Timon Rabczuk

List of Publications by Year in Descending Order

650 papers	32,960 citations	98 h-index	157 g-index
673 ext. papers	39,229 ext. citations	4.2 avg, IF	8.3 L-index

#	Paper	IF	Citations
650	Phase field modeling and computer implementation: A review. *Engineering Fracture Mechanics*, **2022**, 262, 108234	4.2	2
649	Intelligent on-demand design of phononic metamaterials. *Nanophotonics*, **2022**, 11, 439-460	6.3	11
648	An isogeometric phase-field based shape and topology optimization for flexoelectric structures. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 391, 114564	5.7	2
647	Wave propagation in generalized thermo-poro-elastic media via wavelet-based cell-adaptive central high resolution schemes using UNO limiters. *Applied Numerical Mathematics*, **2022**, 173, 112-143	2.5	
646	Machine-learning-driven on-demand design of phononic beams. *Science China: Physics, Mechanics and Astronomy*, **2022**, 65, 1	3.6	7
645	Molecular dynamics study on the crack propagation in carbon doped polycrystalline boron-nitride nanosheets. *Computational Materials Science*, **2022**, 203, 111066	3.2	1
644	Multilevel Monte Carlo method for topology optimization of flexoelectric composites with uncertain material properties. *Engineering Analysis With Boundary Elements*, **2022**, 134, 412-418	2.6	6
643	Isogeometric analysis of hydrodynamics of vesicles using a monolithic phase-field approach. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 388, 114191	5.7	2
642	Exploring thermal expansion of carbon-based nanosheets by machine-learning interatomic potentials. *Carbon*, **2022**, 186, 501-508	10.4	6
641	An isogeometric Burton-Miller method for the transmission loss optimization with application to mufflers with internal extended tubes. *Applied Acoustics*, **2022**, 185, 108410	3.1	3
640	A first-principles and machine-learning investigation on the electronic, photocatalytic, mechanical and heat conduction properties of nanoporous CN monolayers.. *Nanoscale*, **2022**,	7.7	2
639	Damage and Nonlinear Super Healing with Application to the Design of New Strengthening Theory **2022**, 119-154		
638	Stochastic full-range multiscale modeling of thermal conductivity of Polymeric carbon nanotubes composites: A machine learning approach. *Composite Structures*, **2022**, 289, 115393	5.3	2
637	Outstanding thermal conductivity and mechanical properties in the direct gap semiconducting penta-NiN2 monolayer confirmed by first-principles. *Physica E: Low-Dimensional Systems and Nanostructures*, **2022**, 140, 115221	3	3
636	Stochastic integrated machine learning based multiscale approach for the prediction of the thermal conductivity in carbon nanotube reinforced polymeric composites. *Composites Science and Technology*, **2022**, 109425	8.6	2
635	IGA-Reuse-NET: A deep-learning-based isogeometric analysis-reuse approach with topology-consistent parameterization. *Computer Aided Geometric Design*, **2022**, 95, 102087	1.2	0
634	A robust monolithic solver for phase-field fracture integrated with fracture energy based arc-length method and under-relaxation. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 394, 114927	5.7	1

633	An open source peridynamics code for dynamic fracture in homogeneous and heterogeneous materials. *Advances in Engineering Software*, **2022**, 168, 103124	3.6	0
632	Modeling neuron growth using isogeometric collocation based phase field method.. *Scientific Reports*, **2022**, 12, 8120	4.9	1
631	Inverse design of reconfigurable piezoelectric topological phononic plates. *Materials and Design*, **2022**, 110760	8.1	0
630	A NURBS-based inverse analysis of swelling induced morphing of thin stimuli-responsive polymer gels. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 397, 115049	5.7	0
629	An open-source unconstrained stress updating algorithm for the modified Cam-clay model. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 390, 114356	5.7	2
628	Enhanced mechanical properties of epoxy-based nanocomposites reinforced with functionalized carbon nanobuds. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	1
627	Dynamic stability optimization of laminated composite plates: An isogeometric HSDT formulation and PSO algorithm. *Composite Structures*, **2021**, 280, 114935	5.3	1
626	Mechanical, thermal transport, electronic and photocatalytic properties of penta-PdPS, -PdPSe and -PdPTe monolayers explored by first-principles calculations. *Journal of Materials Chemistry C*, **2021**, 10, 329-336	7.1	5
625	Laser-assisted graphene layer exfoliation from graphite slab. *Molecular Simulation*, **2021**, 47, 1540-1548	2	
624	Theoretical Prediction of P-Triphenylene-Graphdiyne as an Excellent Anode Material for Li, Na, K, Mg, and Ca Batteries. *Applied Sciences (Switzerland)*, **2021**, 11, 2308	2.6	1
623	A nonlinear geometric couple stress based strain gradient Kirchhoff–Love shell formulation for microscale thin-wall structures. *International Journal of Mechanical Sciences*, **2021**, 196, 106272	5.5	7
622	High correlated variables creator machine: Prediction of the compressive strength of concrete. *Computers and Structures*, **2021**, 247, 106479	4.5	16
621	Isogeometric analysis for a phase-field constrained optimization problem of morphological evolution of vesicles in electrical fields. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 377, 113669	5.7	6
620	Exceptional piezoelectricity, high thermal conductivity and stiffness and promising photocatalysis in two-dimensional MoSi2N4 family confirmed by first-principles. *Nano Energy*, **2021**, 82, 105716	17.1	70
619	An engineering interpretation of Nesterov's convex minimization algorithm and time integration: application to optimal fiber orientation. *Computational Mechanics*, **2021**, 68, 211-227	4	0
618	Deep autoencoder based energy method for the bending, vibration, and buckling analysis of Kirchhoff plates with transfer learning. *European Journal of Mechanics, A/Solids*, **2021**, 87, 104225	3.7	52
617	Nonlocal operator method for the Cahn-Hilliard phase field model. *Communications in Nonlinear Science and Numerical Simulation*, **2021**, 96, 105687	3.7	7
616	A Multiscale Investigation on the Thermal Transport in Polydimethylsiloxane Nanocomposites: Graphene vs. Borophene. *Nanomaterials*, **2021**, 11,	5.4	3

615	Computational predictions for predicting the performance of steel 1 panel shear wall under explosive loads. *Engineering Computations*, **2021**, 38, 3564-3589	1.4	3
614	Machine learning assisted multiscale modeling of composite phase change materials for Li-ion batteries□thermal management. *International Journal of Heat and Mass Transfer*, **2021**, 172, 121199	4.9	14
613	A deep energy method for functionally graded porous beams. *Journal of Zhejiang University: Science A*, **2021**, 22, 492-498	2.1	
612	Nanopore creation in MoS2 and graphene monolayers by nanoparticles impact: a reactive molecular dynamics study. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	2
611	Broadband Rayleigh wave attenuation by gradient metamaterials. *International Journal of Mechanical Sciences*, **2021**, 205, 106592	5.5	9
610	Optimizing the neural network hyperparameters utilizing genetic algorithm. *Journal of Zhejiang University: Science A*, **2021**, 22, 407-426	2.1	11
609	Fully anisotropic hyperelasto-plasticity with exponential approximation by power series and scaling/squaring. *Computational Mechanics*, **2021**, 68, 391	4	0
608	A novel mixed finite element formulation based on the refined zigzag theory for the stress analysis of laminated composite plates. *Composite Structures*, **2021**, 267, 113886	5.3	6
607	Multi-connected boundary conditions in solid mechanics and surgery theory. *Computers and Structures*, **2021**, 251, 106504	4.5	0
606	An efficient optimization approach for designing machine learning models based on genetic algorithm. *Neural Computing and Applications*, **2021**, 33, 1923-1933	4.8	32
605	Solving direct and inverse heat conduction problems in functionally graded materials using an accurate and robust numerical method. *International Journal of Thermal Sciences*, **2021**, 159, 106629	4.1	1
604	Phase field approach for simulating failure of viscoelastic elastomers. *European Journal of Mechanics, A/Solids*, **2021**, 85, 104092	3.7	4
603	Isogeometric structural shape optimization using automatic sensitivity analysis. *Applied Mathematical Modelling*, **2021**, 89, 1004-1024	4.5	8
602	A robust potential-based contact force solution approach for discontinuous deformation analysis of irregular convex polygonal block/particle systems. *Acta Geotechnica*, **2021**, 16, 679-697	4.9	3
601	Coupled finite-element/topology optimization of continua using the Newton-Raphson method. *European Journal of Mechanics, A/Solids*, **2021**, 85, 104117	3.7	6
600	On wave dispersion characteristics of magnetostrictive sandwich nanoplates in thermal environments. *European Journal of Mechanics, A/Solids*, **2021**, 85, 104130	3.7	20
599	Accelerating first-principles estimation of thermal conductivity by machine-learning interatomic potentials: A MTP/ShengBTE solution. *Computer Physics Communications*, **2021**, 258, 107583	4.2	44
598	An inverse procedure for identification of loads applied to a fractured component using a meshfree method. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 1687-1705	2.4	5

597	Application of two-dimensional materials as anodes for rechargeable metal-ion batteries: A comprehensive perspective from density functional theory simulations. *Energy Storage Materials*, **2021**, 35, 203-282	19.4	23
596	HERK integration of finite-strain fully anisotropic plasticity models. *Finite Elements in Analysis and Design*, **2021**, 185, 103492	2.2	
595	Nonlinear transient vibration of viscoelastic plates: A NURBS-based isogeometric HSDT approach. *Computers and Mathematics With Applications*, **2021**, 84, 1-15	2.7	10
594	Singularity Structure Simplification of Hexahedral Meshes via Weighted Ranking. *CAD Computer Aided Design*, **2021**, 130, 102946	2.9	3
593	A cover-based contact detection approach for irregular convex polygons in discontinuous deformation analysis. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2021**, 45, 208-233	4	10
592	Inverse design of topological metaplates for flexural waves with machine learning. *Materials and Design*, **2021**, 199, 109390	8.1	21
591	A staggered explicit-implicit isogeometric formulation for large deformation flexoelectricity. *Engineering Analysis With Boundary Elements*, **2021**, 122, 1-12	2.6	2
590	Dual-horizon peridynamics (DH-PD) **2021**, 35-56		
589	An innovative model for predicting the displacement and rotation of column-tree moment connection under fire. *Frontiers of Structural and Civil Engineering*, **2021**, 15, 194-212	2.5	9
588	Extrapolation and Ce-based implicit integration of anisotropic constitutive behavior. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 3218-3240	2.4	3
587	Propagation and attenuation of Rayleigh and pseudo surface waves in viscoelastic metamaterials. *Journal of Applied Physics*, **2021**, 129, 124903	2.5	9
586	High tensile strength and thermal conductivity in BeO monolayer: A first-principles study. *FlatChem* , **2021**, 28, 100257	5.1	6
585	First-Principles Multiscale Modeling of Mechanical Properties in Graphene/Borophene Heterostructures Empowered by Machine-Learning Interatomic Potentials. *Advanced Materials*, **2021**, 33, e2102807	24	33
584	Subdivision-based isogeometric analysis for second order partial differential equations on surfaces. *Computational Mechanics*, **2021**, 68, 1205-1221	4	2
583	A study on the effect of electric potential on vibration of smart nanocomposite cylindrical shells with closed circuit. *Thin-Walled Structures*, **2021**, 166, 108040	4.7	2
582	Electronic properties of transition metal embedded twin T-graphene: A density functional theory study. *Physica E: Low-Dimensional Systems and Nanostructures*, **2021**, 133, 114806	3	4
581	Presenting innovative ensemble model for prediction of the load carrying capacity of composite castellated steel beam under fire. *Structures*, **2021**, 33, 4031-4052	3.4	5
580	A nonlocal operator method for finite deformation higher-order gradient elasticity. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 384, 113963	5.7	6

579	A stochastic multiscale method for the prediction of the thermal conductivity of Polymer nanocomposites through hybrid machine learning algorithms. *Composite Structures*, **2021**, 273, 114269	5.3	8
578	A peridynamic approach for modeling of two dimensional functionally graded plates. *Composite Structures*, **2021**, 279, 114743	5.3	3
577	Factors and Failure Patterns Analysis for Undrained Seismic Bearing Capacity of Strip Footing Above Void. *International Journal of Geomechanics*, **2021**, 21, 04021188	3.1	2
576	3D isogeometric boundary element analysis and structural shape optimization for Helmholtz acoustic scattering problems. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 384, 113950	5.7	6
575	Nonlocal operator method for dynamic brittle fracture based on an explicit phase field model. *European Journal of Mechanics, A/Solids*, **2021**, 90, 104380	3.7	4
574	Discontinuous deformation analysis with distributed bond for the modelling of rock deformation and failure. *Computers and Geotechnics*, **2021**, 139, 104413	4.4	2
573	Exploring tensile piezoelectricity and bending flexoelectricity of diamane monolayers by machine learning. *Carbon*, **2021**, 185, 558-567	10.4	3
572	Parametric deep energy approach for elasticity accounting for strain gradient effects. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 386, 114096	5.7	19
571	Quasi-static and dynamic fracture modeling by the nonlocal operator method. *Engineering Analysis With Boundary Elements*, **2021**, 133, 120-137	2.6	2
570	Outstandingly high thermal conductivity, elastic modulus, carrier mobility and piezoelectricity in two-dimensional semiconducting CrC2N4: a first-principles study. *Materials Today Energy*, **2021**, 22, 100839	7	6
569	A practical meshfree inverse method for identification of thermo-mechanical fracture load of a body by examining the crack path in the body. *Engineering Analysis With Boundary Elements*, **2021**, 133, 236-247	2.6	3
568	A localized collocation scheme with fundamental solutions for long-time anomalous heat conduction analysis in functionally graded materials. *International Journal of Heat and Mass Transfer* , **2021**, 180, 121778	4.9	9
567	Modelling of fracture in pressure vessels by thin shell isogeometric analysis. *International Journal of Hydromechatronics*, **2021**, 4, 155	4.2	4
566	Computational modeling of fracture in capsule-based self-healing concrete: A 3D study. *Frontiers of Structural and Civil Engineering*, **2021**, 15, 1337-1346	2.5	0
565	Tailoring the band gap of 2-graphyne through functionalization with carbene groups: a density functional theory study. *Chemical Papers*, **2020**, 74, 3581-3587	1.9	2
564	Exploring phononic properties of two-dimensional materials using machine learning interatomic potentials. *Applied Materials Today*, **2020**, 20, 100685	6.6	46
563	A higher order nonlocal operator method for solving partial differential equations. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 367, 113132	5.7	39
562	Nanoporous C3N4, C3N5 and C3N6 nanosheets; novel strong semiconductors with low thermal conductivities and appealing optical/electronic properties. *Carbon*, **2020**, 167, 40-50	10.4	34

561	DigiSim □An Open Source Software Package for Heterogeneous Material Modeling Based on Digital Image Processing. *Advances in Engineering Software*, **2020**, 148, 102836	3.6	58
560	The effects of mismatch fracture properties in encapsulation-based self-healing concrete using cohesive-zone model. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 792-801	2.5	4
559	Machine-learning interatomic potentials enable first-principles multiscale modeling of lattice thermal conductivity in graphene/borophene heterostructures. *Materials Horizons*, **2020**, 7, 2359-2367	14.4	62
558	Free and forced vibration analysis of a sandwich beam considering porous core and SMA hybrid composite face layers on Vlasov□ foundation. *Acta Mechanica*, **2020**, 231, 3199-3218	2.1	10
557	Transient responses of two mutually interacting single-walled boron nitride nanotubes induced by a moving nanoparticle. *European Journal of Mechanics, A/Solids*, **2020**, 82, 103978	3.7	11
556	Computational Modeling of Flexoelectricity□A Review. *Energies*, **2020**, 13, 1326	3.1	20
555	Frequency Characteristics of Multiscale Hybrid Nanocomposite Annular Plate Based on a Halpin□Tsai Homogenization Model with the Aid of GDQM. *Applied Sciences (Switzerland)*, **2020**, 10, 1412	2.6	17
554	Efficient machine-learning based interatomic potentialsfor exploring thermal conductivity in two-dimensional materials. *JPhys Materials*, **2020**, 3, 02LT02	4.2	16
553	Isogeometric cohesive zone model for thin shell delamination analysis based on Kirchhoff-Love shell model. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 267-279	2.5	2
552	A surrogate model for computational homogenization of elastostatics at finite strain using high-dimensional model representation-based neural network. *International Journal for Numerical Methods in Engineering*, **2020**, 121, 4811-4842	2.4	14
551	Isogeometric analysis of insoluble surfactant spreading on a thin film. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 370, 113272	5.7	3
550	Particle swarm optimization model to predict scour depth around a bridge pier. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 855-866	2.5	11
549	First-principles investigation of mechanical, electronic and optical properties of H-, F- and Cl-diamane. *Applied Surface Science*, **2020**, 528, 147035	6.7	22
548	Topologically switchable behavior induced by an elastic instability in a phononic waveguide. *Journal of Applied Physics*, **2020**, 127, 245109	2.5	5
547	Exploration of mechanical, thermal conductivity and electromechanical properties of graphene nanoribbon springs. *Nanoscale Advances*, **2020**, 2, 3394-3403	5.1	7
546	Prediction of significant wave height; comparison between nested grid numerical model, and machine learning models of artificial neural networks, extreme learning and support vector machines. *Engineering Applications of Computational Fluid Mechanics*, **2020**, 14, 805-817	4.5	26
545	Hybrid FEM□SBM solver for structural vibration induced underwater acoustic radiation in shallow marine environment. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 369, 113236	5.7	25
544	Evaluation of the efficiency of various force configurations on scoliotic, lordotic and kyphotic curves in the subjects with scoliosis. *Spine Deformity*, **2020**, 8, 361-367	2	4

543	Gradient-enhanced Raviart-Thomas tetrahedron for finite-strain problems. *Computers and Structures*, **2020**, 231, 106212	4.5	
542	A general algorithm for numerical integration of three-dimensional crack singularities in PU-based numerical methods. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 363, 112908	5.7	4
541	ZnN and ZnP as novel graphene-like materials with high Li-ion storage capacities. *Materials Today Energy*, **2020**, 16, 100392	7	16
540	Phase field method for quasi-static hydro-fracture in porous media under stress boundary condition considering the effect of initial stress field. *Theoretical and Applied Fracture Mechanics*, **2020**, 107, 102523	3.7	16
539	Damage and healing mechanics in plane stress, plane strain, and isotropic elasticity. *International Journal of Damage Mechanics*, **2020**, 29, 1246-1270	3	6
538	Adaptive fourth-order phase field analysis using deep energy minimization. *Theoretical and Applied Fracture Mechanics*, **2020**, 107, 102527	3.7	16
537	Multi-patch NURBS formulation for anisotropic variable angle tow composite plates. *Composite Structures*, **2020**, 241, 111964	5.3	5
536	Kinetic analysis of polyhedral block system using an improved potential-based penalty function approach for explicit discontinuous deformation analysis. *Applied Mathematical Modelling*, **2020**, 82, 314-335	4.5	17
535	An energy approach to the solution of partial differential equations in computational mechanics via machine learning: Concepts, implementation and applications. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 362, 112790	5.7	319
534	Adaptive fourth-order phase field analysis for brittle fracture. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 361, 112808	5.7	31
533	Shape optimization by conventional and extended isogeometric boundary element method with PSO for two-dimensional Helmholtz acoustic problems. *Engineering Analysis With Boundary Elements*, **2020**, 113, 156-169	2.6	14
532	One-dimensional model for the unsteady flow of a generalized third-grade viscoelastic fluid. *Neural Computing and Applications*, **2020**, 32, 12881-12894	4.8	1
531	Computational predictions for estimating the maximum deflection of reinforced concrete panels subjected to the blast load. *International Journal of Impact Engineering*, **2020**, 139, 103527	4	35
530	Numerical modeling of microcrack behavior in encapsulation-based self-healing concrete under uniaxial tension. *Journal of Mechanical Science and Technology*, **2020**, 34, 1847-1853	1.6	5
529	Investigation into the fracture mechanism and thermal conductivity of borophene nanofilm; a reactive molecular dynamics simulation. *Computational Materials Science*, **2020**, 178, 109625	3.2	6
528	Monolayer C7N6: Room-temperature excitons with large binding energies and high thermal conductivities. *Physical Review Materials*, **2020**, 4,	3.2	3
527	Damage and Nonlinear Super Healing with Application to the Design of New Strengthening Theory **2020**, 1-37		
526	Three-Dimensional Isogeometric Analysis of Flexoelectricity with MATLAB Implementation. *Computers, Materials and Continua*, **2020**, 65, 1157-1179	3.9	6

525	Evaluation of the effects of various force configurations and magnitudes on scoliotic curve correction by use of finite element analysis: A case study. *Current Orthopaedic Practice*, **2020**, 31, 457-462	0.4	1
524	Shear stress distribution prediction in symmetric compound channels using data mining and machine learning models. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 1097-1109	2.5	5
523	A Systematic Molecular Dynamics Investigation on the Graphene Polymer Nanocomposites for Bulletproofing. *Computers, Materials and Continua*, **2020**, 65, 2009-2032	3.9	3
522	Agglomeration Effects on Static Stability Analysis of Multi-Scale Hybrid Nanocomposite Plates. *Computers, Materials and Continua*, **2020**, 62, 41-64	3.9	15
521	Forced Vibration Analysis of Functionally Graded Anisotropic Nanoplates Resting on Winkler/Pasternak-Foundation. *Computers, Materials and Continua*, **2020**, 62, 607-629	3.9	18
520	CAD-compatible structural shape optimization with a movable Bžier tetrahedral mesh. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 367, 113066	5.7	4
519	A deep energy method for finite deformation hyperelasticity. *European Journal of Mechanics, A/Solids*, **2020**, 80, 103874	3.7	38
518	Effects of nanotube agglomeration on wave dynamics of carbon nanotube-reinforced piezocomposite cylindrical shells. *Composites Part B: Engineering*, **2020**, 187, 107739	10	23
517	As2S3, As2Se3 and As2Te3 nanosheets: superstretchable semiconductors with anisotropic carrier mobilities and optical properties. *Journal of Materials Chemistry C*, **2020**, 8, 2400-2410	7.1	27
516	Transfer learning enhanced physics informed neural network for phase-field modeling of fracture. *Theoretical and Applied Fracture Mechanics*, **2020**, 106, 102447	3.7	116
515	Free vibration analysis of smart laminated carbon nanotube-reinforced composite cylindrical shells with various boundary conditions in hygrothermal environments. *Thin-Walled Structures*, **2020**, 149, 106500	4.7	24
514	Stochastic multiscale modeling of heat conductivity of Polymeric clay nanocomposites. *Mechanics of Materials*, **2020**, 142, 103280	3.3	13
513	Extended finite element method **2020**, 29-151		
512	Phantom node method **2020**, 153-160		
511	Extended meshfree methods **2020**, 161-313		0
510	Extended isogeometric analysis **2020**, 315-358		
509	Fracture in plates and shells **2020**, 359-435		
508	Fracture criteria and crack tracking procedures **2020**, 437-470		

507	Multiscale methods for fracture **2020**, 471-519		
506	A short overview of alternatives for fracture **2020**, 521-579		
505	Implementation details **2020**, 581-598		
504	Dynamics of two-dimensional functionally graded tapered Timoshenko nanobeam in thermal environment using nonlocal strain gradient theory. *Composites Part B: Engineering*, **2020**, 182, 107622	10	62
503	Isogeometric nonlinear transient analysis of porous FGM plates subjected to hygro-thermo-mechanical loads. *Thin-Walled Structures*, **2020**, 148, 106497	4.7	34
502	New group V graphyne: two-dimensional direct semiconductors with remarkable carrier mobilities, thermoelectric performance, and thermal stability. *Materials Today Physics*, **2020**, 12, 100164	8	7
501	Performance of fixed beam without interacting bars. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 1180-1195	2.5	12
500	Evaluation of a novel Asymmetric Genetic Algorithm to optimize the structural design of 3D regular and irregular steel frames. *Frontiers of Structural and Civil Engineering*, **2020**, 14, 1110-1130	2.5	8
499	Three-dimensional topology optimization of auxetic metamaterial using isogeometric analysis and model order reduction. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 371, 113306	5.7	17
498	Dynamic spline bas-relief modeling with isogeometric collocation method. *Computer Aided Geometric Design*, **2020**, 81, 101913	1.2	1
497	Phase field fracture in elasto-plastic solids: a length-scale insensitive model for quasi-brittle materials. *Computational Mechanics*, **2020**, 66, 931-961	4	12
496	Isogeometric boundary element analysis and shape optimization by PSO for 3D axi-symmetric high frequency Helmholtz acoustic problems. *Journal of Sound and Vibration*, **2020**, 486, 115598	3.9	7
495	Computational modeling of meso-scale fracture in polymer matrix composites employing peridynamics. *Composite Structures*, **2020**, 253, 112740	5.3	9
494	Three-dimensional mesoscale computational modeling of soil-rock mixtures with concave particles. *Engineering Geology*, **2020**, 277, 105802	6	80
493	COVID-19 Outbreak Prediction with Machine Learning. *Algorithms*, **2020**, 13, 249	1.8	112
492	A meshfree formulation for large deformation analysis of flexoelectric structures accounting for the surface effects. *Engineering Analysis With Boundary Elements*, **2020**, 120, 153-165	2.6	7
491	Structural shape optimization using Bžier triangles and a CAD-compatible boundary representation. *Engineering With Computers*, **2020**, 36, 1657-1672	4.5	1
490	Evaluation of the efficiency of Boston brace on scoliotic curve control: A review of literature. *Journal of Spinal Cord Medicine*, **2020**, 43, 824-831	1.9	2

489	A Computational Framework for Design and Optimization of Flexoelectric Materials. *International Journal of Computational Methods*, **2020**, 17, 1850097	1.1	10
488	Anisotropic solid-like shells modeled with NURBS-based isogeometric approach: Vibration, buckling, and divergence analyses. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 359, 112668	5.7	5
487	Pointwise dual weighted residual based goal-oriented a posteriori error estimation and adaptive mesh refinement in 2D/3D thermo-mechanical multifield problems. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 359, 112666	5.7	3
486	A nonlocal operator method for solving partial differential equations. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 358, 112621	5.7	71
485	Nonlinear interphase effects on plastic hardening of nylon 6/clay nanocomposites: A computational stochastic analysis. *Journal of Composite Materials*, **2020**, 54, 753-763	2.7	3
484	Isogeometric-stepwise vibrational behavior of rotating functionally graded blades with variable thickness at an arbitrary stagger angle subjected to thermal environment. *Composite Structures*, **2020**, 244, 112281	5.3	13
483	Efficient Deep Learning for Gradient-Enhanced Stress Dependent Damage Model. *Applied Sciences (Switzerland)*, **2020**, 10, 2556	2.6	2
482	Nonlocal operator method with numerical integration for gradient solid. *Computers and Structures*, **2020**, 233, 106235	4.5	19
481	A novel deep learning based method for the computational material design of flexoelectric nanostructures with topology optimization. *Finite Elements in Analysis and Design*, **2019**, 165, 21-30	2.2	34
480	Adaptive phase field analysis with dual hierarchical meshes for brittle fracture. *Engineering Fracture Mechanics*, **2019**, 218, 106608	4.2	15
479	Application of highly stretchable and conductive two-dimensional 1T VS2 and VSe2 as anode materials for Li-, Na- and Ca-ion storage. *Computational Materials Science*, **2019**, 160, 360-367	3.2	29
478	Threshold shift method for reliability-based design optimization. *Structural and Multidisciplinary Optimization*, **2019**, 60, 2053-2072	3.6	10
477	Effect of various characteristics of graphene nanoplatelets on thermal buckling behavior of FGRC micro plate based on MCST. *European Journal of Mechanics, A/Solids*, **2019**, 77, 103802	3.7	57
476	Thermo-mechanical buckling behavior of FG GNP reinforced micro plate based on MSGT. *Thin-Walled Structures*, **2019**, 142, 444-459	4.7	57
475	Effect of characteristics and distribution of porosity on electro-elastic analysis of laminated vessels with piezoelectric face-sheets based on higher-order modeling. *Composite Structures*, **2019**, 225, 111085	5.3	6
474	Mechanical properties of graphene-like BC3; a molecular dynamics study. *Computational Materials Science*, **2019**, 168, 1-10	3.2	27
473	Numerical solutions of the coupled unsteady nonlinear convection-diffusion equations based on generalized finite difference method. *European Physical Journal Plus*, **2019**, 134, 1	3.1	14
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471	Super-stretchability in two-dimensional RuCl3 and RuBr3 confirmed by first-principles simulations. *Physica E: Low-Dimensional Systems and Nanostructures*, **2019**, 113, 79-85	3	4
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