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Lecturer

Computational Fluid Dynamics
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Date: Monday, January 14, 2008
Time: 4:00—5:00 PM
Place: ESB 2001 (Please note room change)
Host: Prof Jeff Moehlis

“Symmetry-breaking pattern formation in a spherical shell convection under microgravity conditions”

Convective motion in a spherical shell under the influence of a central force has been investigated numerically as a part of the GeoFlow experiment which will run under microgravity conditions on the International Space Station (ISS). An approach combining numerical simulations with a spectral time-stepping code and path-following techniques allows the computation of both stable and unstable solutions of stationary states above the onset of convection. Special attention is paid to the symmetry-breaking properties of the arising patterns which are controlled by subgroups of the full spherical symmetry group. Finally, the transition from the stationary to the time-dependent regime is describe.



Come on over at 3:45 pm for some refreshments outside the building.