

Eric Johnsen

List of Publications by Year in descending order

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92
papers

3,359
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172443

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docs citations

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2099
citing authors

#	ARTICLE	IF	CITATIONS
1	Bubble Cloud Behavior and Ablation Capacity for Histotripsy Generated from Intrinsic or Artificial Cavitation Nuclei. <i>Ultrasound in Medicine and Biology</i> , 2021, 47, 620-639.	1.5	27
2	Acoustic Measurements of Nucleus Size Distribution at the Cavitation Threshold. <i>Ultrasound in Medicine and Biology</i> , 2021, 47, 1024-1031.	1.5	1
3	Ultrasound-induced nonlinear oscillations of a spherical bubble in a gelatin gel. <i>Journal of Fluid Mechanics</i> , 2021, 924, .	3.4	14
4	A theoretical approach for transient shock strengthening in high-energy-density laser compression experiments. <i>Physics of Plasmas</i> , 2021, 28, 082708.	1.9	1
5	A simple, optimally convergent, parameter-free discretization of diffusive terms with the discontinuous Galerkin method. <i>Journal of Computational Physics</i> , 2021, 445, 110595.	3.8	1
6	Acoustic cavitation rheometry. <i>Soft Matter</i> , 2021, 17, 2931-2941.	2.7	17
7	Predicting complex nonspherical instability shapes of inertial cavitation bubbles in viscoelastic soft matter. <i>Physical Review E</i> , 2021, 104, 045108.	2.1	7
8	Analysis of Recovery-assisted discontinuous Galerkin methods for the compressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2020, 423, 109813.	3.8	5
9	Shape stability of a gas bubble in a soft solid. <i>Ultrasonics Sonochemistry</i> , 2020, 67, 105170.	8.2	13
10	Enabling power-performance balance with transprecision calculations for extreme-scale computations of turbulent flows. , 2020, , .		0
11	Shape stability of a gas cavity surrounded by linear and nonlinear elastic media. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 143, 104047.	4.8	6
12	Interactions of two bubbles along a gaseous interface undergoing the Richtmyerâ€“Meshkov instability in two dimensions. <i>Physica D: Nonlinear Phenomena</i> , 2020, 409, 132489.	2.8	9
13	Characteristics of flow modulation on a backward-facing ramp by a line array of wall-mounted cubes. , 2020, , .		0
14	Singleâ€“bubble dynamics in histotripsy and highâ€“amplitude ultrasound: Modeling and validation. <i>Physics in Medicine and Biology</i> , 2020, 65, 225014.	3.0	20
15	The compact gradient recovery discontinuous Galerkin method for diffusion problems. <i>Journal of Computational Physics</i> , 2019, 398, 108872.	3.8	9
16	Modeling tissue-selective cavitation damage. <i>Physics in Medicine and Biology</i> , 2019, 64, 225001.	3.0	41
17	A high-order accurate AUSM ⁺⁺ approach for simulations of compressible multiphase flows with linear viscoelasticity. <i>Shock Waves</i> , 2019, 29, 717-734.	1.9	3
18	Comparative study of the dynamics of laser and acoustically generated bubbles in viscoelastic media. <i>Physical Review E</i> , 2019, 99, 043103.	2.1	29

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19	Understanding the dependence of turbulent flow modulation on the spacing between adjacent cubes on a backward-facing ramp. , 2019, , .		0
20	A high-order accurate five-equations compressible multiphase approach for viscoelastic fluids and solids with relaxation and elasticity. Journal of Computational Physics, 2019, 379, 70-90.	3.8	10
21	Atmospheric pressure plasma jets onto a reactive water layer over tissue: pulse repetition rate as a control mechanism. Journal Physics D: Applied Physics, 2019, 52, 015201.	2.8	29
22	Using the cavitation collapse time to indicate the extent of histotripsy-induced tissue fractionation. Physics in Medicine and Biology, 2018, 63, 055013.	3.0	18
23	A Compact Discontinuous Galerkin Method for Advection-Diffusion Problems. , 2018, , .		3
24	Bubble-Induced Color Doppler Feedback Correlates with Histotripsy-Induced Destruction of Structural Components in Liver Tissue. Ultrasound in Medicine and Biology, 2018, 44, 602-612.	1.5	12
25	High strain-rate soft material characterization via inertial cavitation. Journal of the Mechanics and Physics of Solids, 2018, 112, 291-317.	4.8	96
26	Soft-Tissue Aberration Correction for Histotripsy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 2073-2085.	3.0	19
27	Experimental considerations to observe two ionizing fronts in systems with a sharp absorption edge. Review of Scientific Instruments, 2018, 89, 10G104.	1.3	1
28	Near-Wake Flow Modulation by A Cube On A Backward-Facing Ramp. , 2018, , .		2
29	Understanding the Dependence of Near-Wake Characteristics on the Cube Height in a Turbulent Boundary Layer. , 2018, , .		0
30	Synthetic Inflow Methods for Turbulent Boundary Layer Simulations: a Physics-Based Approach Versus a Data-Driven Approach. , 2018, , .		0
31	Temperatures produced by inertially collapsing bubbles near rigid surfaces. Journal of Fluid Mechanics, 2018, 852, 105-125.	3.4	65
32	A platform for x-ray Thomson scattering measurements of radiation hydrodynamics experiments on the NIF. Review of Scientific Instruments, 2018, 89, 10F105.	1.3	2
33	Growth of liquid-gas interfacial perturbations driven by acoustic waves. Physical Review Fluids, 2018, 3, .	2.5	1
34	The effects of heat and mass diffusion on freely oscillating bubbles in a viscoelastic, tissue-like medium. Journal of the Acoustical Society of America, 2017, 141, 908-918.	1.1	37
35	Predicting Tissue Susceptibility to Mechanical Cavitation Damage in Therapeutic Ultrasound. Ultrasound in Medicine and Biology, 2017, 43, 1421-1440.	1.5	50
36	Microcavitation as a Neuronal Damage Mechanism in an In Vitro Model of Blast Traumatic Brain Injury. Biophysical Journal, 2017, 112, 159a.	0.5	7

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37	Plasma-induced flow instabilities in atmospheric pressure plasma jets. Applied Physics Letters, 2017, 111, .	3.3	49
38	Damage mechanisms for ultrasound-induced cavitation in tissue. AIP Conference Proceedings, 2017, , .	0.4	3
39	The role of bulk viscosity on the decay of compressible, homogeneous, isotropic turbulence. Journal of Fluid Mechanics, 2017, 833, 717-744.	3.4	42
40	A New Family of Discontinuous Galerkin Schemes for Diffusion Problems. , 2017, , .		4
41	Flow Control Using Passive Vortex Generators. , 2017, , .		3
42	Visualizing the Histotripsy Process: Bubble Clouds—Cancer Cell Interactions in a Tissue-Mimicking Environment. Ultrasound in Medicine and Biology, 2016, 42, 2466-2477.	1.5	82
43	Helium atmospheric pressure plasma jets interacting with wet cells: delivery of electric fields. Journal Physics D: Applied Physics, 2016, 49, 185201.	2.8	56
44	Effects of Temperature on the Histotripsy Intrinsic Threshold for Cavitation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1064-1077.	3.0	39
45	Progress Towards the Application of the Recovery-Based Discontinuous Galerkin Method to Practical Flow Physics Problems. , 2016, , .		1
46	Flow separation over a backward-facing ramp with and without a vortex generator. , 2016, , .		8
47	Helium atmospheric pressure plasma jets touching dielectric and metal surfaces. Journal of Applied Physics, 2015, 118, 013301.	2.5	167
48	Temperature considerations in non-spherical bubble collapse near a rigid wall. Journal of Physics: Conference Series, 2015, 656, 012044.	0.4	2
49	Bubble dynamics in soft materials: Viscoelastic and thermal effects. Journal of Physics: Conference Series, 2015, 656, 012022.	0.4	3
50	Modeling Fluid-Structure Interaction in Cavitation Erosion: Preliminary Results. Journal of Physics: Conference Series, 2015, 656, 012053.	0.4	0
51	Propagation mechanisms of guided streamers in plasma jets: the influence of electronegativity of the surrounding gas. Plasma Sources Science and Technology, 2015, 24, 035022.	3.1	89
52	Formation of reactive oxygen and nitrogen species by repetitive negatively pulsed helium atmospheric pressure plasma jets propagating into humid air. Plasma Sources Science and Technology, 2015, 24, 035026.	3.1	150
53	Analysis of Discontinuous Galerkin Approaches for Advection–Diffusion Problems. , 2015, , .		0
54	Numerical modeling of bubble dynamics in viscoelastic media with relaxation. Physics of Fluids, 2015, 27, 063103.	4.0	69

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55	Effects of tissue stiffness, ultrasound frequency, and pressure on histotripsy-induced cavitation bubble behavior. <i>Physics in Medicine and Biology</i> , 2015, 60, 2271-2292.	3.0	95
56	Bubble dynamics in a viscoelastic medium with nonlinear elasticity. <i>Journal of Fluid Mechanics</i> , 2015, 766, 54-75.	3.4	97
57	Effects of Ultrasound Frequency and Tissue Stiffness on the Histotripsy Intrinsic Threshold for Cavitation. <i>Ultrasound in Medicine and Biology</i> , 2015, 41, 1651-1667.	1.5	128
58	The mixing region in freely decaying variable-density turbulence. <i>Journal of Fluid Mechanics</i> , 2015, 772, 386-426.	3.4	6
59	Experimental and numerical investigations of beryllium strength models using the Rayleigh-Taylor instability. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	14
60	High-order Discontinuous Galerkin Methods Applied to Multiphase Flows. , 2015, , .		0
61	Maintaining interface equilibrium conditions in compressible multiphase flows using interface capturing. <i>Journal of Computational Physics</i> , 2015, 302, 548-566.	3.8	38
62	Numerical simulations of a shock interacting with successive interfaces using the Discontinuous Galerkin method: the multilayered Richtmyerâ€“Meshkov and Rayleighâ€“Taylor instabilities. <i>Shock Waves</i> , 2015, 25, 329-345.	1.9	26
63	A new limiting procedure for discontinuous Galerkin methods applied to compressible multiphase flows with shocks and interfaces. <i>Journal of Computational Physics</i> , 2015, 280, 489-509.	3.8	51
64	A numerical study of turbulence in boxes with no-slip walls and of varying volume-to-surface ratios. , 2015, , .		0
65	A Simple Method to Improve the Accuracy of Advection in Discontinuous Galerkin Methods for Navier-Stokes Simulations. , 2014, , .		2
66	Observation and modeling of mixing-layer development in high-energy-density, blast-wave-driven shear flow. <i>Physics of Plasmas</i> , 2014, 21, 056306.	1.9	19
67	Numerical Simulations of Shock Emission by Bubble Collapse Near a Rigid Surface. <i>Fluid Mechanics and Its Applications</i> , 2014, , 373-396.	0.2	0
68	Atmospheric pressure plasma jets interacting with liquid covered tissue: touching and not-touching the liquid. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 475203.	2.8	164
69	Histotripsy-induced cavitation cloud initiation thresholds in tissues of different mechanical properties. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 341-352.	3.0	102
70	Analysis of Improved Advection Schemes for Discontinuous Galerkin Methods. , 2014, , .		6
71	Nonlinear oscillations following the Rayleigh collapse of a gas bubble in a linear viscoelastic (tissue-like) medium. <i>Physics of Fluids</i> , 2013, 25, .	4.0	49
72	Reactive oxygen and nitrogen species (RONS) produced by repetitive pulses in atmospheric pressure plasma jets. , 2013, , .		0

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73	A solution-adaptive method for efficient compressible multifluid simulations, with application to the Richtmyer-Meshkov instability. Journal of Computational Physics, 2013, 239, 166-186.	3.8	52
74	Analysis of Numerical Errors Generated by Slowly Moving Shock Waves. AIAA Journal, 2013, 51, 1269-1274.	2.6	9
75	Turbulence diffusion effects at material interfaces, with application to the Rayleigh-Taylor instability. , 2013, , .		0
76	Discontinuous Galerkin method for multifluid Euler equations. , 2013, , .		4
77	High order schemes for cylindrical/spherical coordinates with radial symmetry. , 2013, , .		4
78	Recovery Discontinuous Galerkin Method for Compressible Turbulence. , 2013, , .		3
79	A Three-Dimensional Recovery-Based Discontinuous Galerkin Method for Turbulence Simulations. , 2013, , .		8
80	Preventing numerical errors generated by interface-capturing schemes in compressible multi-material flows. Journal of Computational Physics, 2012, 231, 5705-5717.	3.8	77
81	Theoretical microbubble dynamics in a viscoelastic medium at capillary breaching thresholds. Journal of the Acoustical Society of America, 2012, 132, 3770-3777.	1.1	8
82	Injection Pump Analysis. , 2012, , .		0
83	Numerical errors generated by WENO-based interface-capturing schemes in multifluid computations. , 2011, , .		2
84	Numerical simulations of the Richtmyer-Meshkov instability with reshock. , 2011, , .		4
85	Analysis and Correction of Errors Generated by Slowly Moving Shocks. , 2011, , .		3
86	On the treatment of contact discontinuities using WENO schemes. Journal of Computational Physics, 2011, 230, 8665-8668.	3.8	19
87	Assessment of high-resolution methods for numerical simulations of compressible turbulence with shock waves. Journal of Computational Physics, 2010, 229, 1213-1237.	3.8	315
88	Numerical simulations of non-spherical bubble collapse. Journal of Fluid Mechanics, 2009, 629, 231-262.	3.4	255
89	Shock-induced collapse of a gas bubble in shockwave lithotripsy. Journal of the Acoustical Society of America, 2008, 124, 2011-2020.	1.1	132
90	Toward petascale shock/turbulence computations. Journal of Physics: Conference Series, 2008, 125, 012045.	0.4	1

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91	Non-Spherical Collapse of an Air Bubble Subjected to a Lithotripter Pulse. , 2007, , .		1
92	Implementation of WENO schemes in compressible multicomponent flow problems. Journal of Computational Physics, 2006, 219, 715-732.	3.8	343