International Workshop on Jamming and Granular Matter

Satellite Meeting of StatPhys26

13-15 July 2016

Arts One Lecture Theatre
Queen Mary University of London
327 Mile End Road
London E1 4NS

Organizers: A. Baule (QMUL) , P. Sollich (KCL), T. Aste (UCL)

Participants

Marco Baity-Jesi
Stefan Boettcher
Osvaldo Carvente
Patrick Charbonneau
Yeng-Long Chen
Eric Clement
Antonio Coniglio
Ariel Diaz De Armas
Gary Delaney
Annalisa Fierro
Daan Frenkel
Miguel Gonzalez-Pinto
Paul Geffert
Giacomo Gradenigo
Hisao Hayakawa
Silke Henkes
Hans J. Herrmann
Harukuni Ikeda
Masaharu Isobe
Heinrich Jäger
Yoav Kallus
Seung-Yeon Kim
Antonio Lasanta Becerra
Julian Lee
Edan Lerner
Stefan Luding
Hernan A. Makse
Yuri Martinez-Raton
Stefano Martiniani
Matthias Möbius
Michael Moore
Adil Mughal
Jose Daniel Munoz Castro
Shin-ichiro Nagahiro
Corey S. O'Hern
Peter Olsson
Mizaki Ozawa
Deren Ozturk
Fabien Paillusson
Massimo Pica Ciamarra
Yoav Pollack
Corrado Rainone
Kabir Ramola
Francisco Vega Reyes
Mohammad Saadatfar
Kuniyasu Saitoh
Bjornar Sandnes
Matthias Schröter
Antoine Seguin
Denis Weaire
Jens Winkelmann
Alessio Zaccone
Annette Zippelius

Programme

Invited talks: 35min (incl. discussion)
Contributed talks: 25min (incl. discussion)

Poster session: Thursday 14.7. 17:30 – 19:30

Wednesday 13.7.

8:30-9:20	Registration
9:20-9:30	Welcome
9:30-11:00	*Chair: Makse* Antonio Coniglio (CNR-SPIN Naples) *"Scaling and universality in glass, gel and jamming transitions"* Patrick Charbonneau (Duke University) *"Universal criticality at and around the jamming transition"* Kabir Ramola (Brandeis University) *"Scaling Theory for the Frictionless Unjamming Transition"*
11:00-11:30	Coffee break
11:30-13:00	*Chair: Olsson* Hisao Hayakawa (YITP Kyoto) *"Kinetic theory of shear thickening"* Francisco Vega Reyes (Universidad de Extremadura) *"Theoretical analysis of a granular gas experiment: low gravity and granular convection"* Matthias Möbius (Trinity College Dublin) *"Yielding and flow of jammed, high-aspect ratio graphene platelets"*
13:00-14:30	Lunch break
14:30-16:10	*Chair: Schröter* Silke Henkes (Aberdeen University) *"Rigid Cluster Decomposition Reveals Criticality in Frictional Jamming"* Massimo Pica-Ciamarra (NTU Singapore) *"Jamming of deformable particles"* Stefan Boettcher (Emory University) *"Record Dynamics as the Origin of Aging"*
16:10-16:40	Coffee break
16:40-18:10	*Chair: Sollich* Peter Olsson (Umea University) *"Dissipation, velocity distribution and critical exponents in shear-driven jamming"* Marco Baity-Jesi (CEA Saclay) *"Shear jamming in frictionless soft sphere packings"*

	Yeng-Long Chen (Academia Sinica) *"Shear-induced ordering and shear-thinning in dense soft particle suspensions"*

Thursday 14.7.

9:30-11:00	*Chair: Delaney* Hans J. Herrmann (ETH Zürich) *"Rotations in jammed sphere assemblies"* Yoav Kallus (Santa Fe) *"Do non-spheres always pack more densely than spheres?"* Misaki Ozawa (Montpellier) *"Structural Properties of High Density Jamming Transition Points"*
11:00-11:30	Coffee break
11:30-13:00	*Chair: Henkes* Stefan Luding (University of Twente) *"Multiscale models for the memory of jamming in soft and granular matter"* Kuniyasu Saitoh (Tohoku University) *"A stochastic approach to mechanics of jammed granular materials"* Alessio Zaccone (Cambridge University) *"Emergence of power-law creep from the interplay of soft vibrational modes and nonaffine dynamics in athermal jammed solids"*
13:00-14:10	Lunch break
14:10-15:50	*Chair: Kallus* Heinrich M. Jaeger (University of Chicago) *"Granular materials by design"* Hernan A. Makse (City College of New York) *"Searching for optimal packings"* Gary W. Delaney (CSIRO Melbourne) *"Understanding the Role of Particle Shape and Friction in Determining the Internal Structure and Stability of Jammed Granular Matter"*

15:50-16:20	Coffee break
16:20-17:30	*Chair: Sandnes* Annette Zippelius (Göttingen University) *"Dense Granular Flow of Frictional Particles"* Eric Clement (ESPCI Paris) *"Creep, fluidity and non-local microscopic processes in granular rheology"*
17:30-19:30	Poster session with drinks reception
20:00-23:00	Conference dinner

Friday 15.7.

9:30-11:10	*Chair: Pica-Ciamarra* Corey S. O'Hern (Yale University) *"Nonlinear dynamics of contact breaking in jammed solids"* Matthias Schröter (FAU Erlangen) *"Friction with your neighbors? Think locally!"* Edan Lerner (Amsterdam University) *"Low-frequency vibrational modes in disordered solids"*
11:10-11:40	Coffee break
11:40-13:10	*Chair: Charbonneau* Daan Frenkel (Cambridge University) *"Numerical calculation of granular entropy: counting the uncountable"* Giacomo Gradenigo (UJF Grenoble) *"Effective thermodynamics for a driven athermal system with dry friction"* Yoav Pollack (Weizmann Institute) *"Determining the Force-Law in "Static" Amorphous Solids from a Visual Image"*
13:10-14:00	Lunch break
14:00	Departure

Posters

Osvaldo Carvente-Muñoz (Universidad Autonoma de Yucatan)
“Nucleation pathways in systems of non-Brownian spheres”

Ariel Díaz De Armas (Universidad Carlos III de Madrid)
"Polydisperse hard rectangles: A simple model for vibrated monolayers of granular rods"

Paul M. Geffert (Queen Mary University of London)
"Nonequilibrium dynamics of a dry friction model subjected to coloured noise"

Miguel González-Pinto (Universidad Autonoma de Madrid)
"Clustering effects in vibrated monolayers of rods"

Harukuni Ikeda (University of Nagoya)
“Decoupling phenomenon and replica symmetry breaking in the glass transition of binary fluids”

Masaharu Isobe (Nagoya Institute of Technology)
“Dynamic facilitation in binary hard disk systems”

Antonio Lasanta (Universidad de Extremadura)
"An itinerant oscillator model with cage inertia for weakly vibrated granular media"

Julian Lee (Soongsil University)
"A jamming transition of a finite-size nonequilibrium system"

Stefano Martiniani (University of Cambridge)
“Turning intractable counting into sampling: Computing the configurational entropy of three-dimensional jammed packings”

Jose Daniel Muñoz Castro (Universidad National de Colombia)
"Equation of State and Equipartition Relations for the Limit State of Isotropic Compression in Granular Media"

Deren Ozturk (Swansea University)
“Three-Phase Flow and Fracturing of Deformable Granular Media”

Fabien Paillusson (University of Lincoln)
"How can we test ergodicity in absence of a prior distribution?"

Massimo Pica Ciamarra (Nanyang Technological University)
“Diffusion of random walkers in periodic potentials, with applications to glasses.”

Corrado Rainone (Weizmann Institute of Science)
“An effective potential approach to thermal hard spheres”

Mohammad Saadatfar (Australian National University**)**
"Pore deformation mechanisms and configuration landscape of granular crystallisation"

Bjornar Sandnes (Swansea University)
“Jamming of granular plugs in cylindrical confinement”

Antoine Seguin (Universite Paris Sud)
“Clustering and flow around a sphere moving into a grain cloud”

J. Winkelmann (Trinity College Dublin)
"2D foams jam differently than soft disks"