

Abstract Submitted
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Topology of the force field in a jammed granular systems exposed to an intruder¹ LOU KONDIC, XIAONI FANG, NJIT, MIROSLAV KRAMAR, KONSTANTIN MISCHAIKOW, Rutgers, COREY O'HERN, Yale, JIE ZHANG, ROBERT BEHRINGER, Duke — It is well known that the structure of forces and stresses in granular systems goes through significant changes close to jamming. In this talk, we will present precise and objective measures of these changes based on topological properties of the force field in granular systems exposed to compression and shear. Then, we will discuss how these measures evolve in granular systems during an impact of a large intruder. We will particularly concentrate on the role of packing, polydispersity, and friction on structure of the force field.

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