

Abstract Submitted
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Flow topology and bifurcations in streaming lattices¹ YASHRAJ BHOSALE, TEJASWIN PARTHASARATHY, GIRIDAR VISHWANATHAN, GABRIEL JUAREZ, MATTIA GAZZOLA, University of Illinois, Urbana-Champaign — Viscous streaming flows generated due to constant curvature objects (circular cylinders, infinite plates) have been well-understood in the past. Yet, characterization and understanding of such flows when multiple body length-scales are involved has not been looked into. We propose a simplified setting to understand and explore the effect of multiple curvatures on streaming flows, analysing the system through the lens of bifurcation theory. This analysis uncovers the dynamic richness of the system, which we showcase through potential microfluidic applications.

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