Mitchell Luskin

List of Publications by Year
in descending order

62 papers	2,142 citations	279798 23 h-index	223800 46 g-index
64 all docs	64 docs citations	64 times ranked	2121 citing authors

#	Article	IF	Citations
1	Homogenization of hydrodynamic transport in Dirac fluids. Journal of Mathematical Physics, 2021, 62, 011503.	1.1	0
2	Existence of the first magic angle for the chiral model of bilayer graphene. Journal of Mathematical Physics, 2021, 62, .	1.1	9
3	Correlated Insulating States and Transport Signature of Superconductivity in Twisted Trilayer Graphene Superlattices. Physical Review Letters, 2021, 127, 166802.	7.8	44
4	Energy Minimization of Two Dimensional Incommensurate Heterostructures. Archive for Rational Mechanics and Analysis, 2020, 235, 1289-1325.	2.4	21
5	Nonlinear eigenvalue problems for coupled Helmholtz equations modeling gradient-index graphene waveguides. Journal of Computational Physics, 2020, 423, 109871.	3.8	3
6	Anharmonic free energy of lattice vibrations in fcc crystals from a mean-field bond. Physical Review B, 2020, 102, .	3.2	6
7	Twisted Trilayer Graphene: A Precisely Tunable Platform for Correlated Electrons. Physical Review Letters, 2020, 125, 116404.	7.8	82
8	Finite-size effects in wave transmission through plasmonic crystals: A tale of two scales. Physical Review B, 2020, 102, .	3.2	1
9	Dipole excitation of collective modes in viscous two-dimensional electron systems. Physical Review B, 2020, 102, .	3.2	4
10	Modeling mechanical relaxation in incommensurate trilayer van der Waals heterostructures. Physical Review B, 2020, 101, .	3.2	31
11	Efficient computation of Kubo conductivity for incommensurate 2D heterostructures. European Physical Journal B, 2020, 93, 1.	1.5	7
12	Duality between atomic configurations and Bloch states in twistronic materials. Physical Review Research, 2020, 2, .	3.6	14
13	Modeling and Computation of Kubo Conductivity for Two-Dimensional Incommensurate Bilayers. Multiscale Modeling and Simulation, 2020, 18, 1525-1564.	1.6	5
14	Switchable and unidirectional plasmonic beacons in hyperbolic two-dimensional materials. Physical Review B, 2019, 99, .	3.2	27
15	Atomic and electronic reconstruction at the van der Waals interface in twisted bilayer graphene. Nature Materials, 2019, 18, 448-453.	27.5	454
16	Adaptive finite element simulations of waveguide configurations involving parallel 2D material sheets. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 20-34.	6.6	9
17	Stability and Convergence of the String Method for Computing Minimum Energy Paths. Multiscale Modeling and Simulation, 2019, 17, 873-898.	1.6	4
18	Universal behavior of a dispersive Dirac cone in gradient-index plasmonic metamaterials. Physical Review B, 2018, 97, .	3.2	5

#	Article	IF	Citations
19	Incommensurate Heterostructures in Momentum Space. Multiscale Modeling and Simulation, 2018, 16, 429-451.	1.6	15
20	Ultracompact Amplitude Modulator by Coupling Hyperbolic Polaritons over a Graphene-Covered Gap. ACS Photonics, 2018, 5, 544-551.	6.6	13
21	Nonperturbative nonlinear effects in the dispersion relations for TE and TM plasmons on two-dimensional materials. Physical Review B, 2018, 98, .	3.2	2
22	Relaxation and domain formation in incommensurate two-dimensional heterostructures. Physical Review B, 2018, 98, .	3.2	177
23	Cauchyâ€“Born strain energy density for coupled incommensurate elastic chains. ESAIM: Mathematical Modelling and Numerical Analysis, 2018, 52, 729-749.	1.9	2
24	Generation of surface plasmon-polaritons by edge effects. Communications in Mathematical Sciences, 2018, 16, 77-95.	1.0	5
25	Analysis of Rippling in Incommensurate One-Dimensional Coupled Chains. Multiscale Modeling and Simulation, 2017, 15, 56-73.	1.6	10
26	Twistronics: Manipulating the electronic properties of two-dimensional layered structures through their twist angle. Physical Review B, 2017, 95, .	3.2	308
27	Analysis of a Predictor-Corrector Method for Computationally Efficient Modeling of Surface Effects in 1D. Multiscale Modeling and Simulation, 2017, 15, 892-919.	1.6	1
28	On the Wienerâ€“Hopf Method for Surface Plasmons: Diffraction from Semiinfinite Metamaterial Sheet. Studies in Applied Mathematics, 2017, 139, 599-625.	2.4	7
29	Generalized Kubo formulas for the transport properties of incommensurate 2D atomic heterostructures. Journal of Mathematical Physics, 2017, 58, .	1.1	24
30	Dipole excitation of surface plasmon on a conducting sheet: Finite element approximation and validation. Journal of Computational Physics, 2017, 339, 126-145.	3.8	19
31	Electronic Density of States for Incommensurate Layers. Multiscale Modeling and Simulation, 2017, 15, 476-499.	1.6	24
32	On solutions of Maxwellâ€™s equations with dipole sources over a thin conducting film. Journal of Mathematical Physics, 2016, 57, 042903.	1.1	8
33	Perturbation theory for weakly coupled two-dimensional layers. Journal of Materials Research, 2016, 31, 959-966.	2.6	21
34	Atomistic to Continuum Coupling. , 2015, , 89-97.		0
35	An Optimization-based Atomistic-to-Continuum Coupling Method. SIAM Journal on Numerical Analysis, 2014, 52, 2183-2204.	2.3	20
36	Theory-based benchmarking of the blended force-based quasicontinuum method. Computer Methods in Applied Mechanics and Engineering, 2014, 268, 763-781.	6.6	22

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37	Atomistic-to-continuum coupling. Acta Numerica, 2013, 22, 397-508.	10.7	83
38	Lattice stability for atomistic chains modeled by local approximations of the embedded atom method. Computational Materials Science, 2013, 66, 96-103.	3.0	2
39	A Computational and Theoretical Investigation of the Accuracy of Quasicontinuum Methods. Lecture Notes in Computational Science and Engineering, 2012, , 67-96.	0.3	7
40	A mathematical formalization of the parallel replica dynamics. Monte Carlo Methods and Applications, 2012, 18, .	0.8	70
41	Positive Definiteness of the Blended Force-Based Quasicontinuum Method. Multiscale Modeling and Simulation, 2012, 10, 1023-1045.	1.6	18
42	Linear Stationary Iterative Methods for the Force-Based Quasicontinuum Approximation. Lecture Notes in Computational Science and Engineering, 2012, , 331-368.	0.3	2
43	Analysis of Energy-Based Blended Quasi-Continuum Approximations. SIAM Journal on Numerical Analysis, 2011, 49, 2182-2209.	2.3	38
44	Analysis of the Quasi-Nonlocal Approximation of Linear and Circular Chains in the Plane. Multiscale Modeling and Simulation, 2011, 9, 1495-1527.	1.6	0
45	Stability, Instability, and Error of the Force-based Quasicontinuum Approximation. Archive for Rational Mechanics and Analysis, 2010, 197, 179-202.	2.4	57
46	An analysis of the effect of ghost force oscillation on quasicontinuum error. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 591-604.	1.9	41
47	Non-ergodicity of NosÃ©â€“Hoover dynamics. Nonlinearity, 2009, 22, 1673-1694.	1.4	40
48	An Analysis of Node-Based Cluster Summation Rules in the Quasicontinuum Method. SIAM Journal on Numerical Analysis, 2009, 47, 3070-3086.	2.3	36
49	An Optimal Order Error Analysis of the One-Dimensional Quasicontinuum Approximation. SIAM Journal on Numerical Analysis, 2009, 47, 2455-2475.	2.3	39
50	Iterative Solution of the Quasicontinuum Equilibrium Equations with Continuation. Journal of Scientific Computing, 2008, 37, 19-41.	2.3	15
51	Goal-oriented adaptive mesh refinement for the quasicontinuum approximation of a Frenkel-Kontorova model. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4298-4306.	6.6	19
52	Error Estimation and Atomistic-Continuum Adaptivity for the Quasicontinuum Approximation of a Frenkelâ€“Kontorova Model. Multiscale Modeling and Simulation, 2008, 7, 147-170.	1.6	30
53	Analysis of a force-based quasicontinuum approximation. ESAIM: Mathematical Modelling and Numerical Analysis, 2008, 42, 113-139.	1.9	48
54	Non-Ergodicity of the NosÃ©â€“Hoover Thermostatted Harmonic Oscillator. Archive for Rational Mechanics and Analysis, 2007, 184, 449-463.	2.4	62

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55	Goal-oriented Atomistic-Continuum Adaptivity for the Quasicontinuum Approximation. International Journal for Multiscale Computational Engineering, 2007, 5, 407-415.	1.2	18
56	A finite element model for martensitic thin films. Calcolo, 2006, 43, 197-215.	1.1	2
57	A COMPUTATIONAL MODEL FOR MARTENSITIC THIN FILMS WITH COMPOSITIONAL FLUCTUATION. Mathematical Models and Methods in Applied Sciences, 2004, 14, 1585-1598.	3.3	4
58	The Computation of Martensitic Microstructure with Piecewise Laminates. Journal of Scientific Computing, 2003, 19, 293-308.	2.3	25
59	APPROXIMATION BY PIECEWISE CONSTANT FUNCTIONS IN A BV METRIC. Mathematical Models and Methods in Applied Sciences, 2003, 13, 373-393.	3.3	12
60	The Simply Laminated Microstructure in Martensitic Crystals that Undergo a Cubic-to-Orthorhombic Phase Transformation. Archive for Rational Mechanics and Analysis, 1999, 149, 123-154.	2.4	34
61	Approximation of a laminated microstructure for a rotationally invariant, double well energy density. Numerische Mathematik, 1996, 75, 205-221.	1.9	35
62	Analysis of a block Gauss-Seidel iterative method for a finite element discretization of the neutron transport equation. Transport Theory and Statistical Physics, 1985, 14, 35-62.	0.4	1