

CASTS TALKS

Special Program in Applied Mathematics and Applied Mechanics

*Statistical Properties of Granular Materials and Their Application
on 3D Printing*

2014 - 12 - 17 (Wed.)

15:00 - 18:00

308, Mathematics Research Center Building (ori. New Math. Bldg.)

Placing an obstacle near an orifice of a granular hopper has been recently shown to facilitate gravitational granular flow through the orifice significantly. Using various obstacles and changing size disparity of grains, we want to further clarify the physics behind this phenomenon. We developed molecular dynamics (MD) simulations to study the discharging of frictionless grains, and reported potentially the most efficient way of discharging densely stored grains. We emphasize the impact of applying our results to 3D printing that makes solid objects of virtually any shape using granular materials.



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