

Richard Wan

List of Publications by Year in descending order

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Version: 2024-02-01

77
papers

1,155
citations

471061

17
h-index

454577

30
g-index

80
all docs

80
docs citations

80
times ranked

666
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | A simple constitutive model for granular soils: Modified stress-dilatancy approach. Computers and Geotechnics, 1998, 22, 109-133. | 2.3 | 175 |
| 2 | Stress Dilatancy and Fabric Dependencies on Sand Behavior. Journal of Engineering Mechanics - ASCE, 2004, 130, 635-645. | 1.6 | 98 |
| 3 | Drained Cyclic Behavior of Sand with Fabric Dependence. Journal of Engineering Mechanics - ASCE, 2001, 127, 1106-1116. | 1.6 | 57 |
| 4 | Contact angle mechanical influence in wet granular soils. Acta Geotechnica, 2017, 12, 67-83. | 2.9 | 40 |
| 5 | A Finite Element Model for Ice Ball Evolution in a Multi-probe Cryosurgery. Computer Methods in Biomechanics and Biomedical Engineering, 2003, 6, 197-208. | 0.9 | 36 |
| 6 | Prediction of Stimulated Reservoir Volume and Optimization of Fracturing in Tight Gas and Shale With a Fully Elasto-Plastic Coupled Geomechanical Model. SPE Journal, 2014, 19, 771-785. | 1.7 | 36 |
| 7 | 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 |
| 8 | Non-dissipative structural evolutions in granular materials within the small strain range. International Journal of Solids and Structures, 2017, 110-111, 94-105. | 1.3 | 34 |
| 9 | 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 |
| 10 | On the validity of the flow rule postulate for geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 863-880. | 1.7 | 24 |
| 11 | Onset of structural evolution in granular materials as a redundancy problem. Granular Matter, 2016, 18, 1. | 1.1 | 24 |
| 12 | Numerical study of inter-particle bond failure by 3D discrete element method. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 523-545. | 1.7 | 23 |
| 13 | Elastoplastic modelling of diffuse instability response of geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 140-160. | 1.7 | 22 |
| 14 | Micromechanical Analysis of Force Transport in Wet Granular Soils. Vadose Zone Journal, 2014, 13, 1-12. | 1.3 | 21 |
| 15 | A finite element model for cryosurgery with coupled phase change and thermal stress aspects. Finite Elements in Analysis and Design, 2008, 44, 288-297. | 1.7 | 20 |
| 16 | Stress in Wet Granular Media with Interfaces via Homogenization and Discrete Element Approaches. Journal of Engineering Mechanics - ASCE, 2016, 142, . | 1.6 | 19 |
| 17 | Joint Stiffness and Deformation Behaviour of Discontinuous Rock. Journal of Canadian Petroleum Technology, 2010, 49, 78-86. | 2.3 | 18 |
| 18 | Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials. Journal of Engineering Mechanics - ASCE, 2010, 136, 589-598. | 1.6 | 18 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | The micromechanical nature of stresses in triphasic granular media with interfaces. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 99, 495-511. | 2.3 | 18 |
| 20 | Implicit integration algorithm for Hoek-Brown elastic-plastic model. <i>Computers and Geotechnics</i> , 1992, 14, 149-177. | 2.3 | 17 |
| 21 | Computation of sand fluidization phenomena using stabilized finite elements. <i>Finite Elements in Analysis and Design</i> , 2004, 40, 1681-1699. | 1.7 | 17 |
| 22 | A finite element method for the analysis of shear bands in geomaterials. <i>Finite Elements in Analysis and Design</i> , 1990, 7, 129-143. | 1.7 | 16 |
| 23 | BEHAVIOUR OF GRANULAR MATERIALS IN RELATION TO THEIR FABRIC DEPENDENCIES. <i>Soils and Foundations</i> , 2005, 45, 77-86. | 0.7 | 16 |
| 24 | Fabric and connectivity as field descriptors for deformations in granular media. <i>Continuum Mechanics and Thermodynamics</i> , 2015, 27, 243-259. | 1.4 | 16 |
| 25 | Subtleties in discrete-element modelling of wet granular soils. <i>Geotechnique</i> , 2017, 67, 365-370. | 2.2 | 16 |
| 26 | 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 |
| 27 | Prediction And Optimization Of Fracturing In Tight Gas And Shale Using A Coupled Geomechanical Model Of Combined Tensile And Shear Fracturing. , 2012, , . | | 14 |
| 28 | Microstructural self-organization in granular materials during failure. <i>Comptes Rendus - Mecanique</i> , 2015, 343, 143-154. | 2.1 | 14 |
| 29 | On elastic deformations and decomposition of strain in granular media. <i>International Journal of Solids and Structures</i> , 2018, 138, 97-108. | 1.3 | 14 |
| 30 | A tensorial description of stresses in triphasic granular materials with interfaces. <i>Geomechanics for Energy and the Environment</i> , 2015, 4, 73-87. | 1.2 | 13 |
| 31 | Failure in granular media from an energy viewpoint. <i>Granular Matter</i> , 2016, 18, 1. | 1.1 | 13 |
| 32 | Strain in Granular Media: Probabilistic Approach to Dirichlet Tessellation. <i>Journal of Engineering Mechanics - ASCE</i> , 2017, 143, . | 1.6 | 13 |
| 33 | The possible influence of osmotic poration on cell membrane water permeability. <i>Cryobiology</i> , 2009, 58, 62-68. | 0.3 | 12 |
| 34 | Micromechanical approach to swelling behavior of capillaryâ€porous media with coupled physics. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2019, 43, 353-380. | 1.7 | 12 |
| 35 | A level set variational formulation for coupled phase change/mass transfer problems: application to freezing of biological systems. <i>Finite Elements in Analysis and Design</i> , 2004, 40, 1641-1663. | 1.7 | 11 |
| 36 | Hydro-mechanical description of fractured porous media based on microporomechanics. <i>International Journal of Solids and Structures</i> , 2016, 96, 274-287. | 1.3 | 11 |

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|----|--|-----|-----------|
| 37 | Statistical analysis of stress transmission in wet granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 1935-1956. | 1.7 | 10 |
| 38 | Critical plane analysis for interpreting experimental results on anisotropic rocks. Acta Geotechnica, 2019, 14, 1215-1225. | 2.9 | 10 |
| 39 | $\frac{1}{4}$ -GM: A purely micromechanical constitutive model for granular materials. Mechanics of Materials, 2018, 126, 57-74. | 1.7 | 9 |
| 40 | Preferential growth of force network in granular media. Granular Matter, 2019, 21, 1. | 1.1 | 9 |
| 41 | A probabilistic approach for computing water retention of particulate systems from statistics of grain size and tessellated pore network. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 956-973. | 1.7 | 9 |
| 42 | Tensile and shear failure behaviour of compacted clay $\hat{\epsilon}$ hybrid failure mode. International Journal of Geotechnical Engineering, 2020, 14, 231-241. | 1.1 | 9 |
| 43 | Micromechanical correlation between elasticity and strength characteristics of anisotropic rocks. International Journal of Rock Mechanics and Minings Sciences, 2020, 125, 104154. | 2.6 | 9 |
| 44 | Numerical modeling of fracturing in permeable rocks via a micromechanical continuum model. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 1885-1915. | 1.7 | 8 |
| 45 | Hydraulic variations in permafrost due to open-pit mining and climate change: a case study in the Canadian Arctic. Acta Geotechnica, 2020, 15, 883-905. | 2.9 | 7 |
| 46 | Non-coaxial plastic flow of granular materials through stress probing analysis. International Journal of Solids and Structures, 2021, 222-223, 111015. | 1.3 | 7 |
| 47 | Fabric response to strain probing in granular materials: Two-dimensional, isotropic systems. International Journal of Solids and Structures, 2019, 156-157, 251-262. | 1.3 | 6 |
| 48 | Quasistatic kinetic avalanches and self-organized criticality in deviatorically loaded granular media. Physical Review E, 2021, 104, 024901. | 0.8 | 6 |
| 49 | Computing sand production under foamy oil flow in porous media via least-squares finite elements. Finite Elements in Analysis and Design, 2006, 42, 592-601. | 1.7 | 5 |
| 50 | A micromechanical $\frac{1}{4}$ UNSAT effective stress expression for stress-strain behaviour of wet granular materials. Geomechanics for Energy and the Environment, 2018, 15, 10-18. | 1.2 | 5 |
| 51 | An elastoplastic description of frictional destructuration in natural clays and shales. Acta Geotechnica, 2018, 13, 911-924. | 2.9 | 5 |
| 52 | A three-dimensional multiscale damage poroelasticity model for fractured porous media. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 585-630. | 1.7 | 5 |
| 53 | Microstructural formulation of stress dilatancy. Comptes Rendus - Mecanique, 2014, 342, 198-207. | 2.1 | 4 |
| 54 | Micromechanical analysis of cyclic and asymptotic behaviors of a granular backfill. Acta Geotechnica, 2020, 15, 715-734. | 2.9 | 4 |

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|----|--|-----|-----------|
| 55 | Micromechanical description of adsorptive-capillary stress in wet fine-grained media. Computers and Geotechnics, 2021, 137, 104047. | 2.3 | 4 |
| 56 | MULTISCALE MODEL FOR DAMAGE-FLUID FLOW IN FRACTURED POROUS MEDIA. International Journal for Multiscale Computational Engineering, 2016, 14, 367-387. | 0.8 | 4 |
| 57 | Granular material response with respect to loading direction and material instability. European Journal of Environmental and Civil Engineering, 2009, 13, 219-233. | 1.0 | 3 |
| 58 | Derivation of soil water retention curve incorporating electrochemical effects. Acta Geotechnica, 2021, 16, 1147-1160. | 2.9 | 3 |
| 59 | Fabric response to stress probing in granular materials: Two-dimensional, anisotropic systems. Computers and Geotechnics, 2022, 146, 104695. | 2.3 | 3 |
| 60 | Finite element analysis of diffuse instability using an implicitly integrated pressure-density dependent elastoplastic model. Finite Elements in Analysis and Design, 2010, 46, 487-495. | 1.7 | 2 |
| 61 | Multiscale Approach to Micro-Poro-Mechanical Modelling of Unsaturated Shales. Springer Series in Geomechanics and Geoengineering, 2017, , 57-66. | 0.0 | 2 |
| 62 | Strain Localization as a Function of Topological Changes in Mesoscopic Granular Structures. Springer Series in Geomechanics and Geoengineering, 2017, , 459-465. | 0.0 | 2 |
| 63 | Non-Dissipative Structural Evolutions in Granular Materials. EPJ Web of Conferences, 2017, 140, 02014. | 0.1 | 2 |
| 64 | Effects of sample disturbance and heterogeneity on the triaxial behaviour of a Canadian oil sand at ambient and high temperatures. Acta Geotechnica, 2018, 13, 457. | 2.9 | 2 |
| 65 | Partially Saturated Granular Materials: Insights from Micro-Mechanical Modelling. , 2017, , . | | 2 |
| 66 | Thermal Disturbances in Permafrost Due to Open Pit Mining and Tailings Impoundment. Minerals (Basel, Switzerland), 2020, 10, 35. | 0.8 | 2 |
| 67 | Experimental Investigation of Instabilities of Granular Materials in Relation to Dilatancy and Fabric Issues. , 2007, , 71-93. | | 2 |
| 68 | Instabilities and bifurcations in geomechanics. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 111-111. | 1.7 | 1 |
| 69 | Fabric Evolution in Granular Materials Under Strain Probing. Springer Series in Geomechanics and Geoengineering, 2019, , 151-161. | 0.0 | 1 |
| 70 | Anisotropic nature of the capillary stress tensor. EPJ Web of Conferences, 2021, 249, 11010. | 0.1 | 1 |
| 71 | Hierarchy of Failure Indicators in the Failure Analysis of Geomaterials. Springer Series in Geomechanics and Geoengineering, 2015, , 189-197. | 0.0 | 0 |
| 72 | Instability Analysis of Granular Media via a Purely Micromechanical Constitutive Model. Springer Series in Geomechanics and Geoengineering, 2017, , 507-513. | 0.0 | 0 |

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|----|--|-----|-----------|
| 73 | Finite Element Modelling of Material Instability via an Enriched Elastoplastic Model. Springer Series in Geomechanics and Geoengineering, 2011, , 235-241. | 0.0 | 0 |
| 74 | Failure Mechanics of Geomaterials. , 2013, , 1-29. | | 0 |
| 75 | Failure Mechanics of Geomaterials. , 2015, , 137-169. | | 0 |
| 76 | Multiscale Investigation of Microcrack-Induced Instability in Rocks. Springer Series in Geomechanics and Geoengineering, 2017, , 299-305. | 0.0 | 0 |
| 77 | Failure Mechanics of Geomaterials. , 2022, , 1077-1109. | | 0 |