

Fluid mechanics of kidney stone removal

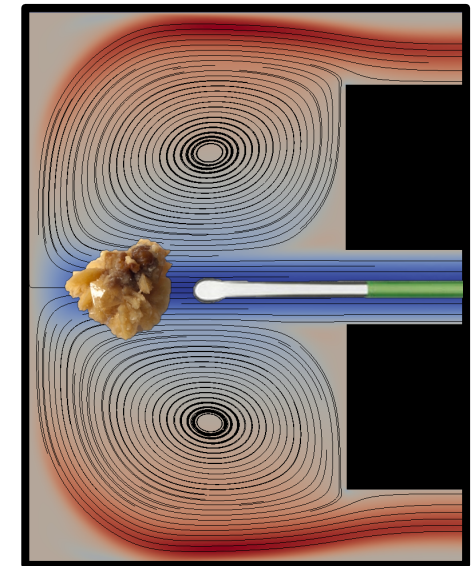
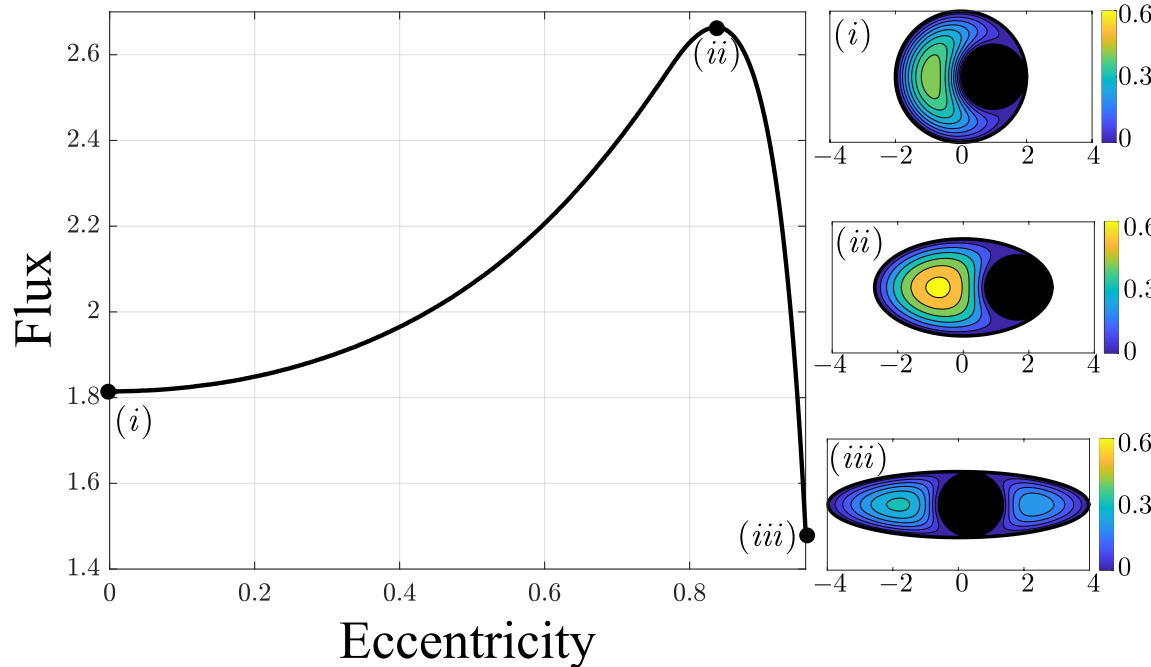


$$\rho \left(\frac{\partial \mathbf{u}}{\partial t} + (\mathbf{u} \cdot \nabla) \mathbf{u} \right) = -\nabla p + \mu \nabla^2 \mathbf{u}$$
$$\nabla \cdot \mathbf{u} = 0$$

Kidney

Hydrostatic pressure

Flow



A mathematician's kidney