

Abstract Submitted
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From single swimmers to Swarms: active matter at intermediate Reynolds numbers DAPHNE KLOTSKA, University of North Carolina at Chapel Hill — In this talk, I will present experiments and simulations of how we use simple geometric objects, model swimmers made out of spheres, to understand characteristics of motility at intermediate Reynolds numbers. Questions we will address are the following. What happens to different types of swimmers as they cross the boundary from Stokes flows to the intermediate Reynolds regime, and can we use our findings to classify intermediate-Reynolds model swimmers? How is the system affected, e.g. the onset of inertia, transition from rest to motility, fluid flows, etc. when we have more than one swimmers present? The fundamental understanding gleaned from these studies builds onto our final goal which is to explore the collective emergent behavior of (slightly) inertial swimmers

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