

LadHyX Seminar – September 25, 10:45, Meeting Room, Building 65

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Thin films of living fluids: spontaneous flow and negative viscosity

Active fluids, such as bacterial suspensions and the cytoskeleton of living cells, are viscous suspensions of self-driven particles that are capable of converting chemical energy into mechanical work. Due to this internal energy conversion, these systems display macroscopic mechanical behaviours that are unlike those of conventional complex fluids. In this talk, I will present a simple model of an active liquid in a confined geometry and show how this active liquid can be turned into an (apparently) negative-viscosity fluid.