

Flocks and crowds: a Gulliver travel

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In the first part of my talk, building on spontaneously flowing liquids assembled from colloidal rollers, I will show that (french) active colloids collectively protest and resist when one tries to waive their privilege to freely choose their direction of motion: I will demonstrate that the flows emerging from flocking transitions are intrinsically bistable and can proceed against external pressure gradients. I will theoretically explain this collective stubbornness showing that orientational elasticity and confinement conspire to protect the direction of spontaneous active flows. In the sedan part of my talk, I will show how to construct a hydrodynamic description of another class of active material assembled from constituent 6 order of magnitude larger than active colloids: pedestrian crowds. I will show how to infer crowd hydrodynamics from their spontaneous fluctuations response to external perturbations.

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**MPIDS, Prandtl lecture hall,
Am Faßberg 17, Göttingen**

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