Sergio Idelsohn

List of Publications by Year
in descending order

147	5,125	87886	102480
papers	citations	38 h-index	66 g-index

159	159	159	2152
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A deterministic pathogen transmission model based on high-fidelity physics. Computer Methods in Applied Mechanics and Engineering, 2022, 401, 114929.	6.6	5
2	A multiscale approach for the study of particle-laden flows using a continuous model. Computer Methods in Applied Mechanics and Engineering, 2022, 401, 115174.	6.6	4
3	A Multiscale Approach for the Numerical Simulation of Turbulent Flows with Droplets. Archives of Computational Methods in Engineering, 2021, 28, 4185-4204.	10.2	11
4	The Pseudo-Direct Numerical Simulation method for multi-scale problems in mechanics. Computer Methods in Applied Mechanics and Engineering, 2021, 380, 113774.	6.6	7
5	High-Fidelity Simulation of Pathogen Propagation, Transmission and Mitigation in the Built Environment. Archives of Computational Methods in Engineering, 2021, 28, 4237-4262.	10.2	12
6	A pseudo-DNS method for the simulation of incompressible fluid flows with instabilities at different scales. Computational Particle Mechanics, 2020, 7, 19-40.	3.0	12
7	Detailed simulation of viral propagation in the built environment. Computational Mechanics, 2020, 66, 1093-1107.	4.0	31
8	A State of the Art Review of the Particle Finite Element Method (PFEM). Archives of Computational Methods in Engineering, 2020, 27, 1709-1735.	10.2	78
9	A second-order in time and space particle-based method to solve flow problems on arbitrary meshes. Journal of Computational Physics, 2019, 380, 295-310.	3.8	11
10	Variational Framework for FIC Formulations in Continuum Mechanics: High Order Tensor-Derivative Transformations and Invariants. Archives of Computational Methods in Engineering, 2018, 25, 919-963.	10.2	1
11	Multifluid flows with weak and strong discontinuous interfaces using an elemental enriched space. International Journal for Numerical Methods in Fluids, 2018, 86, 750-769.	1.6	5
12	Reduced order models for thermally coupled low Mach flows. Advanced Modeling and Simulation in Engineering Sciences, 2018, 5, .	1.7	14
13	A Finite Element Model for the Simulation of the UL-94 Burning Test. Fire Technology, 2018, 54, 1783-1805.	3.0	15
14	Global-local HROM for non-linear thermal problems with irreversible changes of material states. Comptes Rendus - Mecanique, 2018, 346, 539-555.	2.1	2
15	An assessment of the potential of PFEM-2 for solving long real-time industrial applications. Computational Particle Mechanics, 2017, 4, 251-267.	3.0	6
16	A-posteriori error estimation for the finite point method with applications to compressible flow. Computational Mechanics, 2017, 60, 219-233.	4.0	7
17	Globalâ€“Local ROM for the solution of parabolic problems with highly concentrated moving sources. Computer Methods in Applied Mechanics and Engineering, 2017, 326, 739-756.	6.6	6
18	Elemental enriched spaces for the treatment of weak and strong discontinuous fields. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 535-559.	6.6	9

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19	On the issue that Finite Element discretizations violate, nodally, Clausiusâ€™s postulate of the second law of thermodynamics. Advanced Modeling and Simulation in Engineering Sciences, 2016, 3, .	1.7	0
20	Surface tension problems solved with the particle finite element method using large time-steps. Computers and Fluids, 2016, 141, 90-104.	2.5	12
21	A multiresolution strategy for solving landslides using the Particle Finite Element Method. Acta Geotechnica, 2016, 11, 643-657.	5.7	14
22	General treatment of essential boundary conditions in reduced order models for non-linear problems. Advanced Modeling and Simulation in Engineering Sciences, 2016, 3, .	1.7	10
23	An embedded strategy for the analysis of fluid structure interaction problems. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 106-128.	6.6	16
24	A unified monolithic approach for multi-fluid flows and fluidâ€“structure interaction using the Particle Finite Element Method with fixed mesh. Computational Mechanics, 2015, 55, 1091-1104.	4.0	41
25	Lagrangian versus Eulerian integration errors. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 191-206.	6.6	19
26	A semi-analytical model for droplet dynamics on the GDL surface of a PEFC electrode. International Journal of Hydrogen Energy, 2015, 40, 5375-5383.	7.1	18
27	Reduced-order subscales for POD models. Computer Methods in Applied Mechanics and Engineering, 2015, 291, 173-196.	6.6	34
28	Modelling the vertical UL 94 test: competition and collaboration between melt dripping, gasification and combustion. Fire and Materials, 2015, 39, 570-584.	2.0	61
29	P1/P0+ elements for incompressible flows with discontinuous material properties. Computer Methods in Applied Mechanics and Engineering, 2014, 271, 185-209.	6.6	10
30	GPGPU implementation of the BFECC algorithm for pure advection equations. Cluster Computing, 2014, 17, 243-254.	5.0	5
31	Comparative accuracy and performance assessment of the finite point method in compressible flow problems. Computers and Fluids, 2014, 89, 53-65.	2.5	10
32	A reduced-order model based on the coupled 1D-3D finite element simulations for an efficient analysis of hemodynamics problems. Computational Mechanics, 2014, 54, 1013-1022.	4.0	7
33	Analysis of multifluid flows with large time steps using the particle finite element method. International Journal for Numerical Methods in Fluids, 2014, 75, 621-644.	1.6	42
34	Evaluating the performance of the particle finite element methodÂin parallel architectures. Computational Particle Mechanics, 2014, 1, 103-116.	3.0	12
35	Improving the k-compressibility of Hyper Reduced Order Models with moving sources: Applications to welding and phase change problems. Computer Methods in Applied Mechanics and Engineering, 2014, 274, 237-263.	6.6	18
36	Application of the finite point method to highâ€Reynolds number compressible flow problems. International Journal for Numerical Methods in Fluids, 2014, 74, 732-748.	1.6	2

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37	Recent Advances in the Particle Finite Element Method Towards More Complex Fluid Flow Applications. Computational Methods in Applied Sciences (Springer), 2014, , 267-318.	0.3	4
38	On the Application of Two-Fluid Flows Solver to the Casting Problem. Computational Methods in Applied Sciences (Springer), 2014, , 245-266.	0.3	0
39	Migration of a generic multi-physics framework to HPC environments. Computers and Fluids, 2013, 80, 301-309.	2.5	58
40	Explicit reducedâ€order models for the stabilized finite element approximation of the incompressible Navierâ€“Stokes equations. International Journal for Numerical Methods in Fluids, 2013, 72, 1219-1243.	1.6	55
41	A FFT preconditioning technique for the solution of incompressible flow on GPUs. Computers and Fluids, 2013, 74, 44-57.	2.5	8
42	Parallel adaptive mesh refinement for incompressible flow problems. Computers and Fluids, 2013, 80, 342-355.	2.5	10
43	A domain decomposition strategy for reduced order models. Application to the incompressible Navierâ€“Stokes equations. Computer Methods in Applied Mechanics and Engineering, 2013, 267, 23-42.	6.6	43
44	A meshless finite point method for threeâ€dimensional analysis of compressible flow problems involving moving boundaries and adaptivity. International Journal for Numerical Methods in Fluids, 2013, 73, 323-343.	1.6	13
45	A portable OpenCL-based unstructured edge-based finite element Navierâ€“Stokes solver on graphics hardware. Computers and Fluids, 2013, 81, 134-144.	2.5	9
46	A compressible Lagrangian framework for the simulation of the underwater implosion of large air bubbles. Computer Methods in Applied Mechanics and Engineering, 2013, 255, 210-225.	6.6	20
47	A COMPRESSIBLE LAGRANGIAN FRAMEWORK FOR MODELING THE FLUIDâ€“STRUCTURE INTERACTION IN THE UNDERWATER IMPLOSION OF AN ALUMINUM CYLINDER. Mathematical Models and Methods in Applied Sciences, 2013, 23, 339-367.	3.3	24
48	The Particle Finite Element Method (PFEM). An Effective Numerical Technique for Solving Marine, Naval and Harbour Engineering Problems. Computational Methods in Applied Sciences (Springer), 2013, , 65-81.	0.3	0
49	A coupled PFEMâ€“Eulerian approach for the solution of porous FSI problems. Computational Mechanics, 2012, 50, 805-819.	4.0	51
50	Improving mass conservation in simulation of incompressible flows. International Journal for Numerical Methods in Engineering, 2012, 90, 1435-1451.	2.8	45
51	Combined Eulerianâ€“PFEM approach for analysis of polymers in fire situations. International Journal for Numerical Methods in Engineering, 2012, 92, 782-801.	2.8	24
52	Numerical simulations of negatively buoyant jets in an immiscible fluid using the Particle Finite Element Method. International Journal for Numerical Methods in Fluids, 2012, 69, 1016-1030.	1.6	6
53	A new enrichment space for the treatment of discontinuous pressures in multiâ€fluid flows. International Journal for Numerical Methods in Fluids, 2012, 70, 829-850.	1.6	36
54	Large time-step explicit integration method for solving problems with dominant convection. Computer Methods in Applied Mechanics and Engineering, 2012, 217-220, 168-185.	6.6	49

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55	OpenCLâ€based implementation of an unstructured edgeâ€based finite element convectionâ€diffusion solver on graphics hardware. International Journal for Numerical Methods in Engineering, 2012, 89, 1635-1651.	2.8	20
56	Flow behaviour of negatively buoyant jets in immiscible ambient fluid. Experiments in Fluids, 2012, 52, 261-271.	2.4	8
57	Advances in the Particle Finite Element Method (PFEM) for Solving Coupled Problems in Engineering. Computational Methods in Applied Sciences (Springer), 2011, , 1-49.	0.3	20
58	Possibilities of the particle finite element method for fluidâ€“soilâ€“structure interaction problems. Computational Mechanics, 2011, 48, 307-318.	4.0	142
59	Consistent pressure Laplacian stabilization for incompressible continua via higherâ€order finite calculus. International Journal for Numerical Methods in Engineering, 2011, 87, 171-195.	2.8	27
60	An adaptive finite point method for the shallow water equations. International Journal for Numerical Methods in Engineering, 2011, 88, 180-204.	2.8	5
61	Advances in the simulation of multiâ€fluid flows with the particle finite element method. Application to bubble dynamics. International Journal for Numerical Methods in Fluids, 2011, 67, 1516-1539.	1.6	31
62	A family of residualâ€based stabilized finite element methods for Stokes flows. International Journal for Numerical Methods in Fluids, 2011, 65, 106-134.	1.6	19
63	The challenge of mass conservation in the solution of freeâ€surface flows with the fractionalâ€step method: Problems and solutions. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 1313-1330.	2.1	20
64	On the analysis of heterogeneous fluids with jumps in the viscosity using a discontinuous pressure field. Computational Mechanics, 2010, 46, 115-124.	4.0	29
65	A monolithic Lagrangian approach for fluidâ€“structure interaction problems. Computational Mechanics, 2010, 46, 883-899.	4.0	123
66	Melting and spread of polymers in fire with the particle finite element method. International Journal for Numerical Methods in Engineering, 2010, 81, 1046-1072.	2.8	56
67	Possibilities of the Particle Finite Element Method in Computational Mechanics. Advanced Structured Materials, 2010, , 271-310.	0.5	3
68	A finite point method for adaptive threeâ€dimensional compressible flow calculations. International Journal for Numerical Methods in Fluids, 2009, 60, 937-971.	1.6	27
69	Fluidâ€“structure interaction problems with strong addedâ€mass effect. International Journal for Numerical Methods in Engineering, 2009, 80, 1261-1294.	2.8	76
70	Multi-fluid flows with the Particle Finite Element Method. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2750-2767.	6.6	70
71	Interaction between an elastic structure and free-surface flows: experimental versus numerical comparisons using the PFEM. Computational Mechanics, 2008, 43, 125-132.	4.0	94
72	Unified Lagrangian formulation for elastic solids and incompressible fluids: Application to fluidâ€“structure interaction problems via the PFEM. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 1762-1776.	6.6	208

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73	Advances in the particle finite element method for the analysis of fluidâ€“multibody interaction and bed erosion in free surface flows. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 1777-1800.	6.6	190
74	Objectivity tests for Navierâ€“Stokes simulations: The revealing of non-physical solutions produced by Laplace formulations. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4180-4192.	6.6	9
75	The ALE/Lagrangian Particle Finite Element Method: A new approach to computation of free-surface flows and fluidâ€“object interactions. Computers and Fluids, 2007, 36, 27-38.	2.5	82
76	An improved finite point method for tridimensional potential flows. Computational Mechanics, 2007, 40, 949-963.	4.0	41
77	Finite calculus formulations for finite element analysis of incompressible flows. Eulerian, ALE and Lagrangian approaches. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 3001-3037.	6.6	58
78	Advances in stabilized finite element and particle methods for bulk forming processes. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6750-6777.	6.6	21
79	Fluidâ€“structure interaction using the particle finite element method. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 2100-2123.	6.6	134
80	Finite element formulation for convectiveâ€“diffusive problems with sharp gradients using finite calculus. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1793-1825.	6.6	30
81	To mesh or not to mesh. That is the questionâ€¦. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 4681-4696.	6.6	84
82	Fractional Step Like Schemes for Free Surface Problems with Thermal Coupling Using the Lagrangian PFEM. Computational Mechanics, 2006, 38, 294-309.	4.0	20
83	Modeling bed erosion in free surface flows by the particle finite element method. Acta Geotechnica, 2006, 1, 237-252.	5.7	44
84	Particle finite element method in fluid-mechanics including thermal convection-diffusion. Computers and Structures, 2005, 83, 1459-1475.	4.4	62
85	Possibilities of the particle finite element method for fluid-structure interaction problems with free surface waves. Revue Europeenne Des Elements, 2004, 13, 637-666.	0.1	0
86	THE PARTICLE FINITE ELEMENT METHOD â€" AN OVERVIEW. International Journal of Computational Methods, 2004, 01, 267-307.	1.3	377
87	Continuous mandibular distraction osteogenesis using superelastic shape memory alloy (SMA). Journal of Materials Science: Materials in Medicine, 2004, 15, 541-546.	3.6	35
88	The particle finite element method: a powerful tool to solve incompressible flows with free-surfaces and breaking waves. International Journal for Numerical Methods in Engineering, 2004, 61, 964-989.	2.8	386
89	The meshless finite element method. International Journal for Numerical Methods in Engineering, 2003, 58, 893-912.	2.8	191
90	Polyhedrization of an arbitrary 3D point set. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 2649-2667.	6.6	67

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91	A Lagrangian meshless finite element method applied to fluidâ€“structure interaction problems. Computers and Structures, 2003, 81, 655-671.	4.4	106
92	The extended Delaunay tessellation. Engineering Computations, 2003, 20, 583-600.	1.4	22
93	A Lagrangian Panel Method in the Time Domain for Moving Free-surface Potential Flows. International Journal of Computational Fluid Dynamics, 2002, 16, 263-275.	1.2	6
94	Numerical Simulation of the 3D Laminar Viscous Flow on a Horizontal-axis Wind Turbine Blade. International Journal of Computational Fluid Dynamics, 2002, 16, 283-295.	1.2	2
95	A finite point method for compressible flow. International Journal for Numerical Methods in Engineering, 2002, 53, 1765-1779.	2.8	92
96	All-hexahedral element meshing: automatic elimination of self-intersecting dual lines. International Journal for Numerical Methods in Engineering, 2002, 55, 1439-1449.	2.8	7
97	Applied hydrodynamic wave-resistance computation by Fourier transform. Ocean Engineering, 2002, 29, 261-278.	4.3	2
98	Lagrangian formulations to solve free surface incompressible inviscid fluid flows. Computer Methods in Applied Mechanics and Engineering, 2001, 191, 583-593.	6.6	36
99	All-hexahedral mesh smoothing with a node-based measure of quality. International Journal for Numerical Methods in Engineering, 2001, 50, 1957-1967.	2.8	21
100	Non-reflective planar boundary condition based on Gauss filter. International Journal for Numerical Methods in Engineering, 2000, 47, 969-983.	2.8	1
101	Announcement ?Meshfree Methods?. International Journal for Numerical Methods in Engineering, 2000, 49, 721-723.	2.8	2
102	All-hexahedral element meshing: Generation of the dual mesh by recurrent subdivision. Computer Methods in Applied Mechanics and Engineering, 2000, 182, 371-378.	6.6	43
103	The DNL absorbing boundary condition: applications to wave problems. Computer Methods in Applied Mechanics and Engineering, 2000, 182, 483-498.	6.6	5
104	A finite point method for incompressible flow problems. Computing and Visualization in Science, 2000, 3, 67-75.	1.2	67
105	A Panel-Fourier Method for Free-Surface Flows. Journal of Fluids Engineering, Transactions of the ASME, 2000, 122, 309-317.	1.5	8
106	Finite element solution of free-surface ship-wave problems. International Journal for Numerical Methods in Engineering, 1999, 45, 503-528.	2.8	22
107	Discrete non-local absorbing boundary condition for exterior problems governed by Helmholtz equation. International Journal for Numerical Methods in Fluids, 1999, 29, 605-621.	1.6	1
108	A discrete non-local (DNL) outgoing boundary condition for diffraction of surface waves. Communications in Numerical Methods in Engineering, 1998, 14, 849-861.	1.3	4

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109	Computation of the stabilization parameter for the finite element solution of advective-diffusive problems. , 1997, 25, 1385-1407.		42
110	TRANSVERSE VIBRATIONS OF RECTANGULAR PLATES OF NON-UNIFORM THICKNESS WITH A FREE, CONCENTRIC CIRCULAR HOLE. Journal of Sound and Vibration, 1997, 199, 704-710.	3.9	1
111	PETROV-GALERKIN METHODS FOR THE TRANSIENT ADVECTIVE-DIFFUSIVE EQUATION WITH SHARP GRADIENTS. , 1996, 39, 1455-1473.		29
112	CVBEM Formulation for Multiple Profiles and Cascades. Applied Mechanics Reviews, 1995, 48, S203-S210.	10.1	9
113	Steady state incompressible flows using explicit schemes with an optimal local preconditioning. Computer Methods in Applied Mechanics and Engineering, 1995, 124, 231-252.	6.6	16
114	Introduction to Annual Supplement on Mechanics Pan-America 1995. Applied Mechanics Reviews, 1995, 48, S2-S2.	10.1	0
115	Finite volumes and finite elements: Two â€˜good friendsâ€™. International Journal for Numerical Methods in Engineering, 1994, 37, 3323-3341.	2.8	90
116	Transient analysis of tube rolling processes by a semi-analytical formulation. International Journal for Numerical Methods in Engineering, 1994, 37, 3621-3632.	2.8	0
117	Numerical methods in phase-change problems. Archives of Computational Methods in Engineering, 1994, 1, 49-74.	10.2	44
118	Transverse vibrations of an isotropic, simply supported rectangular plate with an orthotropic inclusion. Journal of Sound and Vibration, 1992, 153, 217-221.	3.9	11
119	Metal forming analysis by fourier series expansion and further uses of pseudo-concentrations. Computers and Structures, 1992, 44, 435-451.	4.4	4
120	A Petrov-Galerkin technique for the solution of transonic and supersonic flows. Computer Methods in Applied Mechanics and Engineering, 1992, 95, 49-70.	6.6	11
121	A preconditioning mass matrix to accelerate the convergence to the steady Euler solutions using explicit schemes. International Journal for Numerical Methods in Engineering, 1992, 34, 519-541.	2.8	2
122	Improving the convergence rate of the Petrov-Galerkin techniques for the solution of transonic and supersonic flows. International Journal for Numerical Methods in Engineering, 1992, 34, 543-568.	2.8	3
123	Multigrid methods and adaptive refinement techniques in elliptic problems by finite element methods. Computer Methods in Applied Mechanics and Engineering, 1991, 93, 13-30.	6.6	8
124	Upwind parameters for the numerical solution of the compressible flow Euler equations. Advances in Engineering Software and Workstations, 1991, 13, 58-67.	0.2	0
125	On load interaction in the non linear buckling analysis of cylindrical shells. Advances in Engineering Software and Workstations, 1991, 13, 46-50.	0.2	1
126	Free vibrations of rectangular plates of exponentially varying thickness and with a free edge. Journal of Sound and Vibration, 1990, 140, 513-522.	3.9	9

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127	Fracture analysis of a surface-coated ceramic by speckle photography and finite elements. Optics and Laser Technology, 1990, 22, 17-22.	4.6	5
128	Upwind techniques via variational principles. International Journal for Numerical Methods in Engineering, 1989, 28, 769-784.	2.8	11
129	An effective automatic incremental/iterative method for static nonlinear structural analysis. Computers and Structures, 1989, 32, 125-135.	4.4	8
130	An efficient tangent scheme for solving phase-change problems. Computer Methods in Applied Mechanics and Engineering, 1988, 66, 65-86.	6.6	12
131	Making curved interfaces straight in phase-change problems. International Journal for Numerical Methods in Engineering, 1987, 24, 375-392.	2.8	27
132	Numerical implementation of a discontinuous finite element algorithm for phase-change problems. Advances in Engineering Software (1978), 1987, 9, 66-73.	0.1	2
133	Evaluation of finite-element calculations in a part-circular crack by coherent optics techniques. Experimental Mechanics, 1987, 27, 154-157.	2.0	4
134	A temperature-based finite element solution for phase-change problems. International Journal for Numerical Methods in Engineering, 1986, 23, 99-119.	2.8	53
135	Solution of non-linear thermal transient problems by a reduction method. International Journal for Numerical Methods in Engineering, 1986, 23, 1023-1042.	2.8	37
136	A simple hidden line algorithm for a structural model of planar elements. Advances in Engineering Software (1978), 1986, 8, 2-7.	0.1	2
137	Failure internal pressure of spherical steel containments. Nuclear Engineering and Design, 1985, 90, 209-222.	1.7	5
138	A reduction method for nonlinear structural dynamic analysis. Computer Methods in Applied Mechanics and Engineering, 1985, 49, 253-279.	6.6	149
139	A load-dependent basis for reduced nonlinear structural dynamics. Computers and Structures, 1985, 20, 203-210.	4.4	79
140	A comparative computational study of blood flow through prosthetic heart valves using the finite element method. Journal of Biomechanics, 1985, 18, 97-115.	2.1	26
141	Reduction methods and explicit time integration technique in structural dynamics. Advances in Engineering Software (1978), 1984, 6, 36-44.	0.1	4
142	Inelastic seismic analysis of a building structure designed by argentine codes. Earthquake Engineering and Structural Dynamics, 1984, 12, 721-736.	4.4	3
143	Pre- and post-degradation analysis of composite materials with different moduli in tension and compression. Computer Methods in Applied Mechanics and Engineering, 1982, 30, 133-149.	6.6	8
144	On the self-stressing modes in free vibration analysis. Journal of Sound and Vibration, 1982, 83, 143-155.	3.9	1

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145	On the use of deep, shallow or flat shell finite elements for the analysis of thin shell structures. Computer Methods in Applied Mechanics and Engineering, 1981, 26, 321-330.	6.6	36
146	Computational strategies for the solution of large nonlinear problems via quasi-newton methods. Computers and Structures, 1981, 13, 73-81.	4.4	58
147	Nonlinear structural dynamics via Newton and quasi-Newton methods. Nuclear Engineering and Design, 1980, 58, 339-348.	1.7	15