

1135-76-231

**Zhenlu Cui\*** (zcui@uncfsu.edu), 1200 Murchison Rd., Fayetteville, NC 28301. *Confined Flowing Bacterial Suspensions*.

A Leslie-Erickson hydrodynamic model is used to study bacterial suspensions in shear and Poiseuille flows. We focus on the role of the director anchoring boundary conditions at the plates and examine oblique anchoring boundary conditions. We establish the asymptotic formulas of the steady boundary-value problem and establish remarkable dualities. We find that the director anchoring boundary condition plays a key role in the change of hydrodynamics of and stability of the system. (Received August 14, 2017)