



Statistical Physics of Run-and-Tumble Bacteria and other Self-Propelled Particles

by

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Abstract:

Suspensions of self-propelled particles have attracted lots of interest from the physics community over the last decade. Bacteria and algae are prototypical self-propelled particles but self-propulsion can also be met outside biology, for instance due to self-diffusiophoresis which is studied in the LPMCN. In this talk, I will briefly review several types of self-propelled particles and describe how one can build a statistical physics treatment of their collective behavior. I will describe various interesting features of these suspensions, such as ratchet effects, effective temperature and pattern formation.

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Room: PH 127

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