

Zhiye Zhao

List of Publications by Year in descending order

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115
papers

3,203
citations

126858

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118
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docs citations

118
times ranked

2100
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Numerical study on tunnel damage subject to blast-induced shock wave in jointed rock masses. <i>Tunnelling and Underground Space Technology</i> , 2014, 43, 88-100. | 3.0 | 136 |
| 2 | Experimental Investigation of Bedding Plane Orientation on the Rockburst Behavior of Sandstone. <i>Rock Mechanics and Rock Engineering</i> , 2012, 45, 311-326. | 2.6 | 97 |
| 3 | Numerical simulations of rock mass damage induced by underground explosion. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2009, 46, 1206-1213. | 2.6 | 87 |
| 4 | Hydraulic fracturing modeling using the discontinuous deformation analysis (DDA) method. <i>Computers and Geotechnics</i> , 2016, 76, 12-22. | 2.3 | 84 |
| 5 | Numerical study of shear behavior of intermittent rock joints with different geometrical parameters. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2006, 43, 802-816. | 2.6 | 80 |
| 6 | Geological discontinuity persistence: Implications and quantification. <i>Engineering Geology</i> , 2018, 241, 41-54. | 2.9 | 80 |
| 7 | Numerical modelling of laboratory soil desiccation cracking using UDEC with a mix-mode cohesive fracture model. <i>Engineering Geology</i> , 2016, 202, 14-23. | 2.9 | 79 |
| 8 | A numerical model of fully grouted bolts considering the tri-linear shear bond-slip model. <i>Tunnelling and Underground Space Technology</i> , 2016, 54, 73-80. | 3.0 | 73 |
| 9 | Considerations of the discontinuous deformation analysis on wave propagation problems. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2009, 33, 1449-1465. | 1.7 | 70 |
| 10 | Development of three-dimensional numerical manifold method for jointed rock slope stability analysis. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2013, 64, 22-35. | 2.6 | 68 |
| 11 | Effects of anisotropic permeability of fractured rock masses on underground oil storage caverns. <i>Tunnelling and Underground Space Technology</i> , 2010, 25, 629-637. | 3.0 | 61 |
| 12 | UDEC-AUTODYN Hybrid Modeling of a Large-Scale Underground Explosion Test. <i>Rock Mechanics and Rock Engineering</i> , 2015, 48, 737-747. | 2.6 | 59 |
| 13 | Fully Grouted Rock Bolts: An Analytical Investigation. <i>Rock Mechanics and Rock Engineering</i> , 2015, 48, 1181-1196. | 2.6 | 54 |
| 14 | Prediction model of tunnel boring machine performance by ensemble neural networks. <i>Geomechanics and Geoengineering</i> , 2007, 2, 123-128. | 0.9 | 53 |
| 15 | Design of structural modular neural networks with genetic algorithm. <i>Advances in Engineering Software</i> , 2003, 34, 17-24. | 1.8 | 52 |
| 16 | An improved three-dimensional spherical DDA model for simulating rock failure. <i>Science China Technological Sciences</i> , 2015, 58, 1533-1541. | 2.0 | 50 |
| 17 | Numerical investigation of the direct tensile behaviour of laminated and transversely isotropic rocks containing incipient bedding planes with different strengths. <i>Computers and Geotechnics</i> , 2018, 104, 373-388. | 2.3 | 50 |
| 18 | DEM simulation of mortar-bolt interface behaviour subjected to shearing. <i>Construction and Building Materials</i> , 2018, 185, 120-137. | 3.2 | 50 |

| # | ARTICLE | IF | CITATIONS |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | A detailed investigation of block dynamic sliding by the discontinuous deformation analysis. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 2373-2393. | 1.7 | 49 |
| 20 | On the shear failure of incipient rock discontinuities under CNL and CNS boundary conditions: Insights from DEM modelling. Engineering Geology, 2018, 234, 153-166. | 2.9 | 48 |
| 21 | An optimal neural network and concrete strength modeling. Advances in Engineering Software, 2002, 33, 117-130. | 1.8 | 46 |
| 22 | A fuzzy system for concrete bridge damage diagnosis. Computers and Structures, 2002, 80, 629-641. | 2.4 | 46 |
| 23 | The vertex-to-vertex contact analysis in the two-dimensional discontinuous deformation analysis. Advances in Engineering Software, 2012, 45, 1-10. | 1.8 | 46 |
| 24 | Numerical studies on rockbolts mechanism using 2D discontinuous deformation analysis. Tunnelling and Underground Space Technology, 2014, 41, 223-233. | 3.0 | 44 |
| 25 | An alternative scheme for the corner-corner contact in the two-dimensional Discontinuous Deformation Analysis. Advances in Engineering Software, 2010, 41, 206-212. | 1.8 | 42 |
| 26 | Numerical investigation of the opening effect on the mechanical behaviours in rocks under uniaxial loading using hybrid continuum-discrete element method. Computers and Geotechnics, 2017, 90, 55-72. | 2.3 | 41 |
| 27 | Development of Rock Bolt Elements in Two-Dimensional Discontinuous Deformation Analysis. Rock Mechanics and Rock Engineering, 2014, 47, 2157-2170. | 2.6 | 40 |
| 28 | Design of ensemble neural network using the Akaike information criterion. Engineering Applications of Artificial Intelligence, 2008, 21, 1182-1188. | 4.3 | 38 |
| 29 | Modeling bimaterial interface cracks using the numerical manifold method. Engineering Analysis With Boundary Elements, 2013, 37, 464-474. | 2.0 | 37 |
| 30 | Development of contact algorithm for three-dimensional numerical manifold method. International Journal for Numerical Methods in Engineering, 2014, 97, 423-453. | 1.5 | 37 |
| 31 | Pile response subjected to rock blasting induced ground vibration near soil-rock interface. Computers and Geotechnics, 2017, 82, 1-15. | 2.3 | 37 |
| 32 | Development of a new deformation-controlled rock bolt: Numerical modelling and laboratory verification. Tunnelling and Underground Space Technology, 2020, 98, 103305. | 3.0 | 36 |
| 33 | Concrete bridge deterioration diagnosis using fuzzy inference system. Advances in Engineering Software, 2001, 32, 317-325. | 1.8 | 35 |
| 34 | Stability of piezoelectric FGM rectangular plates subjected to non-uniformly distributed load, heat and voltage. Advances in Engineering Software, 2008, 39, 121-131. | 1.8 | 35 |
| 35 | Coupled hydro-mechanical model for fractured rock masses using the discontinuous deformation analysis. Tunnelling and Underground Space Technology, 2013, 38, 506-516. | 3.0 | 35 |
| 36 | Experimental and Numerical Study on the Interface Behaviour Between the Rock Bolt and Bond Material. Rock Mechanics and Rock Engineering, 2019, 52, 869-879. | 2.6 | 35 |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | TUNNEL BLASTING SIMULATIONS BY THE DISCONTINUOUS DEFORMATION ANALYSIS. International Journal of Computational Methods, 2011, 08, 277-292. | 0.8 | 34 |
| 38 | A simplified model for predicting grout flow in fracture channels. Tunnelling and Underground Space Technology, 2017, 70, 11-18. | 3.0 | 34 |
| 39 | Tensile strength of large-scale incipient rock joints: a laboratory investigation. Acta Geotechnica, 2018, 13, 869-886. | 2.9 | 33 |
| 40 | Stability Charts for Homogenous Soil Slopes. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 2212-2218. | 1.5 | 32 |
| 41 | Determination of three dimensional hydraulic conductivities using a combined analytical/neural network model. Tunnelling and Underground Space Technology, 2011, 26, 310-319. | 3.0 | 31 |
| 42 | 3D Particle-Based DEM Investigation into the Shear Behaviour of Incipient Rock Joints with Various Geometries of Rock Bridges. Rock Mechanics and Rock Engineering, 2018, 51, 3563-3584. | 2.6 | 31 |
| 43 | Effect of bolt configuration on the interface behaviour between a rock bolt and bond material: A comprehensive DDA investigation. Computers and Geotechnics, 2019, 105, 116-128. | 2.3 | 31 |
| 44 | Block fracturing analysis using nodal-based discontinuous deformation analysis with the double minimization procedure. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 881-902. | 1.7 | 30 |
| 45 | Failure Criterion of Concrete under Triaxial Stresses Using Neural Networks. Computer-Aided Civil and Infrastructure Engineering, 2002, 17, 68-73. | 6.3 | 28 |
| 46 | Steel columns under fire—a neural network based strength model. Advances in Engineering Software, 2006, 37, 97-105. | 1.8 | 28 |
| 47 | The grain effect of intact rock modelling using discrete element method with Voronoi grains. Geotechnique Letters, 2016, 6, 136-143. | 0.6 | 27 |
| 48 | An analytical model for shear behaviour of bolted rock joints. International Journal of Rock Mechanics and Minings Sciences, 2019, 121, 104019. | 2.6 | 26 |
| 49 | High velocity impact mitigation with gradient cellular solids. Composites Part B: Engineering, 2016, 85, 93-101. | 5.9 | 25 |
| 50 | An Analytical Model for Fully Grouted Rockbolts with Consideration of the Pre- and Post-yielding Behavior. Rock Mechanics and Rock Engineering, 2017, 50, 3019-3028. | 2.6 | 25 |
| 51 | Numerical investigation of crack growth in concrete subjected to compression by the generalized beam lattice model. Computational Mechanics, 2009, 43, 277-295. | 2.2 | 24 |
| 52 | Investigation of linear dependence problem of three-dimensional partition of unity-based finite element methods. Computer Methods in Applied Mechanics and Engineering, 2012, 233-236, 137-151. | 3.4 | 24 |
| 53 | Implementation of displacement-dependent Barton-Bandis rock joint model into discontinuous deformation analysis. Computers and Geotechnics, 2017, 86, 1-8. | 2.3 | 24 |
| 54 | On the Implementation of augmented Lagrangian method in the two-dimensional discontinuous deformation Analysis. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 551-571. | 1.7 | 23 |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Rock Slope Stability and Stabilization Analysis Using the Coupled DDA and FEM Method: NDDA Approach. <i>International Journal of Geomechanics</i> , 2018, 18, 04018044. | 1.3 | 22 |
| 56 | Boundary stress calculation—a comparison study. <i>Computers and Structures</i> , 1999, 71, 77-85. | 2.4 | 21 |
| 57 | Augmented Numerical Manifold Method with implementation of flat-top partition of unity. <i>Engineering Analysis With Boundary Elements</i> , 2015, 61, 153-171. | 2.0 | 21 |
| 58 | Development of a Unified Rock Bolt Model in Discontinuous Deformation Analysis. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 827-847. | 2.6 | 21 |
| 59 | DDA based grouting prediction and linkage between fracture aperture distribution and grouting characteristics. <i>Computers and Geotechnics</i> , 2019, 112, 350-369. | 2.3 | 21 |
| 60 | Influence of workmanship on the bonding strength of tiles to external walls. <i>International Journal of Adhesion and Adhesives</i> , 1997, 17, 47-53. | 1.4 | 20 |
| 61 | MODELING BRITTLE FRACTURE WITH THE NODAL-BASED DISCONTINUOUS DEFORMATION ANALYSIS. <i>International Journal of Computational Methods</i> , 2013, 10, 1350040. | 0.8 | 20 |
| 62 | Energy absorption of graded foam subjected to blast: A theoretical approach. <i>Materials and Design</i> , 2015, 84, 351-358. | 3.3 | 20 |
| 63 | Effects of joints on the reinforced rock units of fully-grouted rockbolts. <i>Tunnelling and Underground Space Technology</i> , 2018, 71, 15-26. | 3.0 | 20 |
| 64 | Analytical modeling of shear behaviors of rockbolts perpendicular to joints. <i>Construction and Building Materials</i> , 2018, 175, 286-295. | 3.2 | 19 |
| 65 | Analysis of mechanically fastened composite joints by boundary element methods. <i>Composites Part B: Engineering</i> , 2000, 31, 693-705. | 5.9 | 18 |
| 66 | Numerical modelling of a field soil desiccation test using a cohesive fracture model with Voronoi tessellations. <i>Acta Geotechnica</i> , 2018, 13, 87-102. | 2.9 | 18 |
| 67 | Broad-spectrum fracture toughness of an anisotropic sandstone under mixed-mode loading. <i>Theoretical and Applied Fracture Mechanics</i> , 2018, 96, 556-575. | 2.1 | 18 |
| 68 | Two-dimensional and three-dimensional magnification factors, M_k , for non-load-carrying fillet welds cruciform joints. <i>Engineering Fracture Mechanics</i> , 2000, 65, 435-453. | 2.0 | 17 |
| 69 | Investigation on strength and stability of jointed rock mass using three-dimensional numerical manifold method. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2013, 37, 2348-2366. | 1.7 | 17 |
| 70 | Modeling of Rock Joints Under Cyclic Loading Conditions Using Discontinuous Deformation Analysis. <i>Rock Mechanics and Rock Engineering</i> , 2017, 50, 1205-1215. | 2.6 | 17 |
| 71 | Comparative study of Sarma's method and the discontinuous deformation analysis for rock slope stability analysis. <i>Geomechanics and Geoengineering</i> , 2011, 6, 293-302. | 0.9 | 16 |
| 72 | Error estimation and h adaptive boundary elements. <i>Engineering Analysis With Boundary Elements</i> , 1999, 23, 793-803. | 2.0 | 15 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Modified generalized beam lattice model associated with fracture of reinforced fiber/particle composites. <i>Theoretical and Applied Fracture Mechanics</i> , 2008, 50, 132-141. | 2.1 | 14 |
| 74 | Proof of linear independence of flat-top PU-based high-order approximation. <i>Engineering Analysis With Boundary Elements</i> , 2014, 44, 104-111. | 2.0 | 14 |
| 75 | Evaluation of equivalent hydraulic aperture (EHA) for rough rock fractures. <i>Canadian Geotechnical Journal</i> , 2019, 56, 1486-1501. | 1.4 | 14 |
| 76 | Design of ensemble neural network using entropy theory. <i>Advances in Engineering Software</i> , 2011, 42, 838-845. | 1.8 | 13 |
| 77 | Design of Metal Foam Cladding Subjected to Close-Range Blast. <i>Journal of Performance of Constructed Facilities</i> , 2015, 29, . | 1.0 | 13 |
| 78 | Rock Cavern Stability Analysis Under Different Hydro-Geological Conditions Using the Coupled Hydro-Mechanical Model. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 555-572. | 2.6 | 13 |
| 79 | A field study on pile response to blast-induced ground motion. <i>Soil Dynamics and Earthquake Engineering</i> , 2018, 114, 568-575. | 1.9 | 13 |
| 80 | Influence of fracture deformation on grout penetrability in fractured rock masses. <i>Tunnelling and Underground Space Technology</i> , 2020, 102, 103431. | 3.0 | 13 |
| 81 | Stress recovery procedure for discontinuous deformation analysis. <i>Advances in Engineering Software</i> , 2009, 40, 52-57. | 1.8 | 12 |
| 82 | Effects of Water Related Factors on Pre-grouting in Hard Rock Tunnelling. <i>Procedia Engineering</i> , 2016, 165, 300-307. | 1.2 | 12 |
| 83 | Bearing capacity analysis using the method of characteristics. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2013, 29, 179-188. | 1.5 | 11 |
| 84 | Determination of hydraulic conductivity of fractured rock masses: A case study for a rock cavern project in Singapore. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2015, 7, 178-184. | 3.7 | 11 |
| 85 | Grouting knowledge discovery based on data mining. <i>Tunnelling and Underground Space Technology</i> , 2020, 95, 103093. | 3.0 | 11 |
| 86 | INTERELEMENT STRESS EVALUATION BY BOUNDARY ELEMENTS. <i>International Journal for Numerical Methods in Engineering</i> , 1996, 39, 2399-2415. | 1.5 | 10 |
| 87 | A simple method to simulate shrinkage-induced cracking in cement-based composites by lattice-type modeling. <i>Computational Mechanics</i> , 2009, 43, 477-492. | 2.2 | 10 |
| 88 | Low frequency acoustic signals associated with rock falls, thunderstorms, and wind turbulences in field environment. <i>Applied Acoustics</i> , 2016, 112, 131-139. | 1.7 | 10 |
| 89 | Back-analysis approach for the determination of hydraulic conductivity in rock caverns. <i>Tunnelling and Underground Space Technology</i> , 2015, 47, 233-238. | 3.0 | 8 |
| 90 | Numerical Simulation of P-Wave Propagation in Rock Mass with Granular Material-Filled Fractures Using Hybrid Continuum-Discrete Element Method. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 4049-4060. | 2.6 | 8 |

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|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91 | Simulating stress wave with flat-top partition of unity based high-order discontinuous deformation analysis. <i>Engineering Analysis With Boundary Elements</i> , 2018, 91, 110-123. | 2.0 | 8 |
| 92 | Numerical Modelling of Fully Grouted Rockbolts Subjected to Shear Load. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 2493-2503. | 2.6 | 8 |
| 93 | An alternative approach to shape design sensitivity analysis. <i>International Journal for Numerical Methods in Engineering</i> , 1992, 35, 1071-1086. | 1.5 | 7 |
| 94 | On the calculation of boundary stresses in boundary elements. <i>Engineering Analysis With Boundary Elements</i> , 1995, 16, 317-322. | 2.0 | 7 |
| 95 | Evaluation of singular integrals in the symmetric Galerkin boundary element method. <i>Advances in Engineering Software</i> , 2004, 35, 781-789. | 1.8 | 7 |
| 96 | Information and knowledge behind data from underground rock grouting. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2021, 13, 1326-1339. | 3.7 | 7 |
| 97 | Mitigating Ground Shocks with Cellular Solids. <i>Journal of Engineering Mechanics - ASCE</i> , 2013, 139, 1362-1371. | 1.6 | 6 |
| 98 | Improvement of contact calculation in spherical discontinuous deformation analysis. <i>Science China Technological Sciences</i> , 2017, 60, 765-771. | 2.0 | 6 |
| 99 | Protection Against Blast Load with Cellular Materials and Structures. <i>International Journal of Aerospace and Lightweight Structures (IJALS)</i> , 2012, 02, 53. | 0.1 | 6 |
| 100 | Preliminary Design System for Concrete Box Girder Bridges. <i>Journal of Computing in Civil Engineering</i> , 2001, 15, 184-192. | 2.5 | 5 |
| 101 | Numerical implementation of the symmetric Galerkin boundary element method in 2D elastodynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2003, 58, 1049-1060. | 1.5 | 5 |
| 102 | In-structure shock of underground structures: A revisit with experimental investigation. <i>Engineering Structures</i> , 2013, 56, 1620-1630. | 2.6 | 5 |
| 103 | Micro- and macro-fractures of coarse granite under true-triaxial unloading conditions. <i>Mining Science and Technology</i> , 2011, 21, 389-394. | 0.3 | 4 |
| 104 | An Analytical Investigation on the Estimation of Water Inflow into a Circular Tunnel Based On-site Data. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 3835-3844. | 2.6 | 4 |
| 105 | Error estimation in adaptive BEM by postprocessing interpolation. <i>Communications in Numerical Methods in Engineering</i> , 1998, 14, 633-645. | 1.3 | 3 |
| 106 | A simple error indicator for adaptive boundary element method. <i>Computers and Structures</i> , 1998, 68, 433-443. | 2.4 | 3 |
| 107 | Dynamic analysis with flat-top partition of unity-based discontinuous deformation analysis. <i>Computers and Geotechnics</i> , 2018, 98, 35-47. | 2.3 | 3 |
| 108 | Stress and stress gradient evaluation – a BEM approach. <i>Advances in Engineering Software</i> , 1994, 19, 45-52. | 1.8 | 2 |

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|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | Design sensitivity analysis with hypersingular boundary elements. Engineering Analysis With Boundary Elements, 2000, 24, 485-490. | 2.0 | 2 |
| 110 | Local refinement of flatâ€top partition of unity based highâ€order approximation. International Journal for Numerical Methods in Engineering, 2018, 116, 465-486. | 1.5 | 2 |
| 111 | Discontinuous Deformation Analysis for Parallel Hole Cut Blasting in Rock Mass. , 2009, , . | | 2 |
| 112 | A numerical study on the elements of shape optimum design. Engineering Analysis With Boundary Elements, 1992, 9, 339-349. | 2.0 | 1 |
| 113 | Shape design sensitivity analysis of kinematical boundaries. Structural Optimization, 1993, 5, 190-196. | 0.7 | 0 |
| 114 | Direct Continuum Approach to Threeâ€Dimensional Sensitivity Analysis. Journal of Engineering Mechanics - ASCE, 1993, 119, 2143-2156. | 1.6 | 0 |
| 115 | A preliminary study of the economic dimension of underground rock caverns for water storage at Singapore. , 2018, , . | | 0 |