

Kai Germaschewski

List of Publications by Year in descending order

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56
papers

1,997
citations

236925

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59
all docs

59
docs citations

59
times ranked

1992
citing authors

#	ARTICLE	IF	CITATIONS
1	The Exascale Framework for High Fidelity coupled Simulations (EFFIS): Enabling whole device modeling in fusion science. International Journal of High Performance Computing Applications, 2022, 36, 106-128.	3.7	11
2	Coupling of a multi-GPU accelerated elasto-visco-plastic fast Fourier transform constitutive model with the implicit finite element method. Computational Materials Science, 2022, 208, 111348.	3.0	13
3	First coupled GENEâ€“XGC microturbulence simulations. Physics of Plasmas, 2021, 28, 012303.	1.9	9
4	Spatial coupling of gyrokinetic simulations, a generalized scheme based on first-principles. Physics of Plasmas, 2021, 28, .	1.9	12
5	Kinetic Simulations of Electron Pre-energization by Magnetized Collisionless Shocks in Expanding Laboratory Plasmas. Astrophysical Journal Letters, 2021, 908, L52.	8.3	3
6	Three-dimensional magnetic reconnection in particle-in-cell simulations of anisotropic plasma turbulence. Journal of Plasma Physics, 2021, 87, .	2.1	19
7	Toward exascale whole-device modeling of fusion devices: Porting the GENE gyrokinetic microturbulence code to GPU. Physics of Plasmas, 2021, 28, .	1.9	9
8	Origin and structure of electromagnetic generator regions at the edge of the electron diffusion region. Physics of Plasmas, 2021, 28, .	1.9	8
9	ADIOS 2: The Adaptable Input Output System. A framework for high-performance data management. SoftwareX, 2020, 12, 100561.	2.6	102
10	Energy Balance and Time Dependence of a Magnetotail Electron Diffusion Region. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028290.	2.4	3
11	Kinetic simulations of piston-driven collisionless shock formation in magnetized laboratory plasmas. Physics of Plasmas, 2020, 27, .	1.9	12
12	Exact and locally implicit source term solvers for multifluid-Maxwell systems. Journal of Computational Physics, 2020, 415, 109510.	3.8	16
13	A multi-GPU implementation of a full-field crystal plasticity solver for efficient modeling of high-resolution microstructures. Computer Physics Communications, 2020, 254, 107231.	7.5	30
14	Global Tenâ€“Moment Multifluid Simulations of the Solar Wind Interaction with Mercury: From the Planetary Conducting Core to the Dynamic Magnetosphere. Geophysical Research Letters, 2019, 46, 11584-11596.	4.0	44
15	Direct Observations of Particle Dynamics in Magnetized Collisionless Shock Precursors in Laser-Produced Plasmas. Physical Review Letters, 2019, 122, 245001.	7.8	33
16	Graphics processing unit accelerated phase field dislocation dynamics: Application to bi-metallic interfaces. Advances in Engineering Software, 2018, 115, 248-267.	3.8	15
17	Regimes of magnetic reconnection in colliding laser-produced magnetized plasma bubbles. Physics of Plasmas, 2018, 25, .	1.9	3
18	Kinetic simulation of magnetic field generation and collisionless shock formation in expanding laboratory plasmas. Physics of Plasmas, 2018, 25, .	1.9	26

#	ARTICLE	IF	CITATIONS
19	OpenMP and MPI implementations of an elasto-viscoplastic fast Fourier transform-based micromechanical solver for fast crystal plasticity modeling. <i>Advances in Engineering Software</i> , 2018, 126, 46-60.	3.8	39
20	Electron Physics in 3D Two-Fluid Moment Modeling of Ganymede's Magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 2815-2830.	2.4	36
21	Generation of Electron Whistler Waves at the Mirror Mode Magnetic Holes: MMS Observations and PIC Simulation. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 6383-6393.	2.4	27
22	Biermann-Battery-Mediated Magnetic Reconnection in 3D Colliding Plasmas. <i>Physical Review Letters</i> , 2018, 121, 095001.	7.8	12
23	Reply to comment by Remya et al. on "Effects of electron temperature anisotropy on proton mirror instability evolution". <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 748-752.	2.4	7
24	High-Mach number, laser-driven magnetized collisionless shocks. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	23
25	Generation and Evolution of High-Mach-Number Laser-Driven Magnetized Collisionless Shocks in the Laboratory. <i>Physical Review Letters</i> , 2017, 119, 025001.	7.8	66
26	Using OpenGGCM to Compute and Separate Magnetosphere Magnetic Perturbations Measured on Board Low Earth Orbiting Satellites. <i>Space Science Reviews</i> , 2017, 206, 601-620.	8.1	14
27	Simulation of magnetic holes formation in the magnetosheath. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	23
28	The Plasma Simulation Code: A modern particle-in-cell code with patch-based load-balancing. <i>Journal of Computational Physics</i> , 2016, 318, 305-326.	3.8	77
29	Effects of electron temperature anisotropy on proton mirror instability evolution. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 5350-5365.	2.4	26
30	Electron acceleration by parallel and perpendicular electric fields during magnetic reconnection without guide field. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 9355-9367.	2.4	12
31	The island coalescence problem: Scaling of reconnection in extended fluid models including higher-order moments. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	35
32	Instability-enhanced friction in the presheath of two-ion-species plasmas. <i>Plasma Sources Science and Technology</i> , 2015, 24, 015034.	3.1	19
33	Comparison of multi-fluid moment models with particle-in-cell simulations of collisionless magnetic reconnection. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	60
34	Magnetic Reconnection between Colliding Magnetized Laser-Produced Plasma Plumes. <i>Physical Review Letters</i> , 2014, 113, 105003.	7.8	97
35	Synthesis of 3D Coronal Solar Wind Energetic Particle Acceleration Modules. <i>Space Weather</i> , 2014, 12, 323-328.	3.7	23
36	Filamentation Instability of Counterstreaming Laser-Driven Plasmas. <i>Physical Review Letters</i> , 2013, 111, 225002.	7.8	158

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37	Discrete kinetic eigenmode spectra of electron plasma oscillations in weakly collisional plasma: A numerical study. <i>Physics of Plasmas</i> , 2013, 20, 012125.	1.9	9
38	Magnetic reconnection in high-energy-density laser-produced plasmas. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	51
39	Fast Magnetic Reconnection in Laser-Produced Plasma Bubbles. <i>Physical Review Letters</i> , 2011, 106, 215003.	7.8	79
40	Hall magnetohydrodynamic reconnection in the plasmoid unstable regime. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	38
41	PERPENDICULAR ION HEATING BY LOW-FREQUENCY ALFVÉN-WAVE TURBULENCE IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2010, 720, 503-515.	4.5	248
42	Linear plasmoid instability of thin current sheets with shear flow. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	65
43	Initiation of ballooning instability in the near-Earth plasma sheet prior to the 23 March 2007 THEMIS substorm expansion onset. <i>Annales Geophysicae</i> , 2009, 27, 1129-1138.	1.6	48
44	Intermediate nonlinear regimes of line-tied g mode and ballooning instability. <i>Nuclear Fusion</i> , 2009, 49, 095009.	3.5	3
45	A Comparison of Spectral Element and Finite Difference Methods Using Statically Refined Nonconforming Grids for the MHD Island Coalescence Instability Problem. <i>Astrophysical Journal, Supplement Series</i> , 2008, 177, 613-625.	7.7	10
46	Intermediate nonlinear regime of a line-tied g mode. <i>Physics of Plasmas</i> , 2007, 14, 055903.	1.9	18
47	Nonlinear ballooning instability in the near-Earth magnetotail: Growth, structure, and possible role in substorms. <i>Journal of Geophysical Research</i> , 2007, 112, n/a-n/a.	3.3	14
48	Intermediate Nonlinear Evolution of the Parker Instability: Formation of Convection-Induced Discontinuities and Absence of Finite-Time Singularities. <i>Physical Review Letters</i> , 2006, 96, 065001.	7.8	9
49	Using Krylov-Schwarz methods in an adaptive mesh refinement environment. <i>Lecture Notes in Computational Science and Engineering</i> , 2005, , 115-124.	0.3	2
50	Current singularities: Drivers of impulsive reconnection. <i>Physics of Plasmas</i> , 2005, 12, 042305.	1.9	62
51	Three-dimensional MHD high-resolution computations with CWENO employing adaptive mesh refinement. <i>Computer Physics Communications</i> , 2004, 158, 47-56.	7.5	15
52	Anisotropic fluid turbulence in the interstellar medium and solar wind. <i>Physics of Plasmas</i> , 2003, 10, 1954-1962.	1.9	58
53	Hyperbolic Shock Waves of the Optical Self-Focusing with Normal Group-Velocity Dispersion. <i>Physical Review Letters</i> , 2002, 89, 153902.	7.8	28
54	Splittings, coalescence, bunch and snake patterns in the 3D nonlinear Schrödinger equation with anisotropic dispersion. <i>Physica D: Nonlinear Phenomena</i> , 2001, 151, 175-198.	2.8	26

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55	Longitudinal and transversal structure functions in two-dimensional electron magnetohydrodynamic flows. <i>Physics of Plasmas</i> , 1999, 6, 3788-3793.	1.9	8
56	Adaptive Mesh Refinement for Singular Solutions of the Incompressible Euler Equations. <i>Physical Review Letters</i> , 1998, 80, 4177-4180.	7.8	81