Erkan Oterkus

List of Publications by Year
in descending order

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145 papers	4,045 citations	126907 33 h-index	175258 52 g-index
145 all docs	145 docs citations	145 times ranked	1081 citing authors

#	Article	IF	Citations
1	A peridynamic-based machine learning model for one-dimensional and two-dimensional structures. Continuum Mechanics and Thermodynamics, 2023, 35, 741-773.	2.2	6
2	Derivation of dual-horizon state-based peridynamics formulation based on Eulerâ€“Lagrange equation. Continuum Mechanics and Thermodynamics, 2023, 35, 841-861.	2.2	10
3	Determination of horizon size in state-based peridynamics. Continuum Mechanics and Thermodynamics, 2023, 35, 705-728.	2.2	20
4	Evaluation of stress intensity factors under thermal effect employing domain integral method and ordinary state based peridynamic theory. Continuum Mechanics and Thermodynamics, 2023, 35, 1021-1040.	2.2	6
5	Prediction of fracture toughness of metallic materials. Engineering With Computers, 2023, 39, 81-88.	6.1	0
6	Evaluation of dynamic behaviour of porous media including micro-cracks by ordinary state-based peridynamics. Engineering With Computers, 2023, 39, 61-79.	6.1	5
7	Nonlocal strong forms of thin plate, gradient elasticity, magneto-electro-elasticity and phase-field fracture by nonlocal operator method. Engineering With Computers, 2023, 39, 23-44.	6.1	21
8	Peridynamic simulation of dynamic fracture in functionally graded materials subjected to impact load. Engineering With Computers, 2023, 39, 253-267.	6.1	14
9	A computational homogenization framework for non-ordinary state-based peridynamics. Engineering With Computers, 2023, 39, 461-487.	6.1	12
10	Peridynamic Simulation of Fracture in Polycrystalline Graphene. Journal of Peridynamics and Nonlocal Modeling, 2023, 5, 260-274.	2.9	5
11	Peridynamic computational homogenization theory for materials with evolving microstructure and damage. Engineering With Computers, 2023, 39, 2945-2957.	6.1	5
12	Peridynamic model for visco-hyperelastic material deformation in different strain rates. Continuum Mechanics and Thermodynamics, 2022, 34, 977-1011.	2.2	27
13	An In-depth Investigation of Bimaterial Interface Modeling Using Ordinary State-based Peridynamics. Journal of Peridynamics and Nonlocal Modeling, 2022, 4, 112-138.	2.9	16
14	Static and dynamic mechanical behaviors of cracked Mindlin plates in ordinary state-based peridynamic framework. Acta Mechanica, 2022, 233, 299-316.	2.1	6
15	Experimental investigation on the influence of interceptor plate on the motion performance of a cylindrical FPSO. Ocean Engineering, 2022, 243, 110339.	4.3	6
16	Probabilistic ship corrosion wastage model with Bayesian inference. Ocean Engineering, 2022, 246, 110571.	4.3	4
17	A comprehensive investigation on macroâ€“micro crack interactions in functionally graded materials using ordinary-state based peridynamics. Composite Structures, 2022, 287, 115299.	5.8	14
18	Coupling of peridynamics and inverse finite element method for shape sensing and crack propagation monitoring of plate structures. Computer Methods in Applied Mechanics and Engineering, 2022, 391, 114520.	6.6	21

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19	Static condensation of peridynamic heat conduction model. Mathematics and Mechanics of Solids, 2022, 27, 2689-2714.	2.4	7
20	Experimental investigation of motion behavior in irregular wave and site selection analysis of a hybrid offshore renewable power station for Egypt. Ocean Engineering, 2022, 249, 110858.	4.3	3
21	Fracture parameter investigations of functionally graded materials by using ordinary state based peridynamics. Engineering Analysis With Boundary Elements, 2022, 139, 180-191.	3.7	8
22	Thermomechanical phase change peridynamic model for welding analysis. Engineering Analysis With Boundary Elements, 2022, 140, 371-385.	3.7	6
23	Titanium alloy corrosion fatigue crack growth rates prediction: Peridynamics based numerical approach. International Journal of Fatigue, 2022, 162, 107023.	5.7	14
24	Peridynamic Modelling of Propagation of Cracks in Photovoltaic Panels. Procedia Structural Integrity, 2022, 41, 305-316.	0.8	1
25	Peridynamic Method. , 2022, , .		0
26	Some analytical solutions to peridynamic beam equations. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2022, 102, .	1.6	5
27	Peridynamic modeling of toughening enhancement in unidirectional fiber-reinforced composites with micro-cracks. Composite Structures, 2022, 297, 115950.	5.8	7
28	Model order reduction of linear peridynamic systems using static condensation. Mathematics and Mechanics of Solids, 2021, 26, 552-569.	2.4	6
29	A smoothed variable horizon peridynamics and its application to the fracture parameters evaluation. Acta Mechanica, 2021, 232, 533-553.	2.1	8
30	Mixed-mode stress intensity factors evaluation of flat shells under in-plane loading employing ordinary state-based peridynamics. Theoretical and Applied Fracture Mechanics, 2021, 112, 102841.	4.7	11
31	Peridynamic Formulation for Higher-Order Plate Theory. Journal of Peridynamics and Nonlocal Modeling, 2021, 3, 185-210.	2.9	6
32	Thermal diffusion analysis by using dual horizon peridynamics. Journal of Thermal Stresses, 2021, 44, 51-74.	2.0	11
33	A state-based peridynamic formulation for functionally graded Kirchhoff plates. Mathematics and Mechanics of Solids, 2021, 26, 530-551.	2.4	8
34	An energy-based peridynamic model for fatigue cracking. Engineering Fracture Mechanics, 2021, 241, 107373.	4.3	44
35	Peridynamic Higher-Order Beam Formulation. Journal of Peridynamics and Nonlocal Modeling, 2021, 3, 67-83.	2.9	11
36	Analysis of Functionally Graded Timoshenko Beams by Using Peridynamics. Journal of Peridynamics and Nonlocal Modeling, 2021, 3, 148-166.	2.9	7

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37	Application of peridynamics for rock mechanics and porous media. , 2021, , 387-401.		2
38	Peridynamics in dynamic fracture modeling. , 2021, , 159-181.		0
39	Fatigue analysis of polycrystalline materials using Peridynamic Theory with a novel crack tip detection algorithm. Ocean Engineering, 2021, 222, 108572.	4.3	21
40	A Novel Peridynamic Mindlin Plate Formulation Without Limitation on Material Constants. Journal of Peridynamics and Nonlocal Modeling, 2021, 3, 287-306.	2.9	3
41	Peridynamic formulation for higher order functionally graded beams. Thin-Walled Structures, 2021, 160, 107343.	5.3	6
42	Fracture parameter analysis of flat shells under out-of-plane loading using ordinary state-based peridynamics. Engineering Fracture Mechanics, 2021, 244, 107560.	4.3	11
43	Peridynamic investigation of the effect of porosity on fatigue nucleation for additively manufactured titanium alloy Ti6Al4V. Theoretical and Applied Fracture Mechanics, 2021, 112, 102925.	4.7	24
44	Peridynamic modelling of higher order functionally graded plates. Mathematics and Mechanics of Solids, 2021, 26, 1737-1759.	2.4	5
45	A physics-guided machine learning model for two-dimensional structures based on ordinary state-based peridynamics. Theoretical and Applied Fracture Mechanics, 2021, 112, 102872.	4.7	15
46	Parametric lightweight design of a direct-drive wind turbine electrical generator supporting structure for minimising dynamic response. Ships and Offshore Structures, 2021, 16, 266-274.	1.9	6
47	Numerical hydrodynamics-based design of an offshore platform to support a desalination plant and a wind turbine in Egypt. Ocean Engineering, 2021, 229, 108598.	4.3	19
48	Ordinary state-based peridynamic homogenization of periodic micro-structured materials. Theoretical and Applied Fracture Mechanics, 2021, 113, 102960.	4.7	17
49	Experimental study on the motion response of an integrated floating desalination plant and offshore wind turbine on a non-ship platform. Ocean Engineering, 2021, 234, 109275.	4.3	9
50	Crack growth modeling and simulation of a peridynamic fatigue model based on numerical and analytical solution approaches. Theoretical and Applied Fracture Mechanics, 2021, 114, 103026.	4.7	19
51	Peridynamic analysis of fatigue crack growth in fillet welded joints. Ocean Engineering, 2021, 235, 109348.	4.3	15
52	Ordinary state-based peridynamic shell model with arbitrary horizon domains for surface effect correction. Theoretical and Applied Fracture Mechanics, 2021, 115, 103068.	4.7	4
53	Experimental investigation on a towing assessment for a floating desalination plant for Egypt. Ocean Engineering, 2021, 238, 109746.	4.3	6
54	Modelling of Eulerian incompressible fluid flows by using peridynamic differential operator. Ocean Engineering, 2021, 239, 109815.	4.3	5

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55	Modelling of cracks with frictional contact based on peridynamics. Theoretical and Applied Fracture Mechanics, 2021, 116, 103082.	4.7	14
56	Beam and plate models in peridynamics. , 2021, , 97-112.		0
57	Application of artificial intelligence and machine learning in peridynamics. , 2021, , 419-435.		0
58	Environmentally-driven design of a floating desalination platform (Case study: reverse osmosis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	1.9	4
59	3-Dimensional Bond-Based Peridynamic Representative Volume Element Homogenization. Physical Mesomechanics, 2021, 24, 541-547.	1.9	4
60	Dynamic Crack Propagation and Its Interaction With Micro-Cracks in an Impact Problem. Journal of Engineering Materials and Technology, Transactions of the ASME, 2021, 143, .	1.4	23
61	Peridynamics: Past, present and future. AIP Conference Proceedings, 2021, , .	0.4	0
62	Family Member Search Algorithms for Peridynamic Analysis. Journal of Peridynamics and Nonlocal Modeling, 2020, 2, 59-84.	2.9	10
63	A Kirchhoff plate formulation in a state-based peridynamic framework. Mathematics and Mechanics of Solids, 2020, 25, 727-738.	2.4	46
64	Dynamic crack arrest analysis by ordinary state-based peridynamics. International Journal of Fracture, 2020, 221, 155-169.	2.2	53
65	Free vibration analysis of cracked plates using peridynamics. Ships and Offshore Structures, 2020, 15, S220-S229.	1.9	11
66	Experimental investigation on the motion response of a novel floating desalination plant for Egypt. Ocean Engineering, 2020, 210, 107535.	4.3	14
67	Investigation of the effect of shape of inclusions on homogenized properties by using peridynamics. Procedia Structural Integrity, 2020, 28, 1094-1105.	0.8	4
68	Buckling analysis of cracked plates using peridynamics. Ocean Engineering, 2020, 214, 107817.	4.3	12
69	Effect of horizon shape in peridynamics. Procedia Structural Integrity, 2020, 28, 418-429.	0.8	1
70	Closed-form dispersion relationships in bond-based peridynamics. Procedia Structural Integrity, 2020, 28, 482-490.	0.8	2
71	Isogeometric iFEM Analysis of Thin Shell Structures. Sensors, 2020, 20, 2685.	3.8	43
72	Influence of Different Types of Small-Size Defects on Propagation of Macro-cracks in Brittle Materials. Journal of Peridynamics and Nonlocal Modeling, 2020, 2, 289-316.	2.9	16

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73	Thermally-induced fracture analysis of polycrystalline materials by using peridynamics. Engineering Analysis With Boundary Elements, 2020, 117, 167-187.	3.7	13
74	An ordinary state-based peridynamic model for toughness enhancement of brittle materials through drilling stop-holes. International Journal of Mechanical Sciences, 2020, 182, 105773.	6.7	21
75	Microstructural Investigation of Plasma Sprayed Ceramic Coatings Using Peridynamics. Journal of Mechanics, 2020, 36, 183-196.	1.4	9
76	Peridynamic Modelling of Fracture in Polycrystalline Ice. Journal of Mechanics, 2020, 36, 223-234.	1.4	20
77	Peridynamic Model for a Mindlin Plate Resting on a Winkler Elastic Foundation. Journal of Peridynamics and Nonlocal Modeling, 2020, 2, 229-242.	2.9	11
78	Peridynamic Mindlin Plate Formulation for Functionally Graded Materials. Journal of Composites Science, 2020, 4, 76.	3.0	1
79	Conceptual Design and Numerical Analysis of a Novel Floating Desalination Plant Powered by Marine Renewable Energy for Egypt. Journal of Marine Science and Engineering, 2020, 8, 95.	2.6	27
80	Dent damage identification in stiffened cylindrical structures using inverse Finite Element Method. Ocean Engineering, 2020, 198, 106944.	4.3	41
81	Calculation of Stress Intensity Factor using Displacement Extrapolation Method in Peridynamic Framework. Journal of Mechanics, 2020, 36, 235-243.	1.4	14
82	In-Plane and Out-of Plane Failure of an Ice Sheet using Peridynamics. Journal of Mechanics, 2020, 36, 265-271.	1.4	14
83	Structural health monitoring of an offshore wind turbine tower using iFEM methodology. Ocean Engineering, 2020, 204, 107291.	4.3	49
84	Dynamic fracture analysis of functionally graded materials using ordinary state-based peridynamics. Composite Structures, 2020, 244, 112296.	5.8	48
85	An in-depth investigation of critical stretch based failure criterion in ordinary state-based peridynamics. International Journal of Fracture, 2020, 226, 97-119.	2.2	12
86	Peridynamic modelling of periodic microstructured materials. Procedia Structural Integrity, 2020, 28, 820-828.	0.8	6
87	Peridynamic shell membrane formulation. Procedia Structural Integrity, 2020, 28, 411-417.	0.8	3
88	Investigation of the effect of porosity on intergranular brittle fracture using peridynamics. Procedia Structural Integrity, 2020, 28, 472-481.	0.8	0
89	Peridynamic formulation for Timoshenko beam. Procedia Structural Integrity, 2020, 28, 464-471.	0.8	3
90	Peridynamic modelling of Hertzian indentation fracture. Procedia Structural Integrity, 2020, 28, 1559-1571.	0.8	2

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91	Implementation of peridynamic beam and plate formulations in finite element framework. Continuum Mechanics and Thermodynamics, 2019, 31, 301-315.	2.2	45
92	Marine Structures. Journal of Marine Science and Engineering, 2019, 7, 351.	2.6	1
93	Topology optimization of cracked structures using peridynamics. Continuum Mechanics and Thermodynamics, 2019, 31, 1645-1672.	2.2	51
94	Peridynamic Simulations of Nanoindentation Tests to Determine Elastic Modulus of Polymer Thin Films. Journal of Peridynamics and Nonlocal Modeling, 2019, 1, 36-44.	2.9	5
95	Lightweight design of direct-drive wind turbine electrical generators: A comparison between steel and composite material structures. Ocean Engineering, 2019, 181, 330-341.	4.3	18
96	A computational model of peridynamic theory for deflecting behavior of crack propagation with micro-cracks. Computational Materials Science, 2019, 162, 33-46.	3.0	54
97	Modelling and parameter identification of electromechanical systems for energy harvesting and sensing. Mechanical Systems and Signal Processing, 2019, 121, 890-912.	8.0	15
98	Vibration suppression of offshore wind turbine foundations using tuned liquid column dampers and tuned mass dampers. Ocean Engineering, 2019, 172, 286-295.	4.3	48
99	Peridynamics review. Mathematics and Mechanics of Solids, 2019, 24, 3714-3739.	2.4	189
100	A computational approach based on ordinary state-based peridynamics with new transition bond for dynamic fracture analysis. Engineering Fracture Mechanics, 2019, 206, 359-374.	4.3	52
101	An Eulerâ€“Bernoulli beam formulation in an ordinary state-based peridynamic framework. Mathematics and Mechanics of Solids, 2019, 24, 361-376.	2.4	48
102	Two-dimensional implementation of the coarsening method for linear peridynamics. AIMS Materials Science, 2019, 6, 252-275.	1.4	12
103	Predicting fracture evolution during lithiation process using peridynamics. Engineering Fracture Mechanics, 2018, 192, 176-191.	4.3	58
104	Three dimensional shape and stress monitoring of bulk carriers based on iFEM methodology. Ocean Engineering, 2018, 147, 256-267.	4.3	66
105	Physical mechanism of ice/structure interaction. Journal of Glaciology, 2018, 64, 197-207.	2.2	4
106	A Novel Moisture Diffusion Modeling Approach Using Finite Element Analysis. Electronics (Switzerland), 2018, 7, 438.	3.1	4
107	An ordinary state-based peridynamic model for the fracture of zigzag graphene sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180019.	2.1	30
108	Three-Dimensional Peridynamic Model for Predicting Fracture Evolution during the Lithiation Process. Energies, 2018, 11, 1461.	3.1	23

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109	Dynamic structural design of offshore direct-drive wind turbine electrical generators. Ocean Engineering, 2018, 161, 1-19.	4.3	14
110	A non-simultaneous dynamic ice-structure interaction model. Ocean Engineering, 2018, 166, 278-289.	4.3	3
111	Peridynamics for Predicting Pit-to-Crack Transition. , 2017, , .		2
112	Fully coupled poroelastic peridynamic formulation for fluid-filled fractures. Engineering Geology, 2017, 225, 19-28.	6.3	93
113	Shape Sensing of Aerospace Structures by Coupling Isogeometric Analysis and Inverse Finite Element Method. , 2017, , .		9
114	Finite element implementation of a peridynamic pitting corrosion damage model. Ocean Engineering, 2017, 135, 76-83.	4.3	50
115	Modeling of the Onset, Propagation, and Interaction of Multiple Cracks Generated From Corrosion Pits by Using Peridynamics. Journal of Engineering Materials and Technology, Transactions of the ASME, 2017, 139, .	1.4	41
116	Peridynamic wetness approach for moisture concentration analysis in electronic packages. Microelectronics Reliability, 2017, 70, 103-111.	1.7	42
117	An enhanced inverse finite element method for displacement and stress monitoring of multilayered composite and sandwich structures. Composite Structures, 2017, 179, 514-540.	5.8	82
118	Peridynamic Modeling of Diffusion by Using Finite-Element Analysis. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 1823-1831.	2.5	43
119	Thermomechanical analysis of porous solid oxide fuel cell by using peridynamics. AIMS Energy, 2017, 5, 585-600.	1.9	11
120	Dynamic propagation of a macrocrack interacting with parallel small cracks. AIMS Materials Science, 2017, 4, 118-136.	1.4	47
121	Modelling of Granular Fracture in Polycrystalline Materials Using Ordinary State-Based Peridynamics. Materials, 2016, 9, 977.	2.9	48
122	Peridynamic Modeling of Granular Fracture in Polycrystalline Materials. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	1.4	69
123	A dynamic ice-structure interaction model for ice-induced vibrations by using van der pol equation. Ocean Engineering, 2016, 128, 147-152.	4.3	11
124	Peridynamic Direct Concentration Approach by Using ANSYS. , 2016, , .		3
125	A quadrilateral inverse-shell element with drilling degrees of freedom for shape sensing and structural health monitoring. Engineering Science and Technology, an International Journal, 2016, 19, 1299-1313.	3.2	65
126	Displacement and stress monitoring of a Panamax containership using inverse finite element method. Ocean Engineering, 2016, 119, 16-29.	4.3	92

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127	Modelling of stress-corrosion cracking by using peridynamics. International Journal of Hydrogen Energy, 2016, 41, 6593-6609.	7.1	75
128	Peridynamic modeling of composite laminates under explosive loading. Composite Structures, 2016, 144, 14-23.	5.8	106
129	Displacement and stress monitoring of a chemical tanker based on inverse finite element method. Ocean Engineering, 2016, 112, 33-46.	4.3	80
130	A non-ordinary state-based peridynamics formulation for thermoplastic fracture. International Journal of Impact Engineering, 2016, 87, 83-94.	5.0	133
131	Peridynamics for bending of beams and plates with transverse shear deformation. International Journal of Solids and Structures, 2015, 69-70, 152-168.	2.7	109
132	Peridynamic Theory and Its Applications. , 2014, , .		417
133	Hygro-thermo-mechanical analysis and failure prediction in electronic packages by using peridynamics. , 2014, , .		26
134	Peridynamic Theory. , 2014, , 19-43.		52
135	Peridynamic analysis of fiber-reinforced composite materials. Journal of Mechanics of Materials and Structures, 2012, 7, 45-84.	0.6	185
136	Peridynamics for Failure Prediction in Composites. , 2012, , .		33
137	Impact damage assessment by using peridynamic theory. Open Engineering, 2012, 2, 523-531.	1.6	30
138	Combined finite element and peridynamic analyses for predicting failure in a stiffened composite curved panel with a central slot. Composite Structures, 2012, 94, 839-850.	5.8	167
139	Fatigue failure model with peridynamic theory. , 2010, , .		42
140	Damage Growth Prediction from Loaded Composite Fastener Holes by Using Peridynamic Theory. , 2010, , .		23
141	Mechanical characterization of ultra-thin films by combining AFM nanoindentation tests and peridynamic simulations. , 2009, , .		5
142	A criterion for dynamic ductile fracture initiation of tensile mode. Continuum Mechanics and Thermodynamics, 0, , 1.	2.2	1
143	Representative Volume Element Homogenization of a Composite Material by Using Bond-Based Peridynamics. Journal of Composites and Biodegradable Polymers, 0, 7, 51-56.	0.3	13
144	Comparative study of offshore spar-buoy oscillating water column dynamic models for captured power estimation. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 0, , 147509022110677.	0.5	0

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145	Experimentally validated simplified prediction model of unloaded spar-buoy wave energy converter motionsâ€™ responses in waves. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 0, , 095765092210984.	1.4	1