

Publications for Pierre Rognon

2019

Macaulay, M., Rognon, P. (2019). Shear-induced diffusion in cohesive granular flows: Effect of enduring clusters. *Journal of Fluid Mechanics*, 858, 1-11. [More Information]

2018

Griffani, D., Rognon, P., Einav, I. (2018). Establishing a practical framework to predict heat and contaminant transfers in fractured geological media. *Australian Geomechanics Journal*, 53(4), 159-163.

Einav, I., Rognon, P., Miller, T., Sulem, J. (2018). Faults Get Colder Through Transient Granular Vortices. *Geophysical Research Letters*, 45(6), 2625-2632. [More Information]

Griffani, D., Rognon, P., Einav, I. (2018). Impact of clogging on the transfer dynamics of hydraulic networks. *Physical Review E*, 98(5), 1-12. [More Information]

Athani, S., Rognon, P. (2018). Mobility in granular materials upon cyclic loading. *Granular Matter*, 20(4), 1-11. [More Information]

Kharel, P., Rognon, P. (2018). Shear-induced diffusion in non-local granular flows. *EPL*, 124(2), 1-7. [More Information]

2017

Liu, S., Guillard, F., Marks, B., Rognon, P., Einav, I. (2017). Experimental study of shear rate dependence in perpetually sheared granular matter. *Powders and Grains 2017 - 8th International Conference on Micromechanics on Granular Media*, Les Ulis, France: EDP Sciences. [More Information]

Athani, S., Kharel, P., Airey, D., Rognon, P. (2017). Grain-size effect on uplift capacity of plate anchors in coarse granular soils. *Geotechnique Letters*, 7(2), 1-7. [More Information]

Rognon, P., Kharel, P., Miller, T., Einav, I. (2017). How granular vortices can help understanding rheological and mixing properties of dense granular flows. *Powders and Grains 2017 - 8th International Conference on Micromechanics on Granular Media*, Les Ulis, France: EDP Sciences. [More Information]

Kharel, P., Rognon, P. (2017). Partial jamming and non-locality in dense granular flows. *EPJ Web of Conferences*, 140, 1-4. [More Information]

Kharel, P., Rognon, P. (2017). Vortices Enhance Diffusion in Dense Granular Flows. *Physical Review Letters*, 119(14), 178001-1-178001-5. [More Information]

href="http://dx.doi.org/10.1103/PhysRevLett.119.178001">[More Information]

2016

Wyburn, E., Marks, B., Guillard, F., Rognon, P., Einav, I. (2016). Particle shape effects on flowability of powder mixtures. *The 12th International Conference on Bulk Materials Storage, Handling and Transportation (ICBMH 2016)*, Barton, ACT: Engineers Australia.

Rognon, P., Russo, D., Griffani, D., Einav, I. (2016). Vulnerability of hydraulic networks to channel clogging. *EPL*, 113(1), 1-6. [More Information]

2015

Rognon, P., Miller, T., Einav, I. (2015). A circulation-based method for detecting vortices in granular materials. *Granular Matter*, 17(2), 177-188. [More Information]

Rognon, P., Miller, T., Griffani, D., Einav, I. (2015). Heat and mass transfer in deforming granular matter. *10th International Conference on Diffusion in Solids and Liquids*, online: xyz.

Rognon, P., Miller, T., Metzger, B., Einav, I. (2015). Long-range wall perturbations in Dense Granular Flows. *Journal of Fluid Mechanics*, 764, 171-192. [More Information]

Gelet, R., Nguyen, G., Rognon, P. (2015). Modelling interaction of incompressible fluids and deformable particles with the Material Point Method. *The 6th International Conference on Computational methods (ICCM2015)*, Auckland: Scien Tech Publisher.

Griffani, D., Rognon, P., Einav, I. (2015). Porous materials featuring channel flows: the effect of the flow velocity profile on heat transfer efficiency. *10th International Conference on Diffusion in Solids and Liquids*, online: xyz.

2014

Dyson, A., Bennett, M., Rognon, P. (2014). Biomimetic for new soil-anchor designs. *23rd Australasian Conference on the Mechanics of Structures and Materials (ACMSM23)*, Lismore, NSW: Southern Cross University.

Rognon, P., Miller, T., Einav, I. (2014). Constitutive behaviour of flowing granular soils near walls. *23rd Australasian Conference on the Mechanics of Structures and Materials (ACMSM23)*, Lismore, NSW: Southern Cross University.

Einav, I., Rognon, P., Miller, T. (2014). Stadium Shear Device. *Patent No. 8701498*.

Rognon, P., Macaulay, M., Griffani, D., Einav, I. (2014). Explaining complex network permeability through the covariance of channel length and velocity. *EPL*, 108(3), 1-5. [More Information]

Dyson, A., Rognon, P. (2014). Pull-out capacity of tree root inspired anchors in shallow granular soils. *Geotechnique Letters*, 4, 301-305. [More Information]

<http://dx.doi.org/10.1680/geolett.14.00061>>[More Information]

Griffani, D., Einav, I., Rognon, P. (2014). The role of channel networks in biological transfers. *23rd Australasian Conference on the Mechanics of Structures and Materials (ACMSM23)*, Lismore, NSW: Southern Cross University.

Griffani, D., Rognon, P., Einav, I. (2014). Transfer in solids featuring channel flows. *EPL*, 106(6), 1-6. [More Information]

2013

Einav, I., Rognon, P., Gan, Y., Miller, T., Griffani, D. (2013). 10,000 - A Reason to Study Granular Heat Convection. *7th International Conference on Micromechanics of Granular Media: Powders and Grains 2013*, Melville, New York, USA: American Institute of Physics. [More Information]

Rognon, P., Miller, T., Einav, I. (2013). Eddies, mixing and heat transfer in dense granular flows. *7th International Conference on Micromechanics of Granular Media: Powders and Grains 2013*, Melville, New York, USA: American Institute of Physics. [More Information]

Miller, T., Rognon, P., Metzger, B., Einav, I. (2013). Eddy Viscosity in Dense Granular Flows. *Physical Review Letters*, 111(5), 1-4. [More Information]

Griffani, D., Rognon, P., Metzger, B., Einav, I. (2013). How rotational vortices enhance transfers. *Physics of Fluids*, 25(9), 1-8. [More Information]

Rognon, P., Gay, C., Einav, I. (2013). Rheology of dense suspensions: Insights from soft dynamics simulations. *7th International Conference on Micromechanics of Granular Media: Powders and Grains 2013*, Melville, New York, USA: American Institute of Physics. [More Information]

Miller, T., Rognon, P., Einav, I. (2013). The Stadium Shear Device: A Novel Apparatus For Studying Dense Granular Flows. *7th International Conference on Micromechanics of Granular Media: Powders and Grains 2013*, Melville, New York, USA: American Institute of Physics. [More Information]

2012

Marks, B., Rognon, P., Einav, I. (2012). Grainsize dynamics of polydisperse granular segregation down inclined planes. *Journal of Fluid Mechanics*, 690, 499-511. [More Information]

Gan, Y., Rognon, P., Einav, I. (2012). Phase transitions and cyclic pseudotachylite formation in simulated faults. *Philosophical Magazine*, 92(28-30), 3405-3417. [More Information]

2011

Rognon, P., Einav, I., Gay, C. (2011). Flowing resistance and dilatancy of dense suspensions: lubrication and repulsion.

Journal of Fluid Mechanics, 689, 75-96. [More Information]

Marks, B., Einav, I., Rognon, P. (2011). Polydisperse segregation down inclines: towards degradation models of granular avalanches. In Stephane Bonelli, Cristian Dascalu and Francois Nicot (Eds.), *Advances in Bifurcation and Degradation in Geomaterials*, (pp. 145-151). New York: Springer Science+Business Media. [More Information]

Gay, C., Rognon, P., Reinelt, D., Molino, F. (2011). Rapid Plateau border size variations expected in three simple experiments on 2D liquid foam. *European Physical Journal E. Soft Matter*, 34(1), 1-11. [More Information]

2010

Rognon, P., Einav, I., Bonivin, J., Miller, T. (2010). A scaling law for heat conductivity in sheared granular materials. *EPL*, 89(5), 1-6. [More Information]

Rognon, P., Einav, I., Gay, C. (2010). Internal relaxation time in immersed particulate materials. *Physical Review E*, 81(6), 061304-1-061304-9. [More Information]

Rognon, P., Molino, F., Gay, C. (2010). Prediction of Positive and Negative Elastic Dilatancy in 2D and 3D Liquid Foams. *EPL*, 90(3), 1-6. [More Information]

Rognon, P., Einav, I. (2010). Thermal Transients and Convective Particle Motion in Dense Granular Materials. *Physical Review Letters*, 105, 1-4. [More Information]

2009

Chevoir, F., Roux, J., da Cruz, F., Rognon, P., Koval Jr, G. (2009). Friction law in dense granular flows. *The French National Symposium on Powder Science and Technology 2007*, Albi: Elsevier. [More Information]

Rognon, P., Gay, C. (2009). Soft dynamics simulation. 2. Elastic spheres undergoing a T 1 process in a viscous fluid. *European Physical Journal E. Soft Matter*, 30(3), 291-301. [More Information]

2008

Rognon, P., Roux, J., Naaïm, M., Chevoir, F. (2008). Dense flows of cohesive granular materials. *Journal of Fluid Mechanics*, 596(25 January), 21-47. [More Information]

Mills, P., Rognon, P., Chevoir, F. (2008). Rheology and structure of granular materials near the jamming transition. *EPL*, 81(6), 1-6. [More Information]

Rognon, P., Chevoir, F., Bellot, H., Ousset, F., Naaïm, M., Coussot, P. (2008). Rheology of dense snow flows: Inferences from steady state chute-flow experiments. *Journal of Rheology*, 52(3), 729-748. [More Information]

<http://dx.doi.org/10.1122/1.2897609>>[More Information]

Rognon, P., Gay, C. (2008). Soft Dynamics simulation. 1. Normal approach of two deformable particles in a viscous fluid and optimal-approach strategy. *European Physical Journal E. Soft Matter*, 27(3), 253-260. [More Information]

2007

Rognon, P., Chevoir, F., Naaïm, M., Roux, J. (2007). Behavior of model cohesive granular materials in the dense flow regime. *18th French Congress of Mechanics*.

Rognon, P., Roux, J., Naaïm, M., Chevoir, F. (2007). Dense flows of bidisperse assemblies of disks down an inclined plane. *Physics of Fluids*, 19, 1-4. [More Information]

Rognon, P., Chevoir, F., Roux, J., Naaïm, M. (2007). Ecoulements granulaires bidisperses sur plan incliné (Bidisperse granular flows on inclined plane). *18th French Congress of Mechanics*.

2006

Chevoir, F., Azanza, E., da Cruz, F., Koval Jr, G., Prochnow, M., Rognon, P., Coussot, P., Moucheron, P., Roux, J., Tocquer, L. (2006). Ecoulements granulaires: physique et applications (English Translation Unknown). In Bogdan Cazacliu and Jean-Noël Roux (Eds.), *Rheologie des pâtes et des matériaux granulaires (Rheology of pastes and granular materials)*, (pp. 7-32). France: LABORATOIRE CENTRAL DES PONTS ET CHAUSSEES (LCPC).

Rognon, P., Roux, J., Wolf, D., Naaïm, M., Chevoir, F. (2006). Rheophysics of cohesive granular materials. *EPL*, 74(4), 644-650. [More Information]

2005

Rognon, P., Roux, J., Naaïm, M., Chevoir, F. (2005). Dense flow of bidisperse assemblies of disks down an inclined plane. *Powders and Grains 2005*, Leiden, The Netherlands: Taylor and Francis.

Rognon, P., Roux, J., Naaïm, M., Chevoir, F. (2005). Rheology of cohesive granular materials. *Powders and Grains 2005*, Leiden, The Netherlands: Taylor and Francis.

Mills, P., Rognon, P., Chevoir, F. (2005). Transient rigid clusters in dense granular flows. *Powders and Grains 2005*, Leiden, The Netherlands: Taylor and Francis.