1125-VW-821 **Jianjun Huang*** (jhuang@wpi.edu), Department of Mathematical Sciences, 100 Institute Rd, Worcester, MA 01609, and **Sarah D Olson** (sdolson@wpi.edu), Department of Mathematical Sciences, 100 Institute Rd, Worcester, MA 01609. *Sperm movement under the effect of a wall in Stokes flow.*

We are interested in studying wall interactions of elastic rods and microorganisms such as sperm in Stokes flow. In the presence of a wall, we employ the regularized method of images that satisfies the zero flow boundary condition. A Kirchhoff rod model is used with a preferred curvature and twist. We determine that an elastic rod is still able to reach its preferred equilibrium configuration even when bounded by a wall. However, the time to reach the equilibrium and location (tilt) may change. To study sperm motility, the tail is assumed to propagate with either a planar (sinusoidal) or helical wave. We find that the swimming speed and angle of the swimmer near the wall varies based on the material properties of the swimmer, preferred flagellar bending, as well as the plane that the swimmer is initialized in relative to the wall. (Received September 12, 2016)