

Abstract Submitted
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Universal emergent dynamics of micro-spinners above a wall
ENKELEIDA LUSHI, MICHAEL SHELLEY, Simons Foundation and New York University — We study the collective behavior in ensembles of micro-spheres driven to rotate above a wall. This many particle system is Hamiltonian and the ensemble rotates about its center of mass. Using large-scale computations that resolve the interactions with the wall, hydrodynamics and particle collisions, we study the emergence of collective rotation, edge currents and universal behaviors that depend on the density.

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