

Nicolas Treps

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3072036/publications.pdf>

Version: 2024-02-01

138
papers

3,999
citations

147801

31
h-index

123424

61
g-index

143
all docs

143
docs citations

143
times ranked

2362
citing authors

#	ARTICLE	IF	CITATIONS
1	Roadmap on multimode light shaping. <i>Journal of Optics (United Kingdom)</i> , 2022, 24, 013001.	2.2	41
2	Distribution and quantification of remotely generated Wigner negativity. <i>Npj Quantum Information</i> , 2022, 8, .	6.7	7
3	Certification of Non-Gaussian States using Double Homodyne Detection. , 2021, , .		0
4	Full characterization of the transmission properties of a multi-plane light converter. <i>Physical Review Research</i> , 2021, 3, .	3.6	4
5	Versatile Photonic Entanglement Synthesizer in the Spatial Domain. , 2021, , .		0
6	Certification of Non-Gaussian States with Operational Measurements. <i>PRX Quantum</i> , 2021, 2, .	9.2	16
7	Conditional preparation of non-Gaussian quantum optical states by mesoscopic measurement. <i>New Journal of Physics</i> , 2021, 23, 063039.	2.9	4
8	Moment-based superresolution: Formalism and applications. <i>Physical Review A</i> , 2021, 104, .	2.5	14
9	Optimal Observables and Estimators for Practical Superresolution Imaging. <i>Physical Review Letters</i> , 2021, 127, 123604.	7.8	17
10	Frequency-multiplexed entanglement for continuous-variable quantum key distribution. <i>Photonics Research</i> , 2021, 9, 2351.	7.0	6
11	Non-Gaussian quantum states of a multimode light field. <i>Nature Physics</i> , 2020, 16, 144-147.	16.7	95
12	Quantum state engineering in arrays of nonlinear waveguides. <i>Physical Review A</i> , 2020, 102, .	2.5	8
13	Neural Networks for Detecting Multimode Wigner Negativity. <i>Physical Review Letters</i> , 2020, 125, 160504.	7.8	18
14	Versatile Photonic Entanglement Synthesizer in the Spatial Domain. <i>Physical Review Applied</i> , 2020, 14, .	3.8	10
15	Superresolution Limits from Measurement Crosstalk. <i>Physical Review Letters</i> , 2020, 125, 100501.	7.8	29
16	Generation of hexapartite entanglement in a four-wave-mixing process with a spatially structured pump: Theoretical study. <i>Physical Review A</i> , 2020, 102, .	2.5	5
17	Reconfigurable Hexapartite Entanglement by Spatially Multiplexed Four-Wave Mixing Processes. <i>Physical Review Letters</i> , 2020, 124, 090501.	7.8	65
18	Remote Generation of Wigner Negativity through Einstein-Podolsky-Rosen Steering. <i>Physical Review Letters</i> , 2020, 124, 150501.	7.8	22

#	ARTICLE	IF	CITATIONS
19	Versatile multipartite Einstein-Podolsky-Rosen steering via a quantum frequency comb. <i>Physical Review Research</i> , 2020, 2, .	3.6	27
20	Practical Framework for Conditional Non-Gaussian Quantum State Preparation. <i>PRX Quantum</i> , 2020, 1, .	9.2	25
21	Multimode single-pass spatio-temporal squeezing. <i>Optics Express</i> , 2020, 28, 12385.	3.4	7
22	Spatial optical mode demultiplexing as a practical tool for optimal transverse distance estimation. <i>Optica</i> , 2020, 7, 1621.	9.3	42
23	Experimental generation of non-Gaussian quantum states of a multimode light field. , 2020, , .		0
24	Spatial eigenmodes of light in atmospheric turbulence. , 2020, , .		1
25	Mode-dependent-loss model for multimode photon-subtracted states. <i>Physical Review A</i> , 2019, 100, .	2.5	9
26	Modal analysis for noise characterization and propagation in a femtosecond oscillator. <i>Optics Letters</i> , 2019, 44, 3992.	3.3	3
27	Quantum Frequency Comb for Quantum Complex Networks. , 2019, , .		0
28	Non-Gaussian Continuous-Variable Graph States. , 2019, , .		3
29	Photon-Subtracted Continuous-Variable Graph States. , 2019, , .		0
30	Quantum-enhanced interferometric timing measurement with a squeezed optical frequency comb. , 2019, , .		0
31	Violating Bell inequalities with entangled optical frequency combs and multi-pixel homodyne detection. , 2019, , .		0
32	Experimental realization of a feedback optical parametric amplifier with four-wave mixing. <i>Physical Review B</i> , 2018, 97, .	3.2	14
33	Versatile engineering of multimode squeezed states by optimizing the pump spectral profile in spontaneous parametric down-conversion. <i>Physical Review A</i> , 2018, 97, .	2.5	28
34	Tailoring Non-Gaussian Continuous-Variable Graph States. <i>Physical Review Letters</i> , 2018, 121, 220501.	7.8	34
35	Sub-shot-noise interferometric timing measurement with a squeezed frequency comb. <i>Physical Review A</i> , 2018, 98, .	2.5	8
36	A Single-Pass Quantum Source of Multimode Squeezed States of Light. , 2018, , .		0

#	ARTICLE	IF	CITATIONS
37	Violating Bell inequalities with entangled optical frequency combs and multipixel homodyne detection. <i>Physical Review A</i> , 2018, 98, .	2.5	12
38	Tomography and Purification of the Temporal-Mode Structure of Quantum Light. <i>Physical Review Letters</i> , 2018, 120, 213601.	7.8	51
39	Near-infrared to visible upconversion imaging using a broadband pump laser. <i>Optics Express</i> , 2018, 26, 13252.	3.4	33
40	Toward a compact fibered squeezing parametric source. <i>Optics Letters</i> , 2018, 43, 1267.	3.3	4
41	A Single-Pass Quantum Source of Multimode Squeezed States of Light. , 2018, , .		0
42	Temporal Mode Selective Measurement and Purification of Quantum Light. , 2018, , .		0
43	Near-infrared to visible upconversion detection for active imaging using a broadband pump laser. , 2018, , .		1
44	Increasing image resolution in near-infrared to visible upconversion detection for long-range active imaging. , 2018, , .		0
45	Entanglement and Wigner Function Negativity of Multimode Non-Gaussian States. <i>Physical Review Letters</i> , 2017, 119, 183601.	7.8	64
46	Polynomial approximation of non-Gaussian unitaries by counting one photon at a time. <i>Physical Review A</i> , 2017, 95, .	2.5	36
47	Tomography of a Mode-Tunable Coherent Single-Photon Subtractor. <i>Physical Review X</i> , 2017, 7, .	8.9	31
48	Quantum-limited measurements of distance fluctuations with a multimode detector. <i>Quantum Science and Technology</i> , 2017, 2, 034008.	5.8	10
49	Statistical signatures of multimode single-photon-added and -subtracted states of light. <i>Physical Review A</i> , 2017, 96, .	2.5	27
50	Ultra-fast and continuous control of the focus point of a laser beam. , 2017, , .		0
51	Phase-amplitude noise correlations in an optical frequency comb. , 2017, , .		0
52	High sensitivity mid-infrared detection at room temperature by upconversion in orientation-patterned GaAs. , 2017, , .		0
53	Continuous axial scanning of a Gaussian beam via beam steering. <i>Optics Express</i> , 2017, 25, 23060.	3.4	7
54	Third-order nonlinearity OPO: Schmidt mode decomposition and tripartite entanglement. <i>Optics Letters</i> , 2017, 42, 4865.	3.3	5

#	ARTICLE	IF	CITATIONS
55	Tomography of mode-tunable coherent single-photon subtractor. , 2017, , .		0
56	Temporal-mode tomography of single photons. , 2017, , .		3
57	High sensitivity narrowband wavelength mid-infrared detection at room temperature. Optics Letters, 2017, 42, 2006.	3.3	9
58	Photon subtraction from a multimode squeezed vacuum state. , 2017, , .		1
59	Programmable unitary transformation of spectro-temporal modes. , 2017, , .		1
60	Tomography of mode-tunable coherent single-photon subtractor. , 2017, , .		0
61	Tomography of mode-tunable coherent single-photon subtractor. , 2017, , .		0
62	SINGLE-PASS QUANTUM SOURCE OF MULTIMODE SQUEEZED STATES. , 2017, , .		0
63	Shaping the Pump of a Synchronously Pumped Optical Parametric Oscillator for Continuous-Variable Quantum Information. , 2017, , .		0
64	Statistical signatures of non-Gaussian states of light. , 2017, , .		0
65	Modal Approach Towards Complete Characterization of Frequency Comb Noise. , 2017, , .		0
66	Quantum Uncertainty in the Beam Width for Optical Spatial Modes. , 2016, , .		0
67	Multipartite Entanglement of a Two-Separable State. Physical Review Letters, 2016, 117, 110502.	7.8	40
68	Squeezed light from a diamond-turned monolithic cavity. Optics Express, 2016, 24, 4042.	3.4	7
69	Detecting the spatial quantum uncertainty of bosonic systems. New Journal of Physics, 2016, 18, 093004.	2.9	3
70	Tomography of Single-Photon Subtraction Process in Multiple Time-Frequency Modes. , 2016, , .		0
71	Quantum uncertainty in the beam width of spatial optical modes. Optics Express, 2015, 23, 32777.	3.4	6
72	Quantum-network generation based on four-wave mixing. Physical Review A, 2015, 91, .	2.5	50

#	ARTICLE	IF	CITATIONS
73	Atomic quantum memory for multimode frequency combs. <i>Physical Review A</i> , 2015, 91, .	2.5	16
74	Spectral Noise Correlations of an Ultrafast Frequency Comb. <i>Physical Review Letters</i> , 2014, 113, 263906.	7.8	18
75	Efficient and mode selective spatial mode multiplexer based on multi-plane light conversion. , 2014, , .		4
76	3 Modes transmission using hybrid separation with high mode selectivity and low losses spatial mode multiplexer. , 2014, , .		2
77	Analysis and filtering of phase noise in an optical frequency comb at the quantum limit to improve timing measurements. <i>Optics Letters</i> , 2014, 39, 3603.	3.3	8
78	Efficient and mode selective spatial mode multiplexer based on multi-plane light conversion. <i>Optics Express</i> , 2014, 22, 15599.	3.4	342
79	Precision measurements with photon-subtracted or photon-added Gaussian states. <i>Physical Review A</i> , 2014, 90, .	2.5	45
80	Wavelength-multiplexed quantum networks with ultrafast frequency combs. <i>Nature Photonics</i> , 2014, 8, 109-112.	31.4	370
81	Nonlinear photon subtraction from a multimode quantum field. <i>Physical Review A</i> , 2014, 89, .	2.5	34
82	Quantum Limited Parameter Estimation with Pulse Shaped Frequency Combs. , 2014, , .		0
83	Revealing spectral amplitude and phase correlations of an optical frequency comb with ultrafast pulse-shaping. , 2014, , .		0
84	High dimensional quantum entanglement. <i>European Physical Journal D</i> , 2013, 67, 1.	1.3	4
85	Pulse shaping with birefringent crystals: a tool for quantum metrology. <i>Optics Express</i> , 2013, 21, 21889.	3.4	8
86	Broadband Fabry-Perot cavity for quantum-limited frequency comb metrology. , 2013, , .		0
87	Parametrically generated ultrafast frequency combs : a promising tool for wavelength multiplexed quantum information processing. , 2013, , .		0
88	Parametrically generated ultrafast frequency combs : a promising tool for wavelength multiplexed quantum information processing. , 2013, , .		1
89	A time/frequency quantum analysis of the light generated by synchronously pumped optical parametric oscillators. <i>New Journal of Physics</i> , 2012, 14, 043006.	2.9	11
90	Real-time displacement measurement immune from atmospheric parameters using optical frequency combs. <i>Optics Express</i> , 2012, 20, 27133.	3.4	32

#	ARTICLE	IF	CITATIONS
91	Generation and Characterization of Multimode Quantum Frequency Combs. Physical Review Letters, 2012, 108, 083601.	7.8	104
92	Ultimate sensitivity of precision measurements with intense Gaussian quantum light: A multimodal approach. Physical Review A, 2012, 85, .	2.5	77
93	Programmable multimode quantum networks. Nature Communications, 2012, 3, 1026.	12.8	130
94	Direct generation of a multi-transverse mode non-classical state of light. Optics Express, 2011, 19, 4405.	3.4	25
95	Quantum correlations of pulses of optical parametric oscillator synchronously pumped above threshold. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2011, 110, 925-935.	0.6	6
96	Spatial reshaping of a squeezed state of light. , 2011, , .		0
97	Frequency doubling of low power images using a self-imaging cavity. Optics Express, 2010, 18, 8033.	3.4	23
98	Programmable unitary spatial mode manipulation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 2524.	1.5	181
99	Experimental Demonstration of Computer Reconfigurable Multimode Entanglement. , 2010, , .		0
100	Optical entanglement of co-propagating modes. Nature Photonics, 2009, 3, 399-402.	31.4	60
101	A gain criterion for the improvement of detection tasks with sub-Poissonian light. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 1139.	1.5	1
102	Multimode OPOs as Sources for Multipartite Entanglement. , 2009, , .		0
103	Entangling the Spatial Properties of Laser Beams. Science, 2008, 321, 541-543.	12.6	81
104	Experimental demonstration of frequency-degenerate bright EPR beams with a self-phase-locked OPO. Optics Express, 2008, 16, 9351.	3.4	33
105	Quantum limits in image processing. Europhysics Letters, 2008, 81, 44001.	2.0	47
106	Quantum Improvement of Time Transfer between Remote Clocks. Physical Review Letters, 2008, 101, 123601.	7.8	74
107	Spatial quantum optical properties of c.w. Optical Parametric Amplification. Comptes Rendus Physique, 2007, 8, 199-205.	0.9	1
108	Demonstrating spatial entanglement for the position and momentum of laser beams. , 2007, , .		0

#	ARTICLE	IF	CITATIONS
109	Quantum Imaging Techniques for Improving Information Extraction from Images. , 2007, , 323-343.		0
110	Quantum Imaging in the Continuous-Wave Regime Using Degenerate Optical Cavities. , 2007, , 47-65.		0
111	Quantum Imaging by Synthesis of Multimode Quantum Light. , 2007, , 67-78.		0
112	Transverse Distribution of Quantum Fluctuations in Free-Space Spatial Solitons. , 2007, , 201-219.		0
113	Quantum measurements of spatial conjugate variables: displacement and tilt of a Gaussian beam. Optics Letters, 2006, 31, 1537.	3.3	31
114	Spatial quantum effects with continuous-wave laser beams. Journal of Modern Optics, 2006, 53, 597-611.	1.3	3
115	Continuous-wave phase-sensitive parametric image amplification. Journal of Modern Optics, 2006, 53, 809-820.	1.3	18
116	Teaching a laser beam to go straight. Contemporary Physics, 2005, 46, 395-405.	1.8	2
117	Continuous-variable spatial entanglement for bright optical beams. Physical Review A, 2005, 72, .	2.5	20
118	Experimental evidence of spontaneous symmetry breaking in intracavity type II second-harmonic generation with triple resonance. Optics Letters, 2005, 30, 284.	3.3	12
119	Image transmission through a stable paraxial cavity. Physical Review A, 2005, 72, .	2.5	29
120	Nano-displacement measurements using spatially multimode squeezed light. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S664-S674.	1.4	38
121	Quantum fluctuations and correlations of spatial scalar or multimode vector solitons in Kerr media. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S295-S302.	1.4	15
122	Quantum imaging with continuous variables. , 2004, , .		0
123	Quantum laser pointer and other applications of squeezed light. , 2004, , .		0
124	Unity gain and nonunity gain quantum teleportation. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 1519-1532.	2.9	29
125	Optical experiments beyond the quantum limit: Squeezing, entanglement, and teleportation. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2003, 94, 651-665.	0.6	5
126	Experimental investigation of continuous-variable quantum teleportation. Physical Review A, 2003, 67, .	2.5	280

#	ARTICLE	IF	CITATIONS
127	A Quantum Laser Pointer. <i>Science</i> , 2003, 301, 940-943.	12.6	263
128	Stokes-operator-squeezed continuous-variable polarization states. <i>Physical Review A</i> , 2003, 67, .	2.5	41
129	Conditional Preparation of a Quantum State in the Continuous Variable Regime: Generation of a sub-Poissonian State from Twin Beams. <i>Physical Review Letters</i> , 2003, 91, 213601.	7.8	98
130	Continuous variable polarization entanglement, experiment and analysis. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2003, 5, S467-S478.	1.4	14
131	Quantum squeezing in temporal, polarization, and spatial domains. , 2003, 5111, 67.		0
132	Experimental Demonstration of Continuous Variable Polarization Entanglement. <i>Physical Review Letters</i> , 2002, 89, 253601.	7.8	164
133	Recovery of continuous wave squeezing at low frequencies. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, 421-424.	1.4	37
134	Surpassing the Standard Quantum Limit for Optical Imaging Using Nonclassical Multimode Light. <i>Physical Review Letters</i> , 2002, 88, 203601.	7.8	190
135	Quantum information processing in optical images. <i>Superlattices and Microstructures</i> , 2002, 32, 323-329.	3.1	1
136	C.w. optical parametric oscillators: single mode or multimode?. <i>Comptes Rendus Physique</i> , 2000, 1, 553-559.	0.1	3
137	Mode-selective single-photon addition to a multimode quantum field. <i>New Journal of Physics</i> , 0, , .	2.9	1
138	Maximal entanglement increase with single-photon subtraction. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 6, 704.	0.0	2