

**Meeting:** 1003, Atlanta, Georgia, SS 38A, AMS-SIAM Special Session on Orthogonal Polynomials—Random Matrices—Integrable Systems: Interdisciplinary Aspects, I

1003-34-684      **Anthony M Bloch\*** (abloch@umich.edu), Department of Mathematics, University of Michigan, Ann Arbor, MI 48109-1109, and **Arieh Iserles**. *Geometric aspects of isospectral flows on symmetric matrices.*

In this talk I will discuss aspects of the geometry and dynamics of certain isospectral flows on symmetric matrices. In particular I will consider generalized double bracket flows. These flows generalize the double bracket flow which describes the Toda lattice. I will analyze their gradient structure, the nature of their equilibria, and their image under the moment map. I will also consider related flows that involves both skew and symmetric brackets. This is joint work with Arieh Iserles. (Received September 27, 2004)