

Abstract Submitted
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Viscous streaming for locomotion and transport MATTIA GAZZOLA, TEJASWIN PARTHASARATHY, Univ of Illinois - Urbana — Rectified and oscillatory flows associated with vibrating boundaries have been employed in a variety of tasks, especially in microfluidics. The associated fluid mechanics is well known in the case of simple geometries, cylinders in particular, yet little is known in the case of active, complex systems. Motivated by potential applications in swimming mini-bots, we established an accurate and robust computational framework to investigate the flow behavior associated with oscillations of multiple and deforming shapes with an emphasis on streaming assisted locomotion and transport systems.

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