



The behaviour of a rigid ellipsoid in Stokes flow with slip at the boundary.

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A theoretical framework for investigating the motion of a rigid ellipsoid with slip on the boundary and subjected to a surrounding Stokes flow is developed. An approach is taken whereby the ellipsoid orientation is determined by equating the internal and external stresses at the boundary. By applying the zero-penetration condition at the boundary while setting boundary shear forces to zero, an analytical solution for ellipsoidal motion with slip at the boundary is determined. Stable orientations prevail and compare well with natural and analogue examples of inclusions subject to simple shear.