Jerome Kasparian

List of Publications by Year in Descending Order

154 papers	6,757 citations	42 h-index	79 g-index
182 ext. papers	7,738 ext. citations	4.5 avg, IF	5.39 L-index

#	Paper	IF	Citations
154	Multi-column modelling of lake Geneva for climate applications.. *Scientific Reports*, **2022**, 12, 353	4.9	0
153	Robustness of competing climatic states. *Journal of Climate*, **2022**, 1-59	4.4	1
152	Smooth velocity fields for tracking climate change.. *Scientific Reports*, **2022**, 12, 2997	4.9	
151	Nonlinear wave evolution with data-driven breaking.. *Nature Communications*, **2022**, 13, 2343	17.4	0
150	The role of internal feedbacks in shifting deep lake mixing regimes under a warming climate. *Freshwater Biology*, **2021**, 66, 1021-1035	3.1	4
149	Stabilization of Unsteady Nonlinear Waves by Phase-Space Manipulation. *Physical Review Letters*, **2021**, 126, 174501	7.4	2
148	Laser induced aerosol formation mediated by resonant excitation of volatile organic compounds. *Optica*, **2021**, 8, 1256	8.6	0
147	The laser lightning rod project. *EPJ Applied Physics*, **2021**, 93, 10504	1.1	9
146	Separatrix crossing and symmetry breaking in NLSE-like systems due to forcing and damping. *Nonlinear Dynamics*, **2020**, 102, 2385-2398	5	0
145	Shifting velocity of temperature extremes under climate change. *Environmental Research Letters*, **2020**, 15, 034027	6.2	4
144	Performance of one-dimensional hydrodynamic lake models during short-term extreme weather events. *Environmental Modelling and Software*, **2020**, 133, 104852	5.2	6
143	Stabilization of uni-directional water wave trains over an uneven bottom. *Nonlinear Dynamics*, **2020**, 101, 1131-1145	5	1
142	Co-existing climate attractors in a coupled aquaplanet. *Climate Dynamics*, **2019**, 53, 6293-6308	4.2	16
141	Ab initio calculations of laser-atom interactions revealing harmonics feedback during macroscopic propagation. *Physical Review A*, **2019**, 99,	2.6	2
140	Single-spectrum prediction of kurtosis of water waves in a nonconservative model. *Physical Review E*, **2019**, 100, 013102	2.4	5
139	HV discharges triggered by dual- and triple-frequency laser filaments. *Optics Express*, **2019**, 27, 11339-11347	3.5	3
138	Quantitative analysis of self-organized patterns in ombrotrophic peatlands. *Scientific Reports*, **2019**, 9, 1499	4.9	1

137	Amplification of intense light fields by nearly free electrons. *Nature Physics*, **2018**, 14, 695-700	16.2	22
136	Nonlinear stage of Benjamin-Feir instability in forced/damped deep-water waves. *Physics of Fluids*, **2018**, 30, 017102	4.4	12
135	Energy conservation in self-phase modulation. *Physical Review A*, **2018**, 97,	2.6	2
134	Viscous damping of gravity-capillary waves: Dispersion relations and nonlinear corrections. *Physical Review Fluids*, **2018**, 3,	2.8	2
133	Free space laser telecommunication through fog. *Optica*, **2018**, 5, 1338	8.6	32
132	Modifications of filament spectra by shaped octave-spanning laser pulses. *Physical Review A*, **2018**, 98,	2.6	1
131	Maximizing energy deposition by shaping few-cycle laser pulses. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2018**, 51, 135402	1.3	2
130	Assessing the Dynamics of Organic Aerosols over the North Atlantic Ocean. *Scientific Reports*, **2017**, 7, 45476	4.9	9
129	Gas-Solid Phase Transition in Laser Multiple Filamentation. *Physical Review Letters*, **2017**, 118, 133902	7.4	5
128	Time-resolved monitoring of polycyclic aromatic hydrocarbons adsorbed on atmospheric particles. *Environmental Science and Pollution Research*, **2017**, 24, 19517-19523	5.1	3
127	Recurrence in the high-order nonlinear Schrödinger equation: A low-dimensional analysis. *Physical Review E*, **2017**, 96, 012222	2.4	12
126	HV discharge acceleration by sequences of UV laser filaments with visible and near-infrared pulses. *New Journal of Physics*, **2017**, 19, 123040	2.9	6
125	Shockwave-assisted laser filament conductivity. *Applied Physics Letters*, **2017**, 111, 211103	3.4	1
124	Spectral up- and downshifting of Akhmediev breathers under wind forcing. *Physics of Fluids*, **2017**, 29, 107103	4.4	17
123	Linearity of charge measurement in laser filaments. *Optics Express*, **2017**, 25, 16517-16526	3.3	
122	Optimal laser-pulse energy partitioning for air ionization. *Physical Review A*, **2016**, 94,	2.6	8
121	Triggering filamentation using turbulence. *Physical Review A*, **2016**, 94,	2.6	6
120	Conductivity and discharge guiding properties of mid-IR laser filaments. *Applied Physics B: Lasers and Optics*, **2016**, 122, 1	1.9	10

119	Dual-scale turbulence in filamenting laser beams at high average power. *Physical Review A*, **2016**, 94,	2.6	4
118	Laser pulse propagation in a meter scale rubidium vapor/plasma cell in AWAKE experiment. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2016**, 829, 339-342	1.2	1
117	Laser vaporization of cirrus-like ice particles with secondary ice multiplication. *Science Advances*, **2016**, 2, e1501912	14.3	13
116	High repetition rate ultrashort laser cuts a path through fog. *Applied Physics Letters*, **2016**, 109, 251105	3.4	12
115	Spin-Glass Model Governs Laser Multiple Filamentation. *Physical Review Letters*, **2015**, 115, 033902	7.4	7
114	Non-linear photochemical pathways in laser-induced atmospheric aerosol formation. *Scientific Reports*, **2015**, 5, 14978	4.9	15
113	Remote electrical arc suppression by laser filamentation. *Optics Express*, **2015**, 23, 28640-8	3.3	12
112	Nonlinear synthesis of complex laser waveforms at remote distances. *Physical Review A*, **2015**, 91,	2.6	8
111	Laser filamentation as a new phase transition universality class. *Physical Review Letters*, **2015**, 114, 063903	7.4	12
110	White-light femtosecond Lidar at 100 TW power level. *Applied Physics B: Lasers and Optics*, **2014**, 114, 319-325	1.9	18
109	Modulational instability in wind-forced waves. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2014**, 378, 3626-3630	2.3	23
108	Pump-probe differential Lidar to quantify atmospheric supersaturation and particle-forming trace gases. *Applied Physics B: Lasers and Optics*, **2014**, 117, 667-672	1.9	1
107	Reversibility of laser filamentation. *Optics Express*, **2014**, 22, 21061-8	3.3	4
106	Nonlinear fast growth of water waves under wind forcing. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2014**, 378, 1025-1030	2.3	44
105	Cooperative effect of ultraviolet and near-infrared beams in laser-induced condensation. *Applied Physics Letters*, **2013**, 103, 264103	3.4	8
104	Laser-induced plasma cloud interaction and ice multiplication under cirrus cloud conditions. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10106-10	11.5	24
103	Higher-order Kerr effects improve quantitative modelling of harmonics generation and laser filamentation. *EPJ Web of Conferences*, **2013**, 41, 12007	0.3	
102	High-field quantum calculation reveals time-dependent negative Kerr contribution. *Physical Review Letters*, **2013**, 110, 043902	7.4	42

101	Laser-induced condensation by ultrashort laser pulses at 248 nm. *Applied Physics Letters*, **2013**, 102, 091112	3.4	14
100	Mid-infrared laser filamentation in molecular gases. *Optics Letters*, **2013**, 38, 3194-7	3	44
99	Mid-Infrared femtosecond filament and three octaves continuum generation in gases. *EPJ Web of Conferences*, **2013**, 41, 10003	0.3	1
98	Laser filament-induced aerosol formation. *Atmospheric Chemistry and Physics*, **2013**, 13, 4593-4604	6.8	22
97	Laser Filament Induced Water Condensation. *EPJ Web of Conferences*, **2013**, 41, 12008	0.3	
96	OECD's Better Life Index: can any country be well ranked?. *Journal of Applied Statistics*, **2012**, 39, 2223-2230	1	20
95	Laser-assisted water condensation in the atmosphere: a step towards modulating precipitation?. *Journal Physics D: Applied Physics*, **2012**, 45, 293001	3	14
94	Ultrafast laser spectroscopy and control of atmospheric aerosols. *Physical Chemistry Chemical Physics*, **2012**, 14, 9291-300	3.6	5
93	White light generation over three octaves by femtosecond filament at 3.9 μm in argon. *Optics Letters*, **2012**, 37, 3456-8	3	58
92	Higher-order Kerr improve quantitative modeling of laser filamentation. *Optics Letters*, **2012**, 37, 4347-9	3	13
91	Transition from plasma-driven to Kerr-driven laser filamentation. *Physical Review Letters*, **2011**, 106, 243902	7.4	82
90	From higher-order Kerr nonlinearities to quantitative modeling of third and fifth harmonic generation in argon. *Optics Letters*, **2011**, 36, 828-30	3	19
89	Conical emission from laser filaments and higher-order Kerr effect in air. *Optics Letters*, **2011**, 36, 4812-4	3	14
88	On negative higher-order Kerr effect and filamentation. *Laser Physics*, **2011**, 21, 1319-1328	1.2	36
87	Multijoule scaling of laser-induced condensation in air. *Applied Physics Letters*, **2011**, 99, 141103	3.4	17
86	Modelling of HNO3-mediated laser-induced condensation: a parametric study. *Journal of Chemical Physics*, **2011**, 135, 134703	3.9	18
85	1-J white-light continuum from 100-TW laser pulses. *Physical Review A*, **2011**, 83,	2.6	13
84	Influence of pulse duration, energy, and focusing on laser-assisted water condensation. *Applied Physics Letters*, **2011**, 98, 041105	3.4	17

83	Field measurements suggest the mechanism of laser-assisted water condensation. *Nature Communications*, **2011**, 2, 456	17.4	60
82	Laser-induced water condensation in air. *Nature Photonics*, **2010**, 4, 451-456	33.9	140
81	Spectral dependence of purely-Kerr-driven filamentation in air and argon. *Physical Review A*, **2010**, 82,	2.6	23
80	Mechanism of hollow-core-fiber infrared-supercontinuum compression with bulk material. *Physical Review A*, **2010**, 81,	2.6	34
79	Compression of 1.8 μm laser pulses to sub two optical cycles with bulk material. *Applied Physics Letters*, **2010**, 96, 121109	3.4	103
78	Generalized Miller formulae. *Optics Express*, **2010**, 18, 6613-20	3.3	56
77	Arbitrary-order nonlinear contribution to self-steepening. *Optics Letters*, **2010**, 35, 2795-7	3	15
76	Laser-Based Weather Control. *Optics and Photonics News*, **2010**, 21, 22	1.9	10
75	Mobile source of high-energy single-cycle terahertz pulses. *Applied Physics B: Lasers and Optics*, **2010**, 101, 11-14	1.9	52
74	On Lightning Control Using Lasers. *Springer Series in Chemical Physics*, **2010**, 109-122	0.3	2
73	Production of ozone and nitrogen oxides by laser filamentation. *Applied Physics Letters*, **2010**, 97, 021108	3.4	47
72	Higher-order Kerr terms allow ionization-free filamentation in gases. *Physical Review Letters*, **2010**, 104, 103903	7.4	200
71	Saturation of the filament density of ultrashort intense laser pulses in air. *Applied Physics B: Lasers and Optics*, **2010**, 100, 77-84	1.9	31
70	Contribution of water droplets to charge release by laser filaments in air. *Applied Physics Letters*, **2009**, 95, 091107	3.4	23
69	White-light symmetrization by the interaction of multifilamenting beams. *Physical Review A*, **2009**, 79,	2.6	15
68	Applied physics. Laser beams take a curve. *Science*, **2009**, 324, 194-5	33.3	20
67	Multiple filamentation of non-uniformly focused ultrashort laser pulses. *Applied Physics B: Lasers and Optics*, **2009**, 94, 243-247	1.9	7
66	Contribution of crude oil price to households' budget: The weight of indirect energy use. *Energy Policy*, **2009**, 37, 111-114	7.2	6

65	Filament-induced birefringence in Argon. *Laser Physics*, **2009**, 19, 336-341	1.2	5
64	Ultraviolet-visible conical emission by multiple laser filaments. *Optics Express*, **2009**, 17, 4726-31	3.3	28
63	Optical rogue wave statistics in laser filamentation. *Optics Express*, **2009**, 17, 12070-5	3.3	57
62	Curved plasma channels: Kerr lens and Airy prism. *Journal of the European Optical Society-Rapid Publications*, **2009**, 4,	2.5	7
61	Filament-induced electric events in thunderstorms. *Springer Series in Chemical Physics*, **2009**, 967-969	0.3	
60	Physics and applications of atmospheric nonlinear optics and filamentation. *Optics Express*, **2008**, 16, 466-93	3.3	270
59	Electric events synchronized with laser filaments in thunderclouds. *Optics Express*, **2008**, 16, 5757-63	3.3	120
58	Ultrafast gaseous "half-wave plate". *Optics Express*, **2008**, 16, 7564-70	3.3	35
57	Dual-color co-filamentation in Argon. *Optics Express*, **2008**, 16, 14115-27	3.3	15
56	Ultrashort filaments of light in weakly ionized, optically transparent media. *Reports on Progress in Physics*, **2008**, 71, 109801	14.4	4
55	Cross compression of light bullets by two-color cofilamentation. *Physical Review A*, **2008**, 78,	2.6	8
54	Effects of atmospheric turbulence on remote optimal control experiments. *Applied Physics Letters*, **2008**, 92, 041103	3.4	6
53	Progress towards lightning control using lasers. *Journal of the European Optical Society-Rapid Publications*, **2008**, 3,	2.5	9
52	Angular distribution of non-linear optical emission from spheroidal microparticles. *Applied Physics B: Lasers and Optics*, **2008**, 91, 167-171	1.9	5
51	Ultrashort filaments of light in weakly ionized, optically transparent media. *Reports on Progress in Physics*, **2007**, 70, 1633-1713	14.4	770
50	Spectral correlation and noise reduction in laser filaments. *Applied Physics B: Lasers and Optics*, **2007**, 87, 1-4	1.9	16
49	Propagation of laser filaments through an extended turbulent region. *Applied Physics Letters*, **2007**, 91, 171106	3.4	48
48	32TW atmospheric white-light laser. *Applied Physics Letters*, **2007**, 90, 151106	3.4	28

47	Some Properties of Femtosecond Laser Filamentation Relevant to Atmospheric Applications Part I. The Robustness of Filamentation. *Springer Series in Chemical Physics*, **2007**, 281-300	0.3	
46	Some Properties of Femtosecond Laser Filamentation Relevant to Atmospheric Applications Part II. Large-Scale Filamentation. *Springer Series in Chemical Physics*, **2007**, 301-318	0.3	1
45	Optimal control of filamentation in air. *Applied Physics Letters*, **2006**, 89, 171117	3.4	40
44	Laser noise reduction in air. *Applied Physics Letters*, **2006**, 88, 251112	3.4	8
43	Improved laser triggering and guiding of meqavolt discharges with dual fs-ns pulses. *Applied Physics Letters*, **2006**, 88, 021101	3.4	52
42	Laser filaments generated and transmitted in highly turbulent air. *Optics Letters*, **2006**, 31, 86-8	3	56
41	Non-linear effects accompanying terawatt laser-pulse in air and their applications **2006**, 6158, 133		2
40	Filaments of Light. *American Scientist*, **2006**, 94, 150	2.7	3
39	Influence of negative leader propagation on the triggering and guiding of high voltage discharges by laser filaments. *Applied Physics B: Lasers and Optics*, **2006**, 82, 561-566	1.9	42
38	UV supercontinuum generated by femtosecond pulse filamentation in air: Meter-range experiments versus numerical simulations. *Applied Physics B: Lasers and Optics*, **2006**, 82, 341-345	1.9	29
37	White-light filaments for multiparameter analysis of cloud microphysics. *Journal of the Optical Society of America B: Optical Physics*, **2005**, 22, 369	1.7	30
36	Supercontinuum emission and enhanced self-guiding of infrared femtosecond filaments sustained by third-harmonic generation in air. *Physical Review E*, **2005**, 71, 016602	2.4	70
35	Filament-induced remote surface ablation for long range laser-induced breakdown spectroscopy operation. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2005**, 60, 1025-1033	3.1	82
34	Propagation of fs TW laser filaments in adverse atmospheric conditions. *Applied Physics B: Lasers and Optics*, **2005**, 80, 785-789	1.9	66
33	Multifilamentation transmission through fog. *Physical Review E*, **2005**, 72, 026611	2.4	72
32	Spatial Break-up of Femtosecond Laser Pulses in the Atmosphere. *Physica Scripta*, **2004**, T107, 135	2.6	4
31	Filamentation of femtosecond light pulses in the air: turbulent cells versus long-range clusters. *Physical Review E*, **2004**, 70, 046602	2.4	88
30	Long-distance remote laser-induced breakdown spectroscopy using filamentation in air. *Applied Physics Letters*, **2004**, 85, 3977-3979	3.4	202

29	Triggering and guiding of megavolt discharges by laser-induced filaments under rain conditions. *Applied Physics Letters*, **2004**, 85, 5781-5783	3.4	53
28	Remote detection and identification of biological aerosols using a femtosecond terawatt lidar system. *Applied Physics B: Lasers and Optics*, **2004**, 78, 535-537	1.9	77
27	Ray-tracing simulation of ionization-free filamentation. *Applied Physics B: Lasers and Optics*, **2004**, 79, 947-951	1.9	15
26	Remote LIBS with ultrashort pulses: characteristics in picosecond and femtosecond regimes. *Journal of Analytical Atomic Spectrometry*, **2004**, 19, 437-444	3.7	98
25	Kilometer-range nonlinear propagation of femtosecond laser pulses. *Physical Review E*, **2004**, 69, 036607	2.4	215
24	Multiple filamentation of terawatt laser pulses in air. *Physical Review Letters*, **2004**, 92, 225002	7.4	139
23	Femtosecond LIDAR: new perspectives of atmospheric remote sensing **2003**, 5149, 135		2
22	Ultrashort laser applications in lidar and atmospheric sciences **2003**, 5226, 238		1
21	Towards a supercontinuum-based infrared lidar. *Applied Physics B: Lasers and Optics*, **2003**, 77, 357-359	1.9	69
20	Sonographic probing of laser filaments in air. *Applied Optics*, **2003**, 42, 7117-20	1.7	66
19	White-light filaments for atmospheric analysis. *Science*, **2003**, 301, 61-4	33.3	687
18	Ultraintense light filaments transmitted through clouds. *Applied Physics Letters*, **2003**, 83, 213-215	3.4	117
17	Triggering and guiding megavolt discharges by use of laser-induced ionized filaments. *Optics Letters*, **2002**, 27, 772-4	3	220
16	Teramobile: A mobile femtosecond-terawatt laser and detection system. *EPJ Applied Physics*, **2002**, 20, 183-190	1.1	136
15	Modifications to the lidar equation due to nonlinear propagation in air. *Applied Physics B: Lasers and Optics*, **2001**, 73, 157-163	1.9	15
14	Backward supercontinuum emission from a filament generated by ultrashort laser pulses in air. *Optics Letters*, **2001**, 26, 533-5	3	64
13	Microtubule structure at improved resolution. *Biochemistry*, **2001**, 40, 8000-8	3.2	112
12	The critical laser intensity of self-guided light filaments in air. *Applied Physics B: Lasers and Optics*, **2000**, 71, 877-879	1.9	336

11	Infrared extension of the super continuum generated by femtosecond terawatt laser pulses propagating in the atmosphere. *Optics Letters*, **2000**, 25, 1397-9	3	171
10	Characterization of urban aerosols using SEM-microscopy, X-ray analysis and Lidar measurements. *Atmospheric Environment*, **1998**, 32, 2957-2967	5.3	41
9	A new transient SRS analysis method of aerosols and application to a nonlinear femtosecond lidar. *Optics Communications*, **1998**, 152, 355-360	2	21
8	Three-Dimensional Analysis of Urban Aerosols by use of a Combined Lidar, Scanning Electron Microscopy, and X-Ray Microanalysis. *Applied Optics*, **1998**, 37, 2231-7	1.7	8
7	Size dependence of nonlinear Mie scattering in microdroplets illuminated by ultrashort pulses. *Journal of the Optical Society of America B: Optical Physics*, **1998**, 15, 1918	1.7	9
6	Angular Dependences of Third Harmonic Generation from Microdroplets. *Physical Review Letters*, **1997**, 78, 2952-2955	7.4	43
5	Monitoring of urban aerosols using a combined lidar/SEM method **1997**, 3104, 278		
4	Digital computation and in situ STM approach of silicon anisotropic etching. *Surface Science*, **1997**, 388, 50-62	1.8	40
3	Monte-Carlo Simulations of Si Etching: Comparison with in-situ STM images. *Microscopy Microanalysis Microstructures*, **1994**, 5, 257-267		5
2	Drivers of phytoplankton responses to summer wind events in a stratified lake: A modeling study. *Limnology and Oceanography*,	4.8	2
1	Laser filament-induced aerosol formation		1