

Abstract Submitted  
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**Pulsating Soft Corals**<sup>1</sup> SHILPA KHATRI, University of California, Merced, ROI HOLZMAN, Tel Aviv University and Inter-University Institute for Marine Sciences, LAURA MILLER, JULIA SAMSON, University of North Carolina at Chapel Hill , URI SHAVIT, Technion (Israel Institute of Technology) — Soft corals of the family Xeniidae have a pulsating motion, a behavior not observed in many other sessile organisms. We are studying how this behavior may give these corals a competitive advantage. We will present experimental data and computational simulations of the pulsations of the coral. Video data and kinematic analysis will be shown from the lab and the field. We will present direct numerical simulations of the pulsations of the coral and the resulting fluid flow by solving the Navier-Stokes equations coupled with the immersed boundary method. Furthermore, parameter sweeps studying the resulting fluid flow will be discussed.

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