Schedule for 14th Northeast Granular Workshop

University of Massachusetts Amherst

1630 Lederle Graduate Tower

Friday June 3rd, 2016

9-9:25 Registration, refreshments

Invited talks 30 mins talk + 6 mins questions; Short talks 10+2 mins

Session 1 **Glassy grains and memory** *Chair: Shubha Tewari*

9:30-10:06 Joseph D Paulsen *Multiple memory formation in a sheared granular suspension*

10.06-10:18 Meng Fan *The effects of cooling rate on reversibility and elasticity in model glasses*

10:18-10:30 Kabir Ramola, *Disordered Contact Networks in Jammed Packings of Frictionless Disks*

Coffee/**Posters**

Session 2 **Erosion and flow initiation** *Chair: Mark Shattuck*

11:00 – 11:36 Arshad Kudrolli *Sediment transport and channelization in rivers and fractures*

11:36 – 11:48 Patrick Mutabaruka *Triggering mechanisms of immersed granular avalanches*

11:48 - 12:00 Sumit Birwa *Distribution of unjamming times of a vibrated granular hopper*

Lunch

Session 3 **Designed granular media** *Chair: Corey O'Hern*

1:15 - 1:27 Craig Maloney *Gelation and mechanical response of patchy rods.*

1:27 – 2:03 Aparna Baskaran *Active fluids and granular fluids: Comparing two inherently non-equilibrium systems*

2:03 – 2:15 Lee Walsh *Noise and diffusion in vibrated self-propelled granular particles*

2:15 – 2:25 **Organizational discussion**

Coffee/**Posters**

Session 4 **Breaking down granular matter** *Chair: Don Candela*

3:00 - 3:12 David Cantor *Bonded-Cell method for particle crushing in 3D*

3:12 - 3:24 Guga Gogia *Emergent Phenomena in 2D Dusty Plasma Crystals*

3:24 - 4:00 Nick Gravish *Ant collective construction and locomotion in granular substrates*

Poster presentations

Hamed Abdi

Paramagnetic Colloids Under Rotating Fields: From Chain Through Chaos to Clusters and Molecules

Abe Clarke

Geometric strengthening of fluid-sheared granular beds

Keely Criddle

3D Flow through Porous Media

Omer Gottesman

Crumpling dynamics and the evolution of damage networks

Deepak Kumar

Granular self organization by autotuning of friction

Charles Lewis

Cohesion amongst Grains in Charged Powders

Daren Liu

Continuum Modeling of Granular Flow Down Heaps

Rijan Maharjan

A new state transition in the rheology of dense suspensions

Neil Shah

Simulation of the effects of wall friction on hopper flow rates

Peter Williams

Modelling the mRNA-Ribosome Complex: A study of polymer diffusion in the bacterial cytoplasm