

# GaÃ«l Combe

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

1,292  
citations

394286

19  
h-index

360920

35  
g-index

63  
all docs

63  
docs citations

63  
times ranked

882  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental and discrete element modeling studies of the trapdoor problem: influence of the macro-mechanical frictional parameters. <i>Acta Geotechnica</i> , 2012, 7, 15-39.	2.9	119
2	Experimental Validation of a Nonextensive Scaling Law in Confined Granular Media. <i>Physical Review Letters</i> , 2015, 115, 238301.	2.9	107
3	Quasistatic rheology and the origins of strain. <i>Comptes Rendus Physique</i> , 2002, 3, 131-140.	0.3	101
4	Two-scale modeling of granular materials: a DEM-FEM approach. <i>Granular Matter</i> , 2011, 13, 277-281.	1.1	84
5	Strain versus Stress in a Model Granular Material: A Devil's Staircase. <i>Physical Review Letters</i> , 2000, 85, 3628-3631.	2.9	78
6	An experimental assessment of displacement fluctuations in a 2D granular material subjected to shear. <i>Geotechnique Letters</i> , 2012, 2, 113-118.	0.6	70
7	Coupling between finite and discrete element methods for the modelling of earth structures reinforced by geosynthetic. <i>Computers and Geotechnics</i> , 2009, 36, 709-717.	2.3	69
8	FEM – DEM modelling of cohesive granular materials: Numerical homogenisation and multi-scale simulations. <i>Acta Geophysica</i> , 2014, 62, 1109-1126.	1.0	60
9	Scale Separation in Granular Packings: Stress Plateaus and Fluctuations. <i>Physical Review Letters</i> , 2006, 96, 168001.	2.9	51
10	Particle shape dependence in 2D granular media. <i>Europhysics Letters</i> , 2012, 98, 44008.	0.7	48
11	From discrete to continuum modelling of boundary value problems in geomechanics: An integrated FEM – DEM approach. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2019, 43, 919-955.	1.7	48
12	Investigation of Load-Transfer Mechanisms in Geotechnical Earth Structures with Thin Fill Platforms Reinforced by Rigid Inclusions. <i>International Journal of Geomechanics</i> , 2011, 11, 239-250.	1.3	39
13	Polygons vs. clumps of discs: A numerical study of the influence of grain shape on the mechanical behaviour of granular materials. <i>Powder Technology</i> , 2011, 208, 279-288.	2.1	38
14	Sensitivity of the stress response function to packing preparation. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S2391-S2403.	0.7	34
15	How granular materials deform in quasistatic conditions. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	29
16	A study of the influence of REV variability in double-scale FEM – DEM analysis. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 107, 882-900.	1.5	26
17	Shaft friction changes for cyclically loaded displacement piles: an X-ray investigation. <i>Geotechnique Letters</i> , 2018, 8, 66-72.	0.6	21
18	X-ray CT analysis of the evolution of ballast grain morphology along a Micro-Deval test: key role of the asperity scale. <i>Granular Matter</i> , 2019, 21, 1.	1.1	21

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19	Departure from elasticity in granular layers: Investigation of a crossover overload force. <i>Computer Physics Communications</i> , 2009, 180, 612-615.	3.0	20
20	FEM–DEM multiscale modeling: Model performance enhancement from Newton strategy to element loop parallelization. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 114, 47-65.	1.5	20
21	Experimental and Numerical Study of the Response of Granular Layer in the Trap-door Problem. , 2009, , .		17
22	Quantifying Degradation of Railway Ballast Using Numerical Simulations of Micro-deval Test and In-situ Conditions. <i>Procedia Engineering</i> , 2016, 143, 1016-1023.	1.2	15
23	TRACKER: A particle image tracking (PIT) technique dedicated to nonsmooth motions involved in granular packings. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	14
24	Modeling of a cohesive granular materials by a multi-scale approach. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	12
25	Characterising processes at sand-pile interface using digital image analysis and X-ray CT. <i>Geotechnique Letters</i> , 2019, 9, 254-262.	0.6	11
26	Mechanical response of an inclined frictional granular layer approaching unjamming. <i>Europhysics Letters</i> , 2013, 101, 44006.	0.7	10
27	Experimental evidence of "Granulence". <i>AIP Conference Proceedings</i> , 2013, , .	0.3	10
28	Mechanical properties of inclined frictional granular layers. <i>Granular Matter</i> , 2014, 16, 193-201.	1.1	10
29	Influence of the grains shape on the mechanical behavior of granular materials. , 2009, , .		8
30	Postmortem analysis of sand grain crushing from pile interface using X-ray tomography. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	8
31	Discrete numerical simulation, quasistatic deformation and the origins of strain in granular materials. , 2003, , .		8
32	FEM–DEM multi-scale model for cemented granular materials: Inter- and intra-granular cracking induced strain localisation. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2022, 46, 1001-1025.	1.7	8
33	Mechanical behavior of mixtures of circular and rectangular 2D particles. , 2009, , .		6
34	Prediction of Load Transfers in Granular Layers Used in Rigid Inclusions Technique—Experimental and Discrete Element Method Analysis. , 2010, , .		6
35	FEM – DEM: a new efficient multi-scale approach for geotechnical problems with strain localization. <i>EPJ Web of Conferences</i> , 2017, 140, 11007.	0.1	6
36	Wear of sharp aggregates in a rotating drum. <i>EPJ Web of Conferences</i> , 2017, 140, 07009.	0.1	6

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37	An assessment of discrete element approaches to infer intergranular forces from experiments on 2D granular media. <i>International Journal of Solids and Structures</i> , 2020, 187, 48-57.	1.3	6
38	Jamming transition in a two-dimensional open granular pile with rolling resistance. <i>Papers in Physics</i> , 2014, 6, .	0.2	6
39	Restoring Mesh Independency in FEM-DEM Multi-scale Modelling of Strain Localization Using Second Gradient Regularization. <i>Springer Series in Geomechanics and Geoengineering</i> , 2017, , 453-457.	0.0	5
40	Emergence of Shear Bands in Confined Granular Systems: Singularity of the q-Statistics. <i>Entropy</i> , 2018, 20, 862.	1.1	5
41	Fingering phenomena during grainâ€“grain displacement. <i>Computational Particle Mechanics</i> , 2017, 4, 153-164.	1.5	4
42	A DEMâ€“FEM two scale approach of the behaviour of granular materials. , 2009, , .		3
43	Transitions in the response of a granular layer. , 2009, , .		3
44	A benchmark for particle shape dependence. , 2013, , .		3
45	Experimental investigation of mode I fracture for brittle tube-shaped particles. <i>EPJ Web of Conferences</i> , 2017, 140, 07015.	0.1	3
46	Assessing contact forces in granular materials from experimental measurements of kinematics. <i>EPJ Web of Conferences</i> , 2017, 140, 02012.	0.1	3
47	Experimental micromechanical analysis of a 2D granular material: relation between structure evolution and loading path. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 1997, 2, 121-163.	1.0	3
48	Ã‰tude du comportement de lâ€™interface sable-pieu sous chargement axial monotone et cyclique Ã  lâ€™Ã©chelle granulaire. <i>Revue FranÃ§aise De GÃ©otechnique</i> , 2021, , 4.	0.1	2
49	Publisherâ€™s Note: Scale Separation in Granular Packings: Stress Plateaus and Fluctuations [ <i>Phys. Rev. Lett.</i> 96, 168001 (2006)]. <i>Physical Review Letters</i> , 2006, 96, .	2.9	1
50	Pattern formation during capillary rising of a fluid front into a granular media. , 2013, , .		1
51	Non-Gaussian behavior in jamming / unjamming transition in dense granular materials. , 2013, , .		1
52	An attempt in assessing contact forces from a kinematic field. , 2013, , .		1
53	Particle Shape Effect on Macroscopic Behaviour of Underground Structures: Numerical and Experimental Study. <i>Studia Geotechnica Et Mechanica</i> , 2015, 36, 67-74.	0.2	1
54	Effects of a large number of cycles on pile shaft resistance analyzed at the grain scale using x-ray tomography. <i>EPJ Web of Conferences</i> , 2017, 140, 07014.	0.1	1

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55	Stochastic model for the micromechanics of jammed granular materials: experimental studies and numerical simulations. EPJ Web of Conferences, 2017, 140, 02021.	0.1	1
56	The particle image tracking technique: An accurate optical method for measuring individual kinematics of rigid particles. Strain, 2020, 56, e12362.	1.4	1
57	Grain-scale DEM study of open-ended pipe pile penetration in granular soils. EPJ Web of Conferences, 2021, 249, 11007.	0.1	0
58	High compressibility caused by particle breakage: a DEM investigation. EPJ Web of Conferences, 2021, 249, 07011.	0.1	0
59	Sample preparation of dense granular materials Influence of void ratio $e$ and coordination number $Z^*$ on the mechanical behaviour at failure. EPJ Web of Conferences, 2021, 249, 02012.	0.1	0
60	A numerical homogenized law using discrete element method for continuum modelling of boundary value problems. Lecture Notes in Civil Engineering, 2020, , 715-720.	0.3	0
61	High compression of granular assemblies of brittle hollow tubular particles: investigation through a 3D discrete element model. Computational Particle Mechanics, 0, , 1.	1.5	0