1046-80-1866 **Matthew Glomski*** (Matthew.Glomski@marist.edu), Poughkeepsie, NY 12601. *Existence and uniqueness of the critical wave number for the asymmetric planar Bénard problem.* Preliminary report.

Rayleigh-Bénard convection is a much researched thermodynamical phenomenon, yet significant unanswered questions remain. In this talk, we will present an outline of a proof of the existence and uniqueness of the critical wave number for the linearized planar Bénard problem on the hexagonal lattice. The proof relies on both analytical techniques first developed by Hassard and Jeng, as well as on more traditional methods in classical fluid dynamics. (Received September 16, 2008)