

1056-65-1963

**Yuen Yick Kwan\*** (tkwan@tulane.edu), 1322 West Esplanade Ave, apt N, Kenner, LA 70065.

*Simulation of Surfactant Dynamics using Spectral Method.* Preliminary report.

The coupling between a bulk vortical flow and a surfactant-influenced interface in a stationary open cylinder driven by the constant rotation of the bottom disk is investigated. The time-discretized equations are solved using an efficient and effective spectral-Galerkin method recently developed. It is found through numerical simulation that the base axisymmetric flow is unstable to three-dimensional perturbations for sufficiently large rotation rates. (Received September 22, 2009)