Roberto Cerbino

List of Publications by Year
in descending order

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78	3,573	136740	143772
papers	citations	32 h-index	57 g-index

84	84	84	3138
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Differential Dynamic Microscopy: Probing Wave Vector Dependent Dynamics with a Microscope. Physical Review Letters, 2008, 100, 188102.	2.9	266
2	Functional transcription promoters at DNA double-strand breaks mediate RNA-driven phase separation of damage-response factors. Nature Cell Biology, 2019, 21, 1286-1299.	4.6	233
3	Endocytic reawakening of motility in jammed epithelia. Nature Materials, 2017, 16, 587-596.	13.3	207
4	Two-Dimensional X-Ray Beam Phase Sensing. Physical Review Letters, 2012, 108, 158102.	2.9	158
5	Phase behavior and critical activated dynamics of limited-valence DNA nanostars. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15633-15637.	3.3	156
6	Scattering information obtained by optical microscopy: Differential dynamic microscopy and beyond. Physical Review E, 2009, 80, 031403.	0.8	121
7	Unjamming overcomes kinetic and proliferation arrest in terminally differentiated cells and promotes collective motility of carcinoma. Nature Materials, 2019, 18, 1252-1263.	13.3	117
8	Flocking transitions in confluent tissues. Soft Matter, 2018, 14, 3471-3477.	1.2	114
9	X-ray-scattering information obtained from near-field speckle. Nature Physics, 2008, 4, 238-243.	6.5	105
10	Right-handed double-helix ultrashort DNA yields chiral nematic phases with both right- and left-handed director twist. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17497-17502.	3.3	91
11	Fractal fronts of diffusion in microgravity. Nature Communications, 2011, 2, 290.	5.8	90
12	Characterizing Concentrated, Multiply Scattering, and Actively Driven Fluorescent Systems with Confocal Differential Dynamic Microscopy. Physical Review Letters, 2012, 108, 218103.	2.9	90
13	A fast and simple label-free immunoassay based on a smartphone. Biosensors and Bioelectronics, 2014, 58, 395-402.	5.3	86
14	Digital Fourier microscopy for soft matter dynamics. Journal of Optics (United Kingdom), 2014, 16, 083001.	1.0	84
15	New trends in light scattering. Current Opinion in Colloid and Interface Science, 2007, 12, 50-57.	3.4	81
16	Bistable Heat Transfer in a Nanofluid. Physical Review Letters, 2009, 102, 104503.	2.9	77
17	Liquid crystal self-assembly of random-sequence DNA oligomers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1110-1115.	3.3	69
18	Re-entrant DNA gels. Nature Communications, 2016, 7, 13191.	5.8	69

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19	Perspective: Differential dynamic microscopy extracts multi-scale activity in complex fluids and biological systems. Journal of Chemical Physics, 2017, 147, 110901.	1.2	61
20	Noise in laser speckle correlation and imaging techniques. Optics Express, 2010, 18, 14519.	1.7	55
21	Equilibrium gels of low-valence DNA nanostars: a colloidal model for strong glass formers. Soft Matter, 2015, 11, 3132-3138.	1.2	53
22	Soret driven convection in a colloidal solution heated from above at very large solutal Rayleigh number. Physical Review E, 2002, 66, 055301.	0.8	52
23	Near-field scattering techniques: Novel instrumentation and results from time and spatially resolved investigations of soft matter systems. Current Opinion in Colloid and Interface Science, 2009, 14, 416-425.	3.4	52
24	Active diffusion and advection in Drosophila oocytes result from the interplay of actin and microtubules. Nature Communications, 2017, 8, 1520.	5.8	49
25	Scaling Behavior for the Onset of Convection in a Colloidal Suspension. Physical Review Letters, 2005, 94, 064501.	2.9	48
26	Correlations of light in the deep Fresnel region: An extended Van Cittert and Zernike theorem. Physical Review A, 2007, 75, .	1.0	46
27	Viscoelasticity of nematic liquid crystals at a glance. Soft Matter, 2014, 10, 3938-3949.	1.2	42
28	Differential dynamic microscopy microrheology of soft materials: A tracking-free determination of the frequency-dependent loss and storage moduli. Physical Review Materials, 2017, 1, .	0.9	42
29	Thermal Fluctuations in a Layer of Liquid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Subjected to Temperature Gradients with and without the Influence of Gravity. Physical Review Letters, 2011, 106, 244502.	2.9	37
30	Giant fluctuations and structural effects in a flocking epithelium. Journal Physics D: Applied Physics, 2017, 50, 384003.	1.3	37
31	Giant thermophoresis of poly(N-isopropylacrylamide) microgel particles. Soft Matter, 2012, 8, 5857.	1.2	36
32	Multispot, label-free biodetection at a phantom plasticâ€“water interface. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9350-9355.	3.3	35
33	Gradient-driven fluctuations experiment: fluid fluctuations in microgravity. Applied Optics, 2006, 45, 2155.	2.1	34
34	Topological defects of nematic liquid crystals confined in porous networks. Soft Matter, 2011, 7, 10945.	1.2	33
35	Emergence of Multiscale Dynamics in Colloidal Gels. Physical Review Letters, 2020, 124, 088005.	2.9	32
36	Structure and dynamics of concentration fluctuations in a non-equilibrium dense colloidal suspension. Soft Matter, 2016, 12, 6588-6600.	1.2	31

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37	Shadowgraph Analysis of Non-equilibrium Fluctuations for Measuring Transport Properties in Microgravity in the GRADFLEX Experiment. Microgravity Science and Technology, 2016, 28, 467-475.	0.7	30
38	Kinetics of colloidal fractal aggregation by differential dynamic microscopy. European Physical Journal: Special Topics, 2011, 199, 139-148.	1.2	29
39	DNA-Based Soft Phases. Topics in Current Chemistry, 2011, 318, 225-279.	4.0	29
40	Equilibrium gels of trivalent DNA-nanostars: Effect of the ionic strength on the dynamics. European Physical Journal E, 2015, 38, 64.	0.7	29
41	Dynamic scaling for the growth of non-equilibrium fluctuations during thermophoretic diffusion in microgravity. Scientific Reports, 2015, 5, 14486.	1.6	28
42	The NEUF-DIX space project - Non-EquilibriUm Fluctuations during DIffusion in compleX liquids. European Physical Journal E, 2016, 39, 119.	0.7	28
43	European Space Agency experiments on thermodiffusion of fluid mixtures in space. European Physical Journal E, 2019, 42, 86.	0.7	28
44	How Archer Fish Achieve a Powerful Impact: Hydrodynamic Instability of a Pulsed Jet in Toxotes jaculatrix. PLoS ONE, 2012, 7, e47867.	1.1	26
45	Simultaneous characterization of rotational and translational diffusion of optically anisotropic particles by optical microscopy. Journal of Physics Condensed Matter, 2016, 28, 195201.	0.7	26
46	Transient oscillations in Soret-driven convection in a colloidal suspension. European Physical Journal E, 2004, 15, 305-309.	0.7	25
47	Multi-spot, label-free immunoassay on reflectionless glass. Biosensors and Bioelectronics, 2015, 74, 539-545.	5.3	23
48	Equilibrium and non-equilibrium concentration fluctuations in a critical binary mixture. European Physical Journal E, 2016, 39, 103.	0.7	23
49	Nematic Liquid Crystals Embedded in Cubic Microlattices: Memory Effects and Bistable Pixels. Advanced Functional Materials, 2013, 23, 3990-3994.	7.8	21
50	Image windowing mitigates edge effects in Differential Dynamic Microscopy. European Physical Journal E, 2017, 40, 97.	0.7	21
51	Fast-onset Soret-driven convection in a colloidal suspension heated from above. Philosophical Magazine, 2003, 83, 2023-2031.	0.7	20
52	Quantitative optical microscopy of colloids: The legacy of Jean Perrin. Current Opinion in Colloid and Interface Science, 2018, 34, 47-58.	3.4	19
53	Tracking-Free Determination of Single-Cell Displacements and Division Rates in Confluent Monolayers. Frontiers in Physics, 2018, 6, .	1.0	19
54	Differential dynamic microscopy for the characterization of polymer systems. Journal of Polymer Science, 2022, 60, 1079-1089.	2.0	18

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55	Dark field differential dynamic microscopy enables accurate characterization of the roto-translational dynamics of bacteria and colloidal clusters. Journal of Physics Condensed Matter, 2018, 30, 025901.	0.7	15
56	Giant Fluctuations Induced by Thermal Diffusion in Complex Liquids. Microgravity Science and Technology, 2020, 32, 873-887.	0.7	14
57	Mutual Voronoi Tessellation in Spoke Pattern Convection. Physical Review Letters, 2008, 100, 188104.	2.9	12
58	Disentangling collective motion and local rearrangements in 2D and 3D cell assemblies. Soft Matter, 2021, 17, 3550-3559.	1.2	12
59	Multiple dynamic regimes in a coarsening foam. Journal of Physics Condensed Matter, 2021, 33, 024002.	0.7	9
60	Deformation profiles and microscopic dynamics of complex fluids during oscillatory shear experiments. Soft Matter, 2021, 17, 8553-8566.	1.2	8
61	Gradient-driven fluctuations in microgravity. Journal of Physics Condensed Matter, 2012, 24, 284134.	0.7	7
62	Probing roto-translational diffusion of small anisotropic colloidal particles with a bright-field microscope. European Physical Journal E, 2021, 44, 61.	0.7	7
63	Hecw controls oogenesis and neuronal homeostasis by promoting the liquid state of ribonucleoprotein particles. Nature Communications, 2021, 12, 5488.	5.8	7
64	Exploring soft matter with x-rays: from the discovery of the DNA structure to the challenges of free electron lasers. Journal of Physics Condensed Matter, 2010, 22, 323102.	0.7	6
65	Fluctuations in Diffusion Processes in Microgravity. Annals of the New York Academy of Sciences, 2006, 1077, 351-364.	1.8	5
66	Reciprocal Space Study of Brownian Yet Non-Gaussian Diffusion of Small Tracers in a Hard-Sphere Glass. Frontiers in Physics, 0, 10, .	1.0	5
67	Optical generation of Voronoi diagram. Optics Express, 2008, 16, 4819.	1.7	3
68	MicroMotility: State of the art, recent accomplishments and perspectives on the mathematical modeling of bio-motility at microscopic scales. Mathematics in Engineering, 2020, 2, 230-252.	0.5	3
69	Bistability of Dielectrically Anisotropic Nematic Crystals and the Adaptation of Endothelial Collectives to Stress Fields. Advanced Science, 2022, , 2102148.	5.6	3
70	Liquid Crystals: Nematic Liquid Crystals Embedded in Cubic Microlattices: Memory Effects and Bistable Pixels (Adv. Funct. Mater. 32/2013). Advanced Functional Materials, 2013, 23, 4060-4060.	7.8	2
71	Multiscale heterogeneous dynamics in two-dimensional glassy colloids. Journal of Chemical Physics, 2022, 156, 164906.	1.2	2
72	Non-invasive measurement of nuclear relative stiffness from quantitative analysis of microscopy data. European Physical Journal E, 2022, 45, .	0.7	2

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73	Effect of configuration of the microchannels fabricated by femtosecond laser micromachining on topological defects in confined liquid crystals. Proceedings of SPIE, 2012, , .	0.8	1
74	Soft X-ray Fresnel-like diffraction from thin films edges by an ultrafast laser plasma source. , 2007, , .		0
75	Non-equilibrium fluctuations on earth and in micro-gravity. The GRADFLEX experiment. Journal of Physics: Conference Series, 2011, 327, 012023.	0.3	0
76	Bistability of nematic liquid crystals confined in 3D scaffold produced by two-photon polymerization. , 2012, , .		0
77	THERMOPHORETIC CONVECTION OF SILICA NANOPARTICLES. , 2007, , .		0
78	Portable, Multispot, Label-Free Immunoassay on a Phantom Perfluorinated Plastic. Lecture Notes in Electrical Engineering, 2015, , 13-17.	0.3	0