

## Powders and Grains 2017, Corum conference center, Montpellier, 3-7 July

	Sunday July 2	Monday July 3	Tuesday July 4	Wednesday July 5	Thursday July 6	Friday July 7	Saturday July 8
8:00		Registration					
8:30		Welcome address					Geological Excursion
9:00		Jim Jenkins	Roland Pellenq	Vanessa Magnanimo	Takashi Matsushima		
9:30		Malcolm Bolton	Granular Flows	Cohesive Granular Materials	Granular Flows	Environmental Granular Processes	
10:15		Granular Solids					
10:45		Break & Poster	Break & Poster	Break & Poster	Break & Poster	Break & Poster	
11:15		Elisabeth Guazzelli	Ken Kamrin	Focus Session Fluid-Grains	Focus Session Particle Breakage	Matthias Schroeter	
12:30		Fluid-Grains	Continuum Modeling			Granular Solids	
13:45		Lunch	Lunch	Lunch	Lunch	Lunch	
14:15		Thorsten Poeschel	Focus Session Particle Shape	Karen Daniels	Iker Zuriguel	Matthieu Wyart	
15:00		Granular Solids		Granular Solids	Powder Processing	Granular Flows	
15:45			Video Session				
16:00		Break & Poster	Break & Poster		Break & Poster	Closing	
16:15							
16:30		Focus Session Material Instabilities	Focus session Particle Shape	City Guided Tour	Runyu Yang		
16:45			Earth Hands-on Exhibit		Particle Based Methods		
17:15			Poster and Video Awards				
18:00			1) Ganular processes in biology and agronomy (round table) 2) Editorial board: Granular Matter				
18:30	Registration desk open at the conference place (Corum)	Poster Session & Welcome Reception	Poster Session	Music Concert			
19:00							
20:00				Gala Diner			
22:00							

\* All posters are available during the whole week.

## Powders and Grains 2017, 3-7 July, Montpellier

# General program and talks

All talks are plenary and will take place in **Pasteur auditorium** of Corum.

The lunch and breaks will be in **Antigone** space, level 2.

All posters will be on view in **Joffre** space, level 1.

Earth Hands on Exhibit will take place in **Joffre** space.

## Sunday

### Registration desk open

17:15 - 20:00

## Monday

08:00 - 08:30 Registration

08:30 - 09:00 Welcome address

### Invited talk

09:00 - 09:30 **Geo-phenomena: finding the granular mechanism**

*M. Bolton*

### Session on Granular Solids (1)

09:30 - 09:45 Response to a localized stress perturbation during a biaxial test

*S. McNamara, A. Amon and J. Crassous*

09:45 - 10:00 Determination of the equivalent intergranular void ratio - Application to the instability and the critical state of silty sand

*T.-K. Nguyen, N. Benahmed and P.-Y. Hicher*

10:00 - 10:15 Non-dissipative structural evolutions in granular materials

*M. Pouragha and R. Wan*

### Break & Poster

10:15 - 10:45

### Invited talk

10:45 - 11:15 **Rheology of dense suspensions of non colloidal particles**

*E. Guazzelli*

### Session on Fluids and Particles

11:15 - 11:30 A two-phase solid-fluid model for dense granular flows including dilatancy effects: comparison with submarine granular collapse experiments

*F. Bouchut, E. Fernández-Nieto, E. Koné, A. Mangeney and G. Narbona-Reina*

- 11:30 - 11:45    Toward multiscale modelings of grain-fluid systems  
*B. Chareyre, C. Yuan, E.P. Montella and S. Salager*
- 11:45 - 12:00    Dynamics of wetting explored with inkjet printing  
*S. Völkel and K. Huang*
- 12:00 - 12:15    The distribution of saturated clusters in wetted granular materials  
*S. Li, D. Hanaor and Y. Gan*
- 12:15 - 12:30    Microgravity spreading of water spheres on hydrophobic capillary plates  
*L. Steub, J. Kollmer, D. Paxson, A. Sack, T. Pöschel, J. Bartlett, D. Berman, Y. Richardson and M. Louge*

## **Lunch**

12:30 - 13:45

## **Invited talk**

- 13:45 - 14:15    **History and structure of granular packings**  
*T. Pöschel*

## **Session on Granular Solids (2)**

- 14:15 - 14:30    Assessing contact forces in granular materials from experimental measurements of kinematics  
*M. Tolomeo, V. Richefeu, G. Combe, J.-N. Roux and G. Viggiani*
- 14:30 - 14:45    Effects of hydrodynamic interaction on random adhesive loose packings of micron-sized particles  
*W. Liu, R. Tao, S. Chen, H. Zhang and S. Li*
- 14:45 - 15:00    Experimental measurement of granular fabric and its evolution under shearing  
*M. Wiebicke, E. Andò, E. Salvatore, G. Viggiani and I. Herle*
- 15:00 - 15:15    Effect of particle size distribution on 3D packings of spherical particles  
*M. Taiebat, P. Mutabaruka, R. Pellenq and F. Radjai*
- 15:15 - 15:30    Wave Propagation of Spectral Energy Content in a Granular Chain  
*R. K. Shrivastava and S. Luding*
- 15:30 - 15:45    Stochastic heterogeneous material modeling for wave propagation in a ballast layer  
*L. de Abreu Correa, R. Cottreau, C. Voivret, S. Costa D'Aguiar, E. Bongini and B. Faure*

## **Break & Poster**

15:45 - 16:15

## **Focus session on Material Instabilities**

- 16:15-16:30    Session introduction  
*F. Nicot & F. Darve*
- 16:30 - 16:45    Localization in an anisotropic aggregate of spheres  
*L. La Ragione, V.C. Prantil, and J. Jenkins*

- 16:45 - 17:00 Self-organization in the localized failure regime: metastable attractors and their implications on force chain functionality  
*S. Pucilowski, A. Tordesillas and G. Froyland*
- 17:00 - 17:15 Coupled DEM-CFD analysis of the initiation of internal instability in a gap-graded granular embankment filter  
*K. Kawano, T. Shire and C. O'Sullivan*
- 17:15 - 17:30 Experimental study of the shear bands formation in a granular material  
*T.B. Nguyen, S. McNamara, J. Crassous and A. Amon*
- 17:30 - 17:45 Slip-stick excitation and travelling waves excite silo honking  
*K. Warburton, E. Porte and N. Vriend*
- 17:45 - 18:00 Numerical modelling of suffusion by Discrete Element Method: A new internal stability criterion based on mechanical behaviour of eroded soil  
*N. Abdoulaye Hama, T. Ouahbi, S. Taibi, H. Souli, J.-M. Fleureau and A. Pantet*

**Welcome Reception & Poster Session (see **Poster program**)**

18:00 - 20:00

## Tuesday

### Invited talk

08:30 - 09:00 **Dense, Collisional, Shearing Flows**  
*J. Jenkins*

### Session on Granular Flows (1)

- 09:00 - 09:15 Investigations of formation of quasi-static vortex-structures in granular bodies using DEM  
*J. Kozicki and J. Tejchman*
- 09:15 - 09:30 Relaxation processes after instantaneous shear rate reversal in a dense granular flow  
*E. Rojas, R. Soto, E. Clement, M. Trulsson and B. Andreotti*
- 09:30 - 09:45 Dense, inhomogeneous shearing flows of spheres  
*D. Berzi and J. Jenkins*
- 09:45 - 10:00 Experiments and numerical modeling for the movement and resuspension of grains  
*K.V. Aracena, J.G. Benito, L. Oger, R.O. Uñac, I. Ippolito and A. Vidales*
- 10:00 - 10:15 Modeling segregation in modulated granular flow  
*R.M. Lueptow, Z. Deng, H. Xiao and P.B. Umbanhowar*

### Break & Poster

10:15 - 10:45

### Invited talk

10:45 - 11:15 **Continuum modeling and continuum-level numerical simulation of granular flows**  
*K. Kamrin*

### Session on Continuum Modeling

- 11:15 - 11:30 Accounting for segregation employing granular solid hydrodynamics  
*M. Liu and Y. Jiang*
- 11:30 - 11:45 Non-local rheology of dense granular flows  
*M. Bouzid, M. Trulsson, A. Izzet, A. Favier de Coulomb, P. Claudin, E. Clément, and B. Andreotti*
- 11:45 - 12:00 Testing the  $\mu(I)$  granular rheology against experimental silo data  
*L. Fullard, E. Breard, C. Davies, P.-Y. Lagrée, S. Popinet and G. Lube*
- 12:00 - 12:15 Simulation of size segregation in granular flow with Material Point Method  
*M. Fei, Q. Sun, K. Hill and G.G.D. Zhou*
- 12:15 - 12:30 A non-local plasticity theory for slow granular flows  
*P. Nott*

### Lunch

12:30 - 13:45

## **Focus session on Particle Shape Effects (1)**

- 13:45 - 14:00 Session introduction  
*H. Jaeger*
- 14:00 - 14:15 Comparison of multi-sphere and superquadric particle representation for modelling shearing and flow characteristics of granular assemblies  
*B. Soltanbeigi, A. Podlozhnyuk, J.Y. Ooi, C. Kloss and S.-A. Papanicolopoulos*
- 14:15 - 14:30 Stress-Strain diagrams for non-convex particles  
*H.-G. Matuttis, M. Nawa and D. Krengel*
- 14:30 - 14:45 Mechanical behaviour of weak snow layers: modelling a porous structure of sintered grains  
*T. Mede, G. Chambon, P. Hagenmuller and F. Nicot*
- 14:45 - 15:00 Mechanical analysis of the dry stone walls built by the Incas  
*J. Castro, L. E. Vallejo and N. Estrada*
- 15:00 - 15:15 Elongated grains in a hopper  
*T. Börzsönyi, E. Somfai, B. Szabó, S. Wegner, A. Ashour and R. Stannarius*
- 15:15 - 15:30 Fluidization of spherocylindrical particles  
*V. Mahajan, T. Nijssen, B.W. Fitzgerald, J. Hofman, H. Kuipers, and J.T. Padding*
- 15:30 - 15:45 Structure of hexapod 3D packings: understanding the global stability from the local organization  
*J. Barés, Y. Zhao, M. Renouf, K. Dierichs and R. Behringer*

## **Break & Poster**

15:45 - 16:15

## **Focus session on Particle Shape Effects (2)**

- 16:15 - 16:30 Numerical analysis of the effect of particle shape and adhesion on the segregation of powder mixtures  
*M. Alizadeh Behjani, A. Hassanpour, M. Ghadiri and A. Bayly*
- 16:30 - 16:45 Structure generation and analysis from the loosest to the densest packed granular matter  
*G.W. Delaney*
- 16:45 - 17:00 Influence of 3D particle shape on the mechanical behaviour through a novel characterization method  
*N. Ouhbi, C. Voivret, G. Perrin and J.-N. Roux*
- 17:00 - 17:15 Systematic description of the effect of particle shape on the strength properties of granular media  
*E. Azéma, N. Estrada, I. Preechawuttipong, J.-Y. Delenne and F. Radjai*

## **Earth Hands-on Exhibit**

- 17:15 - 17:30 Building with earth, from sand grain to architecture  
*R. Anger (AMACO)*
- 17:30 - 17:45 Granular matter in cultural and educational projects  
*E. Guyon*

17:45 - 18:00 Jamming-Based Aleatory Architectures  
*H. Jaeger*

**Poster Session (see **Poster program**)**

18:00 - 20:00

**AEMMG Meeting (room BC1)**

19:00 - 20:00

## Wednesday

### Invited talk

08:30 - 09:00 **Clays and cement under the nanoscope**  
*R. Pellenq*

### Session on Cohesive Granular Materials

- 09:00 - 09:15 Enhancement of CO<sub>2</sub> capture in limestone and dolomite granular beds by high intensity sound waves  
*J. Valverde, J.M. Perez-Ebri and M.A. Sanchez-Quintanilla*
- 09:15 - 09:30 Clustering and melting in a wet granular monolayer  
*P. Rammung and K. Huang*
- 09:30 - 9h:45 System size effects on the mechanical response of cohesive-frictional granular ensembles  
*S. Singh, R.K. Kandasami, R.K. Mahendran and T. Murthy*
- 09:45 - 10:00 Effect of moisture content on the flowability of crushed ores  
*F. Cabrejos*
- 10:00 - 10:15 Cohesive strength of iron ore granules  
*R.J. Contreras, N. Berger, E. Izard, J.-F. Douce, A. Koltsov, J.-Y. Delenne, E. Azéma, S. Nezamabadi, F. van Loo, R. Pellenq and F. Radjai*

### Break & Poster

10:15 - 10:45

### Focus session on Granular Suspensions

- 10:45 - 11:00 Session introduction  
*G. Ovarlez & J. Morris*
- 11:00 - 11:15 Kinetic theory of discontinuous shear thickening  
*H. Hayakawa and S. Takada*
- 11:15 - 11:30 Microstructural description of shear-thickening suspensions  
*A. Singh, J.F. Morris and M.M. Denn*
- 11:30 - 11:45 Shear-induced organization of forces in dense suspensions: signatures of discontinuous shear thickening  
*S. Sarkar, E. Shatoff, K. Ramola, R. Mari, J. Morris and B. Chakraborty*
- 11:45 - 12:00 Scaling behavior of immersed granular flows  
*L. Amarsid, J.-Y. Delenne, P. Mutabaruka, Y. Monerie, F. Perales and F. Radjai*
- 12:00 - 12:15 Discontinuous Shear Thickening in Cornstarch Suspensions  
*A. Fall, A. Lemaître and G. Ovarlez*
- 12:15 - 12:30 Rheology of vibrated granular suspensions  
*S. Kiesgen de Richter, C. Hanotin, N. Gaudel, N. Louvet, P. Marchal and M. Jenny*

### Lunch

12:30 - 13:45



### **Invited talk**

13:45 - 14:15     **The role of force networks in granular materials**  
*K. Daniels*

### **Session on Granular Solids (3)**

14:15 - 14:30     Granular compaction and stretched exponentials - Experiments and a numerical stochastic model  
*M. Nicolas, J.-E. Mathonnet, B. Dalloz and P. Sornay*

14:30 - 14:45     Compaction of granular materials composed of deformable particles  
*T.H. Nguyen, S. Nezamabadi, J.-Y. Delenne and F. Radjai*

14:45 - 15:00     A DEM study of oedometric compression of model granular materials: Initial state influence, stress ratio, elasticity, irreversibility  
*M.H. Khalili, J.-N. Roux, S. Brisard, J.-M. Pereira and M. Bornert*

### **Video session (see **Video program**)**

15:00 - 16:00

### **City guided tour (starting from the main entry of Corum) / free time**

16:30 - 19:00

### **Music concert (Antigone space, level 2)**

19:00 - 20:00

### **Gala diner (level 3)**

20:00 - 23:00

# Thursday

## Invited talk

08:30 - 09:00 **Micromechanics of complex soils**  
*V. Magnanimo*

## Session on Granular Flows (2)

- 09:00 - 09:15 How granular vortices can help understanding rheological and mixing properties of dense granular flows  
*P. Rognon, P. Kharel, T. Miller and I. Einav*
- 09:15 - 09:30 Balancing size and density segregation in bidisperse dense granular flows  
*D. Tunuguntla and A.R. Thornton*
- 09:30 - 09:45 Effect of geometric base roughness on size segregation  
*L. Jing, C.Y. Kwok, Y.F. Leung and Y. D. Sobral*
- 09:45 - 10:00 Analysis of minor component segregation in ternary powder mixtures  
*M. Asachi, A. Hassanpour, M. Ghadiri and A. Bayly*
- 10:00 - 10:15 Effect of cohesion on local compaction and granulation of sheared granular materials  
*S. Roy, S. Luding and T. Weinhart*

## Break & Poster

10:15 - 10:45

## Focus session on Particle Breakage

- 10:45 - 11:00 Session introduction  
*F. Kun*
- 11:00 - 11:15 Evolution of particle breakage studied using x-ray tomography and the discrete element method  
*Z. Karatza, E. Andò, S.-A. Papanicolopoulos, G. Viggiani, and J.Y. Ooi*
- 11:15 - 11:30 Effect of contact anisotropy on the crushing strength of aggregates  
*A. Neveu, R. Artoni, Y. Descantes and P. Richard*
- 11:30 - 11:45 Compaction dynamics of crunchy granular material  
*F. Guillard, P. Golshan, L. Shen, J.R. Valdès and I. Einav*
- 11:45 - 12:00 CFD-DEM analysis of particle attrition in a jet in a fluidised bed  
*F. Fulchini, W. Nan, M. Ghadiri, M. Yazdan Panah, S. Bertholin, B. Amblard, A. Cloupet T. Gauthier*
- 12:00 - 12:15 Peridynamics simulation of the comminution of particles containing microcracks  
*N. Blanc, X. Frank, C. Mayer-Laigle, F. Radjai and J.-Y. Delenne*
- 12:15 - 12:30 Breaking of rod-shaped model material during the compression  
*L. Kulaviak, V. Penkavova, M. Ruzicka, M. Puncocar, P. Zamostny, G. Zdenek, F. Stepanek, M. Schongut and J. Havlica*

## Lunch

12:30 - 13:45

## Invited talk

13:45 - 14:15 **Flow and clogging of grains in confined geometries**  
*I. Zuriguel*

## Session on Powder Processing

14:15 - 14:30 Flowability of lignocellulosic biomass powders: influence of torrefaction intensity  
*J. Pachón-Morales, J. Colin, F. Pierre, T. Champavert, F. Puel and P. Perré*

14:30 - 14:45 Combined effect of moisture and electrostatic charges on powder flow  
*A. Rescaglio, J. Schockmel, N. Vandewalle and G. Lumay*

14:45 - 15:00 Clay particles as binder for earth buildings materials: a fresh look into rheology of dense clay suspensions  
*G. Landrou, C. Brumaud and G. Habert*

15:00 - 15:15 Initial stage sintering of polymer particles – Experiments and modelling of size-, temperature- and time- dependent contacts  
*R. Fuchs, T. Weinhart, M. Ye, S. Luding, H.-J. Butt and M. Kappl*

15:15 - 15:30 Discharge flow of a granular media from a silo: effect of the packing fraction and of the hopper angle  
*M. Benyamine, P. Aussillous, and B. Dalloz-Dubrujeaud*

15:30 - 15:45 Discharge of repulsive grains from a silo: experiments and simulations  
*D. Hernández-Enríquez, G. Lumay and F. Pacheco-Vázquez*

## Break & Poster

15:45 - 16:15

## Invited talk

16:15 - 16:45 **DEM investigation of the strength of powder compacts**  
*R. Yang*

## Session on Particle Based Methods

16:45 - 17:00 Numerical models for fluid-grains interactions: opportunities and limitations  
*A. Esteghamatian, M. Rahmani and A. Wachs*

17:00 - 17:15 Percolation study for the capillary ascent of a liquid through a granular soil  
*M. Cardenas-Barrantes, J.D. Muñoz and N.M. Araujo*

17:15 - 17:30 Scaling laws for implicit viscosities in smoothed particle hydrodynamics  
*C. Bierwisch and P. Polfer*

17:30 - 17:45 Periodic cells for large-scale problem initialization  
*M. Ciantia, M. Arroyo, N. Zhang and S. Emam*

17:45 - 18:00 Effect of structure on strength of agglomerates using Distinct Element Method  
*T. Bonakdar and M. Ghadiri*

## Poster and video awards

18:00 - 18h30

**Meeting on granular processes in biology and agronomy (room BC1)**

18:30 - 20h00

**Editorial Board meeting of Granular Matter (room Joffre 4, level 1)**

18:30 - 20:00

## Friday

### Invited talk

08:30 - 09:00 **The granular processes in planetary surfaces**  
*T. Matsushima*

### Session on Environmental Granular Processes

09:00 - 09:15 Modeling root growth in granular soils: effects of root stiffness and packing fraction  
*M. Fakh, J.-Y. Delenne, F. Radjai and T. Fourcaud*

09:15 - 09:30 Flexible fiber in interaction with a dense granular flow close to the jamming transition  
*N. Algarra, M. Leang, A. Lazarus, D. Vandembroucq and E. Kolb*

09:30 - 09:45 Physics of soil erosion at the microscale  
*P. Philippe, P. Cuéllar, F. Brunier-Coulin, L.-H. Luu, N. Benahmed, S. Bonelli and J.-Y. Delenne*

09:45 - 10:00 Looking into the evolution of granular asteroids in the Solar System  
*P. Sánchez, D. Scheeres, M. Hirabayashi and S. Tardivel*

10:00 - 10:15 Small Solar System Bodies as Granular Systems  
*D. Hestroffer, A. Campo Bagatín, W. Losert, E. Opsomer, P. Sánchez, D.J. Scheeres, L. Staron, N. Taberlet, H. Yano, S. Eggl, C.-E. Lecomte, N. Murdoch, F. Radjai, D.C. Richardson, M. Salazar, S.R. Schwartz and P. Tanga*

### Break & Poster

10:15 - 10:45

### Invited talk

10:45 - 11:15 **A local view on the role of shape and friction**  
*M. Schroeter*

### Session on Granular Solids (4)

11:15 - 11:30 On the torsional loading of elastic-plastic spheres in contact  
*S. Nadimi and J. Fonseca*

11:30 - 11:45 Sticking properties of ice grains  
*M. Jongmanns, M. Kumm, G. Wurm, D.E. Wolf and J. Teiser*

11:45 - 12:00 Nano-granular texture of cement hydrates  
*A. Ioannidou, F.-J. Ulm, P. Levitz, E. Del Gado and R. Pellenq*

12:00 - 12:15 Acoustic monitoring of a ball sinking in vibrated granular sediments  
*S. van den Wildenberg, J. Léopoldès, A. Tourin and X. Jia*

12:15 - 12:30 Relaxation times in simple shear and the role of walls  
*L. Brendel, J. Török, A. Ries, and D.E. Wolf*

### Lunch

12:30 - 13:45

## **Invited talk**

13:45 - 14:15 **Unifying Suspension and Granular flows near Jamming**  
*M. Wyart*

## **Session on Granular Flows (3)**

14:15 - 14:30 Heaping and secondary flows in sheared granular materials  
*R. Stannarius, D. Fischer and T. Börzsönyi*

14:30 - 14:45 Discrete Element Method simulations of standing jumps in granular flows down inclines  
*S. Méjean, T. Faug and I. Einav*

14:45 - 15:00 Mesostructural investigation of micron-sized glass particles during shear deformation – An experimental approach vs. DEM simulation  
*L. Torbahn, A. Weuster, L. Handl, V. Schmidt, A. Kwade and D.E. Wolf*

15:00 - 15:15 Dynamics of granular segregation in quasi two-dimensional system  
*S.H. Gharat*

15:15 - 15:30 Secondary flows in slow granular flows  
*P.V. Dsouza, K.P. Krishnaraj and P.R. Nott*

15:30 - 15:45 A differential equation for the flow rate during silo discharge: beyond the Beverloo rule  
*M.A. Madrid, J.R. Darias and L.A. Pugnaloni*

## **Closing address and acknowledgements**

15:45 - 16:00

**Powders and Grains 2017, 3-7 July, Montpellier**

## **Poster program**

### **Monday**

18:00 - 20:00

### **Tuesday**

18:00 - 20:00

*All posters will be on view during the whole week in **Joffre** space, level 1.  
The posters will be numbered according to their place.*

### **Granular solids**

Why granular media are thermal after all

*M. Liu and Y. Jiang*

Angle of repose revisited: When is a heap a cone?

*M. Rackl, F. E. Grötsch and W. A. Günthner*

Nonaffinity in amorphous solids close to the jamming transition

*R. Arévalo and M. P. Ciamarra*

Influence of particle deformation on the plastic flow of ductile granular materials

*N. Abdelmoula, B. Harthong, D. Imbault and P. Dorémus*

Modelling polymeric deformable granular materials - from experimental data to numerical models at the grain scale

*M. Teil, B. Harthong, D. Imbault and R. Peyroux*

Force measurements in stiff, 3D, opaque granular materials

*R. C. Hurley, S. A. Hall, J. E. Andrade and J. Wright*

A 2D Fourier tool for the analysis of photo-elastic effect in large granular assemblies

*D. Leśniewska*

Micromechanics of soil responses in cyclic simple shear tests

*L. Cui, S. Bhattacharya and G. Nikitas*

The 4-parameter Compressible Packing Model (CPM) including a critical cavity size ratio

*G. Roquier*

Twisting, an alternative strategy to compact granular materials

*K. Asencio, I. Zuriguel and D. Maza*

Vertical drag force acting on intruders of different shapes in granular media

*A. A. Zaidi and C. Müller*

Response to a localized stress perturbation during a biaxial test

*S. McNamara, A. Amon and J. Crassous*

Heat transfer rate within non-spherical thick grains

*F. Huchet, P. Richard, J. Joniot and L. Le Guen*

Measurement of effective thermal conductivity of compacted granular media by the transient plane source technique

*W. Dai and Y. Gan*

FEM modeling of the sandpile dip effect

*I. Cota Carvalho, D. Santos and A. P. F. Atman*

Modelling of Coke Layer Collapse during Ore Charging in Ironmaking Blast Furnace by DEM

*Y. Narita, H. Mio, T. Orimoto and S. Nomura*

Stochastic model for the micromechanics of jammed granular materials: experimental studies and numerical simulations

*M. Tolomeo, K. Saitoh, G. Combe, S. Luding, V. Magnanimo, V. Richefeu and G. Viggiani*

Active earth pressure model tests versus finite element analysis

*M. Pietrzak*

An experimental investigation of the force network ensemble

*J.E. Kollmer and K. E. Daniels*

Deformation profiles of elastic cylindrical tubes filled with granular media under an overload.

*V.S. Álvarez Salazar, A. Medina and J. Klapp*

Sample similarity analysis of angles of repose based on experimental results for DEM calibration

*Y. Tan, W. A. Günthner, S. Kessler and L. Zhang*

On the submerging of a spherical intruder into granular beds

*C.-Y. Wu, L. Zhang and L. Chen*

Numerical study of the failure of materials embedding soft to hard particles

*X. Frank, J.-Y. Delenne and F. Radjai*

The understanding of silicon sequential elutriation behaviour

*E. Kewes, N. Estime, F. Dahlem, S. Bec, J. Grollemund and J.-L. Loubet*

Reconstitution properties of carbohydrates powders

*J. Dupas, V. Girard, L. Forny*

Distinct-Element Method Modelling of a model baked anode material with PFC

*F. Dedecker, S. Emam and D. H. Andersen*

An Experimental Investigation on the Generation of a Stable Arch in Granular Materials Using a New Developed Trapdoor Apparatus

*A. Ahmadi and E. Seyedi Hosseininia*

Investigation of non-coaxiality in anisotropic granular assemblies using DEM

*E. Seyedi Hosseininia*

DEM investigation of the uniqueness of the critical state behaviors under true triaxial loading

*J. Liu, W. Zhou, F. Nicot and G. Ma*

Transport, Storage and Forming of Industrially Relevant Granular Materials: Interreg Project "PowderReg"



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