



# EMI 2020 – Columbia University New York

May 26-29, 2020

## MS221 - Mechanics and Physics of Granular Materials

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### **Abstract**

Nearly every product, commodity, or infrastructure is constituted from, derived from, or supported by particulate materials through mining, agriculture, and/or chemical processing. They are figured in far-reaching applications from the development of novel composite materials having designed properties to geomechanics and the construction of foundations and earthworks. As ubiquitous constituents of industrial processes and geophysical phenomena, these materials operate in regimes extending from quasi-static deformations to rapid, collision-dominated flows. While systems composed of granular or bulk solids share common properties over a very wide range of particle sizes, their macroscopic behaviors are entirely dependent on the microstructural and micromechanical properties of their grains and their interactions.

### **MS221 – Sessions:**

This symposium focuses on granular systems over a broad range of scales and flow regimes, and it will feature continuum and discrete approaches comprising theoretical, computational and experimental studies under the following five themes:

- Granular Metamaterials (P. Poorsolhjoui, A. Misra)
- Multiscale modeling of crushing in granular materials (J. Zhao)
- Calibration/Validation in granular mechanics (M. Zeghal)
- Experimental methods (R. Hurley, M. Hattab)
- Dynamics of granular systems (A. D. Rosato)



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Deadline Jan 15, 2020

