Bogdan G. Nita*, 1 Normal Ave, Montclair, NJ 07043, and Ashwin Vaidya, Ryan Allaire, Pamela Guerron and Peter Nolan. On the equilibrium configurations of flexible fibers in a flow.

We discuss the equilibrium configurations of fibers, of different length and orientation, clamped to a spherical body and immersed in a flow. Experimental and numerical results are presented and the effects of flow speed and positioning of the fiber upon the equilibrium configuration are investigated. Our results reveal that the orientation of the fiber and its length have a significant impact upon its bending and drag experienced by the sphere-fiber system. (Received January 17, 2015)