1014-34-919   **Anthony M. Bloch*** (`abloch@umich.edu`), Department of Mathematics, 2074 East Hall, University of Michigan, Ann Arbor, MI 48109-1109, and **Arieh Iserles**, **Jerrold E. Marsden** and **Tudor S. Ratiu**. *Geodesic Flows on the Symplectic Group.*

In this talk I will discuss the geometry of certain geodesic flows on the symplectic group and their realization as flows on symmetric matrices. I will also discuss their relationship to the generalized rigid body flows and their Lie-Poisson and bi-Hamiltonian structure as well as the nature of the system Casimirs. This is joint work with Arieh Iserles, Jerry Marsden, and Tudor Ratiu. (Received September 26, 2005)