



## Bulk condensation by an active edge, and other stories in active granular matter

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My talk will present experiments and theory, supported by mechanically detailed simulations, on a childishly simple realisation of active matter. The system is a monolayer of millimetre-sized grains energised by vertical vibration. Depending on the (a)symmetries of their shape, these particles can self-propel, or partition their energy unequally between two directions of motion, or simply diffuse. After a summary of our early work on flocking and our recent studies on non-reciprocal elastic "taxis", I will present our latest findings on bulk condensation and sublimation of spherical beads by a tiny population of orientable motile grains, which we understand within the framework of a theory with a naturally non-reciprocal Cahn-Hilliard structure.

**Monday, June 17<sup>th</sup>, 2024 at 2:15 pm**

MPI-DS, Prandtl Lecture Hall  
Am Fassberg 11, Göttingen, and  
Zoom Meeting ID: 959 2774 3389  
Passcode: 651129, [direct link](#)



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