

1023-97-465

Manmohan Kaur* (mkaur@ben.edu), Department of Mathematics, 5700 College Road, Lisle, IL 60540. *A Fertile Ground for Undergraduate Research: Cryptography*. Preliminary report.

In order to get undergraduates interested in mathematics, it is necessary to involve them in its research. Research opportunities serve not only as a catalyst to understand and appreciate a particular branch of mathematics, but also to kindle their long-term interest in mathematics in general.

Cryptography has played an important role in human lives over the centuries. It is of interest not only to the military, but also to the anthropologist, the historian, and the artist. Modern cryptographic methods have had tremendous impact on the sociological, political and economic aspects of our society. The problems in this field are easy to understand, although they may be very hard to solve. Further, with the development of public key cryptography, this 'science of secrecy' does not need to be 'secret' any more. For these reasons, Cryptography is an ideal subject to excite undergraduates into mathematics research.

In this talk I will discuss a special topics course that I have developed and taught twice at a liberal arts four-year college. As many as twelve papers were presented by my students at various forums off-campus, including the annual meetings of the ISMAA. (Received September 13, 2006)