

1054-35-212

Anna L Mazzucato* (alm24@psu.edu), Mathematics, Penn State University, University Park, PA 16802, and **Michael E Taylor**. *On the vanishing viscosity limit in incompressible flows.*

We study the vanishing viscosity limit for certain Taylor-Couette flows in pipes and channels. We establish convergence of the Navier-Stokes solution to the corresponding Euler solution as viscosity vanishes in various norms. The boundary layer is studied via singular perturbation for variable-coefficient heat equations with small diffusion. (Received September 14, 2009)