could be in the future, I would definitely enthusiastically assign 5.

2002 conferences

The main purpose of this conference seemed to promote research on the irreversible quantum dynamics in the framework of C*-algebras. The subject is physically important and mathematically interesting, though it has not been widely studied, when compared with the reversible dynamics. Therefore the conference is timely and well organized. I think, it will stimulate a substantial progress on the subject.

2003 conferences

My participation in this conference had a very strong influence on my mathematical career. I received a job offer from an institution one of whose professors was present at my presentation.

Question 2: Was the direction of your research changed, broadened or clarified by participation in conference? If so, describe briefly.

Frequency of responses: (Yes, No) = (44%, 56%)

Comments:

2000 conferences

Direction of research broadened, to understand noncommutative geometry better and its possible relevance to number theory.

I had started to work on problems that were new to me (numerical methods for pathfollowing and bifurcation of large-scale problems) and the conference gave me a valuable opportunity to meet researchers in this area. I received valuable input for my continued work in the area.

The workshop had the effect of improving my research in a very direct was: I was challenged during my lecture by the claim by some participants that the algorithm I was proposing could not be guaranteed to complete in a finite time, because in principle it required a search over an interval of real numbers. I was able at the meeting to modify the algorithm to completely overcome that objection.

It was broadened and I was happy to meet many young PhD's and learn about their research.

I had to opportunity to discuss with leading-edge researchers in Computer Algebra during the conference and also meet some of the current PhD students that do very interesting work. I got an idea of new important developments too.

Somewhat. We at GE had been hoping to use the Helgason-Ludwig range conditions to improve image quality, and now better understand that is not directly possible. However, we still hope to use them to flag inconsistent data.

Yes. The conference introduced me to ideas on the frontier between number theory and noncommutative geometry. Having a reasonable background in both areas, I was able to profit from this and am now doing work in this direction. Without the conference, I probably would not have taken up these problems.

This was a good chance for advertisement of my research and to come into contact with American algebraists. Since I am working interdisciplinary giving a talk to an algebraic oriented audience forced me to see things more abstract, precise and dense. My research profited a lot from that. I got several motivations for new or different research directions from the talks.

2001 conferences

Yes, I learned of Jack polynomials and that the challenges that the researchers face with them are the same as the challenges that we had faced with the Schur functions. As a result I received a postdoctoral research appointment at MIT to develop things further.

As a researcher I am quite isolated in my University. At the conference I met several people who could understand and appreciate the work I do. They provided a great deal of encouragement in the pursuit of what I thought were very risky venues of research.

As a senior participant and one who has worked on LS category from time to time over the last 25 years, I must say that my interest in the subject was very much renewed by this excellent conference.

2002 conferences

As the principle organizer of the conference my goal was to help to assemble for the first time a growing group of experts and graduate students who are working in this relatively new area of operator algebras. Because of this conference and the proceedings volume to follow, this area now has a firm foundation upon which to build.

2003 conferences

It made me more committed to explore Riemann-Hilbert Problems in more details. I am currently writing a book on orthogonal polynomials and after the conference I decided to add a chapter on applications of Riemann-Hilbert Problems to orthogonal polynomials.

I would say that it changed my perspective on Combinatorics and it also enriched my panorama on Mathematics in general.

The direction of my research was broadened by interacting with a wide range of other young people in my field. I'm still easing into the process of working with others on various projects, but I expect it to lead to future collaborations.

Question 3: Have there been papers published (submitted or in preparation) fostered by your participation?

Frequency of responses: (Yes, No) = (67%, 33%)

Question 4: Have you undertaken other collaborations as a result of the conference?

Frequency of responses: (Yes, No) = (37%, 63%)

Additional Comments

2000 conferences

Had it not been for this conference, it would have been practically impossible for me to present my ideas to such an audience of experts and to receive the kind of feedback I got there.

At some point wine and beer was being served in the dorm (for a fee of course.) I think this was a great idea and others agreed, particularly because the conference was out in the middle of nowhere. The nowhere aspect I think helps everyone to stick around and talk about mathematics, but then having the wine also helps with the social aspect.

I am particularly heartened that there are many young participants interested in symbolic computation and the contribution of differential algebra to that area.

The conference organization was excellent, starting with accommodation arrangements, web page, e-mailing information, book exhibition and so on. The AMS personnel was extremely helpful. The scientific level of the talks was very high. Thank you very much.

The conference was very well organized, both by the scientific organizers and the AMS people. Having everyone at the dorms facilitated communication, as did the evening snacks and drinks.

The conference was well organized with many interesting talks. It paid to attend. The AMS-staff at the conference site was very kind and helpful. The accommodation at the dorms of Mt. Holyoke College was very poor!

This kind of event is very important. I knew no one in this field, and had the opportunity to meet them there. Also, I have made many friendly and profitable connections with postgrad students from many institutions as a result of this conference. These contacts may not have led to significant

collaborations or papers, but then we are still students and I am a long way from the people I met.
[…] Thanks for running this very special conference.

2001 conferences

This request is foolish bureaucracy.

I thought this was the most useful conference I have participated in for many years! Reasons: i) The participants were dedicated and top   notch. I met a number of contacts with whom I keep in touch. Ii)The chance to discuss at meals, breaks, etc added greatly to my   appreciation and understanding of the material presented.

Other comments: excellent atmosphere; very well run; a great reflection of the liveliness and active interchange within the harmonic analysis community; a great chance for someone on the periphery to experience work at the center.

Because almost everyone was actively working in the same area, I had many long and fruitful discussions that would not have been possible at a larger conference. I would recommend others to attend the same conference in the future.

These types of conferences are very valuable to both junior and senior researchers. The junior ones have the chance to meet more established mathematicians, let their research known and more importantly start a collaboration which is crucial during the first year after PhD. The senior ones have the chance to interact with their peers, learn new directions opened in other fields and keep their research up to date. I strongly support these "summer schools"!

2002 conferences

My impression is that it went extremely well-lots of talented young people along with the "old hands", and the scientific level was very high.

I am currently an undergraduate senior (planning on attending graduate school in combinatorics next year), and this conference has greatly influenced my mathematical career. I really enjoyed the wide variety of topics presented at an introductory level, and since the conference I have done a great deal of further reading. Working with others on conjectures presented during talks and the problem sessions was also a great experience. Overall I had an absolutely wonderful, inspiring time and hope the AMS will sponsor more conferences of this sort in the future.

Dormitory accommodations at Mt Holyoke compare poorly to accommodations at other conferences.

The conference was well organized and the academic facilities were excellent. The surroundings: leafy campus, superb sports facilities, also helped create a relaxed atmosphere conductive to the exchange of ideas. My only quibble is that the computing facilities were not up to date and it was difficult to use the public telephones to make international calls.

I had the occasion to see the most recent and important directions in the field. Almost all the best specialist in the field attended the Conference. I had the opportunity to discuss to them and to see a direction for my PhD. It was very important for me to be there.

The conference (and funds from AMS-NSF) are very generous in allowing new PhD's and interested participants from non-research (Teaching) environments to attend. This furthers the (albeit somewhat slower) research possibilities for these groups and enlarges the academic community. In addition, communications between diverse groups of active mathematicians becomes possible.

2003 conferences

I attended not to give a talk but rather to give input (a "report from the front") on the process of searching for jobs after a postdoc, and to provide feedback for the participants on other early-career issues. At Snowbird we had a little evening "bull session" where some folks who had recently gone through the tenure-track job hunt answered questions on early-career issues; what was supposed to be a little half-hour thing ended up lasting about an hour and a half, with almost all the participants attending.

The conference really changed how I think about my potential to do research. This followed in large part from my realization that my peers at large research institutions are also, for the most part, making slow progress. It encouraged me that steady work is worthwhile, even if the results are slow in coming. I hope that my lack of immediate output does not discourage you from funding future participants from teaching schools.

I think the idea of having joint conferences between the pure and applied community is wonderful. I strongly recommend such meetings in the future. I think in the long-term such meetings will benefit both sides a great deal.

I thought it was very beneficial. It was motivating to see the younger mathematicians in my area give talks and interact so much. It showed me first hand how collaboration gets more math accomplished. It was also to here the young mathematicians talk informally about how their careers were progressing. It gave me an idea of what I'd be going through in a few years. I also learned a lot of math.

Among the many conferences which I have attended, I rate this one as among the best. A rather broad range of interests were represented. The lectures were generally quite good and the discussions unusually lively.

Appendix 3: Conference Activity Outlets for U.S. Mathematicians

NSF-Funded Institutes

Institute Name	Startup Year	Estimated Average Nbr. Of One-week Conferences per year
Mathematical Science Research Institute	1982	12
Institute for Mathematics and Applications	1982	11
Center for Discrete Mathematics and Theoretical Computer Science	1989	9
Institute for Pure and Applied Mathematics	2000	12
Banff International Research Station	2003	40
American Institute of Mathemtaics Research Conference Center	2002	10
Statistical and Applied Mathematical Sciences Institute	2002	3
Mathematical Biosciences Institute	2002	5

With the exception of MSRI, the number of one-week conferences reported above is an estimate based on a review of the information on current and past programs taken from the web sites of these institute. The estimate for MSRI was provided by Hugo Rossi based on a review he was already conducting. Most of the institutes also hold some additional workshops that run from one to three days, and a few hold one or two conferences running two weeks. The short workshops do not appear to be not comparable with a one-week SRC.

Other Conferences

The Division of Mathematical Sciences (DMS) at NSF funds a substantial number of conferences each year through grants it makes directly to one or more organizers for each conference. As a means of finding a reliable estimate of the number of these conferences held each year, I analyzed the number of DMS conferences grants that expired during each of the four yearly periods from September 2000 through August 2004. As a general rule, each of these grants supported a single conference held within a year of the grant's expiration date, so the count of grants expiring each yearly period provides an estimate of the number of such conferences held during the period from 2000 through 2003

Period of Grant Expiration	Number of Grants
September 2000 through August 2001	71
September 2001 through August 2002	40
September 2002 through August 2003	91
September 2003 through August 2004	106

Appendix 4: Reactions to the 2003 Young Researchers SRC

1. Excerpt from email from Diane Saxe, AMS Director of Meetings, to David Eisenbud, 21 October 2003:

David,

The comments on the evaluations of the conference, with about a 50% return ratio thanks to Irena Peeva, were excellent.

The facility and location received mostly excellent on the overall comments. Snowbird definitely is a plus. The one criticism was not being able to see all of the screen from the back of the room, but we are working on this.

When asked what aspects of the conference distinguished it from other conference and workshops they had participated in, most responded about the "young participants" or the "focus on young researchers" or "the fact that talks are mainly given by young people. This is a great opportunity" or the "emphasis on young researchers".

These comments were repeated over and over again.

Some other responses were:

- "high quality of talks"
- "the number of young people"
- "the blend of one expository talk by a senior expert combined with shorter talks by young folks was a great format"
- "This was the best conference I have ever attended"
- "Lots of young scientists. That's a really good idea".
- "the people who gave the talks are very young and this is a positive thing"
- "It is very helpful to the junior researchers like us having such an opportunity to get together.."
- "very motivating to keep working hard."
- "rich in information, time well spent, best opportunity for information exchange. Younger people definitely need it."

And one final comment: "I was not looking forward to coming but am so glad I did. I was ready to give up on research but this has made me feel like it's worth continuing to try. It was also rejuvenating in terms of ideas."

Well, that is a good overview of the comments on the program itself. There is definitely an interest in this type of conference.

Any questions, let me know.

Diane

2. Email to Bob Daverman, 27 October 2003:

Date: Mon, 27 Oct 2003 13:18:31 -0600

From: Roger Wiegand <rwiegand@math.unl.edu>

To: Robert Daverman <daverman@math.utk.edu>

CC: Roger Wiegand <rwiegand@math.unl.edu>,
Craig Huneke <huneke@math.ukans.edu>,
Juergen Herzog <mat300@uni-essen.de>,
Donna Salter <dls@ams.org>,
"Wayne S. Drady" <wsd@ams.org>,
Jim Maxwell <jwm@ams.org>,
David Eisenbud <de@msri.org>

Subject: JSRC

Dear Bob,

We know the time is approaching when AMS will decide whether or not to apply for continued funding for the Joint Summer Research Conferences. Having recently organized and participated in such a conference, we want to urge AMS to work aggressively to continue these wonderful events.

The focus of our conference "Commutative Algebra: Presentations by Young Researchers" was on people no more than two or three years beyond the Ph.D. There were 32 half-hour research talks by these "youngsters", as well as five 50-minute expository talks (by L. Avramov, J. Herzog, C. Huneke, I. Peeva and R. Wiegand). The original plan was to have all talks given by young researchers, but the review panel felt strongly that a few expository talks on central themes in commutative algebra would improve the conference. In retrospect, this seems to have been a good idea, and there was absolutely no indication that the younger mathematicians were inhibited by the presence of a few senior mathematicians.

In addition to the 32 research speakers, there were 27 non-speaking participants. We had an overwhelming response to the conference announcements, and it was difficult to keep the number of talks down and the total number of participants below the maximum of 65 negotiated by AMS and Snowbird.

The response from the young participants who contacted us during and after the conference was extremely positive. Confidential evaluation forms were collected from the participants and sent to AMS. While we have not seen the evaluations, we have gotten some feedback from AMS, all of it positive.

Snowbird provided an excellent venue. Lodging was comfortable, the meals were good, the surroundings were beautiful, and AMS representative Lori Melucci did an excellent job working with Snowbird to ensure that everything ran smoothly. About the only negative thing was that the boards and screen were a bit hard to see from the back of the room. It should be possible to correct this in the future.

In short, the conference was a success, and we expect that the interaction among participants will result in many productive collaborations. We believe that conferences like this, with the focus on young mathematicians, are particularly important to the future vitality of the discipline. If AMS decides that it cannot sponsor a full range of JSRCs in the future, we suggest that they sponsor just a few of these "conferences for youngsters" each summer.

One possible model would have one such conference in a given area of mathematics every two years (or perhaps every three years) for 6 years. This would make a great difference in the long run for that area and would also allow flexibility to rotate through the various areas over time. Perhaps a staggered beginning would be appropriate--so that every year there would a couple of "old" ones and the start of some new ones.

Not every area of mathematics would be appropriate for this sort of conference, since one needs a lot of students and postdocs in the area.

We hope these comments are helpful to AMS in its deliberations. Please contact us if you would like further information or suggestions.

Yours sincerely,

Juergen Herzog
Craig Huneke
Roger Wiegand

Appendix 5: Status of Proceedings from AMS-IMS-SIAM Summer Research Conferences, 1990 - 2004

1990

Probability models and statistical analysis for ranking data
Michael A. Fligne and Joseph A. Verducci, Organizers
Did not publish with AMS

Inverse scattering and applications
David Sattinger, Organizer
CONM/122 - published in 1991

Deformation theory of algebras and quantization with applications to physics
Murray Gerstenhaber and James D. Stasheff, Organizers
CONM/134 - published in 1992

Strategies for sequential search and selection in real time
Thomas S. Ferguson and Stephen M. Samuels, Organizers
CONM/125 - published in 1992

Schottky problems
Leon Ehrenpreis and Robert C. Gunning, Organizers
CONM/136 - published in 1992

Logic, local fields, and subanalytic sets
Lou van Den Dries, Organizer
Did not publish with AMS

1991

Motives
Steven Kleiman and Kari Vilonen, Organizers
PSPUM/55 - published in 1994

Inequalities in statistics
Yung L. Tong and Moshe Shaked, Organizers
Published with IMS – Vol. 22 - LNMS

Mathematical aspects of classical field theory
Mark J. Gotay, Jerrold E. Marsden, and Vincent Moncrief, Organizers
CONM/132 - published in 1992

Graph minors
Neil Robertson and Paul Seymour, Organizers
CONM/147 - published in 1993

Theory and applications of multivariate time series analysis
Ruey S. Tsay and Robert H. Shumway, Organizers
Did not publish with AMS

Biofluiddynamics
Angela Y. Cheer and C.P. van Dam, Orgnizers
CONM/141 - published in 1993

Systems of coupled oscillators
Donald G. Aronson, Organizer
Did not publish with AMS

Stochastic modeling and statistical inference for selected problems in Biology
Grace L. Yang and Charles F. Smith, Organizers
Did not publish with AMS

1992

Conformal field theory, topological field theory, and quantum groups
Moshe Flato, James Lepowsky, and Paul Sally, Organizers
CONM/175 - published in 1994

Cohomology, representations and actions of finite groups
Jon F. Carlson, Organizer
Did not publish with AMS

Nielsen theory and dynamical systems
Christopher McCord, Organizer
CONM/152 - published in 1993

The Penrose transform and analytic cohomology in representation theory
Robert J. Baston and Michael G. Eastwood, Organizers
CONM/154 - published in 1993

Wavelets and applications
Charles K. Chui and Stephen Mallat, Organizers
Did not publish with the AMS

Commutative algebra; syzygies, multiplicities and birational algebra
William Heinzer, Craig Huneke, and Judith D. Sally, Organizers
CONM/159 - published in 1994

Change-point problems
Edward Carlstein, Hans-Georg Muller, and David Siegmund, Organizers
Published with IMS – Vol. 23 - LNMS

Control and identification of partial differential equations
H.T. Banks and K. Ito, Organizers
Published with SIAM – PR68

Adaptive designs
Steve Durham and Nancy Flournoy, Organizers
Did not publish with AMS

1993

Multivariable operator theory
Raul E. Curto, Ronald G. Douglas, Joel Pincas, and Norberto Salinas, Organizers
CONM/185 - published in 1995

Distribution with fixed marginals, doubly stochastic measures and Markov ...
Howard Sherwood and Michael D. Taylor, Organizers
Did not publish with AMS

Curvature equations in conformal geometry
Richard Schoen and Sun-Yung A. Chang, Organizers
Did not publish with AMS

Applications of hypergroups and related measure algebra
William Connett, Olivier Gebuhrer, and Alan Schwartz, Organizers
CONM/183 - published in 1995

Spectral geometry
Robert Brooks, Carolyn Gordon, and Peter Perry, Organizers
CONM/173 - published in 1994

Recent developments in the inverse Galois problem
Walter Feit and Mike Fried, Organizers
CONM/186 - published in 1995

Mathematics of superconductivity
Max Gunzburger and John Ockendon, Organizers
Did not publish with AMS

1994

Periodicity and structured homology theories in homotopy theory
Paul Goerss, Hal Sadofsky, and Paul Shick, Organizers
Did not publish with AMS

Bergman spaces and the operators that act on them
Stephen D. Fisher, Sheldon Axler, and Peter Duren, Organizers
Did not publish with AMS

Multidimensional complex dynamics
Eric Beford and John-Erik Fornaess, Organizers
Did not publish with AMS

Moonshine, the monster and related topics
Geoffrey Mason, Chongying Dong, and John McKay, Organizers
CONM/193 - published in 1995

Continuous algorithms and complexity
James Renegar and J.F. Traub, Organizers
Did not publish with AMS

Markov chain Monte Carlo methods
Alan Gelfand, Organizer
Did not publish with AMS

1995

Smooth dynamical systems and dimension theory
Yakov B. Pesin, R. De La Llave, and Howard Weiss, Organizers
Did not publish with AMS

Hamiltonian dynamics and celestial mechanics
R. Devaney, R. McGehee, K. Meyer, D. Saari, C. Williams, and Z. Xia, Organizers
CONM/198 - published in 1996

Matroid theory
Joseph E. Bonin and Brigitte Servatius, Organizers
CONM/197 - published in 1996

Linear and nonlinar CG-related methods
Loyce Adams and John L. Nazareth, Organizers
Did not publish with AMS

Finsler geometry
Shiing-Shen Chern, David Bao, and Zongmin Shen, Organizers
CONM/196 - published 1996

Analysis of multi-fluid flows and interfacial instabilties
Y. Y. Renardy, D. Papageorgiou, S. Sun, and D. Joseph, Organizers
Did not publish with AMS

Electrical impedance tomography
John Sylvester, Gunther Uhlmann, and Michael Vogelius, Organizers
Did not publish with AMS

1996

Optimization methods in partial differential equations
Steve Cox and Irena Lasiecka, Organizers
CONM/209 - Published in 1997

Adaptive selection of models and statistical procedures
Andrew Barron, Peter Bickel, Iain Johnston, and David Donoho, Organizers
Did not publish with AMS

Random matrices, statistical mechanics, and Painleve transcedents
Pavel Bleher and Alexander Its, Organizers
Did not publish with AMS

Classification problems in C*-algebras and dynamics
Marius Dadarlat, Will Geller, and Terry Loring, Organizers
Did not publish with AMS

Stochastic inference, Monte Carlo and empirical methods
A. Gelfand et al, Organizers
Did not publish with AMS

Quantization
L. Coburn, A. Jaffe, M. Rieffel, and L. Takhtajan, Organizers
CONM/214 - published in 1997

Discrete and computational geometry: ten years later
B. Chazelle, J. Goodman, J. O'Rourke, J. Pach, and R. Pollack, Organizers
CONM/223 - published 1998

1997

Applications of curves over finite fields
M. Fried, R. Guralnick, D. Wan, G. Mullen, and M. Zieve, Organizers
CONM/245 - published 1999

Representation theory of real and p-adic reductive groups
J. Adams, D. Barbasch, and A. Moy, Organizers
Did not publish with AMS

Graphical markov models, influence diagrams, bayesian belief networks...
S. Lauritzen, D. Madigan, J. Pearl, M. Perlman, and N. Wermuth
Did not publish with AMS

New developments and applications in experimental design
K. Chaloner, T. O'Brien, W. Rosenberger, and W. Wong, Organizers
Published with IMS – Vol. 34 - LNMS

Statistics in molecular biology
F. Seillier-Moiseiwitsch, P. Donnelly, and M. Waterman, Organizers
Co-publication between AMS/IMS – Vol. 33 - LNMS

Algebraic K-theory
W. Raskind, C. Weibel, H. Gillet, and D. Grayson, Organizers
PSPUM/67 - published 1999

Trends in the representation theory of finite dimensional algebras
B. Huisgen-Zimmermann and E. Green, Organizers
CONM/229 - published 1998

1998

q-Series, Combinatorics and Computer Algebra
M. Ismail and D. Stanton, Organizers
CONM/254 - published 2000

Quantum Cohomology
A. Bertram and Y. Ruan, Organizers
Not publishing

Geometric Group Theory and Computer Science
R. Gilman, Organizer
CONM/250 - published 1999

Mathematical Methods in Invers Problems for Partial Differential Equations
W. Rundell, Organizer
Did not publish with AMS

Nonlinear PDEs, Dynamics and Continuum Physics
J. Bona, K. Saxton, and R. Saxton, Organizers
CONM/255 - published 2000

1999

From Manifolds to Singular Varieties
S. Cappell, R. Lee, and W. Luck, Organizers
Did not publish with AMS

Computability Theory and Applications
P. Cholak, S. Lempp, M. Lerman, and R. Shore, Organizers
CONM/257 - published 2000

Wave Phenomena in Complex Media
A. Klein, M. Aizenman, A. Figotin, S. Jitomirskaya, and S. Venakides, Organizers
Did not publish with AMS

New Directions in Algebraic Topology
N. Kuhn, R. Bruner, A. Elmendorf, J. Greenlees, and J. McClure, Organizers
CONM/271 - published 2001

Structured Matrices in Operator Theory, Numeric Analysis, Control, Signal and Image Processing
R. Brualdi, G. Golub, F. Luk, and V. Olshevsky, Organizers
CONM/280 - published 2001
CONM/281 - published 2001

Differential Geometry Methods in the Control of Partial Differential Equations
R. Gulliver, W. Littman, and R. Triggiani, Organizers
CONM/268 - published 2000

Groupoids in Physics, Analysis and Geometry
A. Ramsay, J. Kaminker, J. Renault, and Alan Weinstein, Organizers
CONM/282- published 2001

2000

Symbolic Computation: Solving Equations in Algebra, Geometry, and Engineering
E. Green, S. Hosten, R. Laubenbacher, V. Powers
CONM/286 - published 2001

Dispersive Wave Turbulence
P. Milewski, L. Smith, E. Tabak, F. Waleffe
CONM/283 - published 2001

Radon Transforms and Tomography
L. Ehrenpreis, A. Faridani, F. Gonzalez, E. Grinberg, E. Quinto
CONM/278 - published 2001

Noncommutative Geometry
A. Connes, N. Higson, J. Roe, G. Yu
Publishing in Clay Mathematics series

Byes Frequentist and Likelihood Inference: A Synthesis
G. Datta, N. Reid, D. Sun, J. Berger, M. Ghosh, E. Slate
Not publishing.

Algorithms and Their Complexity for Nonlinear Problems
E. Allgower, K. Georg, C. Sikorski, F. Stenger
Publishing with Academic Press (approved by SIAM and AMS)

2001

Statistics in Functional Genomics
F. Seillier-Moiseiwitsch, R. Simon, and K. Tatsuoka
Co-pub with IMS. IMS will produce volume.

Fluid Flow and Transport in Porous Media: Mathematical and Numerical Treatment
Z. Chen, R. Ewing, J. Lage, and R. Lazarov
CONM/295 - published 2002.

The Legacy of Inverse Scattering Transform in Nonlinear Wave Propogation
J. Bona, D. Kaup, and S.R. Choudhury
CONM/301 - published 2002.

Harmonic Analysis
W. Beckner, A. Nagel, A. Seeger, and H. Smith
CONM/320 - published 2003.

Lusternik-Schnirelmann Category in the New Millennium
O. Cornea, G. Lupton, J. Oprea, and D. Tanre
CONM/316 - published 2002

Fast Algorithms in Mathematics, Computer Science and Engineering
G. Heinig, F. Luk, V. Mehrmann, V. Olshevsky, and R. Plemmons
CONM/323 - published in 2003. Co-published with SIAM

2002

Groups, Representatives, and Cohomology
A. Adem, J. Carlson, G. Mason, B. Parshall, S. Smith, and S. Witherspoon
Not publishing

Advances in Quantum Dyanmics
B.M. Baker, P. Jorgensen, P. Muhly, and G. Price
CONM/335 – published in 2003

Waves in Periodic and Random Media
D. Dobson, A. Figotin, P. Kuchment, and S. Venakides
CONM/339 – published in 2003.

Graph Coloring and Symmetry
K. Collins, D. Drizanc, and A. Russell
No response to AMS inquiries to publish

Emerging Issues in Longitudinal Data Analysis
J-L. Wang, M. Davidian, and X. Lin
Will publish in a journal

2003

Spectral Theory and Inverse Spectral Theory for Jacobi Operators
K. McLaughlin and X. Zhou
Not publishing

Machine Learning, Statistics, and Discovery
J. Lafferty, X. Shen, and J. Verducci
They have a website instead of a proceedings volume: http://www-2.cs.cmu.edu/~lafferty/ml-stat/

Mathematical of Finance
W. Fleming, J.P. Fouque, B. Pasik-Duncan, S. Pliska, R. Sircar, G. Yin, Q. Zhang
CONM/351 – will be published in 2004

Hydrodynamic Stability and Flow Control
P. Schmid and J. Riley
Publishing with SIAM

Interger Points in Polyhedra, Geometry, Number Theory, Algebra, and Optimization
A. Barvinok, M. Beck, C. Haase, B. Reznick, M. Vergne, and V. Welker
Plan to publish – likely to appear in 2005

Commutative Algebra: Presentations by Young Researchers
J. Herzog, C. Huneke, and R. Wiegand
Not publishing

2004

String Geometry
K. Becker. M. Becker, A. Bertram, P. Green, and B. McKay
Will Publish – likely to appear in 2005

Complex Dynamics: Twenty-Five Years after the Appearance of the Mandelbrot Set
E. Bedford, B. Branner, R. Devaney, L. Keen, and M. Lyubich
Will publish – likely to appear in 2005

Algebraic Geometry: Presentations by Young Researchers
H. Clemens, R. Lazarsfeld, and R. Vakil
Does not plan to publish

Representations of Algebraic Groups, Quantum Groups, and Lie Algebras
G. Benkart, J. Jantzen, Z. Lin, D. Nakano, and B. Parshall
No response yet

Gaussian Measure and Geometric Convexity
K. Ball, V. Milman, A. Pajor, R. Schneider, R. Vitale, and W. Weil
No response yet

Appendix 6: AMS Summer Research Institutes, 1953 – 1999

Dates	Location	Attendance	Title	Organizers
(discontinued)				
July 26–August 13, 1999	University of Washington, Seattle	141	Smooth Ergodic Theory and Applications	Anatole Katok, Rafael de la Llave, Yakov Pesin, Howard Weiss*
1998	None held			
June 30–July 18, 1997	University of Colorado at Boulder	86	Differential Geometry and Control	Guillermo Ferreya, Robert B. Gardner, Henry Hermes, Hector J. Sussman*
July 7 – July 27, 1996	University of Washington, Seattle	177	Cohomology, Representations, and Actions of Finite Groups	Alejandro Adem, Jonathan Alperin, Jon Carlson*, R. James Milgram, Stewart Priddy, Peter Webb
July 9 – 29, 1995	Santa Cruz, California	430	Algebraic Geometry	Robert Lazarsfeld*, Henri Gillet, Janos Kollar, Robert MacPherson, David Morrison, Y.-T. Su
1994	None held			
1993	Cornell University	139	Stochastic Analysis	Mike Cranston, Rick Durrett*, Mark Pinsky
July 6-24, 1992	UC at Santa Barbara	126	Quadratic Forms and Division Algebras: Connections with Algebraic K-Theory	Richard Elman, Burton I. Fein, William Jacob*, Y-T. Lau, Wayne Raskind, Alex Rosenberg*, David Saltman
July 8 – 26, 1991	Pennsylvania State University at University	166	Algebraic Groups and their Generalizations	Igo Frenkel, Eric Friedlander, William Haboush*, Jens Jantzen, Brian Parshall
July 9 - 27, 1990	UCLA	426	Differential Geometry	Robert Bryant, Eugenio Calabi, S. Y. Cheng, Robert E. Greene*, H. Blaine Lawson, H. Wu, S.-T. Yau*
July 10 - 28, 1989	UC Santa Cruz	266	Several Complex Variables and Complex Geometry	Eric Bedford, John D'Angelo, Robert E. Greene, Steven G. Krantz*
July 3 - 23, 1988	University of New Hampshire	228	Operator Theory/Operator Algebras and Applications	William B. Arveson*, Ronald G. Douglas*, Ciprian I. Foias, I. C. Gohberg, Peter D. Lax, Donald Sarason, Barry Simon
July 6- 24, 1987	Bowdoin College	175	Theta Functions	Enrico Arbarello, David Chudnovsky, Gregory Chudnovsky, Leon Ehrenpreis*, Robert Gunning*, Takahiro Kawai, Henry McKean
July 7 - 25, 1986	Humbolt State University	175	Representations of Finite Groups and Related Topics	Jonathan L. Alperin*, Charles W. Curtis, Walter Feit, Paul Fong
July 8 - 26, 1985	Bowdoin College	310	Algebraic Geometry	Spencer Bloch, David Eisenbud*, William Fulton, David Gieseker, Joe Harris, Robin Hartshorne, Shigefumi Mori
July 16 - August 3, 1984	Humbolt State University	61	Geometric Measure Theory and the Calculus of Variations	William K. Allard*, Frederick J. Almgren Jr.*, Enrico Bombieri, Robert M. Hardt, H. Blaine Lawson Jr., Jon T. Pitts, Richard Schoen, William P. Ziemer

* Chairs or Co-chairs of organizing committee if listed.

Section 5

Appendix 6: AMS Summer Research Institutes, 1953 – 1999

Dates	Location	Title	Attendance	Organizers
July 11 - July 29, 1983	UC at Berkeley	Nonlinear Functional Analysis and Applications	203	Haim Brezis, Felix Browder*, Tosio Kato, J. L. Lions, Louis Nirenberg, Paul Rabinowitz
June 28 - July 16, 1982	Cornell University	Recursion Theory	144	Solomon Feferman, Yiannis Moschovakis, Anil Nerode*, Hilary Putnam, Gerald Sacks, Joseph Schoenfeld, Richard A. Shore*, Robert I. Soare
July 20 - August 7, 1981	Humbolt State University	Singularities	165	Philip Church, Alan Durfee, Martin Golubitsky, Peter Orlik*, Le Dung Trang, Philip Wagreich
July 14 - August 2, 1980	Queen's University	Operator Algebras and Applications	217	Ronald G. Douglas, Edward G. Effros, Richard V. Kadison*, Robert T. Powers, Lajos Pukansky, E. James Woods
1979	Cornell University	Finite Group Theory	179	
July 10 - 28, 1978	Williams College	Harmonic Analysis in Euclidean Spaces and Related Topics	215	
July 11 - August 5, 1977	Oregon State University at Corvallis	Automorphic Forms, Representations, and L-Functions	172	
August 2 - 20, 1976	Stanford University	Algebraic and Geometric Topology	294	
July 28 - August 15, 1975	Williams College	Several Complex Variables	222	
July 29 - August 16, 1974	Humbolt State University	Algebraic Geometry	270	
July 30 - August 17, 1973	Stanford University	Differential Geometry	331	
July 31 - August 18, 1972	Williams College	Harmonic Analysis on Homogeneous Spaces	154	
August 9 - 27, 1971	UC at Berkeley	Partial Differential Equations	256	
June 29 - July 17, 1970	University of Wisconsin at Madison	Algebraic Topology	204	
July 7 - August 1, 1969	SUNY at Stony Brook in Long Island	Number Theory: Analytic Number	139	
July 1 - 26, 1968	UC at Berkeley	Global Analysis	202	
July 10 - August 5, 1967	UC at Los Angeles	Axiomatic Set Theory	121	

* Chairs or Co-chairs of organizing committee if listed.

Section 5

Page 32

Appendix 6: AMS Summer Research Institutes, 1953 – 1999

Dates	Location	Title	Attendance	Organizers
June 27 - July 22, 1966	UC at San Diego	Entire Functions and Related Parts of Analysis	73	
July 5 - August 6, 1965	University of Colorado at Boulder	Algebraic Groups and Discontinuous Subgroups	62	
July 6 - 31, 1964	Woods Hole, Massachusetts	Algebraic Geometry	83	
July 15 - August 16, 1963	University of Washington	Differential and Algebraic Topology	63	
1962	UC at Santa Barbara	Relativity and Differential Geometry	90	
July 10 - August 4, 1961	University of Arizona	Dynamical Astronomy	81	
June 27 - August 7, 1960	Yale University	Dynamical Astronomy	75	
1959	Yale University	Dynamical Astronomy	103	
1958	Bowdoin College	Surface Area and Related Topics		
1957	Cornell University	Mathematical Logic		
1956	University of Washington	Differential Geometry in the Large		
1955	University of Wisconsin	Set Theoretic Topology		
June 21 - July 31, 1954	University of Colorado at Boulder	Several Complex Variables	28	
June 20 - July 31, 1953	Colby College	Lie Algebras	29	

* Chairs or Co-chairs of organizing committee if listed.

Section 5

Page 33

Appendix A: Revised work plan for Focused Planning on Meetings & Conferences

The work plan which follows is derived from that presented to the May 2002 ECBT. All the elements of that work plan have been incorporated into this version except for an item related to the abstract server, an issue which has already been adequately addressed.

Task 1: Compare AMS meetings activities with a set of other professional societies:

A. Select eight to ten societies that will form a set of "peer societies" from which to gather information. Include in this set both other scientific societies and professional societies with large proportions of their members in academia.

B. Identify the key components of meeting activities on which to gather information. An initial list includes:

• types of meetings and the numbers of each per year, including regional and sectional meetings, specialized workshops and short courses.

• Size of meetings

• exhibits size and fees

• registration fees for member and nonmember prereg., including what the fee includes, like meals and/or receptions.

• Percentage of society revenues from meetings, with national meetings broken out separately

• breakdown of the components of meetings revenue into registrations fees, sponsorships, program advertising, exhibits, other components

• coarse level of contribution of meetings to the society's bottom line. (does it contribute at all to overhead? To the society's net income?)

• any use of forms of teleconferencing?

• components of the meetings arrangements that are handled by staff versus components handled by outside service bureaus?

• societies use of the web in connection with their meetings: For online registration? Housing? Program presentation?

C. Contact the peer societies for the necessary information, after first collecting as much of the info as is possible from CESSE surveys and other sources.

D. Prepare a report based on the information collected. Include both a high level display in table format and a narrative summary of the major lessons learned from the exercise.

Staff involved: DMS, POP, GMA, LXM, Temp

Work schedule: Preliminary report due by April 1 for inclusion in Secretariat and COMC agenda. Incorporate any COMC and Secretariat feedback into a preliminary report for ECBT agenda. Revise by June 1 to reflect feedback from ECBT meeting.

Task 2: Prepare a review of the financial aspects of meetings over the past 10 years

A. Prepare an overview of the role of AMS meetings in Society finances over the past ten years.

B. Highlight the sources of revenue from meetings and exhibits (but separately!) and the components of expenses.

C. Show the possible impact of changes in the way we currently handle allocations of fixed costs, e.g . divisional overhead and G&A costs.

D. Characterize the underlying philosophy of meetings relative to the Society's finances given implicitly by the financial picture in A, B and C.

E. Pose the key questions raised by A through D and have a discussion of them by the Secretariat, COMC, and ECBT.

Staff involved: on A, B, C: CWP, with input from JWM, DMS; on D: CWP and JWM draft, with input from JHE, RJD, DMS; on E: JWM and DMS, with input from JHE and RJD

Work schedule: Report on A due by April 1, and preliminary draft on B due by April 1 for inclusion in Secretariat and COMC agenda. Incorporate COMC and Secretariat feedback into a preliminary report for ECBT agenda. Revise by June 1 to reflect feedback from ECBT meeting.

Task 3: Prepare a report that puts the current meetings activity into a historical context.

    A. Prepare a timeline showing the major steps in the development of meetings and conferences since the founding of the AMS.

    B. Prepare a quantitative comparison of the program components of a current national meeting with one 10 years ago.

    C. Review JMC minutes for info on major changes in structure of JMM.

    D. Do a version of B for sectionals.

    E. Prepare a essay which describes the major changes in the character of the joint national meetings since the early 1960's. Do the same for sectionals.

Staff involved: A through D: Temp, with guidance from DMS, DLS, RJD and Assoc. Sec.; E: JWM with input from RJD, DMS, POP, DLS.

Work schedule: Preliminary drafts of A through D due by April 1 for inclusion in Secretariat and COMC agenda. Incorporate COMC and Secretariat feedback into a preliminary report for ECBT agenda. With feedback from Secretariat, COMC and ECBT, draft E by July 1 and circulate to Secretariat for review during July and August. Prepare final draft by September 1 for report to fall ECBT.

Task 4: Prepare a report on what is know about how the meeting attendees value the various components of the national and sectional meetings.

    A. Review the existing body of information from meeting attendees, including previous surveys, to identify information that bears on this issue.

    B. Identify what issues, if any, warrant new information, or updating of previous information.

    C. Determine how best to gather the information from the appropriate segments of the membership.

D. Prepare a final report outlining future plans for monitoring member

   satisfaction with meetings for presentation to November ECBT

Staff involved: Meetings staff with guidance from JWM, DMS for A; DMS, JWM, JHE

and RJD for B and C; DMS and JWM for D.

Work schedule: Complete A by May 1; prepare preliminary report on B by June 15.

Complete C by August 1. Complete initial draft of final report by September 15 for

review by Staff Steering Committee. Complete final draft of report by October 15.

Task 5: Gather information on the type and frequency of conferences now and ten years

ago.

   A. Gather the relevant information from the current NSF-funded institutes, with

      historical data ten years ago, where available.

   B. Gather relevant information on conference funding from the Division of

      Mathematical Sciences of the National Science Foundation for the past ten years

   C. Evaluate the information to determine the growth in the number of conferences

      annually by conference type.

   D. Identify areas of conference activity that may be under served by current

      environment.

   E. Update the November 2003 ECBT report on the SRCs with the information

      from steps A through D. Present the updated report to Secretariat, Committee on

      Meetings and Conferences, and ECBT.

Staff involved: JWM with help from DMS, WSD, DLS, LXM

Work schedule: Complete A and B by March 8; Complete C by March 15; prepare draft

report on D by April 1 for inclusion in Secretariat and COMC agenda. Incorporate

COMC and Secretariat feedback into a preliminary report for ECBT agenda by

April 23. Complete E by April 23.

Committee on Meetings and Conferences
Highlights of 2004 meeting (April 24, 2004)

Report of the Secretariat

AMS Secretary Robert Daverman gave a report on the April 23 Secretariat meeting.

- The Secretariat is holding active discussion with the London Mathematical Society for an International meeting in 2007 in Ireland or England and with IMPA to hold an International meeting in 2008 in Brazil.
- The Secretary and the Meetings Department will prepare summary reports on the Sectional meetings and maintain an archive of these reports, per the recommendation of the 2003 CoMC Review subcommittee.
- CoMC approved the recommendation of the Secretariat to continue with the Special Special Session on Mathematical Current Events at the JMM meeting in Atlanta and the following year. This will be put on the CoMC agenda for review in 2006 for the 2007 JMM meeting.
- The Secretary will continue to send out to the Program Committees per the recommendation of the 2003 CoMC committee the letter written by President David Eisenbud, reminding the committees that their goal is to select speakers who will deliver high quality talks with a commitment to gender diversity.

Report on the Subcommittee to Review Special Lectures Series, Special Projects and Short Course. This subcommittee was composed of Colin Adams (Chair), Tepper Gill and Lesley Sibner. As part of the review, the committee surveyed members from the past few years who attended the Gibbs, the Colloquium and the Short Course and reviewed the past Lectures for the Arnold Ross Lecture Series and the Erdos Lecture.

The subcommittee reported on the following:

Gibbs Lecture
    The subcommittee reported that those surveyed felt that the Gibbs Lecture was successful and the most popular lecture at the meeting.

Colloquium Lecture
    The subcommittee reported on those surveyed who had attended the Colloquium Lecture the past few years. The Secretary had reported that the Council felt that the 3rd Lecture should be kept but asked CoMC for recommendations on how to approach the third Lecture. CoMC made several suggestions to the Secretariat on ideas for the 3rd Lecture, such as:

- Making the 3rd Lecture part of a Special Session
- Putting the 3rd lecture in a smaller room
- Holding a Special Session on the topic after the 3rd Lecture in the Ballroom

CoMC approved the following proposal from the Secretary

- The Secretary should encourage the Colloquium Lecturer to hold a Special Session in conjunction with the 3rd Lecture.
- The Secretary should send a letter to the Lecturer with various ideas and options for the 3rd Lecture.

Arnold Ross Lecture

The subcommittee discussed the Arnold Ross Lectures of the past few years and reported on the success of the ARL. There were some suggestions by CoMC on holding the Lectures in high schools and universities. CoMC also suggested looking for AMS members who may have contacts in the local high schools to encourage the local high school students to attend. No formal action was taken.

Short Course

The subcommittee reported on the overall value of the short course to the participants and recommended that the short course should be continued.

CoMC accepted the subcommittee report on the Short Course, noted the financial deficit and made it known that if management felt that there was a need to lower the number of speakers from six to five, that CoMC in general approved this philosophy.

Report on the Phoenix Focus Group. Paul Zorn moderated the CoMC Focus Group discussion. The comments and suggestions from the Focus Group were discussed at the meeting during Zorn's oral report. No formal CoMC action was taken.

Discussion on the interim report on Focused Planning for Meetings and Conferences

The CoMC discussion centered on three important questions raised in the interim report on focused planning on meetings.

1. Should there be more sectional meetings?
   CoMC supported the concept of having more sectional meetings and supported continuing to discuss the best way to achieve this including having a 5th Associate Secretary who would be "At Large" without a specific defined geographic area and could also hold sectionals with other societies.

2. In what form should the AMS seek to continue its research conference program?

   CoMC approved the following resolution:

   "CoMC recommends the submission of a renewal proposal to the NSF that makes refinements to the way the SRC's are currently working."

   CoMC also supported the continued collaboration with both SIAM and IMS in the conduct of the SRC's.

COMC recommended that the current spirit of flexibility in accommodating various conference formats be maintained in the renewal proposal.

3. What role should the meetings activities play in the overall finances of the Society?

CoMC discussed the role meetings currently played in the finances of the Society and felt that they were appropriate and did not raise any additional questions.

CoMC also raised additional questions to review as follow up to the planning.

Other Informational Items. CoMC's topic for annual review for 2005 is to be the Review of National Meetings (Scientific program). A subcommittee consisting of Paul Zorn, (Chair), Irena Peeva and Susan Friedlander will prepare a report on this topic for the next CoMC meeting.

CoMC will host a focus group at the Atlanta meeting scheduled tentatively for Thursday morning, January 6, 2005, 7-9 am. Jean Taylor agreed to moderate the focus group.

The next meeting of the committee is scheduled for O'Hare Hilton in Chicago on April 30, 2005.

Jim Maxwell
Associate Executive Director
May 3, 2004

American Mathematical Society
Committee on Science Policy Meeting
April 1-3, 2004
Washington DC

Summary Report

The Committee on Science Policy meeting was expanded this year and organized as a Forum to allow for free flowing discussion on issues of policy and funding for the mathematical sciences, as well as discussion of overall federal funding for science. The Forum provided an opportunity for participants to interact with Capitol Hill and federal agency staff.

The meeting was held immediately preceding the AMS Council meeting so Council members were invited to attend the Forum. In addition, as in past years, department chairs were also invited to participate in the Forum.   It is hoped that the Forum will evolve into a yearly event that provides useful information for department chairs, much like the Department Chairs Colloquium of the Board of Mathematical Sciences and Applications did.

The Forum was well attended with over fifty participants and consisted of a focused open discussion, Thursday evening, followed by presentations from Administration and Congressional officials and federal agency representatives on Friday, and a wrap-up session Saturday morning.

Prior to the beginning of the meeting, the AMS honored Bernard S. McDonald, the Executive Officer of the Division of Mathematical Sciences at the National Science Foundation, who will be retiring soon. Jane Hawkins, CSP Chair, recognized Bernie's work on behalf of the mathematical sciences community. David Eisenbud, President of the AMS, and John Ewing, Executive Director of the AMS, thanked Bernie on behalf of the AMS. Several of Bernie's colleagues also made brief presentations. John Ewing presented Bernie with a certificate of appreciation from the AMS Committee on Science Policy.

Opening Discussions
The Forum kicked off with discussions centered around three questions:

1) Do enough mathematicians receive federal funding? (What percentage of academic mathematicians should be funded?)
2) Has the mathematical community been affected by the current U.S. visa regulations?
3) Do we really need more U.S. students in the mathematics pipeline?

Slides and graphs were presented to provide backup data on funding, enrollments and other quantitative information useful to the discussions. There was even some disagreement about the accuracy of the data provided, but the discussion soon made its way away from this discourse towards the substance of the questions themselves.

The size of grants and their success rates were discussed, as well as the fact that other fields have more avenues for research funding than the mathematical sciences. No consensus was reached on grant size, but most agreed that more mathematicians should receive federal funding.

The discussion then turned to visa regulations, particularly the way the law is administered since September 11, 2001. Some anecdotal evidence was given as to the current state of the system and all were encouraged to contact their Congressional representatives to bring the difficulties experienced at universities and elsewhere to light.

With regard to getting more students into the mathematics pipeline, it is known that a mathematical sciences degree offers opportunities beyond teaching or actuarial work, however, departments need to put more effort into identifying these opportunities for students.

Highlights from presentations given by Administration, Congressional and federal agency officials:

Daniel A. Hitchcock, Ph.D. – Senior Technical Advisor,
Advanced Scientific Computing Research (ASCR), U.S. Department of Energy

Dr. Hitchcock gave a summary of the work of the ASCR and the strategic issues it is focusing on within the Office of Science, such as providing high performance computing and network facilities and accelerating the transition from research to application. He then discussed the ASCR budget and gave an overview of ASCR programs. He explained that it takes a minimum of ten years to bring research to a point where software writers can put it in their codes, thus requiring a significant commitment and large investment.

Hitchcock spoke briefly about SciDAC (Scientific Discovery Through Advanced Computation), a program developed across the Office of Science a few years ago to accelerate the transition of software and mathematical ideas into application codes. He went on to discuss how important mathematics is to DOE and how applied mathematics contributes to ASCR strategic goals through well-posed mathematical models; mathematical analysis of model behavior; efficient algorithms for solving the discretized models; predictability analysis and uncertainty quantification for model reduction and to determine levels of confidence in the results.

He highlighted one of the areas ASCR will focus on next year – the mathematics needed for multi-scale systems. DOE will try to address the significant issues associated with multi-scale systems (such as those in materials, chemistry, biology, climate and ground water) that require new mathematical insight to understand them. They will hold a workshop in May 2004 to bring mathematicians and applications people together to talk about the challenges and opportunities for the future. A report will be issued on workshop discussions and ideas as to where future investments should be made. This report will be widely distributed.

David Trinkle, Staff Specialist
Office of Management and Budget

David Trinkle began his presentation with an overview of the Office of Management and Budget (OMB) and the federal budget process in general. OMB is the largest White House office in terms of staff and fulfills a number of roles including helping to prepare the President's budget, overseeing the day-to-day operations of federal agencies, and management and implementation of any long term management initiatives. Trinkle, an examiner of the National Science Foundation (NSF), looks at broad research issues across the government.

Now that the FY2005 budget request is out, the OMB is focusing on the FY2006 budget. Presently, OMB is developing FY2006 budget guidance, which agencies will follow in constructing their budgets.

Agencies will present a first draft of their FY2006 budgets to OMB in September. OMB and the agencies will work together through the end of the year finalizing the FY2006 budget.

The President's request for FY2005 was founded on certain priorities including the war on terrorism, homeland defense, and economic recovery. Growth in discretionary spending is held down in favor of funding for defense related expenses. When defense and homeland security are taken out of the equation, discretionary spending grows by only 0.5 percent. Even with this cap, the NSF will increase by 3.0 percent for FY2005. Trinkle's expectation is that the FY2006 budget will be similar to FY2005, possibly even more restrictive given that the Presidential election will have happened.

Several questions were posed to Mr. Trinkle from the Forum participants, including one related to the shift of funds from the Mathematics and Science Partnership (MSP) Program at NSF to the Department of Education. He explained that MSP and DoEd had parallel programs and the desire was to put the program in one agency only. The administration of the program already funded through the MSP at NSF will continue through the NSF (many of which are five years in duration). Other questions focused on how funding is prioritized, what impact the President's Mars initiative will have on future budgeting and what, if anything, can be done to get back on track with doubling NSF's budget in five years as outlined in Public Law 107-338, passed in 2002.

Michael Stephens, Professional Staff, Minority
House Appropriations Subcommittee on VA, HUD & Independent Agencies
Michael Stephens spoke about the legislative environment surrounding the appropriations process for the FY2005 budget. He characterized the FY2005 budget as being very bleak in terms of growth. The current federal budget deficit of $521 billion has created a funding environment that is hugely constrained. However, the legislative process is one of individuals making choices among large numbers of priorities both at the macro and micro levels, so the possibility for surprises is significant.

The situation for science funding, particularly for NSF, is that there is enormous support for federal investment in science and the long term value of this support is a recognition that a significant amount of high quality research is being left unfunded to the detriment of the country. In Stephens' estimation, the House did not overtly "buy in" to Public Law 107-338, but rather would like to see significant increases in the NSF budget without prescription for how to get there. Up until last year the NSF had been receiving 7-13% increases. Last year, the NSF received an increase of 3.9%. A similar situation appears likely for the FY2005 budget, with a currently proposed increase of just 3%.

With current federal finances such as they are, it is extremely difficult to see where any additional resources will come from. There may be an ability to move some monies around within the NSF budget, but it is unlikely that the foundation will receive more than a 3% increase overall for FY2005. In addition, the near term does not look optimistic for increases in discretionary spending even as far out as FY2008, even if there no change in Administrations.

Stephens took questions from Forum participants that included how the No Child Left Behind (NCLB) initiative impacts the budget process. He feels NCLB is a large factor both politically and programmatically because next to veteran's health care, it is the most urgent political challenge for Congress. NCLB has a constraining influence on money being available for other things. Other questions had to do with congressional earmarking, the Mathematics and Science Partnership program being moved to the Department of Education form the NSF, and increasing budget dollars going to community colleges.

Patrick Looney, Assistant Director for Physical Sciences and Engineering
Office of Science and Technology Policy
Patrick Looney began by giving an overview of the Office of Science and Technology Policy (OSTP), an executive office of the President at the White House. He discussed OSTP's mission in assisting the President to evaluate the federal effort in science and technology. He also presented the factors influencing the direction of research and development, which he broke down into three components: scientific 'push,' which represents opportunities; societal 'pull,' representing demands; and the R&D environment, representing capacity and infrastructure.

With the President's priorities for the country in mind, OSTP and OMB are currently defining the areas of emphasis for science and technology for the FY2006 budget and will issue a priorities memo to the agencies as part of the budget process. These areas of emphasis have not changed in the last four years and they include research and development for: homeland and national security; nanotechnology; networking and information technology; environment and energy; and molecular level of understanding of life processes.

Looney then discussed some ongoing OSTP activities and went over the FY05 R&D budget, both in terms of the basic research budget and in terms of R&D as a share of discretionary spending. He pointed out that although non-defense R&D spending hasn't changed over the last 40 years, the distribution of these funds across agencies has changed significantly. The portfolio balance has shifted over time and most areas of science are flat in constant dollar terms, with the exception of health.

In conclusion, he pointed out that the U.S. will spend $60 billion in non-defense R&D this year and that we spend more today in constant dollars than we ever have. In addition, overall R&D spending has accelerated since 2000.

Deborah Lockhart, Acting Executive Officer
Division of Mathematical Sciences, National Science Foundation

Deborah Lockhart began her presentation by reviewing the structure of the NSF in terms of directorates, divisions and programs. She then discussed some new activities and programs in the Division of Mathematical Sciences (DMS).

There is a new, broad activity within DMS called "Enhancing the Mathematical Sciences Workforce in the 21st Century." This builds on the existing VIGRE program and has three components: Research Training Groups (RTG); Mentoring through Critical Transition Points in the Mathematical Sciences (MCTP); and Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences (UBM).

- RTG was designed for groups of researchers with related research goals based in mathematical sciences and covers undergraduates, graduates and post docs. The award size is up to $500,000 per year and the duration is one to five years. The FY04 awards will be announced this summer.
- MCTP facilitates mentoring devoted to points of transition in a career path in the mathematical sciences. The projects may be comprehensive efforts by many individuals or focused involving a few individuals, and the transition points may range from points in undergraduate studies to early

years in a tenure track position. The award size is up to $500,000 per year and the duration is one to five years. The FY04 awards will be announced this summer.

▪ UBM was introduced last year and was designed to enhance undergraduate education and training at the intersection of the biological and mathematical sciences. The award size is $250,000 per year and the duration is one to five years. The deadline for this is April 26, 2004.

Lockhart then discussed the priority areas within the DMS including fundamental mathematics and statistics, connections with other science disciplines and engineering, and addressing mathematical sciences education through research. She also reviewed the criteria used to judge proposals received including intellectual merit and the broader impact of the proposed activity. She encouraged participants to visit their website to know what to address in proposals for funding and also to visit http://www.fastlane.nsf.gov/ to get a list of awards and abstracts of awards.

Lockhart announced the upcoming event entitled "Dialog 2004: DMS and the Mathematical Sciences Community." It will be held April 30 – May 1, 2004 and is hosted by AMS, ASA, MAA, SIAM.

Catherine Woytowicz, Science and Technology Diplomacy Fellow
Office of Science and Technology Cooperation, U.S. Department of State
Catherine Woytowicz discussed what the Office of Science and Technology Cooperation does. She explained that science and technology agreements in bi-lateral treaties increase cooperation between the U.S. and foreign science enterprises and show that the U.S. values science as a priority.

Woytowicz discussed the process by which these bi-lateral agreements are formed and she talked about the implementation and funding of such agreements. She explained that the hardest part of creating these agreements was finding partners to collaborate with where the science and technology priorities are comparable.

She identified three fellowship programs at the U.S. Department of State: Embassy Science Fellows, American Association for the Advancement of Science Fellows and the Jefferson Science Fellows. She gave a brief overview of the AAAS and Jefferson Science fellows programs. She then detailed the Embassy Science Fellows program and explained that it places scientists in overseas posts to serve a specific function and to address a specific problem.   She suggested that there may be opportunities for mathematicians in this program, especially if they are already employed by the government. The Department of State is hoping to also reach out with this program by bringing in scientists from outside the government to participate, as some positions in the past have gone unfilled due to a lack of available government personnel.

Woytowicz then took questions from participants, which centered on security clearances and visa applications. She explained that visa applications are processed through the U.S. Department of State, but visa policy is set by the U.S. Department of Homeland Security. The application process is exceedingly slow, which has resulted in a significant drop in visa applications. She emphasized that the U.S. Department of State understands that foreign visitors contribute significantly to the development of science and technology in the U.S. and that visa applications should be submitted early so as to accommodate travel effectively.

James Turner
Chief Counsel, Minority – House Committee on Science
Jim Turner presented a federal legislative update, focusing on research and development funding. He pointed out that the federal share of R&D as a percentage of GDP is in decline – life science (NIH) R&D has doubled in the last five years, but physical science research has continued its decline and will be down in absolute dollars in 2005. He identified the increasing pressure on the federal budget from deficits and unfunded Social Security and Medicare liability as a cause for the decline.

Turner went through what he deemed the R&D winners and losers in the FY2005 budget – the largest winner is the Department of Homeland Security, whose funding will increase in 2005 by 15 percent; the biggest loser is the Department of Defense science and technology budget, which will decrease by 15 percent next year.

He then discussed some trends that he has seen on Capitol Hill. Increased Congressional earmarking is one of those trends. He has seen a tenfold increase in earmarking in the last three years and this is due in large part to the pressures placed on Members of Congress to deliver to their constituencies. Another trend worth noting is the decrease in the length of time that people stay in Congress or on Congressional staffs. A reason for this trend is that the pension system for Congress and staff changed in 1984, significantly reducing the benefits for those starting after 1984. This causes newer personnel to move on to other jobs more quickly and creates a problem with the most senior, knowledgeable people on Capitol Hill retiring earlier and leaving behind much less experienced Congressional staffs.

Turner then stated his feeling that the appropriations process for the FY2005 budget would not produce an overall budget that is larger than the President's proposal. He then discussed how far the science community has come in the last five to ten years on increasing the visibility for science and technology in Congress and that this success is due in large measure to the work of the AMS and other professional societies in their collaborative efforts.

Scott Weidman, Director
Board on Mathematical Sciences and their Applications
Scott Weidman introduced the Board on Mathematical Sciences and their Applications (BMSA) to participants, identifying those individuals associated with it. He then discussed the four major themes of BMSA's programs: new directions for the discipline, risk analysis, data overload, and computational modeling. The process of the Board's work is to identify major program themes, then the federal agencies decide whether to move forward with a study or a workshop, and if so a workshop is funded.

Related to the theme of new directions for mathematics, the BMSA has had several studies and workshops in area of: computational biology; the interface between mathematical and computer science; the mathematical and statistical challenges in data mining and pattern recognition; and the detection and epidemiology of bioterrorist attacks.

In addition, under the major theme of risk analysis, an enterprise risk management workshop was held in January 2004 and studies on systemic risk in the financial sector and risks in the Army's future combat system are currently being defined.

Weidman went on to discuss a current major BMSA theme, data overload. Several workshops on massive data streams and the mathematical sciences role in homeland security have been held. Another workshop focused on computer models.

CSP Activities at Joint Mathematics Meetings, Atlanta 2005
Historically CSP panels at the Joint Meetings have had poor attendance. This fact initiated discussion on how what to do to increase interest in CSP activities. One idea centered around sponsoring a special session at the Atlanta meeting.

Sam Rankin and David Eisenbud have already had some discussions with NIH representatives about areas of opportunity for collaboration between the mathematics and biomedical research communities. Those discussions have produced the idea of the AMS working with the National Institute for General Medical Sciences (NIGMS), one of the NIH institutes, to set up a special session to discuss how the mathematical sciences contribute to biomedical research. The committee decided to move forward with this idea.

Report from the Washington Office
Sam Rankin gave a brief report on the recent work of the Washington office including preliminary work on the FY2006 federal budget and plans to meet with the new director of the NSF. He reported that the AMS recently joined the "Bridging the Sciences Coalition," an initiative spearheaded by the Biophysical Society to encourage interdisciplinary involvement in biomedical research. Also, the AMS gave joint testimony before the House Appropriations Subcommittee on VA, HUD and Independent Agencies in support of increased funding for NSF. Jane Hawkins, CSP chair presented the testimony for the AMS.

Rankin spoke in more detail about the federal budget process and current difficulties that will likely prohibit efforts to substantially increase funding levels in FY2006. Even so, he discussed the work being undertaken to try to affect the process, including meetings with Congressional offices, working through coalitions, and implementing letter writing campaigns.

Date of Next Meeting
The next meeting of the AMS Committee on Science Policy was scheduled for Thursday-Saturday, April 21-23, 2005 in Washington, DC.

Submitted by Anita Benjamin
American Mathematical Society
April 28, 2004

Washington Office
Report to ECBT
April 22, 2004

On February 2, 2004, the Administration introduced its FY 2005 federal budget request. The news was not good for basic research, the National Science Foundation (NSF), or for the Division of Mathematical Sciences (DMS).   Basic research will increase by only 0.6 percent over FY 2004 and non-biomedical research declines by 2.5 percent. If the Department of Homeland Security funds are also subtracted, basic research drops by 3.4 percent.

The NSF is slated to receive only a 3.0 percent increase, significantly lower than the five- year, 15 percent per year increase plan, put forth in the 2002 National Science Foundation Authorization Act (Public Law 107-338). The outlook for the DMS is even more discouraging, as its budget is slated to increase by only 0.9 percent, or $1.8 million over FY 2004. This is very disheartening given that the mathematical sciences is designated a priority area within the NSF.

Currently, federal support for the mathematical sciences is slated to increase by 3.3 percent. This rate is less than half the rate of increase from FY 2003 to FY 2004. Budget highlights include a 29.6 percent increase, to $29.6 million, in the Department of Energy's Applied Mathematics Program, a 7.0 percent increase, to $23 million, for the Defense Advanced Project Agency's (DARPA) Applied and Computational Mathematics Program, a 5.3 percent increase, to $10 million, for the Army Research Office's Mathematical Sciences Division, and a 16.7 percent increase to $3.5 million for the National Security Agency's mathematics grant program.

An interesting turn of events is the Administration's plan to terminate the NSF Math and Science Partnership (MSP) program in FY 2005, funded at $140 million in FY 2004. Sixty million of this amount will be sent to the Department of Education for its Math and Science Partnership program and the remaining eighty million will be used to phase out projects funded through the NSF MSP program. The NSF Research and Related Activities (R&RA) budget line is slated to grow by 4.7 percent, however when the 80 million for phasing out the MSP program (not a research program) is subtracted, the R&RA account increases by only 2.8 percent. Rumblings heard in Congress, indicate that this termination of the NSF MSP program is not likely to happen. Regardless of how one feels about the quality of the NSF MSP program, we certainly do not want funds transferred out of the NSF to another agency.

Sam has already sent out alerts to members of CSP, COE, and his Contact List, requesting constituent letters be sent to Members of Congress asking for at least a $10 million increase for DMS in the FY 2005 NSF budget. In March, during Congressional Visits Day, Sam, Peter March from Ohio State, and Kevin Clancey from the University of Louisville, made Hill visits advocating for this $ 10 million increase in the FY 2005 DMS budget. Both Peter and Kevin's representatives are on the House VA-HUD Independent Agency appropriations subcommittee. Senator DeWine of Ohio is on the Senate VA-HUD committee, and Senator McConnell of Kentucky is on the Committee on Appropriations. These committees decide the NSF budget.

Sam also made several Hill visits along with representatives from other scientific and engineering societies, to advocate for an increase in the NSF budget that is larger than the budget request. Sam is also helping to organize more visits, encouraging Members of Congress to sign on to a letter drafted by Congressmen Vern Ehlers and Rush Holt and addressed to Congressman Jim Walsh, Chairman of the House VA-HUD appropriations subcommittee. This letter is encouraging Mr. Walsh to increase the NSF budget over the amount in the Administration's budget request. Last year a similar letter had 156 Member signatures.

All during the spring and summer Sam will make Hill visits advocating for more funding for the mathematical sciences and increased funding for the National Science Foundation, the Office of Science of the Department of Energy, and for the basic research budgets of the Department of Defense.

The annual Committee on Science Policy meeting was held April 1-3, 2004. This year the meeting began on Thursday evening with a reception, dinner, and discussion. As in the past several years, department chairs were invited to attend. A report of the meeting is part of the ECBT agenda.

Another meeting of note took place in November, 2003 when David Eisenbud and Sam met with Dr. Elias Zerhouni, Director of the National Institutes of Health (NIH). The conversation focused on contributions of the mathematical sciences to biomedical research. Dr. Zerhouni is interested in increasing interdisciplinary activities at the NIH and is favorable to supporting mathematicians working on biomedical problems. During this meeting we initiated the idea of having a special session at the January, 2005 Joint Meetings, on the mathematical sciences and biomedical research. A few weeks later a follow-up meeting was held with Eric Jakobsson, and John Whitmarsh program officers from the National Institute for General Medical Sciences (NIGMS), to further discuss activities for the January, 2005 Joint Meetings. At this writing, we have applied for and been given time slots for a special session entitled "Mathematical Sciences Contributions to Biomedical Reseach." Sam is in the process of identifying mathematicians working on biomedical problems to be co-organizers of this special session with John Whitmarsh of NIGMS.

On January 29, 2004 David Eisenbud and Sam met with David Radzanowski and David Trinkle from the Office of Management and Budget. The purpose of the meeting was to talk about funding for the mathematical sciences in the FY 2006 federal budget. It is at this time of year that the administration begins the FY 2006 budget process. We are especially concerned that the NSF will not maintain its commitment to adequately increase the budget of the Division of Mathematical Sciences. The mathematical sciences is under-funded throughout the federal government relative to other science disciplines and we continue to try to make this point.

On March 25, Jane Hawkins, chair of the AMS Committee on Science Policy, presented public testimony to the U.S. House VA-HUD and Independent Agency appropriations subcommittee. Jane gave joint testimony on behalf of the NSF with representatives from the American Chemical Society, the American Physical Society, and the Federation of American Societies for Experimental Biology. Sam worked with the Washington representatives of these societies to

develop the given testimony. The testimony and a picture of Jane giving the testimony are on the AMS website.

The AMS also sponsored a breakfast to honor the Presidential Awardees for Excellence in Mathematics Teaching in conjunction with recognition week activities for mathematics and science teacher awardees from across the country. The PAEMST program is administered for the White House by the National Science Foundation and annually chooses one outstanding teacher in both mathematics and science from each state and territory.

In March, Sam wrote his annual chapter on federal funding for the mathematical sciences for the AAAS Annual Research and Development Report. He made a presentation at an NSF sponsored forum, here in Washington, on mentoring students, and participated on a panel concerning future educational agenda for the mathematics community at a AMS-MER workshop: Excellence in Undergraduate Mathematics: Mainstreaming In-Depth Mathematical Experiences for Students.

Sam was also asked to write a guest editorial on federal funding for the Ecological Society of America's monthly magazine, *Frontiers in Ecology and the Environment*.

Sam continues to chair the Coalition for National Science Funding (CNSF), which meets the third Tuesday of each month, here in Washington. The CNSF is currently in the process of organizing its tenth annual CNSF Exhibition on Capitol Hill. Anita Benjamin is handling many of the logistical operations for this event. The Exhibition showcases over thirty NSF sponsored projects, with several Members of Congress and many staff attending the exhibition. The AMS Washington office has been critically involved with organizing the Exhibition for the last five years.

Samuel M. Rankin III
Associate Executive Director

Report on the Book Program

Last year wasn't a good year for scholarly book publishing. The annual survey of the Association of American Publishers showed that sales of scholarly books in 2003 were down by about 10% from the previous year. (For the AMS, revenue was down a little less than 5%.) Many people seem to agree that books are recovering more slowly from the economic downturn than other commodities.

The number of new titles was slightly down in 2003 to 96 (from 100 in 2002). The mix of books is even more important than the number of titles, however. Of those 96 new titles, 66 were AMS publications (38 monographs and 28 proceedings); 30 were copublications (18 monographs and 12 proceedings). This was the smallest number of new AMS titles since 1998, and we are trying to understand the factors that brought about this decrease.
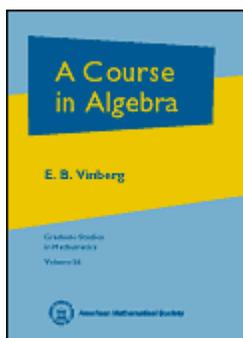
Among the new titles last year, there were some potentially excellent high-level textbooks — a *Graduate Studies* book by Vinberg for a first-year graduate algebra course, another *Graduate Studies* book on numerical analysis by Plato, and a *Student Mathematics Library* text by Hulek on algebraic geometry. These are all nice books with some attractive features. We've been disappointed by the first-year sales, however, because we anticipated stronger sales to a broader market. We are systematically soliciting reviews of the texts in the hope that we can understand some of the reasons for unexpected weak sales.

One of our major publications last year was the four-volume set of Phillip Griffiths' collected works, which was copublished with International Press. This was a multi-year project requiring a great deal of production work. Everyone took considerable pride in the final product, and a special copy of the four-volume set was presented to Phil Griffiths at the ceremony honoring him on his retirement as Director of the Institute for Advanced Study.
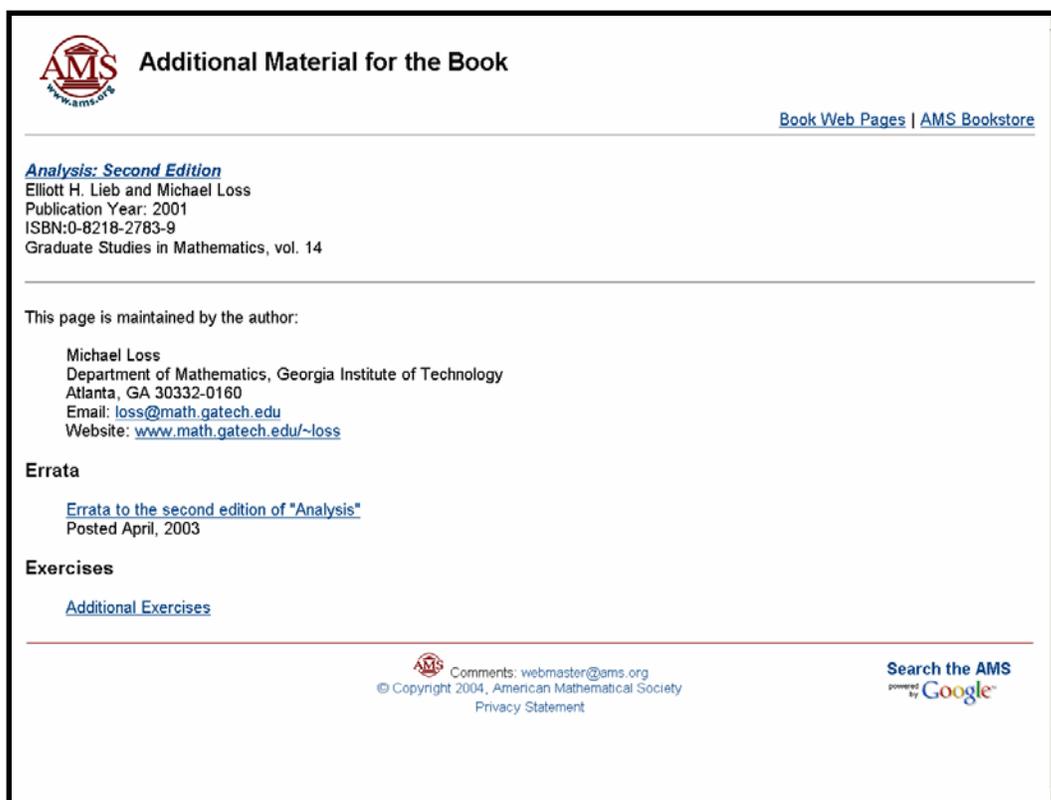
Another noteworthy publication worked on during 2003 (technically published in 2004) was the *Grothendieck-Serre Correspondence: Bilingual Edition* — a unique bilingual (French and English) book that presents a large part of the mathematical correspondence between Grothendieck and Serre over many years. The material is fascinating and the presentation exceptionally attractive. (The French were extremely pleased.)
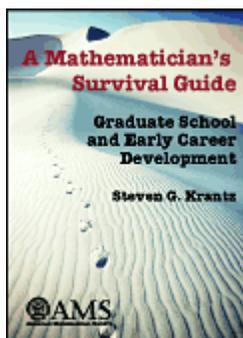
One of the foundational goals of our book program is to develop a group of books that focus on mathematical awareness, education and the profession, referred to internally as AEP books. In 2003 three of the five non-series publications were AEP Publications. *Arithmetic for Teachers: With Applications and Topics from Geometry by* Gary R. Jensen is an intriguing book for "high-level" prospective elementary school teachers. *MASS Selecta: Teaching and Learning Advanced Undergraduate Mathematics,* which is a compilation of materials complied at the Penn State University program, and aimed at talented undergraduate students. And *A Mathematician's Survival Guide: Graduate School and Early Career*

Development by Steve Krantz is a comprehensive set of essays on what students and young mathematicians ought to know as they become mathematicians. As usual for a Krantz book, the book is plain-speaking, forceful, and occasionally quirky.

During the past year, the Society has implemented a new feature for *all* AMS books. Each book now has an associated URL that points to a webpage for the book. That page is maintained by the author and can be updated regularly to include many different kinds of material -- errata, additional information, associated programs and graphics, and even (for a forthcoming book) sound files that users can play to illustrate various phenomena. The URL is printed on the cover of each book and linked to from various references on the web. This makes books much more dynamic than in the past, and many authors are enthusiastic about the opportunity to add value to their books.

The Society has also implemented a new discount policy for AMS-authors during the past year: For a period of five years after publication of their book, authors of AMS monographs receive a standard 50% discount on all AMS publications as a courtesy.

All of the Society's copublishing agreements were reviewed during 2003, and minor modifications were made to many of those agreements. The copublishing agreement with International Press (AMS-IP series) was dissolved early in the year, and in its place the partners signed an agreement to deal with remaining books in the series over the next five years. This arrangement is being reviewed at the current time.

Sales through the AMS Online Bookstore continued to grow in 2003, accounting for over 16 percent of total book sales revenue. This is matched by a growing demand for our books through Amazon, where sales continue to rise.

AMS Bookstore Sales

Year	

(Bar chart showing AMS Bookstore Sales from 1998 to 2003, with y-axis from $0 to $600,000. Values rise from approximately $180,000 in 1998, $230,000 in 1999, $320,000 in 2000, $420,000 in 2001, $450,000 in 2002, to $470,000 in 2003.)
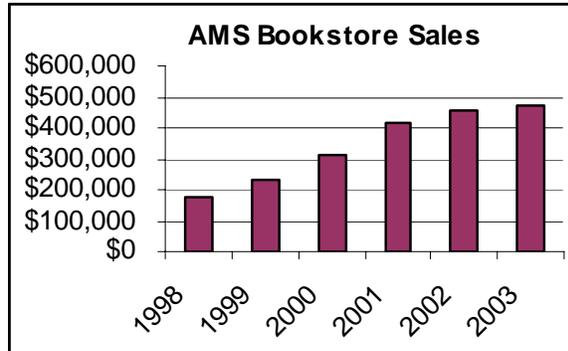
More than 50 percent of annual book revenue from AMS and AMS-distributed books continues be derived from the Americas. The percentage of European sales revenue increased slightly in 2003. Revenue from only two regions, European and Trans Pacific, increased in 2003.

REGION	2002 Revenue thousands	% Total	2003 Revenue thousands	% Total
AMERICAS	$1,860,837	59%	$1,718,695	59%
EUROPE	$608,606	19%	$656,079	22%
MIDDLE/FAR EAST	$504,172	16%	$426,103	15%
TRANS PACIFIC	$140,111	4%	$141,961	5%
REST OF WORLD	$40,491	1%	$38,623	1%

The country that holds the most promise for sales expansion in the next decade is China. For the last ten years China has made protection of intellectual property rights a key area of overall reform, and we see this as the major step required to open the Chinese market to AMS publications. As China joins the world market it is our goal to establish a long-term plan for development of the Chinese market that is financially beneficial. We are currently working with the Rhode Island Economic Development Corporation and the United States Department of Commerce to establish a long-term strategy for increasing sales of AMS publications in this territory. We will be participating in a trade mission to China to develop stronger relationships with distributors in this region.

We will also offer the rights to selected AMS books to International Press and the Morningside Institute (Yau), so that these books can be translated into Chinese and offered inexpensively to students throughout China. This is a contribution from the Society, and all books will indicate that the rights have been donated by the AMS. Each book is a separate agreement, and contracts are renewed at five-year intervals (to allow for renegotiation over time). This is a way to cultivate the Chinese market and, at the same time, to provide a service to the mathematical community.

Similar arrangements are more difficult in India, which is another large potential future market. Because inexpensive books in English inevitably erode normal sales in the rest of the world, we have to control the publication of inexpensive Indian editions. During the next year, we will begin to experiment with our own inexpensive editions of selected books, specially manufactured for the Indian market and shipping to our Indian distributors. Again, we view the program as a way to build future markets and simultaneously help the mathematical community in the developing world.

Beth Huber
Deputy Publisher
April 2004

CITATIONS IN
THE MATHEMATICAL REVIEWS DATABASE (MATHSCINET):
AN UPDATE

Summary: Linked reference lists have been included in the Mathematical Reviews (MR) Database (and MathSciNet) for almost three years now. We describe this project and its history, the new method for processing lists that has been developed very recently and that will allow considerable expansion of the scope of the project, and future plans.

The MR Database entry for some journal articles now includes, in addition to the bibliographic data, MSC classification and review, the list of references from the original article. Moreover, each reference in the list that corresponds to an item in the MR Database includes the MR number for the item, which is linked in MathSciNet to the MR Database entry for the item. These "linked reference lists" allow users to navigate from an item in MathSciNet to reviews of items referenced in the original article, and thence (in many cases) to the full text of the referenced items. By using linked reference lists it is possible both to track antecedents to an item and to compile forward citations. As the number of reference lists grows, the "web" of citations can be used in increasingly sophisticated ways to analyze the mathematical literature.

History
Users of MathSciNet, particularly those familiar with ISI's Web of Science, have often asked for citation information. A crude form of citation information has been available since MathSciNet was introduced (for each MathSciNet item, the reviews that cite it can be listed), but users want citations based on the references listed in the original books and articles. In 2001, a method was developed to capture references and add links. Paper copies of the original reference lists were to be outsourced (to Apex) for fielded keyboarding (i.e. in addition to keying the reference, the various elements of the reference—author, title journal, volume, paging, publisher, etc.—were identified). Meanwhile, a program was developed in house (a batch version of MR Lookup) to match the fielded references with corresponding items in the MR Database. The MR editors, together with the MR Editorial Committee, compiled a list of 65 journals from which reference lists (back to 1997) would be captured initially. The two elements of the method proved extremely successful when put into production in the summer of 2001: the fielded keyboarding has been very accurate and the matching rate has been extraordinarily high (around 95% for items actually in the MR Database and over 80% overall). Reference lists were introduced in the 2001 version of MathSciNet; more have been added each month. In late 2002, another 33 journals were added to those for which reference lists are captured. The MR Editorial Committee (MREC) has urged that the number of journals be further increased, quite substantially, in order to provide a viable source for citation information.

Current status
As of April 2004, the MR Database contains over 45,000 reference lists, containing about 900,000 references. The coverage for the original 65 journals is complete back to 1997 and for the additional 33 journals back to 2000. The 2004 budget allows for some increase in the number of journals covered using the original method, but the kind of increase recommended by MREC would require, using current methods, considerably more resources.

In late 2003, MR staff considered a new approach for capturing reference lists and adding links. Earlier in 2003, a new tool, MRef, was developed and introduced; it is designed to match a reference string (without the individual elements identified as author, title, etc.) with the corresponding MR Database entry, provided there is a unique one. (The matching rate using this new tool is as good as that using MR Lookup.) Using a batch version of this tool, rather than MR Lookup, it is now not necessary to have a list of *fielded* references to apply the matching algorithm. An electronic copy of the reference list, with the start and end of each reference identified, is sufficient. Another tool has been developed in house that extracts reference lists from PDF files in the right form for this matching. The process is sufficiently automated that the reference lists from the Proceedings of the AMS for the period 1997–2003 were extracted, matched and added to MathSciNet essentially overnight. Procedures are currently being developed that will fully automate the ongoing extraction and processing of reference lists from current journal issues; they are expected to be in place by the end of May. Each list will be captured at the same time the link to the original article is added to MathSciNet. This new method holds great promise, although there are technical and political issues that must be solved before it can be used for all journals that are available in PDF form. Most importantly, publishers must agree to MR's downloading of original articles in PDF format for gathering reference lists. (The publishers of the originally selected 65 journals were informed of the project in 2001 and (tacitly) gave their approval, but some may feel differently about potentially massive downloading of full articles.)

Future plans
Reference lists from all the AMS research journals, including the Bulletin and the electronic-only journals, will now be processed in house. It is expected that, over the next few months, reference lists in the journals from other publishers (including some of the original 98 journals) will also be processed in house. Meanwhile, new rates have been negotiated with Apex for keyboarding unfielded references. Also, the MR editors have compiled a list of approximately 100 additional journals to be given reference list treatment as resources allow. As far as possible, journals on this list, together with journals that have to now been sent to Apex, will be processed in house. As many as possible of the journals from the new list that cannot be processed in house will be sent to Apex. It is expected that by the end of 2004, the set of reference-list journals will have grown very considerably.

Currently, it is possible to search the references in MathSciNet reference lists for authors and for expressions (e.g. journal abbreviations, titles) occurring in references using string searches. Much more sophisticated searching and analysis of the references is possible if it is restricted to those references that are matched with an item in MathSciNet. This approach will be developed in the coming year. There will be a "citation database" of matched references. Then, for example, the user will be able to identify an individual in the Author Database and go on to search the citation database for that individual. More global analysis of citations will give important information about the mathematical literature and how it used. Some such analysis is possible for the current MathSciNet reference lists: the data confirms that the "half-life" of the mathematical literature is long and that some of the journals commonly agreed to be among the "best" are among the most cited. (See Att. #22 for more details of this analysis.) The Web of Science publishes similar data but for a very restricted set of mathematics journals and for only a short time frame. The MR citation database will also cover citations from only an incomplete set of journals (although much more extensive than ISI's) and initially only from 1997 and forward journal issues (although the citations themselves may have been published as far back as the 19th century). (It will be important to emphasize these points to deans and others who use the data to evaluate individuals.) But the citation database is expected to become a richer and more wide-ranging resource in the coming years that will significantly enhance MathSciNet.

Jane Kister
Executive Editor
April 2004

JSTOR's Amicus Curiae

The role of copyright in electronic publishing has been a theme in recent meetings of the Committee on Publications. The Society recently agreed to modify its copyright policy because of this. The AMS now asks authors to transfer more rights to the Society in case authors keep the copyright, and additionally allows authors to dedicate their work to the public domain 28 years after publication. When authors transfer the copyright, the Society seemed to be safe—until now.

Copyright law is a bit abstruse, but here is a condensed version of the problem. Copyright tries to balance the interests of all parties. When authors transfer the copyright to a publisher, it does *not* automatically transfer all rights to the work in order to protect authors. A recent famous case (*New York Times v. Tasini*) asserted that freelancers who wrote articles for the newspaper still owned the rights to those articles when they were published as new works, for example in electronic form as parts of collections.

On the other hand, section 201(c) of the Copyright Act permits publishers to republish collections (such as journals) in new formats, provided the collections are merely revisions of the original work and not new works altogether. For scholarly journals, this raises a key question: Is a replica of the original journal in electronic form (a scanned image, for example) a revision or a new work?

The wrangling now goes from abstruse to arcane. The answer to this question may depend on how the material is packaged (splash screens), the availability of search engines, and whether some material is excluded from the final product. Only lawyers can like this sort of thing. The ultimate consequences are enormous for scholarly journals, however.

In a current case, (*Faulkner v. National Geographic*) freelance photographers have brought suit against National Geographic because the magazine produced a CD of scanned older issues that included their photographs. The initial ruling favored *National Geographic*, asserting that this was a revision of the original work[1]. The suit has now moved to the Southern District Court of New York … which is in the jurisdiction of JSTOR.

This is clearly a crucial case for JSTOR. If the initial ruling is reversed, then JSTOR is quite likely out of business. In order to publish digitized past issues of journals, publishers must transfer the rights to JSTOR. A favorable ruling decision for the plaintiff in this case would require publishers to contact *every* author (or in many cases, the heirs) in order to obtain explicit permission. This would be an impossible task, and JSTOR (along with most digitization efforts) would cease.

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[1] It is interesting to note that the ruling was by Judge Kaplan, who also was the judge in the Gordon and Breach action.

For this reason, JSTOR is filing an amicus curiae brief in the case, explaining the significance to scholarly journals and to scholarship in general. They are asking some other organizations to join them by signing on to the brief as well.

The Society has a major stake in this issue. More broadly, however, the entire mathematics community has a stake. All the efforts to digitize the past mathematical literature may be imperiled if the ruling goes the wrong way. It therefore seems important to support the effort.

JSTOR is covering all costs, and there is no liability to the Society.

John Ewing

M E M O R A N D U M

TO: Potential Amici

FROM: Nancy A. Kopans

DATE: March 26, 2004

RE: Amicus Curiae Filing in Faulkner v. National Geographic Society Legal Case

JSTOR has contacted you to see if your organization is interested in signing on to an amicus curiae brief we intend to submit on behalf of the National Geographic Society in the legal case Faulkner v. National Geographic Society, 294 F. Supp. 523 (S.D.N.Y. 2003) ("Faulkner"), now on appeal to the Second Circuit from the Southern District of New York. As shall be explained, the case has significant bearing on JSTOR and projects involving the digitization of scholarly materials.

Background

To best understand the Faulkner case, it is helpful to have background on two cases that dealt with the same provision of the Copyright Act at issue in Faulkner and that had similar facts. In 2001, the Eleventh Circuit (the Circuit court encompassing Alabama, Florida, and Georgia) issued the opinion Greenberg v. National Geographic ("Greenberg"). In Greenberg, a freelance photographer sued the National Geographic Society ("NGS") for copyright infringement for including his work in the "Complete National Geographic" ("CNG"), a commercial product that contains in CD-ROM format the full back run, as searchable, photo-scanned images, of the print version of National Geographic magazine. The Eleventh Circuit's opinion was ambiguous and received much criticism, but in sum it held that NGS, in creating its digital version of the magazine, could not rely on section 201(c) of the Copyright Act. Section 201(c) allows owners of collective works, like periodicals, to reproduce the underlying contributions (for example, individual articles) as part of a "revision" of the collective work. The Eleventh Circuit reasoned that because CNG included an introductory "morphing" sequence (in which the photographs at issue "danced" on the screen with accompanying music), as well as the replica of the pages of the magazine itself and software to make the entire resource searchable, it constituted "a new work altogether" and was therefore outside the ambit of the 201(c) revision exception. Thus, National Geographic was held to have violated the photographers' copyright interests in their works.

While Greenberg opinion may have contained some troubling elements, it was out of the Eleventh Circuit, rather than JSTOR's own jurisdiction, the facts of the case involved an introductory "morphing sequence" (which is unlike anything in JSTOR or other standard digitization projects involving scholarly materials), and most important, the United States

Supreme Court issued its opinion in <u>New York Times Co., Inc. v. Tasini</u>, 533 U.S. 433 (2001) ("<u>Tasini</u>") soon after the <u>Greenberg</u> opinion. Because the Supreme Court is senior to circuit courts, we interpreted <u>Tasini</u> as trumping the <u>Greenberg</u> opinion. In <u>Tasini</u>, the Supreme Court contrasted the databases at issue in that case (e.g., Nexis) with microfilm, which it viewed as not problematic from a copyright standpoint, and suggested that the preservation of the "context" in which an article appears is a crucial factor in determining whether the 201(c) exclusion can apply. Because the articles in Nexis and the other databases at issue in <u>Tasini</u> appeared separate and distinct from the context of the periodical as a whole, the Court determined that the 201(c) revision exception did not apply and that the publishers and databases had indeed infringed the copyrights of the freelancers who contributed articles to the collective works. The freelance photographer community, however, continued to argue that the <u>Tasini</u> opinion dealt with a separate issue and did not address whether a digital, searchable version of print content constitutes entirely new works outside the scope of the revision exception.

<u>The Case at Issue</u>

More recently, <u>Greenberg</u>-like cases were filed in the Southern District of New York, JSTOR's jurisdiction. Like <u>Greenberg</u>, these cases involved freelance photographers, as well as some writers, suing NGS for copyright infringement for including their works in the CNG. On December 11, 2003, Judge Kaplan issued an opinion in <u>Faulkner</u>. The opinion has very encouraging bearing not only for JSTOR but also for other projects involving the digitization of print materials. The issues to be decided were: "whether a print publisher of a collective work is privileged to use the individual contributions in a digital version where (a) the individual contributions are presented in the same contexts in which they appeared in print and (b) the digital version contains also software or other materials that did not appear in the print version," along with a number of ancillary issues.

In a nutshell, Kaplan determined:

1. The <u>Tasini</u> opinion did indeed alter the legal landscape on this issue. The Supreme Court's focus on how the material is visually presented to and perceptible by the user (that is, whether the material is in context or out of context) is key and is in marked contrast to the Eleventh Circuit's approach in <u>Greenberg</u>, which focused on how the resource is "stitched" together (that is, containing discretely copyrightable components, such as software). In CNG, the material appeared in context, as with microfilm, and the addition of interactive software tools and searchability features does not alter this or render the product "a new work altogether" (which would prevent NGS from relying on 201(c)). Stated the court, the material "is precisely comparable to the microforms to which the Supreme Court referred approvingly in <u>Tasini</u>."

2. The fact that the product appears in a new medium makes no difference, in and of itself, as media neutrality is a fundamental principle of the Copyright Act. The court rejected the photographers' argument that that owing to easy searchability and other features, the user experience is so different from that with the print version that the CNG should be considered a new work and noted that these features have only to do with packaging. In the past, technological advances with respect to packaging (e.g., binding issues into more convenient stiff backed volumes and the addition of printed indices) improved the physical characteristics of the periodicals but did not infringe the copyrights of the individual contributors.

3. The fact that several dozen images were blacked out in certain editions of CNG because an issue arose as to whether the NGS had the right to include a limited number of images in consequence of explicit contractual language excluding electronic reproduction does not materially alter the context in which the other content in the collective work appears and therefore does not undermine the ability of NGS to rely on the revision exception under 201(c). Even revisions of encyclopedias, the classic example of allowable 201(c) revisions, contain original contributions along with new or updated material.

4. It is immaterial that the entities that produced and distributed CNG (a for-profit subsidiary of NGS and a third-party software developer) are legally separate from NGS, which had originally licensed the photographs. To rule otherwise would "alter the balance that Congress struck [in drafting section 201(c)] by attaching legal significance to a purely formal matter that does not affect any legitimate substantive interest of the authors." [Note -- This is of great significance to any entity holding copyright in a collective work, such as the publisher of a journal, that wishes to have a third party undertake digitization and distribution on its behalf, a very common occurrence.]

5. The privileges conferred on NGS under 201(c) of the 1976 Copyright Act govern regardless of when the print materials were published. Thus, since NGS had a copyright interest in the collective works published prior to 1978, when the 1909 Copyright Act (which did not contain a 201(c) revision provision) was in effect, section 201(c) nonetheless protects the digitization of those works.

Next Steps

As noted, Faulkner is now on appeal before the Second Circuit. Should the Second Circuit issue an opinion that departs from the Southern District opinion, it could pose risks to projects involving the digitization of print versions of scholarly materials. Thus, we feel it is important, not only because of JSTOR's own interests but also because of the needs of the broader scholarly community, to clarify for the Second Circuit the importance of the digital medium to the storage and availability of scholarly materials and the appropriateness of the Southern District ruling.

Indeed, it is unlikely that the true significance of the digital medium for the purpose of the preservation of and access to scholarly material will be raised by the parties to the case, and without a statement from a credible entity like JSTOR and other similarly situated organizations, this issue might be overlooked by the Second Circuit, to the great expense of the scholarly community. We, therefore, wanted to alert you to this case and inquire whether you would be interested in signing on to our amicus curiae brief. It also should be noted that in the event the Second Circuit departs from the Eleventh Circuit opinion in Greenberg, it could give rise to a "Circuit split," which would mean the case would likely advance to the United States Supreme Court.

Please note that we recently were informed of the court's schedule for the case, and it appears that the filing deadline for our amicus brief will be **May 27th**. Thus, we are on somewhat of a fast track. Please consider whether your organization would like to participate with us in this important effort and let us know if you have any questions. I would be happy to discuss this matter with you further and can be reached at 212-358-6420 and nk@jstor.org.

N.A.K.

Proposal for establishing a "Retired" dues category

The current structure of dues rates is intended to accommodate various sectors of the mathematics community, and, overall, to maximize the number of members. The following dues levels are now in effect for 2004:

Ordinary member (income below $80,000)	$111
Ordinary member (income above $80,000)	$148
Ordinary-Entry member (first five years)	$55
Contributing member	$222
Reciprocity member (outside U.S.; must be member of another society)	$74
Category-S member (in certain developing countries)	$16
Student or unemployed member	$37
Nominee member (nominated by AMS institutional member)	Free
Emeritus member (after 20 years of membership and retirement)	Free

Family membership - follows Ordinary rates with one member getting $20 discount

Over the years it has been noticed that there are individuals who join the AMS somewhat late in their careers. As they retire, they find that they do not qualify for Emeritus status (20 years of Ordinary membership needed). They have two choices: continue at the Ordinary or Reciprocity rate (often viewed by them as too costly) or enter the "unemployed" category (by signing a statement that they are seeking employment, which of course they are not).

To follow the common example among many societies and keep as members those who would very much like to maintain contact with the mathematical community, the AMS should accommodate such individuals with a "Retired" dues category, set at the same level as the current Ordinary Entry (one half of the Ordinary-Low dues amount). This Ordinary-Exiting dues arrangement will serve to bring these members, eventually, into Emeritus status.

One can ask how large is the pool of members who might be interested in the proposed new retired member category? The short answer is a significant number though not a huge number.

In looking at the age and time-in-membership of a snapshot of the ordinary and reciprocity members (from June, 2003), we identified just over one thousand (1041) members who will reach age 66 before they will have been a member for twenty years, the requirement to be eligible for emeritus membership. In addition, over half (574) of these thousand individuals will have to remain a member for at least four more years to earn eligibility for emeritus status.

Jim Maxwell
Associate Executive Director
March 3, 2004

Notices and Member Benefits

Currently, the AMS gives most members two subscriptions, to the *Notices* (published 11 times per year) and to the *Bulletin* (published four times per year). For many members, these subscriptions are viewed as a substantial member benefit. Since 1995, however, electronic versions of both the *Notices* and the *Bulletin* have been available on the AMS web site to members and non-members alike. Effectively, the Society took away a major member benefit.

The recent report on membership asked whether this should be reversed; it wasn't the first time that the suggestion was made. But taking away a service that is widely used is not easily done. Two possible methods of returning the *Notices* to a members-only benefit were suggested -- making the most recent online issues (say two of them) available to members only or making older issues available to members only. Other schemes were mentioned as well, including limited access to certain sections of the *Notices* and/or supplementary materials on the web for members only.

At the May 2004 Council meeting, these general issues were discussed along with various options for reinstating the members-only benefits. Most people supported the idea of reinstating the *Notices* as a member benefit. Indeed, some pointed out that many members do not realize the *Notices* is presently available to all. If members discover this fact, membership could plummet.

On the other hand, members of the Council also expressed concern that removing a service that is widely used may have adverse consequences. Access to the *Notices* has been universal for about ten years, and the journal has prospered in part because nearly every mathematician in the world can see what's written in the *Notices*.

Rather than taking immediate action, therefore, the Council recommended a plan to incrementally change perceptions and, at the same time, to gather more information about the ways in which mathematicians use the *Notices* and the *Bulletin*.

> **Recommendation:** Access to the *Notices* and the *Bulletin* should require users to log into the AMS website using their AMS username/password (which any mathematician can create). In the login process, users will be reminded (tastefully) that both journals are supported by member dues.

There are several important benefits to this measured approach.

1. The Society will be able to gather detailed information about how mathematicians, both members and non-members, use the two journals. This will allow us to implement any further restrictions with some understanding of the effects on readers.

2. By requiring readers to login, the Society can easily differentiate the level of service to users in the future. For example, members could be offered a superior search engine and/or enhanced features.
3. By using the username/password feature of the website, readers will become accustomed to logging in to access other members-only services.

Because "registration" is a common requirement for many magazines and newspapers online, the adverse effects of such requirements are expected to be relatively small.

There are several important details to be worked out before final implementation. (For example, one has to decide whether to allow users to save a username/password on a particular machine so that logins are automatic.) It is expected that implementation of the login procedure will be accomplished by the end of 2004.

John Ewing

Appendix: What other societies do

The AMS' practice of making both member publications (*Notices* and *Bulletin*) publicly available on the internet, for free, varies sharply from the practices of most comparable professional societies.

The Mathematical Association of America does not place *Focus*, its member newsletter published nine times per year, on the web. It has a *Focus* page on the web site that consists of the current table of contents, and a display of recent *Focus* covers. On that page, links are given to membership information.

The Society for Industrial and Applied Mathematics places its member newsletter, *SIAM News*, online. However, there is a six to eight week delay between the mail date of the print publication and when it is placed online. As an example, at the end of February, the December issue was available on the SIAM web site.

The American Geophysical Union places its weekly member newsletter, *Eos*, online, but limits access to members only. This publication also contains all society job ads.

The Ecological Society of America has a new member publication, *Frontiers*, which is mailed to all members. The other member publication, *Bulletin*, is now an electronic-only product. ESA limits electronic access to the following items to members-only: *Frontiers*, *Bulletin*, job ads, and member directory.

The American Chemical Society publishes a weekly member newsletter, *Chemical and Engineering News*, which is available publicly online.

The American Institute of Physics (an umbrella organization for a number of physics-related associations) provides a monthly magazine to all members of the various physics-related societies, called *Physics Today*. It is also available by paid subscription. On the web, headlines from each issue are shown, but to read all but two or three designated "free articles", one would need to use a member (or subscriber) log in. After about 15 months, the back issues become publicly available on the web. The American Physical Society, the largest of the physics organizations, mails a newspaper, *APS News*, to all of its members eleven times per year. The current issue is available online to members only. Back issues are available publicly.

AMERICAN MATHEMATICAL SOCIETY

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State of AMS 2004

The American Mathematical Society has different faces to different groups of mathematicians. Many young mathematicians focus on the Society's employment services and surveys, which help them to make career decisions. More established mathematicians sometimes associate the AMS with meetings, where they not only do mathematics but connect with friends and acquaintances as well. Mathematicians abroad often identify with the *Notices*, which keeps them informed about mathematics and the profession.

But for *many* mathematicians—especially those most actively engaged in research—the most apparent face of the Society is *MathSciNet*, the entryway to the Mathematical Reviews Database. Math Reviews has always been important to mathematicians, but *MathSciNet* has changed the way in which people do research (and many other things as well). It is an enormously successful part of the AMS publication program, and this year's annual report focuses on Mathematical Reviews and its great success.

First, here is an overview of the Society early in 2004.

Overview

The Society's membership grew to over 28,000 in 2003; during the current year, we expect membership to exceed 29,000. Most of that growth is in nominee members (graduate students who become members because their universities are institutional members). Ordinary membership has been slightly declining, as has reciprocity and Category-S (in the developing world). Life and emeritus memberships are up, reflecting our aging population.

The Society will carry out planning in specific areas each year for the next several years. The first of these focused planning efforts took place in 2003, and as a result the AMS will consider making various changes in membership—the principles by which we set dues, our delivery of member benefits, new categories of membership, etc. Most importantly, the planning process has helped us to understand some of the major issues surrounding membership. Membership development is now a separate function in the Society, viewed as an important ongoing activity.
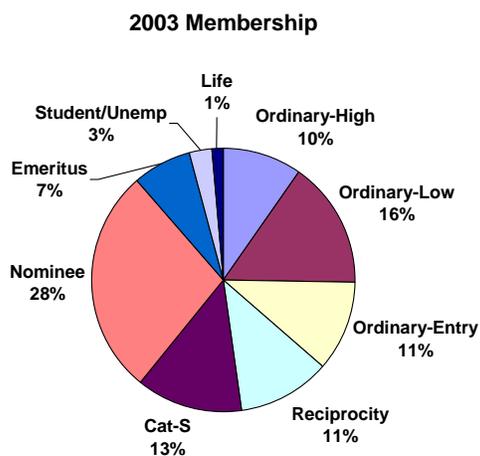
2003 Membership

Our meetings continue to be healthy and robust. The recent Joint Meeting in Phoenix was the fourth largest ever held by the Society, and the program was

widely praised by those attending. The sectional meetings continue to be one of the key ways in which the Society reaches mathematicians throughout the country. The Society held a joint international meeting in Bangalore, India, during December, and attendance exceeded 500 mathematicians (from the U.S., Europe, and India). The summer research conferences, which are now held at Snowbird in Utah, seem to be vigorous and healthy with a resurgence of proposals for future conferences.

The Washington Office of the Society has represented the interests of the mathematical community in Washington for more than ten years now. This is increasingly difficult in the present budgetary environment, but we have been successful nonetheless. The key to success in Washington is making sure that mathematics has a presence—that policy makers think of mathematics when they think about science and technology. We've accomplished this through such things as congressional luncheons, public service awards, and special receptions. But it's the day to day activities that ultimately build connections with all parts of Washington. The Washington Office also oversees special projects, including such things as the Media Fellows Program, the Chairs workshops, and mentoring workshops done jointly with the Mathematicians and Education Reform network (MER).

Many of the programs and services of the Society are ongoing, and for that reason it's easy to overlook their quality and value to the community; new and elaborate projects are easier to tout, even when they are short-lived. But providing sure and steady service to the community has been a hallmark of the Society. For example:

- We continue to conduct the annual Survey[1], which provides essential information about the profession.
- We plan and run the Employment Center[2] at the Joint Meeting.
- We administer the MathJobs service, which connects job applicants and participating departments.
- We publish various professional publications for the mathematics community, including *Employment Information in the Mathematical Sciences*[3], *Assistantships and Fellowships*[4], the *Professional Directory*, and the *Combined Membership List*[5].
- We provide annual Epsilon awards to encourage young scholars programs (summer programs for talented high school students) totaling approximately $80,000.
- We sponsor an Arnold Ross Lecture each year, aimed at high school students and normally held at a science museum.

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[1] Under the auspices of the AMS-ASA-IMS-MAA Data Committee
[2] With the advice of the AMS-MAA-SIAM Joint Committee on Employment Opportunities (JCEO)
[3] With the advice of JECO
[4] Compiled under the direction of the AMS-ASA-IMS-MAA Data Committee
[5] A joint project of the AMS, MAA, and SIAM

- We hold 4-5 "Who Wants to be a Mathematician" games each year, attracting the best mathematics students in some area to participate in mathematics.
- We award annual Trjitzinsky scholarships of $4000 each to 8 mathematics undergraduates.
- We award Centennial Fellowships each year to young mathematicians in the early stages of their careers, allowing them to spend a year fully engaged in research.
- We award annual Ky Fan travel grants to promote the exchange of mathematicians between North America and China.
- We conduct the Math in Moscow program, providing funds for approximately 10 students each year to study for a semester at the Independent University in Moscow, in a demanding mathematics program that builds future connections between our communities.

It is important to note that, with the exception of the last item, every one of these programs is ongoing and does not rely on grant support of any kind.

One of our *greatest* services to the mathematics community is the publication of our member journals, the *Notices* and the *Bulletin*. While only members receive these journals in paper form, the electronic versions are available to all mathematicians with access to the Internet. They are widely accessed throughout the world.

Public awareness is a special kind of service, and it has accomplished a great deal in the few years since the creation of our Public Awareness Office. We are building contacts with the press—a slow process that requires patient diligence to accomplish. *Mathematical Moments* (one page fliers with the simple message that mathematical research is important) have been extremely popular, especially among high school teachers who post them on classroom walls. The "Who Wants to be a Mathematician" contests mentioned above have drawn enthusiastic crowds of shouting students (which isn't something mathematics does very often). And the office has helped to highlight the Society itself, both inside and outside the mathematics community.
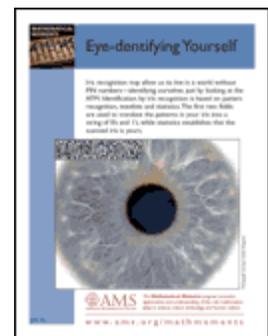
Of course, we could accomplish few of these services if the Society did not have a source of funding, and mainly that source is our publications program. We derive about 75% of our revenues from publications. (Members are almost always surprised to discover that individual dues account for only a small percentage of revenues—6.2% in 2003.) The health of our publications are therefore directly connected to the health of the Society overall.

Our research journals continue to do extremely well in almost every respect. Submissions to the journals are robust; backlogs are under control; and mathematicians view the journals with respect. While citation indices should be viewed cautiously in mathematics, it's interesting to note that the *Journal of the American Mathematical Society* now ranks first as measured by the ISI impact factor. Like most journals, ours experience slight attrition in subscriptions each year, but the attrition remains slight and the journals remain extremely healthy.

Impact Factors (2002)	
1. Journal of AMS:	2.533
2. Comm. Pure and Appl. Math:	2.022
3. Annals of Mathematics:	1.905
4. Bulletin of the AMS:	1.824
5. Memoirs of the AMS:	1.661
6. Acta Mathematica:	1.621
7. Inventiones:	1.616
(all others are below 1.100)	
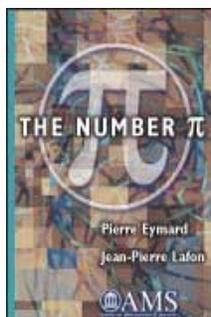
The Society has devoted a great deal of time and energy to its book program over the past 10 years. We now publish approximately 100 new titles each year, and because of our policy to keep *all* monographs in print indefinitely, we list more than 3000 titles in print. We have extended distribution agreements throughout the world and increasingly distribute books for other publishers. We've recently added several benefits for authors of books, including websites for each book (to post corrections and additional material) and author discounts (50% for 5 years on all AMS books). We have evaluated all aspects of the program and we plan to expand our book program further in the future.

Mathematical Reviews

The third part of our publications program is Mathematical Reviews, which plays an increasingly important role both in the mathematics community and in the Society itself. Most mathematicians see only the front face of Math Reviews—either the web version on *MathSciNet* or (less frequently) the large orange volumes. Sitting behind that facade, however, is an enormously complicated set of interlocking components that produce a high-quality product and make it widely available. Mathematical Reviews has become invaluable to mathematicians around the world.

It wasn't always that way. Math Reviews was founded by Otto Neugebauer, who had been the editor for *Zentralblatt für Mathematik und ihre Grenzgebiete (ZBL)*. When *ZBL* began to enforce German racial policies in 1938, Neugebauer resigned his position and immigrated to the United States. American mathematicians discussed how to save *ZBL,* but eventually were led to start a new reviewing journal, which they called *Mathematical Reviews*. Neugebauer and J.D. Tamarkin were its first editors.

In its first year of operation (1940) *Math Reviews* published 2120 reviews in 400 pages. The staff consisted of 4 people—the two editors, a technical assistant (Willy Feller) and a secretary (Evelyn Spencer). Expenses for the year totaled $14,356.77 and the journal actually showed a small profit.
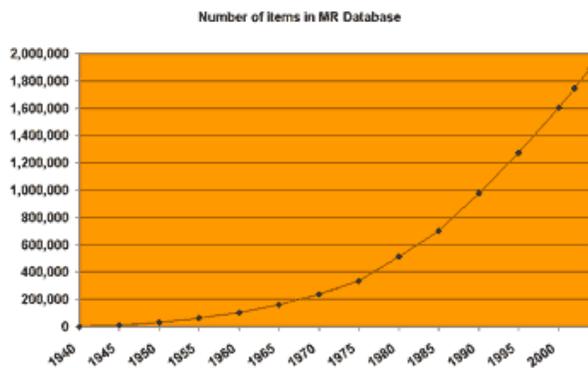
Over the years, Math Reviews slowly evolved into an ever larger operation, growing from its initial staff of 4 to a staff of more than 70. The operation was originally based in Providence (where Neugebauer and Tamarkin held appointments at Brown), and that was part of the motivation for the Society moving its headquarters to Providence in 1951. For the next 14 years, the Math Reviews staff shared space with the rest of the AMS staff. It was not always an easy sharing, however, because Math Reviews operated as a semi-autonomous unit of the Society, with its Executive Editor reporting directly to the Board. For this reason (and others) Math Reviews moved its offices to Ann Arbor, Michigan, in 1965. That year, it had a staff of 35 and published about 15,000 reviews.

In the intervening years, Math Reviews has had its ups and downs. In the late 1970s, Math Reviews fell behind in reviewing, creating a giant backlog of material, which was subsequently processed in a short period of time in order to catch up. (The number of published reviews rose by over 50% in a single year!) For many years, Math Reviews showed a financial loss for the Society, and there was talk of selling it to commercial publishers. Repeatedly over the years, people discussed merging Math Reviews and ZBL in the hope that this would save costs, both for the Society and for subscribers. Early in the development of the Internet, some predicted the imminent demise of Math Reviews, which would "become useless once all mathematics was available on the Web." Of course, exactly the opposite has happened.

Today, Math Reviews is thriving. Each year it adds more than 75,000 items to the database, which now includes more than 1,900,000 items. Assembling that database requires more effort than most people imagine. The staff chooses from over 100,000 items in about 1,800 journals and many hundreds of books. They deal with nearly 3,000 publishing entities, tracking down material when it is lost and sometimes downloading material from the web. They uniquely identify each of the more than 400,000 authors included in the database, which makes it possible to locate all papers by specific authors (even when names change or are transliterated differently!). They classify, they evaluate, and they annotate articles for further processing. They do all this, day after day and week after week, at the rate of about 350 items per day.

Math Reviews 2003

|	
Number of items in the MRDB	1 894 000
Number of reviews in the MRDB	1 661 000
Number of individuals (authors) in the MRDB	400 000
Number of new items added to the MRDB in 2003	77 493
Number of new reviews added to the MRDB in 2003	57 438
Number of new items processed each working day	325
Number of journals currently covered by MR	1 799
Number of classifications in MSC2000	5 529
Number of currently active reviewers	10 843

Reviewers are one of the key assets of Math Reviews, of course, and there are more than 10,000 of them today. Editors decide which reviewers should consider which papers, and the staff must track (and gently remind) reviewers to complete their work. Items are lost in transit; reviewers go on leave (sometimes unexpectedly); occasionally items are returned after long periods of time. Mainly, however, reviews arrive and are edited, not just for style and grammar (that's the easy part), but to add detailed references and their corresponding Math Reviews numbers, to make certain that the database is self-consistent and interconnected.

Today, of course, there is even more data to be captured—there are about 120 possible fields underlying each item in the database. The Math Reviews Database now has more than 360,000 links to original articles, allowing users to access the articles under review with the click of a button. The staff adds more links each year and keeps the old ones up to date. Math Reviews includes a richer and richer collection of internal links that show users which reviews refer to which others, both backwards and forwards. And the most recent additional data is the collection

of references for selected journals. It has the potential to add an entirely new way in which to use Math Reviews to understand the mathematical literature.

Beginning two years ago, Math Reviews began capturing reference lists for approximately 100 journals, going backwards to 1997 for most. Using a sophisticated application, we are able to match those references to the corresponding item in the MR database about 80% of the time. (Many items don't correspond to anything in the database, either because they were never published or were never included. The matching rate for items in the database is about 95%.) Like links to original articles, the links from references to the corresponding items in Math Reviews provide a wonderfully efficient way to navigate the literature. The entire collection of data can do much more, however.

Percent References
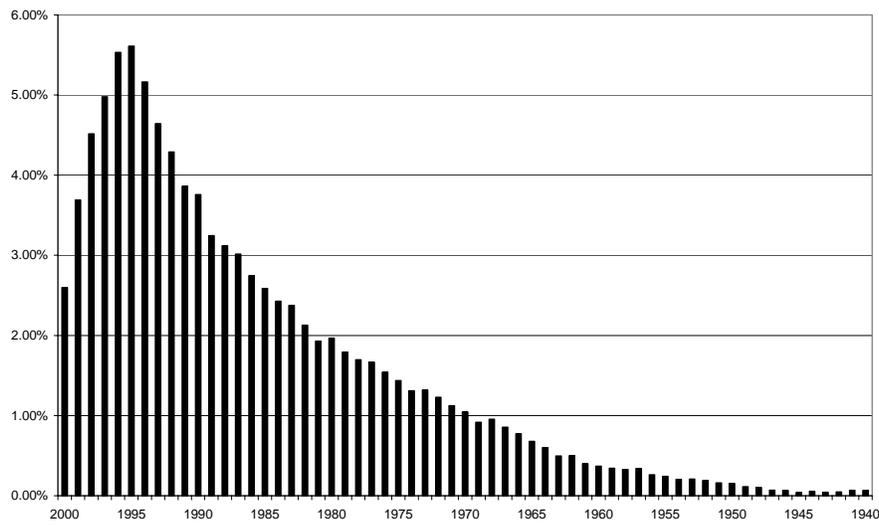
 # Refs / # Items in MR
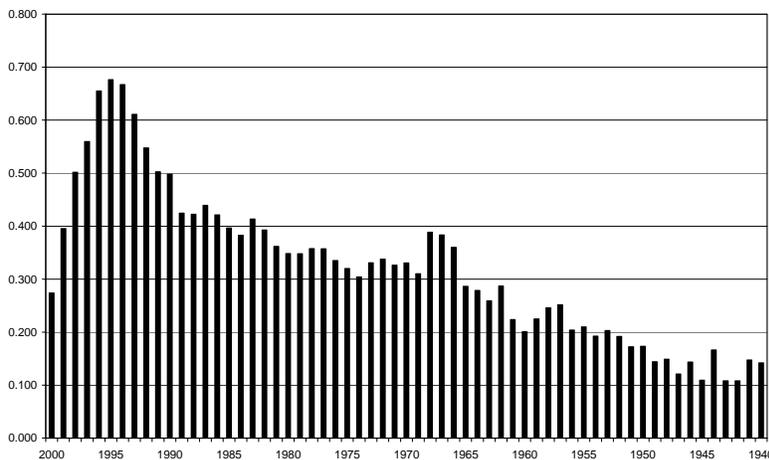
With nearly 800,000 references collected so far, we can begin to study and to understand the mathematical literature far better than we ever have before. Mathematicians have always claimed that mathematical literature is valuable for many years after publication (unlike some other areas); we now can make that evident by graphing the year of publication for all references from recent papers. Better yet, since the number of items in Math Reviews each year

measures the approximate *size* of the mathematical literature, we can measure how often the past mathematical literature is still cited. It's a convincing argument that mathematics has a very long life!

For many years, scientists in other fields have used the "impact factor" to measure the quality of journals. The impact factor is measured by Thompson ISI, which compiles citation data for a large collection of journals. For any given journal, the impact factor for a specific year is the number of citations to the previous 2 years of that journal divided by the total number of articles published in the journal in those 2 years. While this provides *some* information, it is clearly flawed for mathematics, mainly because the time frame (2 years) is far too short.

We can use the Math Reviews citation database to gain a much clearer and more sophisticated understanding of this phenomenon. Again, we can use both the citation database and the Math Reviews Database itself to measure the relative frequency of citations. For example, by dividing the number of citations to a particular journal by the total number of articles published in that journal for the past 60 years, we get a much broader understanding of the frequency of citations.
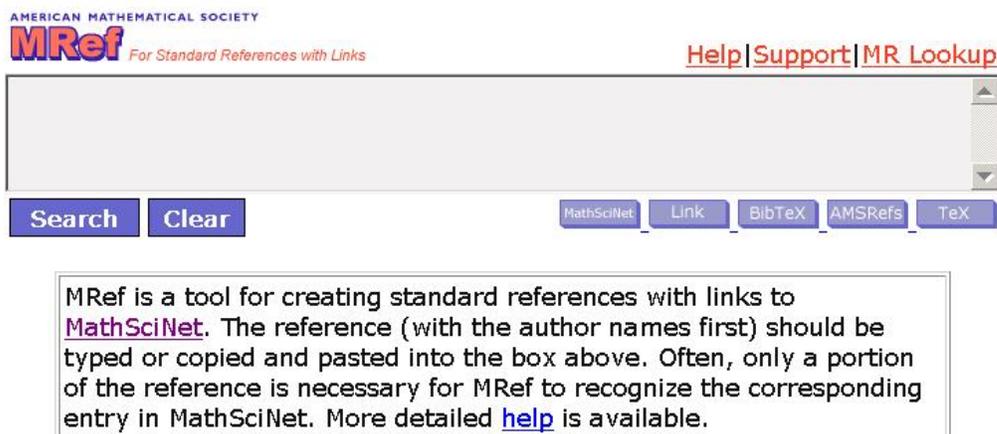
	Journal	#Items	#Refs	Ratio
1	Inst. Hautes Études Sci. Publ. Math.	343	3327	9.70
2	J. Amer. Math. Soc.	486	3333	6.86
3	Invent. Math.	3206	15526	4.84
4	Ann. Sci. École Norm. Sup. (4)	778	3289	4.23
5	J. Differential Geom.	1198	4778	3.99
6	Comm. Pure Appl. Math.	2025	7144	3.53
7	Mem. Amer. Math. Soc.	732	2441	3.33
8	Geom. Funct. Anal.	470	1565	3.33
9	Internat. Math. Res. Notices	553	1757	3.18
10	J. Algebraic Geom.	347	1089	3.14
11	Ann. of Math. (2)	4606	13569	2.95
12	Advances in Math.	379	1030	2.72
13	Ann. Inst. H. Poincare Anal. Non Lin.	537	1356	2.53
14	Math. Res. Lett.	698	1740	2.49
15	Astérisque	954	2348	2.46
16	J. Funct. Anal.	3308	7838	2.37
17	Comm. Math. Phys.	6280	13334	2.12
18	Bull. Amer. Math. Soc. (N.S.)	911	1899	2.08
19	Ergodic Theory Dynam. Systems	1313	2710	2.06
20	*K*-Theory	521	1010	1.94

And of course, we can choose the time period to refine the information.

Of course, citation data can be misused (in some disciplines, self-citations are a major problem) and one should be careful to understand the limitations of citation data (at the moment, the MR data is too limited to be reliable). But over time, as we double the number of journals and build up a citation database, users of Math Reviews will be able to study the literature in ways they never could have before.

The Mathematical Reviews Database is spectacular, but Math Reviews today is much more than just the database. The Web interface, *MathSciNet*, is what has revolutionized the way in which mathematicians use the database. *MathSciNet* is not a collection of Web pages, however—it is a sophisticated piece of software that undergoes extensive development on an annual cycle. In late winter of each year, staff in the Ann Arbor and Providence offices consider a list of potential improvements and enhancements for the next cycle. They review comments made to the customer support personnel in Providence; they consider suggestions made directly to the Executive Editor in Ann Arbor; and they generate ideas from everyone involved in the publication program.The list is narrowed, modified, and (sometimes) expanded. Development takes place over the next 6 months, and the new version of *MathSciNet* is released to all sites in September. We are currently working on version 10.

Software development produces many of the tools associated to *MathSciNet* as well. One of the most exciting is the recently released MRef tool (www.ams.org/mref), which makes it possible to find an item in *Math Reviews* by entering only portions of the actual reference, even with possible mistakes. (It is this tool that underlies the ability to match the items in reference lists with the corresponding items in Math Reviews.)

AMERICAN MATHEMATICAL SOCIETY
MRef For Standard References with Links | Help|Support|MR Lookup

Search Clear   MathSciNet Link BibTeX AMSRefs TeX

MRef is a tool for creating standard references with links to MathSciNet. The reference (with the author names first) should be typed or copied and pasted into the box above. Often, only a portion of the reference is necessary for MRef to recognize the corresponding entry in MathSciNet. More detailed help is available.

To be successful, however, Mathematical Reviews requires even more than a marvelous database and a sophisticated interface. Creating that database and the surrounding software is expensive. Math Reviews is entirely self-sufficient, and in fact, along with other parts of our publications program, Math Reviews makes money for the Society to support our outreach.

Math Reviews has been financially successful because of an effective pricing scheme and hard work. A little more than 10 years ago, the Society changed the way in which Math Reviews was priced. Subscribers were asked to pay a Data Access Fee (the DAF, which this year is $5467 for

institutional members) and then to purchase whatever individual products they chose (in 2004, this is $526 for paper and $1998 for *MathSciNet* or *MathSciDisc*). It was a sensible way to price a database product because it separated the various components—assembling the database and delivering it in various formats. But it also made it possible to create a flexible scheme for pricing Math Reviews for consortia.

Consortia of institutions can now purchase Math Reviews products by joining together. The Data Access Fee for the consortium is the sum of all previous subscribers (no savings there). But adding *new* subscribers does not increase the DAF. Each member of the consortium can then purchase *MathSciNet* at a reduced price of $250 – $1000, depending on "mathematical activity" at the institution. This means that a small college, which never had access to Math Reviews in the past, can join with nearby large universities to access *MathSciNet* for as little as $250 per year. Large *and* small institutions gain by this arrangement, whether or not they previously subscribed. There are now more than 100 consortia around the world involving well more than 1000 institutions.

In addition to the regular consortia, the Society has a National Data Access Fee program that allows certain countries in the developing world to obtain access at greatly reduced prices. Countries currently participating are Algeria, Bosnia, Bulgaria, Costa Rica, Croatia, Estonia, Fiji, Lebanon, Macedonia, Morocco, Romania, Serbia, Vietnam, Yugoslavia, and Zimbabwe.

Keeping track of all the institutions in consortia, as well as the single-institution subscribers is a large job, involving many staff. We have to track subscriptions, send invoices in the right amounts to the right institutions, deal with agents (not always easy), help institutions find a consortium to join, add and subtract Internet addresses for access, etc. This is work is done by our Marketing/Sales and Customer Services departments in the Providence headquarters.

Because of this flexible pricing, the number of institutions with access to the Math Reviews Database has more than doubled during the past 10 years—a remarkable achievement at a time when journal subscriptions are under enormous pressure.

By almost every measure, Mathematical Reviews is healthier now than at any time in the past 64 years. It is used by mathematicians everywhere; it's widely admired; and it's financially secure. We have reached this state through the efforts of people over many years (including the present Executive Editor, Jane Kister, who will retire in July of this year).

Twenty-five years ago, when Math Reviews was struggling, *some* people had the foresight to make certain that the underlying database was computerized — long before they were certain about its usefulness. *MathSciNet* was developed initially at considerable expense, largely because people had the belief that putting a database online was the right thing to do. When the

Society decided to add the old reviews from prior years, it invested nearly $1,000,000 keyboarding those reviews. It was an investment that paid off. We need to continue to invest in Math Reviews in similar ways in the future so that it remains a vital part of the Society's publication program—in many ways, the most important part. And we will.

John Ewing
Executive Director

	Jan 2005 fee	**Jan 2004 fee**
Employers Advanced Registration		
First Table	$225	$220
Second Table	$ 75	$ 65
Employers On-site Registration		
First table	$305	$300
Second table	$105	$100
	Jan 2005 fee	**Jan 2004 fee**
Applicants Advanced Registration	$ 42	$ 40
Advanced Registration for Winter List w/Message Center Only	$ 21	$ 20
Applicants On-site Registration	$ 80	$ 75
On-site Registration for Winter List w/Message Center Only	$ 21	$ 20

The following increases in fees for the Short Course at the January 2005 meeting have been approved:

	Jan 2005 fee	**Jan 2004 fee**
Advanced Registration		
Member	$85	$80
Non-member	$108	$100
Student/Unempl./Emeritus	$37	$35
On-site Registration		
Member	$115	$110
Non-member	$140	$130
Student/Unempl./Emeritus	$55	$50

James Maxwell
Associate Executive Director
April 2004

December 15, 2003

Ivelisse Rubio, Ph.D.   Ricardo Cortez, Ph.D.
University of Puerto Rico at Humacao   Tulane University
Department of Mathematics   Department of Mathematics
Humacao, PR 00791   6823 St. Charles Avenue #424
                                                New Orleans, LA 70118

Dear Drs. Rubio and Cortez:

The resounding success of the 2003 SACNAS Conference in Albuquerque, New Mexico and the infusion of significant programming targeting mathematics students was due in large measure to the dedicated leadership of members of the SACNAS mathematics community. Your efforts were fundamentally important to this progress: both in the development of programmatic aspects and in the area of funding. Sponsorship from National Science Foundation, National Security Agency, American Mathematical Society, AIM and MSRI was instrumental in providing financial aid for undergraduate and graduate students in mathematics-related fields to attend the conference and benefit from the expanded mathematics activities. In addition this funding assisted in providing the resources for organizing the truly exciting and interdisciplinary mathematics sessions at the conference.

The annual conference is a significant, tangible experience of SACNAS' mission in action: to encourage Chicano/Latino and Native American students to pursue graduate education and obtain the advanced degrees necessary for research careers and science teaching professions at all levels. On behalf of SACNAS, I would like to extend my deep gratitude to you for your efforts.

Following is a brief account of the mathematics presence at the 2003 SACNAS National Conference. In addition, we have provided information regarding the various funds expended on student and speaker participation in the conference. Please use these materials as part of any reporting requirements you may have for our mathematics sponsors and use the attached materials in providing reimbursement to SACNAS for the accrued expenses totaling $53,701.83 [AIM/ARCC $664.22; AMS $5,000; NSF $15,425; NSA $31,733; MSRI $879.61]. If you have any questions regarding these materials or if you would like to discuss this year's mathematics-related SACNAS events, please contact either Kerri Cook, Program Manager, or me at: 831-459-0170. We are very pleased about the success of these activities and look forward to continuing to feature a strong mathematics program at the conference and in our year-round initiatives.

Sincerely,

Refugio I. Rochin, Ph.D.
Executive Director

Mathematics at the 2003 SACNAS National Conference

Attendance at the 2003 SACNAS was the largest and most diverse in our thirty year history. There were 2,183 total conference attendees (1,257 females, 831 males, and 95 did not state). Over half of the attendees were students: 1,162 (865 undergraduates, 297 graduate students). In addition, 230 K-12 educators, 33 post-docs, and 731 professionals took part in the conference.

The SACNAS conference is an interdisciplinary event, embracing diversity in all aspects of participation. This aspect encourages cross-pollination of ideas and encourages students to consider fields of study that may not currently be their chosen area. At the same time because many of our participants identify as having multiple interests or backgrounds, this attribute can make exact calculations of participation trends complex. Thus, our records show that seven and ½ percent of conference attendance were self-identified to be within the mathematics field: 162 individuals – 25 in pure mathematics, 59 in applied mathematics, 78 unspecified. This is not the entire picture in relation to mathematics, however, as these figures are based on the primary major identified by the individual and do not include attendees with mathematics as a specialization or secondary field of study.

Mathematics sponsorships enabled SACNAS to bring 57 students to Albuquerque and covered the expenses of 12 session speakers. The contribution of support from our combined mathematics sponsors had a significant impact on the inclusion of mathematics participants and activities; 43% (69 out of 162) of all mathematics attendees received mathematics funding to attend.

Students at the conference participated in three days (October 2-5, 2003) of intensive educational and career development sessions. Professional growth workshops and scientific symposia sessions focused on presenting students with the broad range of disciplines and research options available to them, assisting students in selecting a potential research interest.

As mathematics funding supported the participation of speakers, programming of sessions to address the specific needs and interests of mathematics students was dramatically increased for 2003. Mathematics sessions included a day-long workshop titled the Mathematics Institutes; two scientific symposia – Connections in Mathematics and Mathematics Outside Academia; and a professional development workshop – Career Development Opportunities in Mathematical Sciences.

The introduction of a full-day Mathematics Institute was extremely successful as indicated by preliminary feedback from participants. The intensive and interactive Mathematics Institute involved two sessions: Coding Theory and Explorations in Mathematical Biology. 83 participants attended the sessions and took part in their hands-on activities. According to one participant, *"I am studying Applied Mathematics and this session helped me understand what I can do with my career."*

Meeting with graduate school and internship program representatives in the exhibit hall offered student attendees direct access to career enrichment opportunities that can make an immense difference in their development as researchers. To compliment these formal activities, the 2003 Conference offered several informal mentoring activities to connect students with role models and mentors.

In addition to receiving information regarding summer programs, internships, and graduate institutions, 429 students presented their research before an audience of students, scholars and professionals. SACNAS views poster and oral presentations as a vital opportunity for students to have their work reviewed by mentors and peers, to compete for presentation awards and to receive valuable feedback for improving their research and presentation skills. Of the sponsored mathematics students, fifteen shared their research in a student poster and two presented their work during the Graduate Student Oral Presentations. Three of these students received awards for their presentations. (Please see the attached materials for a complete list of students sponsored by funding source along with detailed demographic information)

Finally, mathematics research was also well represented in a special keynote address by Dr. Arlie Petters. Dr. Petters, William and Sue Gross Associate Professor of Mathematics at Duke University was introduced by MSRI's Dr. David Eisenbud. Through Dr. Petters' enthusiastic presentation, the full audience of SACNAS attendees discovered more about the beauty of mathematics research and excitement of a career in mathematics.

Thanks to mathematics sponsorship, SACNAS continues to actively address the needs of mathematics students and those student who are bridging between mathematics interests and those in fields such as biology, computer sciences, engineering, physics and more. Sponsorship for participation of student in the conference and the Mathematics Institutes, as well as for speakers from mathematics backgrounds, played a vital role in providing the ceaseless effort and creative approaches it takes to improve mathematics education for minority students and equalizing opportunities in the national scientific work force.

Table 1.
SACNAS National Conference Attendance, 1996 - 2003

Conference Year	Total Registrations
1996	942
1997	999
1998	1394
1999	1458
2000	1459
2001	1841
2002	2201
2003	2288

Epsilon Awards to Young Scholars Programs, 2004

Program Name	Location of 2004 Camp	Award
All Girls/All Math	University of Nebraska, Lincoln, NE	$ 2,500
Canada/USA Mathcamp	Colby College, Waterville, ME	$12,000
Hampshire College Summer Studies in Mathematics	Hampshire College, Amherst, MA	$15,000
MathPath	Roger Williams University, Bristol, RI	$ 2,500
PROMYS	Boston University, Boston, MA	$13,000
Ross Mathematics Program	The Ohio State University, Columbus, OH	$15,000
Texas State University Honors Summer Math Camp	Texas State University, San Marcos, TX	$15,000
University of Chicago Young Scholars Program	University of Chicago, Chicago, IL	$ 5,000

Total 2004 Awards		$80,000

To: ECBT
From: Warren Page, Secretary of AAAS Section (Mathematics)
Subject: AMS-support at the 2004 AAAS Annual Meeting
Date: February 26, 2004

Overview The AAAS annual meeting, considered by many to be the showcase of science, features a variety of presentation formats. In addition to more than one hundred 3-hour symposia on themes of contemporary interest, there are individual topical area lectures and plenary lectures. Because Section A's budget is too meager to support speakers, the generous annual support of the AMS has been centrally important in enabling Section A to offer programs and speakers that effectively communicate to general scientific audiences and the press (ergo, the public at large) the nature, excitement, and usefulness of mathematics.

February 13 – 17, 2004 AAAS Annual Meeting in Seattle, WA. Summarized below are Section A's sponsored symposia and talks presented at this meeting.

The Changing Nature of Proof in Mathematics: Past, Present, Future, organized by Warren Page
Historical Aspects of Proof, Victor J. Katz
How Students Learn to Construct and Understand Proofs, Annie Selden
Computers, Proof, and Discrete Geometry, Thomas Hales

What constitutes "proof" and how is it attained? This symposium examined these and related issues from historical, educational, computational, and philosophical perspectives. Victor Katz opened the session with an historical overview of what mathematical proof meant to different cultures and societies. Annie Selden considered our current technology oriented society, where increased classroom emphases on interactive problem solving and exploration provides teachers and education researchers with opportunities to examine and study the nature of their students' understandings of mathematical proof. Although proof plays a central role in mathematics, many students have difficulties constructing or understanding proofs. Drawing on results from research in mathematics education, Selden explained some of these difficulties and described aspects of constructing proofs that are not, but could be, taught. As a glimpse of what the future may portend, Thomas Hales described how the formal proof by a computer might be used to confirm a mathematics proof that cannot readily be verified. He described the status of his solution to Kepler's 400-year old Sphere Packing Density Problem. [After four years of work by a panel of twelve referees, the editor of *The Annals of Mathematics* wrote that they had not been unable to certify the correctness of the proof, and will not be able to certify it in the future, because they have run out of energy to devote to the problem."] Hales is now working with a computer to produce a formal proof of the Kepler problem.
   This symposium (audience of approximately 65 people) generated considerable discussion; the most impassioned mathematical and philosophical interactions related to the implications of Hales' presentation.   Warren Page

Optimal Stent Design for Cardiovascular Intervention, organized by Suncica Canic
Thomas Grad, Suncica Canic, K. Ravi-Chandar, Doreen Rosentrauch (Titles of talks not given)

This symposium brought together experts in applied mathematics, bioengineering, materials science, and cardiovascular intervention. Thomas Grad began the session with an overview of the uses and problems associated with stents (stainless steel or nytinol mesh-like tubes) in the treatment of cardiovascular diseases such as aortic abdominal aneurysms and coronary artery disease. His presented included video monitoring of cardiovascular interventions in patients. K. Ravi-Chandar described the mathematics and mechanics of designing stents, with attention to parameters such as the stent's length, diameter, stiffness, pitch angle of its double helical coils, and the

interaction between the stent's axial and longitudinal motion and the relation of some of these parameters to the pressure by the artery on the stent. He also described the role of friction and hooks in securing stents to the artery wall in order to minimize the stent's migration. Suncica Canic discussed the mathematics used to model blood flow in stents and coupled stents. She described how she approximated the Navier-Stokes equations to obtain a simplified model and showed that her model closely approximated empirical results. Doreen Rosentrauch spoke about drug-eluting (coated) stents that impede restenosis (scaring that closes the artery) and new tissue-engineered stents – as, for example, the cultivation of chrondite cells for helping stents bind more strongly to arterial walls.

   Overall, this was an excellent symposium and included considerable audience interaction that ran beyond the allotted time schedule. Unfortunately, the audience was ver small (about a dozen people throughout) because the symposium was scheduled 8:00 – 9:30 am, concurrently with Section A's symposium Phase Transitions, on the last day of the meeting. (I have already discussed this with the new AAAS Meetings Director in the hope of avoiding such poor scheduling in the future.)   Warren Page

Community Structure of the Internet and the WWW: Mathematical Analyses, organized by
    Jennifer Tour Chayes and Christian Borgs

Overview of Community Structure on the Internet and WWW, Christian Borgs

Correlations in Social Networks, Mark Newman

Exploring the Community Structure of Newsgroups, Jennifer Tour Chayes

The Web and Social Networks, Prabhaker Raghaven

Models and Algorithms for Local Transmission of Information in Social Networks, Jon Kleinberg

Christian Borgs began the session with a review of the measurements, metrics and mathematical models of the Internet and WWW. He also gave a review of the standard search algorithms that are currently in use. Mark Newman's talk began with a detailed review of community structure in general social networks, and then concentrated on some recent clustering algorithms that have been very successful. Jennifer Chayes discussed the structure of newsgroups, including detailed measurements of the relevant metrics for a large collection of newsgroups. She also gave a new algorithm for clustering newsgroups. Prabhakar Raghavan's talk focused on networks of trust, including structures like weblogs and Epinions. Jon Kleinberg discussed how to identify the most influential nodes in a network. About 50 - 75 people attended the symposium. There was a lot of lively discussion and interaction during all of the talks. Jennifer Tour Chayes

Phase Transitions in Computer Science, organized by Allon Percus

Random Properties and Threshold Phenomena, Joel Spencer

Phase Transitions in the Random Satisfiability Problem, Marc Mézard

Phase Transitions and Algorithm Design, Bart Selman

Phase Transitions in Proof Complexity and Satisfiability Search, Paul

Scaling Laws near Phase Transitions in Continuous Length Combinatorial Optimization, David Aldous

During the past ten years, there has been rapidly increasing relevance of phase transitions to average-case algorithmic performance on computationally hard problems. Exploring these developments was the theme of this symposium.

   After reviewing previous results on phase transitions in percolation, Joel Spencer described the process by which components merge and a giant component forms. By finding an appropriate parametrization and scaling, one can locate the "critical window" within which the phase transition takes place, as well as to obtain a detailed view of the process. For a process known as product replacement, Spencer explained how one finds both the critical point and the size of the critical window.

   One of the most fundamental decision problems in computation is *satisfiability*: given a set of logical

constraints acting on Boolean ("true" or "false") variables, can one assign truth values to the variables so that all constraints are simultaneously satisfied? In his talk, Marc Mézard provided an overview of the phase structure of satisfiability, discussing the existence of an intermediate phase that has the effect of slowing down many search algorithms. He also discussed the optimization problem of minimizing violated constraints in satisfiability, and its connections with problems in statistical inference and coding theory.

   Bart Selman discussed the satisfiability problem in the context of efficient reasoning procedures. In chip verification problems, for instance, one must solve large and highly structured satisfiability instances. While understanding phase structure is useful for predicting performance of algorithms on instances drawn from a random ensemble, it is not as generally applicable for instances with structure. Likewise, algorithms that work well over classes of random instances often break down on specific structured instances. However, stochastic search methods can take advantage of other key insights coming out of the study of phase transitions. Selman illustrated the heavy-tail distributions characteristic of the computational cost of standard backtrack algorithms for satisfiability, and how this motivates restart strategies that speed up algorithms significantly.

   Proof complexity is central to bounding the running times of algorithms on computationally hard problems: if the shortest proof (verification procedure) of a solution is exponentially large in the problem size, that algorithm will require exponential time to solve the problem. By analyzing backtrack algorithms in satisfiability, Paul Beame showed the existence of a sharp transition in the length of the shortest proof of unsatisfiability, where it changes from linear to exponential in the problem size. This transition does not coincide with the main satisfiability phase transition: there exists a region in parameter space where nearly all random instances are satisfiable, but those few that are unsatisfiable still lead to exponentially long backtrack searches.

   Expanding upon the notion of phase transitions as a general characterization tool, David Aldous discussed a classification of combinatorial optimization problems based on a scaling exponent. If one imagines a small perturbation from an optimal solution, and examines how the change in the objective function's value scales with the size of this perturbation, the scaling exponent serves to categorize problems into a small set of classes. Aldous described the properties needed for such a scaling exponent to be well-defined, and suggested a classification for several fundamental problems such as the Traveling Salesman Problem and the minimum spanning tree.

   The entire symposium was accompanied by substantial discussion among the audience and speakers. Although attendance suffered considerably from the scheduling of the symposium (Monday morning, when a large fraction of annual meeting participants had already left), it was gratifying that the more than twenty-five people in the audience stayed for the entire 3-hour session. Allon Percus

February 17 – 21, 2005 AAAS Annual Meeting in Washington, DC Section A's Committee is currently working to produce an informative blend of mathematically-related symposia for this meeting. Potential proposals, based on current efforts, include the following:

Associative vs. Disassociative Social Networks
A New Kind of Cellular Automata
Algorithms for Phylogenetic Reconstruction
Rhythm and Synchronicity
Interactions of Noise and Complexity
Mathematical Models of Bioterrorism
Mathematical Oncology
Mathematics of Brain Mapping
Recruitment and Retention of Graduate Students in Mathematical Sciences
Topical talk: Eric Lander

The officers of Section A gratefully acknowledge AMSs generous annual support for these important initiatives

AMERICAN MATHEMATICAL SOCIETY

To: Board of Trustees   **Date**: May 4, 2004
From: Connie Pass
Subject: Operating Fund Portfolio Management Report

SUMMARY RETURNS

The purpose of this memorandum is to summarize the Society's cash management policies and report on the operating portfolio's investment income performance during 2003, as well as to make recommendations for changes in authorized limits of investments or additional investments.

Investment earnings results by type and in total and other pertinent portfolio information for 2003 and the preceding five years are as follows:

	2003	**2002**	**2001**	**2000**	**1999**	**1998**
Overnight Repurchase Agreements	N/A	N/A	N/A	N/A	N/A	2.0%
Money Market Funds	0.9%	1.7%	4.2%	5.2%	4.9%	5.3%
Vanguard Fixed Income Mutual Funds - Total	3.3%	11.0%	6.7%	13.7%	(2.4%)	9.3%
Short Term Corporate Bond Fund	4.3%	6.0%	8.2%	8.2%	3.3%	6.6%
GNMA Fund	2.6%	9.7%	8.0%	11.2%	0.8%	7.1%
Long Term US Treasury Fund	2.8%	15.6%	4.4%	19.7%	(8.7%)	13.0%
High Yield Bond Funds (from 5/97)	N/A	(13.7%)	(0.7%)	(6.9%)	5.6%	1.4%
Vanguard Convertible Securities (from 1/98)	31.6%	(9.4%)	(3.1%)	4.2%	30.4%	2.5%
2 Year Treasuries (from 6/97)	N/A	N/A	N/A	N/A	5.8%	5.7%
Certificates of Deposit & T-Bills	2.1%	3.0%	6.0%	6.4%	5.4%	6.0%
Common Stock	10.7%	(14.4%)	(25.47%)	0.0%	(2.5%)	(8.5%)
Annual total portfolio return	3.7%	2.4%	4.4%	6.4%	5.1%	5.5%
AMS benchmark - Avg 6 month CD rate per Federal Reserve Bank of NY	1.2%	1.8%	3.7%	6.6%	5.4%	5.4%
AMS returns versus benchmark	2.5%	0.6%	0.7%	(0.2%)	(0.3%)	0.1%
Wkly Average Operating Portfolio (in 000's)	12,357	11,967	$11,510	$9,525	$8,800	$8,300
Annual Investment Income (in 000's)	$453	$262	$509	$611	$452	$467

At 12/31/03 operating fund investments equaled approximately $15,214,000, an increase of $1,677,000 from the previous year. Operations provided just over $2,800,000 in cash for in 2003, of which $1,677,000 was invested in the operating investment portfolio.

The return for 2003 is 250 basis points above the benchmark, the average annual 6-month CD rate per the Federal Reserve Bank of New York. In 2002 we changed the benchmark from the 3-month CD rate, as this is a better length of maturity for comparison purposes with our portfolio and the information is now easily retrievable.

DISCUSSION

Recent History of Authorized Investment Vehicles and Limits. At the May 1996 ECBT meeting it was agreed that the Society should have as a goal an accumulation of current assets such that they exceed current liabilities. To help achieve this objective, at the May 1997 ECBT meeting a plan for the creation of an intermediate term investment portfolio was adopted. Increases of $1,000,000 (to $4,000,000) in our money market funds, $1,000,000 (to $2,000,000) in our Vanguard fixed income funds, and $500,000 (to $1,500,000) in Treasury Notes were approved. In addition, a $1,500,000 combined limit for other mutual funds, consisting of high yield and convertible bond funds, was established at this time. In May 2000, the limits for money market funds, fixed income funds and the high yield/convertible funds were each increased by $500,000. At the May 2002 ECBT meeting, the limit on the money market fund was increased to $5,500,000, primarily to accommodate the larger investment balance carried in the operating portfolio.

The strategy of using an intermediate portfolio has occasionally resulted in greater volatility, but overall has generated an increase in the earnings of our operating fund investments. By shifting a portion of operating fund investments into slightly riskier investment vehicles we have, on average, increased the earnings compared to those that would have been achieved in low risk, short term investments.

Recent Portfolio Adjustments. In 2002 we reduced the amount in the intermediate portfolio due principally to poor performance in the high yield bond investment. We also rebalanced the remaining bond fund investments to prepare for a probable decline in the value of long-term treasuries in the coming months. In 2003, no such rebalancing was performed. Rather, new money was invested in low risk, short term investments such as the money market funds and certificates of deposit.

Changes in the Cash Management Environment. The equity markets recovered in 2003 and interest rates continued on a slow downward slope for much of the year, with increases showing in the last quarter. Further, fears that interest rates will rise in the near future affected the markets. While some of the weaknesses in the economy appeared to be recovering at various points in the year, the lack of recovery in the job market (some would say the continued loss of jobs) remains a concern. While consumer spending remained strong, consumer confidence wavered during the year. In this low-interest, somewhat jittery national psyche, the operating portfolio fared relatively well, with an overall return of approximately 3.7%. The intermediate portion of the portfolio provided more than its relative share of this return.

While this return is better than that of 2002, it remains relatively low. This is not expected to change significantly in 2004, although the CD maturities have been shortened in order to be able to take advantage of any increases in rates.

In this environment, it is prudent to reduce further the exposure to the longer duration funds – Vanguard's GNMA and Long-Term US Treasury funds. However, additional convertible bond investments will increase the risk of the overall intermediate portfolio without providing the possibility of significant return, at least in the short term. Shortly after year end, we exceeded the limit in money market funds (Treasurers' were informed); however, we needed the money to remain liquid in order to fund a transfer to the long=term investment portfolio in late May (assuming Board approves the transfer). At over 73 certificates of deposit, the market for that investment vehicle in issuers offering decent rates all but tapped out. With expectations for rising interest rates, further investments in funds with fixed rate securities is not prudent at this time.

Accordingly, in the last quarter of 2003 we looked for alternative investment vehicles that would be appropriate in these economic conditions that also met the principles of liquidity, return and preservation of principal. The attachment to this memo is a detailed analysis of one such investment with staff recommendations.

Cash Management at the AMS. The following rules govern AMS's management of cash:

1. *Availability and Liquidity*. The placement of investments in the operating portfolio is coordinated with the Society's immediate and estimated future cash requirements, which are based on actual and projected revenue and disbursement streams. Cash needs to be available at the appropriate times to cover the operating expenses of the Society as they are incurred - payroll, payroll taxes and other withholdings, and vendor liabilities comprise the bulk of our cash needs. Adequate portfolio liquidity is the ability to turn investments readily into cash without suffering undo loss of principal.

2. *Income*. Cash in excess of immediate operating needs should be invested so as to optimize returns. The Society has intentionally accreted such excess cash, so that the ratio of current assets to current liabilities remains at least 1.5 to 1 (after removing the deferred revenue from both the numerator and denominator) or 1:1 without the deferred revenue adjustment.

3. *Preservation of principal*. Safety is of prime concern in investments of operating capital. Diversifying investment vehicles and monitoring investment maturity dates and market value fluctuations greatly reduces an investment portfolio's exposure to risk. Maximum allowable positions should be established for different types of investments.

Authorized Investments. The investment vehicles authorized by the Board of Trustees for the operating portfolio are as follows:

• *Certificates of Deposit.* As in prior years, a large percentage of the Society's operating investment portfolio has been invested in certificates of deposit, with a weekly balance totaling between 40%-50% of the total portfolio during 2002.

We generally purchase "jumbo" CD's of federally insured savings institutions and commercial banks that are assigned an acceptable safety rating by a weekly bank rating newsletter. Current investment policies limit the amount of each CD to $100,000 (exclusive of accrued interest) per S&L and $400,000 per large commercial bank. In practice, the Society has only invested amounts up to $100,000 in any one financial institution and its affiliates. There is no limit to the total amount of CDs that can be held by the operating investment portfolio.

Issuer	Banks & Savings and Loans
Risk of default	None - federally insured
Risk of market decline	None
Maximum Amount	$100,000 per bank or S&L, $400,000 in large cap banks, unlimited in total

When the rate differential between money market rates and CD rates is quite narrow, we intentionally accumulate a large CD balance in order to maintain the money market balance below the maximum level and to increase the yield, even if slightly. This is what was done in 2002 and 2003. In practice, the Society can accumulate a portfolio between $5,000,000 and $7,000,000 with a rate differential compared to money market funds of at least 50 basis points. After that, the difference in rates over money markets drops significantly, which usually does not warrant the additional administrative burden to the Society.

- **_Treasury Bills._** T-Bills are convenient to use when we have a large planned expenditure for a predetermined future date, such as contributions to the Economic Stabilization Fund; however, better rates are available on alternative forms of short-term operating investments. Treasury Bills have no market risk associated with them because they are backed by the full faith and credit of the US government, are issued for short durations and are highly liquid. Accordingly, there is no limit to the total amount of T-Bills we may hold in our portfolio.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity
Maximum Amount	Unlimited

- **_Cash and repos (repurchase agreements)._** The AMS uses a concentration account at Citizens Bank - Massachusetts into which all receipts are automatically deposited and from which all disbursements are made. Under a repurchase agreement, cash above an established minimum balance is "swept" on a daily basis and invested overnight in repurchase agreements. Under a repurchase agreement, the customer (AMS) purchases government securities and the bank agrees to "repurchase" them the following day. The rate earned on these depends on the dollar amount of the repo; it is generally very low in comparison to rates available on other investment vehicles. Interest rates on repurchase agreements have been low for a few years. Unless one is sweeping large amounts of cash throughout the year, the interest earned does not justify the fees charged to maintain the agreement in place. The AMS has not used this investment vehicle since 1999 and it is not expected to be used in the near future.

Issuer	Citizens Bank - Massachusetts
Risk of default	Minimal
Risk of market decline	None
Maximum Amount	$1,000,000
Comments	Collateralized by US Gov't securities

- **_Money market funds._** The Board of Trustees has authorized a maximum investment of $5,500,000 in money market funds. At the end of 2003 the balance in money markets approximated $4,340,000, principally in Vanguard's Money Market Prime portfolio. Yields on the funds averaged about 0.9% for the year and are currently at about 0.7%. There is very little risk to principal because the valuation of the initial investment is generally not subject to change. Balances in these funds are usually maintained only at levels needed for short-term operating needs in excess of short-term maturities, since they under-perform alternative authorized investment vehicles.

Issuer	Vanguard, Fidelity and Paine Webber
Risk of default	Minimal
Risk of market decline	Very Low
Maximum Amount	$5,500,000

- **_US Treasury Notes._** The Board of Trustees has authorized a maximum investment of $1,500,000 in US Treasury Notes. A loss of market value may be incurred on these investments in a rising interest rate environment if funds are needed before maturity and have to be sold; however this risk is slight as the Society's liquidity is deemed extremely adequate. Treasury Notes can be an attractive investment when interest rates are expected to decline and the yield curve is fairly steep. No recent purchases have been made due to the interest rate environment.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity, otherwise value moves inversely to interest rate changes
Maximum Amount	$1,500,000
Comments	Best used just before interest rates decline

It is likely that staff will start to purchase inflation-protected treasury notes (TIPS), which pay a stated rate of interest, plus inflation over the period outstanding (by adjusting the principal). These have no risk of default and no risk of market decline if held to maturity, which would be the intent when purchased.

- **_Fixed Income (Bond) Mutual funds._** The Board of Trustees has authorized a maximum investment of $2,500,000 in fixed income mutual funds (initial investment, exclusive of reinvested income and share price increases, with appropriate disclosure to Treasurers and Board), and at the end of 2003 we had $2,552,523 invested. The initial investment amount is well below the limit. All of these investments are with the Vanguard Group of Valley Forge, PA. A combination of three funds is used: the High Grade Short-Term Corporate Bond portfolio, the GNMA portfolio, and the Long-Term US Treasury portfolio.

Issuer (currently used)	The Vanguard Group
Risk of default	Minimal
Risk of market decline	The longer the maturities of underlying investments, the higher the risk.
Maximum Amount	$2,500,000
Comments	Market value will decline as interest rates rise and increase as rates fall.

Historically, most of the volatility in the Society's short-term portfolio has been the result of market valuation adjustments on these investments (they are marked to market monthly); however, gains or losses technically are not realized on these funds until they are redeemed. In 2002, the relative mix of these investments was changed to be more heavily weighted to the Short-Term Corporate Bond portfolio and less weighted in the Long-Term US Treasury portfolio, due to expected valuation adjustments on the longer term portfolio expected to occur in the near future. Interest rates remained on slow downward trend in 2003, with increases showing in the fourth quarter. Fears of future increases also affected the market value of these funds, especially the Long-Term US Treasury Fund. Overall return on these funds was 3.3% in 2003, or about twice that of the 2003 return on a 2 year Treasury Note.

Since these funds are different in nature, it is helpful to look at their characteristics separately, keeping in mind that the limit applies to the combined total.

Vanguard High Grade Short-Term Corporate Bond Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, due to quality of underlying debt instruments and borrowers
Risk of market decline	Low, due to short duration of underlying investments
Comments	Share price is relatively stable; return is determined by recent interest rates, as underlying debt is short duration
2003 return	4.28% with average monthly yield of 3.25%

Vanguard GNMA Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low – while not backed by the full faith and credit of the US government, It isn't likely that the US government would allow GNMA to default on its obligations
Risk of market decline	Medium, as duration is longer
Comments	Since the GNMA obligations are linked to collateralized mortgage obligations, and mortgage rates tend to change more slowly than other long term rates, this fund is a bit less volatile when interest rates change.
2003 return	2.56%, with average monthly yield of 4.80%

Vanguard Long-Term US Treasury Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, as most underlying securities are US government direct issues
Risk of market decline	Highly sensitive to interest rate changes, as duration of underlying securities is long-term
Comments	This fund has caused most of the volatility in the Intermediate portfolio; staff mitigates some risk by adjusting investment amount
2003 return	2.81%, with average monthly yield of 4.61%

•*High Yield and Convertible Bond Mutual funds.* The Board of Trustees has authorized a maximum investment of $2,000,000 in any combination of high yield bond and convertible securities accounts. At December 31, 2003 we had $910,000 invested in these vehicles, in one convertible securities mutual fund managed by the Vanguard Group. Gains or losses technically are not realized on these funds until they are redeemed, although, for financial statement purposes, the Society records these investments at market. It is not anticipated that further investments in this group of investment vehicles will be made in the near future.

Issuer (currently used)	The Vanguard Group
Risk of default	Medium to High
Risk of market decline	Sensitive to movements in the equity markets
Maximum Amount	$2,000,000
Comments	Total returns often parallel those of equity markets

Summary of Operating Portfolio Investments, December 31, 2003.

Description	Value at 12/31/03	Current Board Limit	Excess over Limit
Money Market Funds	$4,339,946	$5,500,000	NA
Certificates of Deposit	7,386,000	$100,000 per inst.	NA
Treasury Notes		1,500,000	NA
Vanguard Bond Funds:			
GNMA Portfolio	1,049,071		
Short-Term Corp Bond Portfolio	1,069,111		
LT US Treasury Portfolio	434,341		
Subtotal	2,552,524	2,500,000 (1)	NA
High Yield and Convertible Funds:			
Vanguard Convertible	910,069		
Subtotal	910,069	2,000,000	
Common Stock	25,278	Source is Unrestricted gifts	NA
Total	$15,213,817		

(1) Limit is exclusive of reinvested dividends and share price increases. See discussion above.

The remainder of this document discusses the proposed addition of Floating Rate Mutual Funds to the authorized investments in the operating portfolio, with an investment limit of $2,000,000. The Fidelity Advisor Floating Rate High Income Fund is the specific investment of this type selected by staff should the addition be approved. See the specific recommendation in the Item.

AMERICAN MATHEMATICAL SOCIETY

To: Board of Trustees   **Date**: March 19, 2004
From: Gary Brownell, Connie Pass, Joanne Arruda
Subject: Floating Rate Mutual Fund Proposal

Summary and Recommendation

The purpose of this memorandum is to review the current authorized investments for the Society's operating funds and to request authorization to add an additional investment vehicle. We currently have approximately $1.4 million invested in long-term bond funds, $1 million in a short-term corporate bond fund, and nearly $1 million in a convertible bond fund. The bond funds were rebalanced in 2002 when money was shifted from the Long-Term US Treasury fund into the less volatile Short Term High Grade Corporate Bond Fund, and recently the maturities of the CD portion of the portfolio have been shortened. However, the Society remains in a vulnerable position as interest rates begin to rise.

Staff recommend that the Board of Trustees authorize the addition of floating rate mutual funds to the authorized investment vehicles for the operating investment portfolio with a maximum investment of $2,000,000. Staff further recommend that the Fidelity Advisor Floating Rate High Income Mutual Fund be selected as the investment vehicle in this category at this time.

The remainder of this document includes the following:

- General Discussion
- Fidelity Advisor Floating Rate High Income Mutual Fund
- Comparisons of various funds
- AMS Combined Investment Portfolio
- Morningstar Analyst Report on Fidelity Advisor Floating Rate High Income Mutual Fund
- Wall Street Journal Article on PIMCO's reaction to higher interest rate concerns

General Discussion

There continues to be significant concern that the Federal Reserve will begin to raise interest rates, which will have a negative effect on bond prices (they move in the opposite direction of interest rates). While the Fed left rates the same at its March 2004 meeting, it continues to lurk in the background. Normally, staff would react to the risk of falling bond prices in the operating portfolio by reallocating money from the longer term bond funds to shorter term bond fund, money market funds or bank CDs. We have essentially done this in 2003, with the accumulation of the highest CD portfolio ever, a reallocation among the bond funds to be more heavily weighted towards the short-term fund than previously, and high money market balances.

However, there are limitations on staffs' abilities to improve the return on the operating portfolio with the current authorized investments and expected average investment balances maintained during the year. CDs are limited to $100,000 each and because the number of banks providing higher yielding jumbo CDs is limited, investing in CDs has become very labor intensive and subject to diminishing returns. Money market funds are paying very little, and in March we went over the limit of our authorized total investment in such funds (the Treasurers were informed and the situation is temporary, due to planned transfer to the long-term portfolio). As we consider decreasing our investment in the longer-term bond funds we have looked for a dividend-paying mutual fund with a relatively stable NAV (net asset value) that is less influenced by interest rates, with a potentially better return than the short-term corporate funds. We found that floating rate mutual funds, also known as bank-loan funds, floating-rate funds, and prime-rate funds, meet these criteria. These funds tend to outperform most fixed income funds when the economy is thriving and rates are rising, and are generally not adversely affected when the economy slides (default of the underlying borrowers being the most worrisome possibility).

The rates that banks charge on the corporate loans held within floating rate mutual funds are frequently reset and are less vulnerable to Federal Reserve rate changes than bonds. "Because of that resetting, the net asset value doesn't change much," says Payson Swaffield, co-manager of two Eaton Vance funds.[1] Floating rate loans are often issued in connection with recapitalizations, acquisitions, leveraged buyouts, and refinancings. According to the Fidelity Prospectus dated December 30, 2003, "most floating rate loans are secured by specific collateral of the borrower and are senior to most other securities of the borrower (e.g., common stock or debt instruments) in the event of bankruptcy" (FHFIF Prospectus, 2003, p.7). The risk of default still exists; however, if a company defaults the senior secured creditors are at the front of the line for payment. In a 1999 USA Today article, Eric Jacobson, a senior fund analyst for Morningstar, stated that "bank loan funds typically recover 80 cents on the dollar when a borrower defaults compared to junk bond funds that get about half that when one of their loans goes bad."

A floating rate mutual fund, with a stable NAV which can take advantage of rising interest rates because the underlying loan rates are frequently reset, will counterbalance the negative effects Federal Reserve rate changes will have on the remaining long-term bond funds held within the Society's portfolio.

The Fidelity Advisor Floating Rate High Income Mutual Fund is the investment recommended to balance the effect of changing interest rates and increase the rate of return within the AMS portfolio. This floating rate fund is a Loan Participation Fund with a four star rating on Morningstar.com. The fund has an expense ratio of .94% and a minimum initial investment of $2,500. The institutional shares have an expense ration of .93% and a minimum initial purchase of $1million. This fund also offers daily redemptions; whereas a number of its peers offer only quarterly redemptions.

With safety a prime concern in the operating fund investments, staff believe that now is a favorable time to invest in this product. In view of the fact that the risk of default on bank loans decreases as the economy strengthens and bond prices decrease as interest rates increase, a floating rate mutual fund is an attractive and stable investment and a hedge against increasing interest rates. If the economy falters significantly, the NAV will be affected adversely.

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[1] http://www.usatoday.com/news/opinion/colyrmn/yrmn073.htm

Fidelity Advisor Floating Rate High Income Mutual Fund

The fund was established in August of 2000 with a front-load share class, followed by the addition of a no-load share class in 2002. According to the December 2003 Fund Prospectus, this fund seeks a high level of current income as its investment objective.

Floating rate funds invest in bank loans made to companies with low credit ratings, so the expectation of an improving economy lessens the risk of default. Given the short duration of the corporate loans, rising interest rates will have little impact on them. Though the underlying investments may be a lower grade than in other funds, now that there are signs of an improving economy, these funds offer minimal risk.

Christine McConnell, who has been with Fidelity since 1987, manages the Fidelity Advisor Floating Rate High Income Fund. According to an analyst at Morningstar.com, "Christine focuses on security, collateral, and covenants in an effort to find attractively priced loans"[2]. Some of Christine's principle investment strategies include:

- Normally investing at least 80% of assets in floating rate loans and other floating rate securities.
- Investing in money market and investment-grade debt securities, and repurchase agreements.
- Investing in foreign and domestic issuers.
- Using fundamental analysis of each issuer's financial condition and industry position and market and economic conditions to select investments.[3]

The Fidelity Advisor Floating Rate High Income Fund has earned four stars using Morningstar's rating method and has generated above-average returns. This fund has a very low expense ratio, which is a significant factor in long-term performance, and funds with lower expenses generally outperform those with higher expenses.

The Fidelity Advisor Floating Rate High Income Fund is recommended over other Floating Rate Funds for a number of reasons:

1. We have an established relationship with Fidelity.
2. The Fidelity Floating Rate fund has a high Morningstar rating combined with a low expense ratio.
3. The Fidelity Floating Rate fund is a no load fund

Issuer	Fidelity
Risk of default	Low
Risk of market decline	Low, possibly medium if economy falters significantly
Maximum Amount	$2,500 for investor shares
	One Million Dollars for institutional shares

The table on the following page shows the quality rating for the Fund's investments. The data were obtained from the fund's Annual Report, dated October 31, 2003.

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[2] Scott Berry, 02-09-04, Morningstar's Take, Analyst Report
http://quicktake.morningstar.com/Fund/MorningstarAnalysis.asp?Country=USA&Symbol=FFRIX&fdtab=analysis

[3] Fidelity Investments, 12-30-03, Floating Rate High Income Fund Prospectus, p.3

Fidelity Floating Rate High Income Fund
Quality Diversification (% of fund's net assets)

As of October 31, 2003 *	As of April 30, 2003 **
■ AAA,AA,A 0.0%	■ AAA,AA,A 0.0%
■ BBB 3.8%	■ BBB 4.3%
■ BB 43.2%	■ BB 47.0%
■ B 20.4%	■ B 20.0%
■ CCC,CC,C 0.8%	■ CCC,CC,C 1.1%
■ D 0.1%	■ D 0.0%
■ Not Rated 10.7%	■ Not Rated 10.0%
■ Equities 0.0%	■ Equities 0.0%
■ Short-Term Investments and Net Other Assets 21.0%	■ Short-Term Investments and Net Other Assets 17.6%

Fidelity uses ratings from Moody's Investor Services, Inc. Where Moody's ratings were not available, they use S&P ratings.

Fund Comparisons

Three floating rate mutual funds were selected to compare, based on their characteristics and recommendations in the business press. In addition to safety, we considered their expense ratios, redemption features, loads and other fees, and ease of administration. The tables below compare three floating rate funds, with fixed income funds already used by AMS for comparison.

Fund Properties (Data obtained from Morningstar.com, as of December 31, 2003):

Description	Ticker	Loads	% Asset Mix	Expense Ratio	Redemp-tions	Morning-star Rating
Fidelity Advisor Floating Rate High Income Fund	FFRIX	No load 1% fee on shares held less than 60 days.	24.4 cash 70.0 loans 5.6 other	0.93%	Allowed daily	****
Franklin Floating Rate Daily Access Fund	FAFRX	Front load 2.25%	11.0 cash 89.0 loans	1.12%	Allowed daily	Not Rated
Eaton Vance Classic Senior Floating-Rate Fund	ECFRX	No load	9.84 cash 90.16 loans	1.41%	Allowed monthly	**
Fidelity Cash Reserves (money market)	FDRXX	No load		.39%	Allowed daily	Not Rated

Performance History (Floating Rate Mutual Fund Data were obtained from Morningstar.com, as of December 31, 2003)

Description	2003 Return	2002 Return	2001 Return	2000 Return	Total Assets ($mil)
Floating Rate Funds					
Fidelity Advisor Floating Rate High Income Fund	6.44	1.57	4.52	Inception 08/00	1,657
Franklin Floating Rate Daily Access Fund	6.6	2.0	1.56	Inception 05/01	301
Eaton Vance Classic Senior Floating-Rate Fund	7.19	.61	2.28	3.74	1,418
AMS Bond Funds & Money Market					
Vanguard Convertible Securities Fund	31.6	-9.35	-3.09	4.21	874
Vanguard GNMA Fund	2.49	9.68	7.95	11.22	24,757
Vanguard Short Term Corporate Fund	4.20	5.22	8.14	8.17	15,591
Vanguard Long Term Treasury Fund	2.68	16.67	4.31	19.72	1,952
Fidelity Cash Reserve (money market)	.90	1.62	4.09	6.19	53,632.79
High-Yield Previously Held by AMS					
Strong High-Yield Bond Fund (STHYX)	24.76	-6.65	-.71	-7.08	405.1

In the economic difficulties of 2000 -2002, the floating rate mutual funds still provided positive return, unlike the high-yield bond funds.

Performance Charts from Morningstar.com.

Snapshot
Fidelity Advisor Float Rate Hi Inc I FFRIX

Performance more ▶▶

Growth of $10,000   01-31-04

	2000	2001	2002	2003	2004
● Fund	---	4.5	1.9	6.4	0.6
● +/- Cat	---	2.9	1.2	-3.7	-0.5
● +/- LB Aggregate	---	-3.9	-8.4	2.3	-0.3

Index return based on previous month end.

Snapshot
EV Classic Senior Floating-Rate F000PN

Performance more ▶▶

Growth of $10,000   01-31-04

	2000	2001	2002	2003	2004
● Fund	3.7	2.3	0.6	7.2	0.8
● +/- Cat	-1.9	0.6	-0.1	-3.0	-0.3
● +/- LB Aggregate	-7.9	-6.1	-9.7	3.1	0.0

Index return based on previous month end.

Snapshot
Franklin Floating Rate Daily Access A FAFRX

Performance more ▶▶

Growth of $10,000   01-31-04

	2000	2001	2002	2003	2004
● Fund	---	---	2.0	6.6	0.5
● +/- Cat	---	---	1.3	-3.6	-0.6
● +/- LB Aggregate	---	---	-8.3	2.5	-0.4

Index return based on previous month end.

AMS COMBINED INVESTMENT PORTFOLIOS
AS OF December 31, 2003

		YTD Return
Operating Cash Accounts		-
Money Market Funds	4,339,946	0.9%
Certificates of Deposit	7,386,000	2.1%
Vanguard Fixed Income Funds	2,552,523	3.3%
Vanguard Convertible Securities Fund	910,069	31.6%
Common Stock	25,278	10.7%
PIMCO Total Return Fund	11,207,672	5.6%
Vanguard REIT	1,044,011	35.7%
Cohen and Steers REIT	1,095,244	38.1%
Vanguard S&P 500 Index Fund	4,222,510	28.6%
Vanguard Total Stock Market Fund	18,363,926	31.6%
Frontier Capital Management	7,517,023	27.0%
Fidelity International Index	3,417,258	38.3%

$62,081,460

Investments underlying the Beal Prize and Ky Fan annuity are excluded from the above.
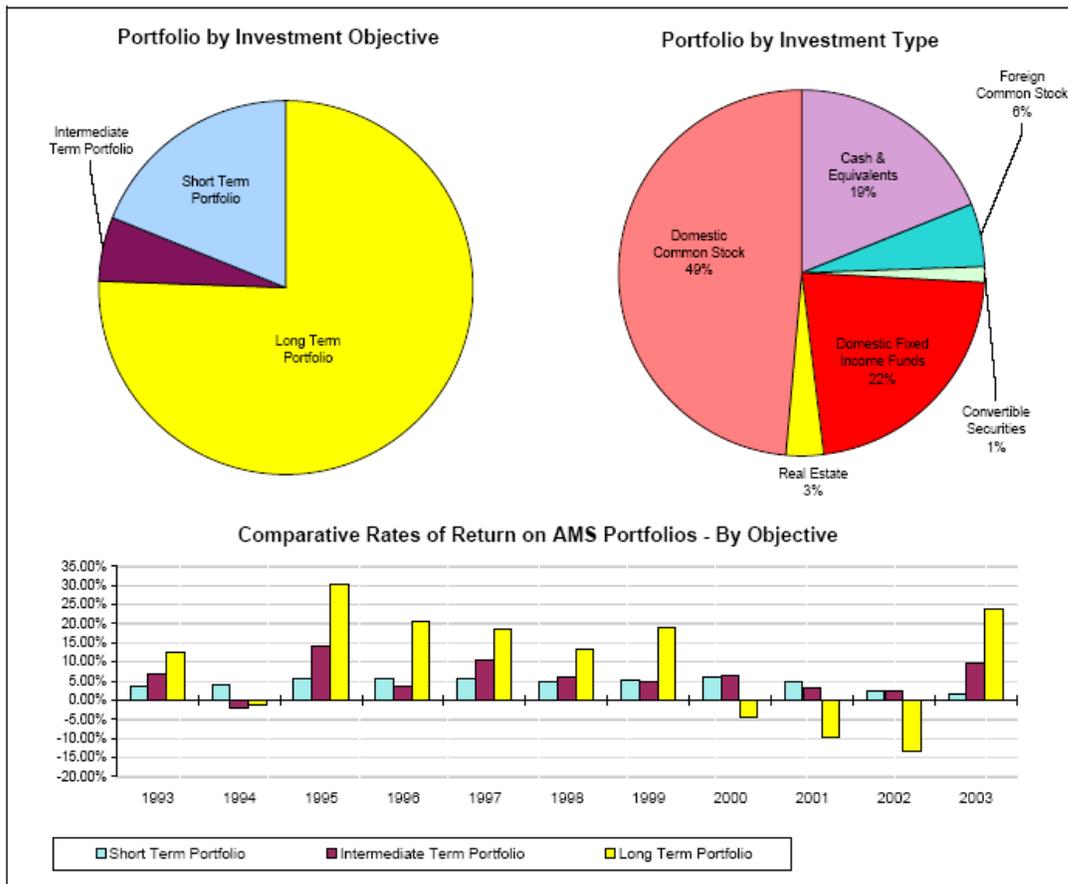
Exhibit 1

Analyst Report
Fidelity Advisor Float Rate Hi Inc I FFRIX
Morningstar's Take | 08-31-2003
by Eric Jacobson
This analysis was written for another share class. FFRHX

Don't look now, but the big dog is on the porch.
The introduction of this fund in 2000 and then its no-load class roughly a year ago are developments we've been anticipating for years. There are other bank loan funds with something to offer. We've grown to be big fans of some. By and large, however, the category has been the province of broker-sold fund firms, and, frankly, none that are among the most competitive, top-tier players in terms of resources, reputation, and pricing. Fidelity's decision to roll out a front-load share of this fund was thus a major breakthrough, lending not only extra legitimacy and cachet to the asset class, but also a true mutual fund structure with daily redemption privileges. The addition of a no-load share class--now among the category's lowest-cost options-- has broken another barrier.

Of course, a big name and a good structure do not a terrific fund make. Thus far, however, manager Christine McConnell has done a fine job of bringing performance to the table, as well. Although her portfolio hasn't been as aggressive as many in 2003--thus relegating it to the back of the category pack for the year to date as many intrepid rivals have ridden back the market's huge rally among lower-quality credits--neither did it endure those funds' suffering in 2001 and 2002. Among other miscues, many rivals had gorged on the market's ubiquitous telecom loans in the late 1990s and found themselves caught in that sector's later fall from grace.

All indications are that McConnell will run this fund with reasonable discretion, yet we're anxious to keep an eye on it given Fidelity's history as an aggressive shop when it comes to credit-sensitive bond investing. We're also anxious to observe how well daily redemption funds of this kind fare in the event of major outflows given the fairly illiquid nature of the loan market. Still, we think the fund's impressive bear-market prowess, notable research resources, and low price tag in particular; make it a competitor to be reckoned with.

Exhibit 2

January 16, 2004

Pimco, Fearing Specter Of Higher Rates, Gets Defensive

By AARON LUCCHETTI
Staff Reporter of THE WALL STREET JOURNAL

NEWPORT BEACH, Calif. -- Bond-market guru Bill Gross huddles with his lieutenants over lunch in a conference room they call Everest, his tie draped around his neck like a scarf. "Let's talk about the fabled handoff," he says.

His lieutenants nod, knowing the "handoff" refers to a decision by the Federal Reserve to raise interest rates. T hat would cause bond prices -- which move in the opposite direction of interest rates -- to fall, perhaps sharply.

No one is sure exactly when that will happen. But Mr. Gross, one of the world's most influential money managers, is spending a lot of time these days discussing how best to prepare. "We're inching toward that point," says Mr. Gross, who oversees $350 billion in bonds and similar assets at Pacific Investment Management Co., better known as Pimco.

What is clear is that interest rates are likely to go up soon. While a weak jobs report recently pushed the yield on the 10-year Treasury note down to about 4%, many people believe a strong economy will push rates up by the end of the year. When rates start rising, it won't be pretty for millions of investors who poured their savings into bonds after the stock-market bubble burst. Mr. Gross, chief investment officer at Pimco, says bonds could face tough times for years, due to big deficits and rising inflation.

Investors, of course, can dump bonds and move back into stocks, as many started doing last year. But the 59-year-old Mr. Gross doesn't have that choice. He is paid more than $40 million a year to focus on bonds and to manage Pimco's flagship Pimco Total Return Fund, the world's largest bond mutual fund. That puts him in the odd position of telling investors to be prepared for losses, but to stick with his fund, which has beaten 95% of its peers since opening in 1987.

Mr. Gross insists there are still ways to make money in bonds. But to find them, the man considered the Warren Buffett of bond investing has altered his strategy. He is betting big on inflation-indexed Treasury securities that should do well if higher inflation returns, while venturing into riskier territory outside the U.S. with emerging-market bonds. In recent months, he has shifted a chunk of his own retirement money into a Pimco commodity-related fund because prices of hard assets rise when economic growth is strong and the dollar is weakening.

The story of how Mr. Gross soured on bonds highlights growing concern that the bond market won't be the haven it has been for nearly a generation. His strategy shifts also offer insights to investors worried about where to put their own money. If Mr. Gross is right, the handoff, as he calls it, could be a watershed event that alters the investment landscape for years.

Rising interest rates could hurt stocks, too. Higher rates make it more expensive for companies to borrow money, cutting into profits. Mr. Gross likes stocks even less than he likes bonds, arguing they are too expensive.
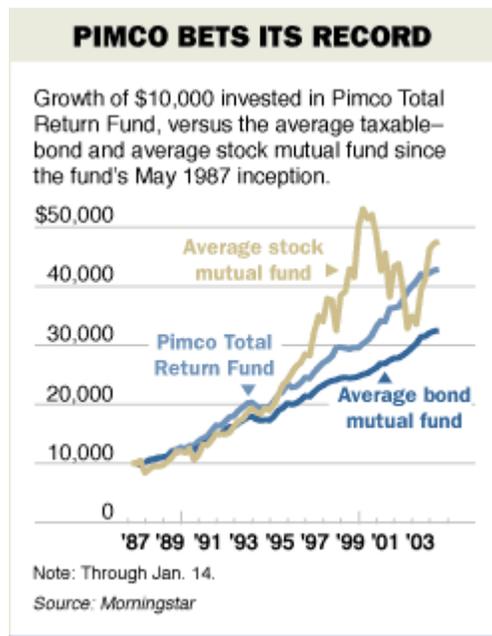
In the upside-down world of bonds, slow economic growth is a good thing. If growth is too strong, the Fed, fearing a resurgence of inflation, steps in and raises rates to cool off the economy. That hurts bond prices. Over the past two years, the Fed, fearing deflation, or falling prices, has instead cut rates to a 45-year low in an effort to spur growth.

Bonds could still do well under such scenarios as another recession or a terrorist attack. If rates go up enough, investors would also have an incentive to shift money to new bonds that pay higher yields.

When the Fed last cut rates, in late June, Mr. Gross viewed the move as a sign that bond-friendly rate cuts were ending. It was the 13th time the Fed had lowered its target short-term rate since 2001, but the size of the cut was smaller than expected. "This was as close to ringing a bell as it gets," Mr. Gross says. He immediately sold "several billions" of dollars in bonds.

The next day, Mr. Gross took about 200 Pimco employees on a long-planned cruise to celebrate the firm's growth. He donned sunglasses and a cowboy hat for a poker tournament.

He also visited a makeshift trading room on board, where Pimco bond managers chattered on satellite phones and tapped away on desktop computers. Across the country, bond investors were frantically digesting what they saw as a groundbreaking Fed shift. The yield on the 10-year Treasury note started to surge, to 4.6% in early August from a June low of 3.1%. Mr. Gross realized the move could wipe out billions of dollars of assets. He removed himself from his cruising colleagues, took three sheets of the ship's stationery and started jotting down Pimco's strategy.

PIMCO BETS ITS RECORD

Growth of $10,000 invested in Pimco Total Return Fund, versus the average taxable–bond and average stock mutual fund since the fund's May 1987 inception.

Note: Through Jan. 14.

Source: Morningstar

Rates were likely to head higher as the U.S. government encouraged inflation and a falling dollar, so Pimco would have to look abroad for "global market alternatives," he wrote. He brought the sheets back to his California office, had them scanned into a computer and then published as part of his widely followed monthly newsletter.

Mr. Gross actually had been growing uneasy for some time. Back in 2002, when the bond market was humming and he was vacationing in Maui, he flipped through a thick book of world financial history with charts that painted an ominous picture. One showed that interest rates tend to go up for years after prolonged periods of gentle declines.

When Mr. Gross got back, Pimco Fed watcher Paul McCulley told him that the Fed's steps to prevent deflation -- mainly interest rate cuts -- would help bonds at first, but would sow the seeds for bond losses. Essentially, bonds were getting too much of a good thing. The predicament made Mr. Gross think of a TV commercial that he used to see. As he recalled, it touted oil filters with the slogan "pay me now or pay me later."

The manager took an indirect path into the bond business. The son of a steel-company executive, Mr. Gross graduated with a psychology degree from Duke University in 1966 and went to Las Vegas with a book about winning at blackjack. Playing 16 hours a day, he turned $200 to $10,000 in four months and used the money to pay for business school.

He hoped to get into stocks, but the best job he found was one his mother spotted in the newspaper -- researching bonds at what was then called Pacific Mutual Life Insurance Co. After becoming a manager, Mr. Gross built a reputation for making timely interest-rate calls and using innovative products such as financial futures to boost returns. Along the way, his fund suffered only two years of losses -- 1994 and 1999 -- and easily beat both stocks and bonds since 2000. Its annual return since opening is 9.2%.

About four years ago, Mr. Gross signed a $200 million retention deal with **Allianz** AG after the German insurance company bought a majority stake in Pimco. His contract keeps him at the firm until at least early 2007.

Sometimes, Mr. Gross is surprisingly outspoken. In 2002, he criticized General Electric Co. for its dependence on short-term borrowing. A former Navy officer who served on a gunboat during

Vietnam, he argued against the war in Iraq on both financial and moral grounds. "I fear for my country's proud heritage and even more for its future," he wrote from the study of his Laguna Beach home in an investment letter published in March.

A recent visit to Pimco's offices in Orange County shows how Mr. Gross is grappling with the difficult bond market. He arrives at 5:30 a.m., checks an outsized red binder that outlines Pimco's positions and works a handful of trades. He slips in a break around 9 a.m. -- lunchtime on New York bond trading desks -- to ride an exercise bike, the backup workout when his yoga instructor is out of town.

Back at the office, the day's bond trading winding down, the main event unfolds. Seven senior Pimco managers gather for sandwiches in a conference room off the trading floor. Over the next two hours, they discuss how best to prepare for the "fabled handoff." There are few obvious choices. In U.S. Treasurys, longer-term bonds suffer from the twin threats of deficits and inflation, but safer shorter-term notes have low yields. Mortgages have their own problems.

Some suggest Pimco should hold more cash or very short-term investments now paying about 1%. "We want to have our powder dry," says William Powers, a longtime Pimco manager, after finishing a lunch of two hard-boiled eggs.

Indeed, Total Return Fund recently held nearly 20% of its assets in cash. But Mr. Gross says cash isn't "sufficient" as a long-term strategy. "Keeping powder dry is expensive" when it entails passing up 4% yields in 10-year Treasury notes for 1% yields in cash, he explains.

So Mr. Gross has sought alternatives. He has invested about $32 billion of Pimco clients' money in Treasury Inflation Protected Securities, known as TIPS, that would beat regular Treasurys if inflation heats up. TIPS now account for about 10% of Total Return's assets, up from 1% a year ago.

Mr. Gross has scooped up municipal bonds that he thinks won't suffer as much as U.S. Treasurys if foreign bondholders slow their buying of U.S. government bonds, as Mr. Gross fears. In Treasurys, he is sticking to intermediate-term notes, believing they will hold up, even during the second half of the year when he expects the Fed to start raising interest rates.

Pimco also is investing overseas, mainly because Mr. Gross is concerned about the debt owed by U.S. companies, consumers and the government.

Pimco has put about $12 billion into emerging-market bonds on the theory that rising oil, metal and agricultural prices will help the economies of commodity producers like Brazil and Russia. Last year, emerging-market bonds surged about 30%.

One bet that didn't work out well was Pimco's sale of corporate debt, including junk bonds, last year. Feeling that many corporate bonds had bounced too fast, Mr. Gross sold some bonds for a profit, but he missed out on further gains when the rally continued.

Still, the biggest concern for Pimco is U.S. monetary policy. The Fed, traditionally most sensitive to inflation, has lately been too preoccupied with the possibility of deflation to fight inflation aggressively, Mr. McCulley tells the group over lunch in November.

Fed officials "are fixated" on preventing the kind of deflation that hobbled Japan's economy over the last 10 years, Mr. Gross says. "They're 'reflationists.' "

"Bingo," responds Mr. McCulley.
Mr. Gross asks if anyone disagrees. The room is silent.
Updated January 16, 2004
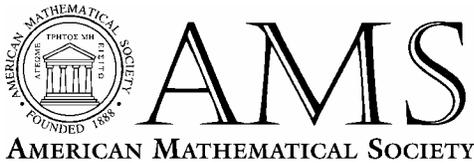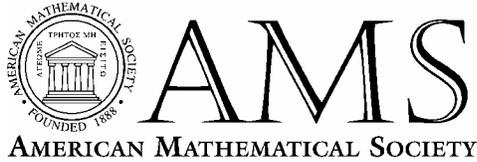
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
Business by Mail
November 1, 2003

MINUTES
from the Ballot dated October 1, 2003

There were five votes cast by John Bryant, Robert Daverman, Susan Friedlander, Michel Lapidus and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated September 20, 2003.

2.   Approved a reciprocity agreement between the AMS and the Indonesian Mathematical Society.

3.   Approved the minutes of the Secretariat Business by Mail from the ballot dated September 2, 2003.

Robert J. Daverman
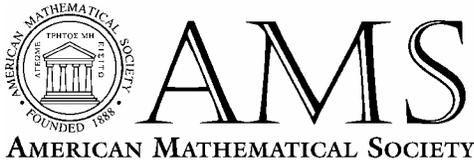
AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
Business by Mail
December 1, 2003

MINUTES
from the Ballot dated November 1, 2003

There were three votes cast by John Bryant, Robert Daverman and Michel Lapidus.

1.   Approved electing to membership the individuals named on the list dated October 20, 2003.

2.   Approved the List of Applicants for Domestic Institutional Membership in the American Mathematical Society for 2004.

3.   Approved the minutes of the Secretariat Business by Mail from the ballot dated October 1, 2003.

Robert J. Daverman

AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
Business by Mail
January 2, 2004

MINUTES
from the Ballot dated December 1, 2003

There were four votes cast by John Bryant, Robert Daverman, Michel Lapidus and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated November 20, 2003.

2.   Approved holding the 2010 Joint Mathematics Meetings in at the Marriott Hotel and Moscone Center West in San Francisco, CA, on January 4-9, 2010. (Note: This will be a Wednesday through Saturday meeting.)

3.   Approved the Applicant for International Institutional Membership in the American Mathematical Society for 2004.

4.   Approved the enclosed minutes of the Secretariat Business by Mail from the ballot dated November 1, 2003.

Robert J. Daverman
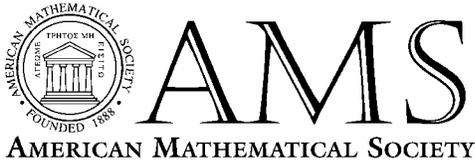
AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
Business by Mail
February 2, 2004

MINUTES
from the Ballot dated January 1, 2004

There were five votes cast by John Bryant, Robert Daverman, Susan Friedlander, Michel L. Lapidus and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated December 20, 2003.

2.   Approved holding the 2011 Joint Mathematics Meetings in at the New Orleans Sheraton and the Marriott Hotel in New Orleans, Louisiana, on January 3-8, 2011. (Note: This will be a Wednesday through Saturday meeting.)

3.   Approved holding an Eastern Sectional Meeting at Bard College, Annandale-on-Hudson, NY, on October 8-9, 2005.

4.   Approved the minutes of the Secretariat Business by Mail from the ballot dated December 1, 2003.

Robert J. Daverman

AMS

AMERICAN MATHEMATICAL SOCIETY

312D Ayres Hall, University of Tennessee
Knoxville, TN 37996-1330 USA
Phone: 865-974-6900 Fax: 865-974-2892
www.ams.org

Robert J. Daverman, Secretary
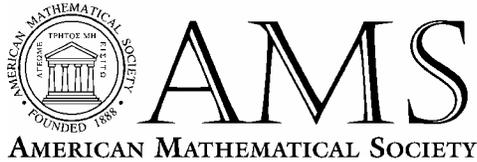Email: daverman@math.utk.edu

SECRETARIAT
Business by Mail
March 1, 2004

MINUTES
from the Ballot dated February 2, 2004

There were three votes cast by John Bryant, Robert Daverman, and Michel L. Lapidus.

1.   Approved electing to membership the individuals named on the list dated January 20, 2004.

2.   Approved AMS sponsorship of a Summer Institute in Albegraic Geometry during 2005.

3.   Approved the minutes of the Secretariat Business by Mail from the ballot dated January 2, 2004.

Robert J. Daverman

AMS

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Robert J. Daverman, Secretary
Email: daverman@math.utk.edu

SECRETARIAT
Business by Mail
April 1, 2004

MINUTES
from the Ballot dated March 1, 2004

There were five votes cast by John Bryant, Robert Daverman, Susan Friedlander, Michel L. Lapidus and Lesley Sibner.

1. Approved electing to membership the individuals named on the list dated March 20, 2004.

2. Approved holding a Western Sectional Meeting at the University of Oregon in Eugene Oregon on November 12-13, 2005.

3. Approved holding a Joint meeting with the Taiwanese Math Society on December 14-18, 2005, in Taiwan.

4. Approved the Technion Israel Inst of Tech, Haifa, Israel, as an International Institutional Member for 2004.

5. Approved the minutes of the Secretariat Business by Mail from the ballot dated February 2, 2004.

Robert J. Daverman

AMS
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Robert J. Daverman, Secretary
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SECRETARIAT
Business by Mail
May 3, 2004

MINUTES
from the Ballot dated April 1, 2004

There were four votes cast by John Bryant, Robert Daverman, Michel L. Lapidus and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated April 20, 2004.

2.   Approved the minutes of the Secretariat meeting held on January 8, 2004.

3.   Approved holding the Spring 2006 Meeting of the Western Section on Saturday and Sunday, April 29-30, 2006, at San Francisco State University.

4.   Approved holding an AMS Council meeting on 11 January 2006 in San Antonio, Texas.

5.   Approved the minutes of the Secretariat Business by Mail from the ballot dated March 1, 2004.

Robert J. Daverman

STATUS REPORT – AMS HEALTH INSURANCE
Tammy Walsh and Gary Brownell

The purpose of this report is to provide a brief update on the cost of health insurance to AMS and its employees and to show the effect of the increase in these costs on the AMS budget and on employees. Specifically, we will address the following questions:
- How have healthcare cost increases affected AMS financially over the past several years?
- How has AMS responded to these challenges?
- How have these pressures affected AMS employees?

Over the past five years, the cost to AMS of health insurance has gone from a little more than 5% to a little more than 8% of total salaries. Rate increases from 1999 to 2004 have nearly doubled the AMS cost over that period, and the next increase probably will double it in 2005. Although such increases are steep, they have been moderated by changes in plan design and competitive bidding. Unfortunately, the number of competitors has diminished, so price competition is not as effective as it once was.

Although the cost of all types of health insurance continues to go up, this report looks at only employer sponsored insurance available to employees. Retiree medical insurance is not included in this discussion.

Table 1 summarizes the cost to AMS of providing health insurance. As can easily be seen, there is a steady increase. We are estimating that these costs will be about 8.2% of total salary costs this year. For comparison purposes, our largest benefit cost has been retirement, which runs about 9.5% of salaries.

Table 1: Overall Cost Data, All Offices

	2000	2001	2002	2003	2004 Estimates
Total annual cost of AMS share of premiums.	$493,815	$592,360	$645,169	$735,049	$853,000
% change of above.		20.0%	8.9%	13.9%	16.0%
Total salary cost, all offices.	$9,172,165	$9,612,131	$9,773,833	$10,024,813	$10,404,619
% AMS cost bears to total salary each year.	5.4%	6.2%	6.6%	7.3%	8.2%
Average number of participants in all offices during the year.	158.9	156.2	151.3	152.7	152.0
Average AMS cost per participant.	$3,108	$3,792	$4,264	$4,814	$5,612
% change of above.		22.0%	12.4%	12.9%	16.6%
FTEs per the green pages for each year.	215.24	212.81	207.02	204.11	205
Average AMS cost per FTE.	$2,294	$2,784	$3,116	$3,601	$4,161
% change of above.		21.3%	12.0%	15.6%	15.5%

About 75% of staff participate in the health insurance benefit. Those participants have shared in these cost increases, and, depending on their circumstances, may have had to bear more cost increases than simply premium increases. More about that below. Obviously, the cost to the AMS is affected not only by the premium rate increase but also by changes in the number of employees

who elect coverage and the level of coverage they select. Since 2000, there has been a decrease in the number of participants, although there has also been a decrease in the number of FTEs.

All regular employees who work at least 20 hours/week are eligible to participate in AMS sponsored health plans. Historically, employees have been offered a choice of carriers and plans, with the basic difference being the choice of provider and the size of the provider network offered in each plan. Employees had the ability to choose a plan that offered benefits most suited to their needs while taking into consideration the cost of the plan. At one time, employees in both RI and MI had a choice of plans whose premiums ranged from very inexpensive (such as a staff model HMO) to fairly expensive (such as the "classic Blue" indemnification plan). Since employees had to bear some of the premium cost, they could exercise choice with the expectation that they would choose the least expensive plan that met their needs. As cost increased and the number of insurers decreased (the least expensive insurer in RI was dissolved a few years ago), insurers would not be competitive in their premiums unless they got all of a company's business (the "whole case scenario"). Currently, Rhode Island's two major insurance companies (Blue Cross/Blue Shield and United Healthcare) will only bid on business the size of AMS (~100 participants) if they are bidding for all the health insurance. So we are no longer able to provide a range of plans in RI. In MI, such choice is mandated, so employees there do have a choice.

Table 2 shows a history of rate increases (for this purpose, we are showing rate increases for specific plans that are representative). In 2000, the Michigan plan saw premiums increase by nearly 24%. This was followed by a proposed premium increase of 19% for all offices for 2001. In an effort to minimize the rate increase, the plans were redesigned, which resulted in a smaller increase for each plan. Again in 2002, proposed premium increases were in the double-digits. The Rhode Island office changed carriers in response to the 18% renewal increase proposed by Blue Cross & Blue Shield RI in that year.

Table 2: Annual Increase in Health Premium Rates for Comparable PPO Plans

		2000	2001	2002	2003	2004 Estimates
RI + DC	Carrier	BCBSRI	BCBSRI	UHC	UHC	UHC
	Rate Increase	6.3%	15.5%	6.8%	15.0%	16.2%
	Total Premium as % of Total RI+DC Salary	7.98%	8.58%	8.79%	9.58%	10.55%
MI	Carrier	BCBSMI	BCBSMI	BCBSMI	BCBSMI	BCBSMI
	Rate Increase	23.80%	5.80%	15.70%	14.70%	12.07%
	Total Premium as % of Total MI Salary	7.90%	8.25%	9.89%	10.69%	12.27%

Up until 2001, premium increases had been absorbed equally by employees and AMS. Faced with double-digit increases and recognizing that an increase of that magnitude would be a hardship for everyone, AMS looked at various methods to hold down health insurance premiums, including changes in plan design. The strategy adopted included higher copays and deductibles. Although premiums are shared based on a fixed percentage, employees must absorb entirely any increase in copays and deductibles. AMS sought to mitigate this change by increasing its share of the total premium by 5% in each category (Table 3).

Table 3: Employer Contribution (% of total premium) for Full Time Employees

	Single	**Two-Person**	**Family**
AMS Pre-2001	80%	65%	60%
AMS 2001 to present	85%	70%	65%
2003 national average	84%	Not reported	73%

In 2003, the monthly premiums AMS pays for insurance were higher than the national average for all plans except for the MI HMO plan, which was about equal to the national average. There are a number of reasons for this (including state mandates for certain coverage, as well as general worker expectations in RI and MI), but the outcome is the same: both AMS and employees continue to pay more for health insurance in both actual dollars and as a percent of total salary. Table 4 shows AMS employee rates for the RI plan and the MI mid-level plan in the context of national averages (the Appendix shows the costs of all the plans offered by AMS and the number currently participating in each).

Table 4: Monthly Employee Contribution for Single/Family Coverage

	2000	**2001**	**2002**	**2003**	**2004**
National Average Single/Family	$28/$135	$30/$149	$39/$178	$42/$201	not available
AMS Michigan Single/Family*	$53/$247	$42/$229	$48/$264	$54/$294	$57/$348
AMS Rhode Island Single/Family*	$47/$264	$39/$261	$46/$259	$53/$298	$61/$346

   *Rates are for comparable PPO plans

Although health insurance is just one component of a comprehensive benefits package, we realize that health insurance is one of the benefits employees value and need most, and are aware of the consequences changes in health insurance benefits have on employees and their families. AMS has implemented the following strategies to minimize the effects of cost increases:
- utilized insurance brokers to solicit competitive bids
- implemented plan design changes in both Rhode Island and Michigan plans
- increased the portion of the premium paid by the AMS
- changed carriers

Although each of these steps has been effective, it has not been possible to avoid continuing double digit increases, and it appears likely that increases in excess of inflation are likely to continue for the foreseeable future.

Sources:

Employee Benefits News Benefits 2004 Sourcebook.
Proprietary Broker Information provided by Group Benefit Advisors, Inc., Warwick, RI.
Rhode Island Commercial Health Plans' Performance Report, 2002, Rhode Island Department of
    Health, Office of Performance Measurement.
The Henry J. Kaiser Family Foundation: State Health Facts Online.

Health Insurance Status Report
April 2004

APPENDIX
MEDICAL INSURANCE PROVIDERS, RATES, AND PARTICIPANTS
MAY 2004

DISTRICT OF COLUMBIA OFFICE

UNITED HEALTHCARE - OPTIONS PPO

	TOTAL MONTHLY	AMS MONTHLY	EMPLOYEE MONTHLY	NUMBER OF PARTICIPANTS
Individual	497.42	422.81	74.61	1
2-Person	990.42	693.29	297.13	1
Family	1,202.62	781.70	420.92	1

RHODE ISLAND OFFICES

UNITED HEALTHCARE - CHOICE PLUS

	TOTAL MONTHLY	AMS MONTHLY	EMPLOYEE MONTHLY	NUMBER OF PARTICIPANTS
Individual	409.27	347.88	61.39	58
2-Person	814.90	570.43	244.47	17
Family	989.49	643.17	346.32	23

MICHIGAN OFFICE

BLUE CROSS NETWORK HMO

	TOTAL MONTHLY	AMS MONTHLY	EMPLOYEE MONTHLY	NUMBER OF PARTICIPANTS
Individual	315.56	268.23	47.33	14
2-Person	725.79	508.05	217.74	2
Family	820.46	533.30	287.16	9

COMMUNITY BLUE PPO – OPTION 2*

	TOTAL MONTHLY	AMS MONTHLY	EMPLOYEE MONTHLY	NUMBER OF PARTICIPANTS
Individual	378.08	321.37	56.71	4
2-Person	839.52	587.66	251.86	2
Family	994.86	646.66	348.20	3

COMMUNITY BLUE PPO – OPTION 10*

	TOTAL MONTHLY	AMS MONTHLY	EMPLOYEE MONTHLY	NUMBER OF PARTICIPANTS
Individual	389.85	331.37	58.48	4
2-Person	862.98	604.09	258.89	4
Family	1,019.59	662.73	356.86	3

American Mathematical Society Audited Financial Statements December 31, 2003 and 2002

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