

Renaud Delannay

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

1,689
citations

279487

23
h-index

276539

41
g-index

55
all docs

55
docs citations

55
times ranked

1336
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Slow relaxation and compaction of granular systems. <i>Nature Materials</i> , 2005, 4, 121-128. | 13.3 | 351 |
| 2 | Superstable Granular Heap in a Thin Channel. <i>Physical Review Letters</i> , 2003, 91, 264301. | 2.9 | 151 |
| 3 | Towards a theoretical picture of dense granular flows down inclines. <i>Nature Materials</i> , 2007, 6, 99-108. | 13.3 | 96 |
| 4 | Dissipation in foam flowing through narrow channels. <i>Europhysics Letters</i> , 2004, 65, 726-732. | 0.7 | 85 |
| 5 | Rheology of Confined Granular Flows: Scale Invariance, Glass Transition, and Friction Weakening. <i>Physical Review Letters</i> , 2008, 101, 248002. | 2.9 | 75 |
| 6 | Experimental Growth Law for Bubbles in a Moderately "Wet" 3D Liquid Foam. <i>Physical Review Letters</i> , 2007, 99, 058304. | 2.9 | 63 |
| 7 | Extraction of relevant physical parameters from 3D images of foams obtained by X-ray tomography. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2005, 263, 295-302. | 2.3 | 61 |
| 8 | Coarsening Foams Robustly Reach a Self-Similar Growth Regime. <i>Physical Review Letters</i> , 2010, 104, 248304. | 2.9 | 60 |
| 9 | Measurement of granular entropy. <i>Physical Review E</i> , 2009, 80, 031301. | 0.8 | 48 |
| 10 | New patterns in high-speed granular flows. <i>Journal of Fluid Mechanics</i> , 2015, 769, 218-228. | 1.4 | 48 |
| 11 | Shallow granular flows down flat frictional channels: Steady flows and longitudinal vortices. <i>Physical Review E</i> , 2013, 87, 022202. | 0.8 | 47 |
| 12 | Topological Characteristics of 2D Cellular Structures Generated by Fragmentation. <i>Physical Review Letters</i> , 1994, 73, 1553-1556. | 2.9 | 42 |
| 13 | Compressibility regularizes the $\mu(I)$ -rheology for dense granular flows. <i>Journal of Fluid Mechanics</i> , 2017, 830, 553-568. | 1.4 | 39 |
| 14 | Pre-avalanche structural rearrangements in the bulk of granular medium: Experimental evidence. <i>Europhysics Letters</i> , 2008, 83, 64003. | 0.7 | 38 |
| 15 | Distribution of the determinant of a random real-symmetric matrix from the Gaussian orthogonal ensemble. <i>Physical Review E</i> , 2000, 62, 1526-1536. | 0.8 | 31 |
| 16 | Two- and three-dimensional confined granular chute flows: experimental and numerical results. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S2457-S2480. | 0.7 | 30 |
| 17 | Experimental study of two-dimensional, monodisperse, frictional-collisional granular flows down an inclined chute. <i>Physics of Fluids</i> , 2006, 18, 123302. | 1.6 | 30 |
| 18 | The growth of a Super Stable Heap: An experimental and numerical study. <i>Europhysics Letters</i> , 2004, 68, 515-521. | 0.7 | 28 |

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|----|---|-----|-----------|
| 19 | In Situ Investigations on Organic Foam Films Using Neutron and Synchrotron Radiation. <i>Langmuir</i> , 2005, 21, 2229-2234. | 1.6 | 27 |
| 20 | Dispersion in periodic porous media. Experience versus theory for two-dimensional systems. <i>Chemical Engineering Science</i> , 1997, 52, 1861-1874. | 1.9 | 25 |
| 21 | Two-dimensional inclined chute flows: Transverse motion and segregation. <i>Physical Review E</i> , 2003, 68, 051303. | 0.8 | 25 |
| 22 | Importance of convection in the compaction mechanisms of anisotropic granular media. <i>Physical Review E</i> , 2005, 71, 011304. | 0.8 | 24 |
| 23 | Nearest-neighbour spacing distributions of the $\hat{\Gamma}^2$ -Hermite ensemble of random matrices. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 383, 190-208. | 1.2 | 24 |
| 24 | Effect of Rare Events on Out-of-Equilibrium Relaxation. <i>Physical Review Letters</i> , 2005, 95, 268001. | 2.9 | 23 |
| 25 | The effect of sidewall friction on dense granular flows. <i>Computers and Mathematics With Applications</i> , 2008, 55, 230-234. | 1.4 | 23 |
| 26 | Experimental evidence of ageing and slow restoration of the weak-contact configuration in tilted 3D granular packings. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010, 2010, P11023. | 0.9 | 22 |
| 27 | Slow compaction of granular systems. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S2743-S2754. | 0.7 | 18 |
| 28 | Dynamics of rearrangements during inclination of granular packings: the avalanche precursor regime. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012, 2012, P04013. | 0.9 | 18 |
| 29 | Some consequences of exchangeability in random-matrix theory. <i>Physical Review E</i> , 1999, 59, 6281-6285. | 0.8 | 13 |
| 30 | High-speed confined granular flows down smooth inclines: scaling and wall friction laws. <i>Granular Matter</i> , 2020, 22, 1. | 1.1 | 13 |
| 31 | Experimental assessment of the effective friction at the base of granular chute flows on a smooth incline. <i>Physical Review E</i> , 2021, 103, 042905. | 0.8 | 13 |
| 32 | The fixed-trace $\hat{\Gamma}^2$ -Hermite ensemble of random matrices and the low temperature distribution of the determinant of an $N\hat{A}-N\hat{I}^2$ -Hermite matrix. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 1561-1584. | 0.7 | 11 |
| 33 | Heterogeneous dynamics of a granular pack under vertical tapping. <i>Europhysics Letters</i> , 2009, 85, 58004. | 0.7 | 11 |
| 34 | Granular flows on a dissipative base. <i>Physical Review E</i> , 2015, 92, 022204. | 0.8 | 9 |
| 35 | Electrically induced tunable cohesion in granular systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010, 2010, P08003. | 0.9 | 8 |
| 36 | Influence of lateral confinement on granular flows: comparison between shear-driven and gravity-driven flows. <i>Granular Matter</i> , 2020, 22, 1. | 1.1 | 8 |

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|----|--|-----|-----------|
| 37 | Coupling heat conduction and water–steam flow in a saturated porous medium. International Journal for Numerical Methods in Engineering, 2011, 85, 1390-1414. | 1.5 | 7 |
| 38 | Precursors and triggering mechanisms of granular avalanches. Comptes Rendus Physique, 2015, 16, 45-50. | 0.3 | 6 |
| 39 | Experimental investigation of high speed granular flows down inclines. EPJ Web of Conferences, 2017, 140, 03057. | 0.1 | 6 |
| 40 | Using Surface Evolver to measure pressures and energies of real 2D foams submitted to quasi-static deformations. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 468, 193-200. | 2.3 | 5 |
| 41 | Dynamic behavior of humid granular avalanches: Optical measurements to characterize the precursor activity. Physical Review E, 2020, 101, 022902. | 0.8 | 5 |
| 42 | The distributions of the determinant of fixed-trace ensembles of real-symmetric and of Hermitian random matrices. Journal of Physics A, 2003, 36, 9885-9898. | 1.6 | 4 |
| 43 | High speed confined granular flows down inclined: numerical simulations. EPJ Web of Conferences, 2017, 140, 03081. | 0.1 | 4 |
| 44 | Exact two-cell correlations in random cellular structures generated from a 2D Ising ferromagnet. Physica A: Statistical Mechanics and Its Applications, 1994, 212, 1-11. | 1.2 | 3 |
| 45 | Experimental link of coarsening rate and volume distribution in dry foam. Europhysics Letters, 2012, 99, 48003. | 0.7 | 3 |
| 46 | Rheology of confined granular flows. , 2010, , . | | 2 |
| 47 | Granular surface flows confined between flat, frictional walls. Part 1. Kinematics. Journal of Fluid Mechanics, 2022, 940, . | 1.4 | 2 |
| 48 | Rotational modes in a 1D array of cylinders under shear stress. Europhysics Letters, 2000, 50, 587-593. | 0.7 | 1 |
| 49 | Effective Thermal Conductivity of a Wet Porous Medium—Presence of Hysteresis When Modeling the Spatial Water Distribution for the Pendular Regime. Journal of Heat Transfer, 2016, 138, . | 1.2 | 1 |
| 50 | Robust experimental study of avalanche precursory events based on reproducible cycles of grain packing destabilizations. EPJ Web of Conferences, 2021, 249, 03023. | 0.1 | 1 |
| 51 | Particle segregation in inclined high-speed granular flows. Journal of Fluid Mechanics, 2022, 935, . | 1.4 | 1 |
| 52 | Overlapping Histogram method for testing Edward’s Statistical Mechanics of Powders. , 2009, , . | | 0 |
| 53 | Confined granular flows on a heap: from simulations to experiments. EPJ Web of Conferences, 2017, 140, 03067. | 0.1 | 0 |
| 54 | Sidewall friction in confined surface flows of granular materials. EPJ Web of Conferences, 2021, 249, 03024. | 0.1 | 0 |

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|----|--|-----|-----------|
| 55 | Effect of dissipation in rapid-gravitational granular flows. EPJ Web of Conferences, 2021, 249, 03046. | 0.1 | 0 |