

Felix Darve

List of Publications by Year in descending order

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116
papers

2,473
citations

172207

29
h-index

233125

45
g-index

134
all docs

134
docs citations

134
times ranked

1184
citing authors

#	ARTICLE	IF	CITATIONS
1	Toward objective rockfall trajectory simulation using a stochastic impact model. <i>Geomorphology</i> , 2009, 110, 68-79.	1.1	103
2	A multi-scale approach to granular materials. <i>Mechanics of Materials</i> , 2005, 37, 980-980.	1.7	100
3	A micromechanical investigation for the effects of pore size and its distribution on geopolymers foam concrete under uniaxial compression. <i>Engineering Fracture Mechanics</i> , 2019, 209, 228-244.	2.0	98
4	Physical processes within a 2D granular layer during an impact. <i>Granular Matter</i> , 2008, 10, 415-437.	1.1	91
5	Bifurcation and second-order work in geomaterials. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2007, 31, 1007-1032.	1.7	87
6	A micro-mechanical investigation of bifurcation in granular materials. <i>International Journal of Solids and Structures</i> , 2007, 44, 6630-6652.	1.3	78
7	Diffuse and localized failure modes: Two competing mechanisms. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2011, 35, 586-601.	1.7	72
8	The H-microdirectional model: Accounting for a mesoscopic scale. <i>Mechanics of Materials</i> , 2011, 43, 918-929.	1.7	67
9	Failure in rate-independent granular materials as a bifurcation toward a dynamic regime. <i>International Journal of Plasticity</i> , 2012, 29, 136-154.	4.1	62
10	A simple non-linear model for internal friction in modified concrete. <i>International Journal of Engineering Science</i> , 2014, 80, 136-152.	2.7	61
11	On a common critical state in localized and diffuse failure modes. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 95, 112-131.	2.3	61
12	Bifurcations in granular media: macro- and micro-mechanics approaches. <i>Comptes Rendus - Mecanique</i> , 2007, 335, 496-515.	2.1	60
13	Micro-mechanical investigation of material instability in granular assemblies. <i>International Journal of Solids and Structures</i> , 2006, 43, 3569-3595.	1.3	55
14	Pore-scale simulations of drainage in granular materials: Finite size effects and the representative elementary volume. <i>Advances in Water Resources</i> , 2016, 95, 109-124.	1.7	54
15	Second-order work, kinetic energy and diffuse failure in granular materials. <i>Granular Matter</i> , 2011, 13, 19-28.	1.1	52
16	Basic features of plastic strains: From micro-mechanics to incrementally nonlinear models. <i>International Journal of Plasticity</i> , 2007, 23, 1555-1588.	4.1	47
17	Bifurcation in granular materials: An attempt for a unified framework. <i>International Journal of Solids and Structures</i> , 2009, 46, 3938-3947.	1.3	47
18	Meso-structure organization in two-dimensional granular materials along biaxial loading path. <i>International Journal of Solids and Structures</i> , 2016, 96, 25-37.	1.3	46

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19	Macroscopic softening in granular materials from a mesoscale perspective. International Journal of Solids and Structures, 2020, 193-194, 222-238.	1.3	46
20	Granular plasticity, a contribution from discrete mechanics. Journal of the Mechanics and Physics of Solids, 2015, 75, 119-139.	2.3	45
21	Meso-structure evolution in a 2D granular material during biaxial loading. Granular Matter, 2016, 18, 1.	1.1	42
22	From microscopic to macroscopic second-order work in granular assemblies. Mechanics of Materials, 2007, 39, 664-684.	1.7	40
23	Solidâ€fluid transition modelling in geomaterials and application to a mudflow interacting with an obstacle. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1341-1361.	1.7	39
24	On incremental non-linearity in granular media: phenomenological and multi-scale views (Part I). International Journal for Numerical and Analytical Methods in Geomechanics, 2005, 29, 1387-1409.	1.7	38
25	Force chain collapse as grain column buckling in granular materials. Granular Matter, 2017, 19, 1.	1.1	36
26	Inertia effects as a possible missing link between micro and macro second-order work in granular media. International Journal of Solids and Structures, 2012, 49, 1252-1258.	1.3	35
27	Stability of non-conservative elastic structures under additional kinematics constraints. Engineering Structures, 2010, 32, 3086-3092.	2.6	34
28	Micromechanical analysis of second order work in granular media. Granular Matter, 2013, 15, 221-235.	1.1	34
29	Diffuse instabilities with transition to localization in loose granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 1292-1311.	1.7	31
30	A generic approach to modelling flexible confined boundary conditions in <sc>SPH</sc> and its application. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 1005-1031.	1.7	31
31	Three-Dimensional Multiscale Bifurcation Analysis of Granular Media. Journal of Engineering Mechanics - ASCE, 2009, 135, 493-509.	1.6	30
32	Analysis of failure occurrence from direct simulations. European Journal of Environmental and Civil Engineering, 2009, 13, 187-201.	1.0	29
33	A new insight into modelling the behaviour of unsaturated soils. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 2629-2654.	1.7	28
34	Multiscale characterisation of diffuse granular failure. Philosophical Magazine, 2012, 92, 4547-4587.	0.7	27
35	A novel multi-scale large deformation approach for modelling of granular collapse. Acta Geotechnica, 2021, 16, 2371-2388.	2.9	26
36	On flow rule in granular media: phenomenological and multi-scale views (Part II). International Journal for Numerical and Analytical Methods in Geomechanics, 2005, 29, 1411-1432.	1.7	25

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37	Bayesian stochastic modeling of a spherical rock bouncing on a coarse soil. <i>Natural Hazards and Earth System Sciences</i> , 2009, 9, 831-846.	1.5	25
38	Liquefaction phenomenon of granular materials and constitutive stability. <i>Engineering Computations</i> , 1996, 13, 5-28.	0.7	24
39	On the Elastic and Plastic Strain Decomposition in Granular Materials. <i>Granular Matter</i> , 2006, 8, 221-237.	1.1	23
40	Micro-mechanical bases of some salient constitutive features of granular materials. <i>International Journal of Solids and Structures</i> , 2007, 44, 7420-7443.	1.3	23
41	A porous media finite element approach for soil instability including the second-order work criterion. <i>Acta Geotechnica</i> , 2016, 11, 805-825.	2.9	22
42	3D bifurcation analysis in geomaterials. <i>European Journal of Environmental and Civil Engineering</i> , 2009, 13, 135-147.	1.0	20
43	Granular media failure along triaxial proportional strain paths. <i>European Journal of Environmental and Civil Engineering</i> , 2013, 17, 777-790.	1.0	20
44	On the stability of non-conservative elastic systems under mixed perturbations. <i>European Journal of Environmental and Civil Engineering</i> , 2009, 13, 347-367.	1.0	19
45	Some insights into structure instability and the second-order work criterion. <i>International Journal of Solids and Structures</i> , 2012, 49, 132-142.	1.3	19
46	Quantitative prediction of discrete element models on complex loading paths. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2019, 43, 858-887.	1.7	19
47	Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials. <i>Journal of Engineering Mechanics - ASCE</i> , 2010, 136, 589-598.	1.6	18
48	Incrementally non-linear plasticity applied to rock joint modelling. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2013, 37, 453-477.	1.7	18
49	Evolution of the micromechanical properties of impacted granular materials. <i>Comptes Rendus - Mecanique</i> , 2010, 338, 639-647.	2.1	17
50	Failure mechanisms in granular media: a discrete element analysis. <i>Granular Matter</i> , 2011, 13, 255-260.	1.1	16
51	Second-order work analysis for granular materials using a multiscale approach. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2013, 37, 2987-3007.	1.7	16
52	Revisiting the existence of an effective stress for wet granular soils with micromechanics. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2018, 42, 959-978.	1.7	16
53	Bifurcation and instability modelling by a multimechanism elasto-plastic model. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2008, 32, 461-492.	1.7	15
54	Additional constraints may soften a non-conservative structural system: Buckling and vibration analysis. <i>International Journal of Solids and Structures</i> , 2013, 50, 363-370.	1.3	14

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55	Microstructural self-organization in granular materials during failure. <i>Comptes Rendus - Mecanique</i> , 2015, 343, 143-154.	2.1	14
56	Second-order work criterion: from material point to boundary value problems. <i>Acta Mechanica</i> , 2017, 228, 2483-2498.	1.1	14
57	Failure in granular media from an energy viewpoint. <i>Granular Matter</i> , 2016, 18, 1.	1.1	13
58	Hydro-elasto-plastic modelling with a solid/fluid transition. <i>Computers and Geotechnics</i> , 2016, 75, 69-79.	2.3	13
59	Reliability analyses of slope stability. <i>European Journal of Environmental and Civil Engineering</i> , 2010, 14, 1227-1257.	1.0	12
60	Designing geotechnical structures with a proper stability criterion as a safety factor. <i>Computers and Geotechnics</i> , 2016, 71, 98-114.	2.3	12
61	On the mechanics of meso-scale structures in two-dimensional granular materials. <i>European Journal of Environmental and Civil Engineering</i> , 2017, 21, 912-935.	1.0	12
62	Partially saturated media: from DEM simulation to thermodynamic interpretation. <i>European Journal of Environmental and Civil Engineering</i> , 2017, 21, 798-820.	1.0	11
63	Deformation and stresses upon drainage of an idealized granular material. <i>Acta Geotechnica</i> , 2018, 13, 961-972.	2.9	11
64	Slip lines versus shear bands: Two competing localization modes. <i>Mechanics Research Communications</i> , 2021, 114, 103603.	1.0	10
65	Preferential growth of force network in granular media. <i>Granular Matter</i> , 2019, 21, 1.	1.1	9
66	Some micromechanical aspects of failure in granular materials based on second-order work. <i>Comptes Rendus - Mecanique</i> , 2014, 342, 174-188.	2.1	8
67	Reliability analyses of slope stability. Homogeneous slope with circular failure. <i>European Journal of Environmental and Civil Engineering</i> , 2010, 14, 1227-1257.	1.0	8
68	Mesoscopic Scale Instability in Particulate Materials. <i>Journal of Engineering Mechanics - ASCE</i> , 2016, 142, 04016047.	1.6	7
69	Constitutive response predictions of both dense and loose soils with a discrete element model. <i>Computers and Geotechnics</i> , 2021, 135, 104161.	2.3	7
70	Constitutive Equations and Instabilities of Granular Materials. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2002, , 3-43.	0.4	7
71	Geometric degree of nonconservativity. <i>Mathematics and Mechanics of Complex Systems</i> , 2014, 2, 123-139.	0.5	7
72	Bifurcation and generalized mixed loading conditions in geomaterials. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2011, 35, 1409-1431.	1.7	6

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73	Divergence and Flutter Instabilities of Some Constrained Two-Degree-of-Freedom Systems. Journal of Engineering Mechanics - ASCE, 2014, 140, 47-52.	1.6	6
74	Real-time monitoring and FEM-LIP simulation of a rainfall-induced rockslide. Natural Hazards and Earth System Sciences, 2019, 19, 153-168.	1.5	6
75	Advantages of second-order work as a rational safety factor and stability analysis of a reinforced rock slope. Canadian Geotechnical Journal, 2020, 57, 661-672.	1.4	6
76	Buckling of granular systems with discrete and gradient elasticity Cosserat continua. Annals of Solid and Structural Mechanics, 2020, 12, 7-22.	0.5	6
77	Kinematical structural stability. Discrete and Continuous Dynamical Systems - Series S, 2016, 9, 529-536.	0.6	6
78	Experimental and numerical analyses of failure in very loose sands. European Journal of Environmental and Civil Engineering, 2009, 13, 149-165.	1.0	5
79	Multiscale modelling of granular materials in boundary value problems accounting for mesoscale mechanisms. Computers and Geotechnics, 2021, 134, 104143.	2.3	5
80	Modelling the mechanical interaction between flowing materials and retaining wire structures. Computers and Geotechnics, 2004, 31, 427-441.	2.3	4
81	Comparing numerical and experimental approaches for the stochastic modeling of the bouncing of a boulder on a coarse soil. European Journal of Environmental and Civil Engineering, 2010, 14, 87-111.	1.0	4
82	Material stability analysis of rock joints. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 2539-2562.	1.7	4
83	Describing failure in geomaterials using second-order work approach. Water Science and Engineering, 2015, 8, 89-95.	1.4	4
84	Micromechanical description of adsorptive-capillary stress in wet fine-grained media. Computers and Geotechnics, 2021, 137, 104047.	2.3	4
85	How meso shear chains bridge multiscale shear behaviors in granular materials: A preliminary study. International Journal of Solids and Structures, 2022, 252, 111835.	1.3	4
86	Divergence Instability and Diffuse Failure in Granular Media. Procedia IUTAM, 2012, 3, 115-140.	1.2	3
87	Particle methods in geomechanics. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 831-832.	1.7	3
88	Fundamentals of constitutive equations for geomaterials. , 2004, , 1-33.		3
89	Strain Localization as a Function of Topological Changes in Mesoscopic Granular Structures. Springer Series in Geomechanics and Geoengineering, 2017, , 459-465.	0.0	2
90	Microstructure Incidence on the Bifurcation Domain Topology in Granular Materials. Journal of Engineering Mechanics - ASCE, 2018, 144, .	1.6	2

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91	Buckling of Granular Systems with Shear Interactions: Discrete versus Continuum Approaches. , 2020, , 199-221.		2
92	Application du critère de Hill dans la modélisation par éléments finis des glissements de terrain de la région de Constantine (Algérie). European Journal of Environmental and Civil Engineering, 2008, 12, 747-769.	1.0	1
93	Caractérisation numérique du phénomène de localisation des déformations dans des essais biaxiaux sur sable. European Journal of Environmental and Civil Engineering, 2008, 12, 651-671.	1.0	1
94	To Which Extend the Failure Mode Originates from Microstructure?. Springer Series in Geomechanics and Geoengineering, 2013, , 359-362.	0.0	1
95	Coupled flow and deformations in granular systems beyond the pendular regime. EPJ Web of Conferences, 2017, 140, 09017.	0.1	1
96	Static bending of granular beam: exact discrete and nonlocal solutions. Meccanica, 0, , .	1.2	1
97	Hyperelastic or Hypoelastic Granular Circular Chain Instability in a Geometrically Exact Framework. Journal of Engineering Mechanics - ASCE, 2022, 148, .	1.6	1
98	3D Continuous and Discrete Modeling of Bifurcations in Geomaterials. , 0, , 153-175.		0
99	Jean Salençon élu président de l'Académie des sciences. European Journal of Environmental and Civil Engineering, 2009, 13, 128-128.	1.0	0
100	A Micromechanical View of Failure in Granular Materials. , 2009, , .		0
101	A multiscale description of failure in granular materials. , 2013, , .		0
102	Preface of the special issue on poromechanics in honour of Arnold Verruijt™. International Journal for Numerical and Analytical Methods in Geomechanics, 2015, 39, 1483-1483.	1.7	0
103	Granular Materials: Mesoscale Structures and Modeling. , 2018, , 61-93.		0
104	Second-order work criterion and divergence criterion: a full equivalence for kinematically constrained systems. Mathematics and Mechanics of Complex Systems, 2020, 8, 1-28.	0.5	0
105	Divergence instability of kinematically constrained Hencky chains: Analytic results and asymptotic behavior. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 0, , e202100157.	0.9	0
106	Failure Mechanics of Geomaterials. , 2013, , 1-29.		0
107	Failure Mechanics of Geomaterials. , 2015, , 137-169.		0
108	Geometric Degree of Non Conservativeness. Lecture Notes in Computer Science, 2017, , 355-358.	1.0	0

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109	Intrinsic Incremental Mechanics. Lecture Notes in Computer Science, 2019, , 51-54.	1.0	0
110	Flutter Kinematic Structural Stability. , 2020, , 125-156.		0
111	Geometrie Degree of Non-conservativity. , 2020, , 157-197.		0
112	Mixed Perturbations and Second-order Work Criterion. , 2020, , 69-102.		0
113	On Stability of Discrete and Asymptotically Continuous Systems. , 2020, , 1-56.		0
114	Divergence Kinematic Structural Stability. , 2020, , 103-123.		0
115	Continuous Divergence KISS. , 2020, , 223-261.		0
116	Failure Mechanics of Geomaterials. , 2022, , 1077-1109.		0