

# Henrik Flyvbjerg

## List of Publications by Year in descending order

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138  
papers

10,137  
citations

66336

42  
h-index

36025

97  
g-index

142  
all docs

142  
docs citations

142  
times ranked

11186  
citing authors

#	ARTICLE	IF	CITATIONS
1	Error estimates on averages of correlated data. Journal of Chemical Physics, 1989, 91, 461-466.	3.0	1,252
2	Error filtering, pair assembly and error correction for next-generation sequencing reads. Bioinformatics, 2015, 31, 3476-3482.	4.1	1,102
3	Power spectrum analysis for optical tweezers. Review of Scientific Instruments, 2004, 75, 594-612.	1.3	842
4	Optimized localization analysis for single-molecule tracking and super-resolution microscopy. Nature Methods, 2010, 7, 377-381.	19.0	791
5	Designing optimal spatial filters for single-trial EEG classification in a movement task. Clinical Neurophysiology, 1999, 110, 787-798.	1.5	723
6	Calibration of optical tweezers with positional detection in the back focal plane. Review of Scientific Instruments, 2006, 77, 103101.	1.3	294
7	Cell Motility as Persistent Random Motion: Theories from Experiments. Biophysical Journal, 2005, 89, 912-931.	0.5	250
8	Evolution as a self-organized critical phenomenon.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 5209-5213.	7.1	218
9	Strong low-pass filtering effects on water vapour flux measurements with closed-path eddy correlation systems. Agricultural and Forest Meteorology, 2007, 147, 140-156.	4.8	203
10	Mean field theory for a simple model of evolution. Physical Review Letters, 1993, 71, 4087-4090.	7.8	201
11	Single-molecule denaturation mapping of DNA in nanofluidic channels. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13294-13299.	7.1	183
12	Optimal estimation of diffusion coefficients from single-particle trajectories. Physical Review E, 2014, 89, 022726.	2.1	170
13	Nanoconfinement-Enhanced Conformational Response of Single DNA Molecules to Changes in Ionic Environment. Physical Review Letters, 2007, 99, 058302.	7.8	161
14	Contributions of the glycocalyx, endothelium, and extravascular compartment to the blood-brain barrier. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9429-E9438.	7.1	152
15	Kinetics of self-assembling microtubules: an "inverse problem" in biochemistry.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 5975-5979.	7.1	148
16	Stochastic Dynamics of Microtubules: A Model for Caps and Catastrophes. Physical Review Letters, 1994, 73, 2372-2375.	7.8	115
17	Automatic differentiation of multichannel EEG signals. IEEE Transactions on Biomedical Engineering, 2001, 48, 111-116.	4.2	113
18	Microtubule dynamics: Caps, catastrophes, and coupled hydrolysis. Physical Review E, 1996, 54, 5538-5560.	2.1	111

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19	Simple Model of Self-Organized Biological Evolution. <i>Physical Review Letters</i> , 1994, 73, 906-909.	7.8	105
20	Cell motility as random motion: A review. <i>European Physical Journal: Special Topics</i> , 2008, 157, 1-15.	2.6	100
21	A Non-Gaussian Distribution Quantifies Distances Measured with Fluorescence Localization Techniques. <i>Biophysical Journal</i> , 2006, 90, 668-671.	0.5	95
22	Model for coarsening froths and foams. <i>Physical Review E</i> , 1993, 47, 4037-4054.	2.1	94
23	â€˜Dicty dynamicsâ€™: <i>Dictyostelium</i> motility as persistent random motion. <i>Physical Biology</i> , 2011, 8, 046006.	1.8	94
24	Self-organized critical forest-fire model: Mean-field theory and simulation results in 1 to 6 dimensions. <i>Physical Review Letters</i> , 1993, 71, 2737-2740.	7.8	92
25	Evolution in a rugged fitness landscape. <i>Physical Review A</i> , 1992, 46, 6714-6723.	2.5	88
26	MatLab program for precision calibration of optical tweezers. <i>Computer Physics Communications</i> , 2004, 159, 225-240.	7.5	86
27	Integrated view of genome structure and sequence of a single DNA molecule in a nanofluidic device. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 4893-4898.	7.1	86
28	Structural Microtubule Cap: Stability, Catastrophe, Rescue, and Third State. <i>Biophysical Journal</i> , 2002, 83, 1317-1330.	0.5	84
29	The Free NADH Concentration Is Kept Constant in Plant Mitochondria under Different Metabolic Conditions. <i>Plant Cell</i> , 2006, 18, 688-698.	6.6	84
30	Modeling elastic properties of microtubule tips and walls. <i>European Biophysics Journal</i> , 1998, 27, 501-513.	2.2	83
31	Directed self-organization of single DNA molecules in a nanoslit via embedded nanopit arrays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 79-84.	7.1	82
32	Unintended filtering in a typical photodiode detection system for optical tweezers. <i>Journal of Applied Physics</i> , 2003, 93, 3167-3176.	2.5	81
33	Experimental investigation of bubble formation during capillary filling of SiO <sub>2</sub> nanoslits. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	76
34	Harmonic force spectroscopy measures load-dependent kinetics of individual human Î²-cardiac myosin molecules. <i>Nature Communications</i> , 2015, 6, 7931.	12.8	65
35	Power spectrum analysis with least-squares fitting: Amplitude bias and its elimination, with application to optical tweezers and atomic force microscope cantilevers. <i>Review of Scientific Instruments</i> , 2010, 81, 075103.	1.3	62
36	Spontaneous nucleation of microtubules. <i>Physical Review E</i> , 1995, 51, 5058-5063.	2.1	55

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37	tweezercalib 2.0: Faster version of MatLab package for precise calibration of optical tweezers. Computer Physics Communications, 2006, 174, 518-520.	7.5	49
38	Simplest Possible Self-Organized Critical System. Physical Review Letters, 1996, 76, 940-943.	7.8	47
39	Error estimates on averages of correlated data. , 1998, , 88-103.		47
40	Power spectrum analysis for optical tweezers. II: Laser wavelength dependence of parasitic filtering, and how to achieve high bandwidth. Review of Scientific Instruments, 2006, 77, 063106.	1.3	47
41	Combining Single-Molecule Optical Trapping and Small-Angle X-Ray Scattering Measurements to Compute the Persistence Length of a Protein ERK 1±-Helix. Biophysical Journal, 2009, 97, 2993-2999.	0.5	46
42	Harmonic oscillator in heat bath: Exact simulation of time-lapse-recorded data and exact analytical benchmark statistics. Physical Review E, 2011, 83, 041103.	2.1	46
43	Intracellular Signaling by Diffusion: Can Waves of Hydrogen Peroxide Transmit Intracellular Information in Plant Cells?. Frontiers in Plant Science, 2012, 3, 295.	3.6	44
44	Limited flexibility of the inter-protofilament bonds in microtubules assembled from pure tubulin. European Biophysics Journal, 1998, 27, 490-500.	2.2	43
45	Mining multi-channel EEG for its information content: an ANN-based method for a brainâ€“computer interface. Neural Networks, 1998, 11, 1429-1433.	5.9	43
46	tweezercalib 2.1: Faster version of MatLab package for precise calibration of optical tweezers. Computer Physics Communications, 2006, 175, 572-573.	7.5	42
47	Coevolution in a rugged fitness landscape. Physical Review A, 1992, 46, 6724-6730.	2.5	40
48	Cell motility, morphology, viability and proliferation in response to nanotopography on silicon black. Nanoscale, 2012, 4, 3739.	5.6	39
49	Pressure-Driven DNA in Nanogroove Arrays: Complex Dynamics Leads to Length- and Topology-Dependent Separation. Nano Letters, 2011, 11, 1598-1602.	9.1	38
50	Strong physical constraints on sequence-specific target location by proteins on DNA molecules. Nucleic Acids Research, 2006, 34, 2550-2557.	14.5	36
51	Why is the microtubule lattice helical?. Biology of the Cell, 2007, 99, 117-128.	2.0	36
52	Self-organization of cellular magnetic-domain patterns. Physical Review A, 1992, 45, 2192-2200.	2.5	34
53	Modelling NADH turnover in plant mitochondria. Physiologia Plantarum, 2004, 120, 370-385.	5.2	34
54	Optimized measurements of separations and angles between intra-molecular fluorescent markers. Nature Communications, 2015, 6, 8621.	12.8	34

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55	The colour of thermal noise in classical Brownian motion: a feasibility study of direct experimental observation. <i>New Journal of Physics</i> , 2005, 7, 38-38.	2.9	32
56	Estimation of motility parameters from trajectory data. <i>European Physical Journal: Special Topics</i> , 2015, 224, 1151-1168.	2.6	31
57	Classification of movement-related EEG in a memorized delay task experiment. <i>Clinical Neurophysiology</i> , 2000, 111, 1353-1365.	1.5	30
58	Chronic rejection of a lung transplant is characterized by a profile of specific autoantibodies. <i>Immunology</i> , 2010, 130, 427-435.	4.4	30
59	Microtubule's Conformational Cap.. <i>Cell Structure and Function</i> , 1999, 24, 299-303.	1.1	30
60	In situ viscometry by optical trapping interferometry. <i>Applied Physics Letters</i> , 2008, 93, 184102.	3.3	29
61	Modeling Microtubule Oscillations. <i>Physical Review Letters</i> , 1997, 79, 519-522.	7.8	28
62	How to connect time-lapse recorded trajectories of motile microorganisms with dynamical models in continuous time. <i>Physical Review E</i> , 2016, 94, 062401.	2.1	28
63	of the non-linear $\dot{f}$ -model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1989, 219, 323-328.	4.1	27
64	-expansion of the non-linear $\dot{f}$ -model: The first three orders. <i>Nuclear Physics B</i> , 1990, 344, 646-664.	2.5	27
65	Concentrating Genomic Length DNA in a Microfabricated Array. <i>Physical Review Letters</i> , 2015, 114, 198303.	7.8	27
66	Single-particle trajectories reveal two-state diffusion-kinetics of hOGG1 proteins on DNA. <i>Nucleic Acids Research</i> , 2018, 46, 2446-2458.	14.5	27
67	Exact stopping cross section of the quantum harmonic oscillator for a penetrating point charge of arbitrary strength. <i>Physical Review A</i> , 1992, 45, 3025-3031.	2.5	23
68	Resummation of the of the non-linear $\dot{f}$ -model by Dyson-Schwinger equations. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1988, 206, 285-289.	4.1	22
69	A Solvable Model for Coarsening Soap Froths and Other Domain Boundary Networks in Two Dimensions. <i>Physica Scripta</i> , 1991, T38, 49-54.	2.5	22
70	Some exact results for the $O(N)$ -symmetric non-linear $\dot{f}$ -model to $O(1/N)$ . <i>Nuclear Physics B</i> , 1991, 348, 714-736.	2.5	20
71	Mass gap of $O(N)$ $\dot{f}$ -models in 2D. Support for exact results from -expansion. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1991, 266, 92-98.	4.1	20
72	Thermophoretic Forces on DNA Measured with a Single-Molecule Spring Balance. <i>Physical Review Letters</i> , 2014, 113, 268301.	7.8	20

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73	“Calibration-on-the-spot” How to calibrate an EMCCD camera from its images. Scientific Reports, 2016, 6, 28680.	3.3	19
74	Optical mapping of single-molecule human DNA in disposable, mass-produced all-polymer devices. Journal of Micromechanics and Microengineering, 2015, 25, 105002.	2.6	18
75	Single-molecule DNA-mapping and whole-genome sequencing of individual cells. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11192-11197.	7.1	18
76	Magnetic susceptibility of $O(N)$ $\phi^4$ -models in 2D. Weak coupling results from expansion. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 266, 99-106.	4.1	17
77	Dynamics of soap froth. Physica A: Statistical Mechanics and Its Applications, 1993, 194, 298-306.	2.6	17
78	Microtubule dynamics. II. Kinetics of self-assembly. Physical Review E, 1997, 56, 7083-7099.	2.1	17
79	Barkas effect in a central collision: Exact numerical results and the tenth-order Born series. Physical Review A, 1990, 42, 3962-3970.	2.5	16
80	Fully Stretched Single DNA Molecules in a Nanofluidic Chip Show Large-Scale Structural Variation. Biophysical Journal, 2013, 104, 175a.	0.5	14
81	Dyson-Schwinger equations for the non-linear $\phi^4$ -model. Nuclear Physics B, 1990, 332, 687-708.	2.5	13
82	Integrative analysis correlates donor transcripts to recipient autoantibodies in primary graft dysfunction after lung transplantation. Immunology, 2011, 132, 394-400.	4.4	12
83	Scaling versus asymptotic scaling in the non-linear $\phi^4$ -model in 2D. continuum version. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1990, 245, 533-544.	4.1	11
84	Single-molecule experiment with optical tweezers: improved analysis of the diffusion of the $\lambda$ -receptor in <i>E. coli</i> 's outer membrane. Journal of Physics Condensed Matter, 2003, 15, S1737-S1746.	1.8	11
85	Theory of optical-tweezers forces near a plane interface. Physical Review A, 2016, 94, .	2.5	11
86	Transition state theory demonstrated at the micron scale with out-of-equilibrium transport in a confined environment. Nature Communications, 2016, 7, 10227.	12.8	11
87	What Synchronization?. Europhysics Letters, 1993, 23, 629-634.	2.0	10
88	New technologies for DNA analysis “ a review of the READNA Project. New Biotechnology, 2016, 33, 311-330.	4.4	10
89	Imaging therapeutic peptide transport across intestinal barriers. RSC Chemical Biology, 2021, 2, 1115-1143.	4.1	10
90	Group space decimation: A way to simulate QCD by the 1080 element subgroup of $SU(3)$ ?. Nuclear Physics B, 1984, 243, 350-364.	2.5	9

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91	Dynamics of ordering in highly degenerate models with anisotropic grain-boundary potential: Effects of temperature and vortex formation. <i>Physical Review B</i> , 1989, 40, 9070-9079.	3.2	9
92	Comment on "Fabrication of a Synthetic Nanopore Ion Pump". <i>Physical Review Letters</i> , 2003, 91, 179801; author reply 179802.	7.8	9
93	How To Characterize Individual Nanosize Liposomes with Simple Self-Calibrating Fluorescence Microscopy. <i>Nano Letters</i> , 2018, 18, 2844-2851.	9.1	9
94	How to determine local stretching and tension in a flow-stretched DNA molecule. <i>Physical Review E</i> , 2016, 93, 042405.	2.1	8
95	Classification of DNA nucleotides with transverse tunneling currents. <i>Nanotechnology</i> , 2017, 28, 015502.	2.6	8
96	How to Measure Load-Dependent Kinetics of Individual Motor Molecules Without a Force-Clamp. <i>Methods in Enzymology</i> , 2017, 582, 1-29.	1.0	8
97	Comment on "Direct Measurement of the Oscillation Frequency in an Optical-Tweezers Trap by Parametric Excitation". <i>Physical Review Letters</i> , 2007, 98, 189801; author reply 189803.	7.8	7
98	Interpolating between Ising, XY-, and non-linear $\tilde{f}$ -models. <i>Nuclear Physics B</i> , 1991, 360, 264-282.	2.5	6
99	How to Measure Separations and Angles Between Intramolecular Fluorescent Markers. <i>Methods in Enzymology</i> , 2016, 581, 147-185.	1.0	6
100	Confined Brownian Motion Tracked With Motion Blur: Estimating Diffusion Coefficient and Size of Confining Space. <i>Frontiers in Physics</i> , 2021, 8, .	2.1	6
101	Self-organized critical pinball machine. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 340, 552-558.	2.6	5
102	Brownian Motion after Einstein: Some New Applications and New Experiments. , 2007, , 181-199.		5
103	Enrichment of megabase-sized DNA molecules for single-molecule optical mapping and next-generation sequencing. <i>Scientific Reports</i> , 2017, 7, 17893.	3.3	5
104	Character table for the 1080 "element point" like subgroup of SU(3). <i>Journal of Mathematical Physics</i> , 1985, 26, 2985-2989.	1.1	4
105	Interpolating between O(N)-symmetric $\tilde{f}$ -models with N = 1, 2, 3. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1991, 258, 386-390.	4.1	4
106	Self-organization of magnetic domain patterns. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992, 185, 3-10.	2.6	4
107	Flyvbjerg Replies:. <i>Physical Review Letters</i> , 1996, 77, 4274-4274.	7.8	3
108	Nanoimprinted polymer chips for light induced local heating of liquids in micro- and nanochannels. , 2010, , .		3

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109	ASSESSMENT OF AUTOMATED ANALYSES OF CELL MIGRATION ON FLAT AND NANOSTRUCTURED SURFACES. Computational and Structural Biotechnology Journal, 2012, 1, e201207004.	4.1	3
110	Configurational Statistics of Magnetic Bead Detection with Magnetoresistive Sensors. PLoS ONE, 2015, 10, e0141115.	2.5	3
111	Camera-based localization microscopy optimized with calibrated structured illumination. Communications Physics, 2021, 4, .	5.3	3
112	1/N-expansion of the non-linear $\tilde{f}$ -model: The first three orders. Nuclear Physics, Section B, Proceedings Supplements, 1990, 17, 343-346.	0.4	2
113	Parasitic filtering in position detection systems for optical tweezers. , 2004, , .		2
114	Past attractions set future course. Nature Physics, 2021, 17, 771-772.	16.7	2
115	Resonant effects in a voltage-activated channel gating. , 2004, , .		1
116	QUANTITATIVE STUDIES OF SUBDIFFUSION IN LIVING CELLS AND ACTIN NETWORKS. Biophysical Reviews and Letters, 2006, 01, 411-421.	0.8	1
117	Combining Single Molecule Optical Trapping and Small Angle X-Ray Scattering Measurements to Compute the Persistence Length of a Protein Alpha-Helix. Biophysical Journal, 2010, 98, 24a.	0.5	1
118	Optimal Estimation of Diffusion Coefficients from Noisy Single-Particle Trajectories. Biophysical Journal, 2013, 104, 174a.	0.5	1
119	How to get into that "room at the bottom" Fig. 1.. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13249-13250.	7.1	1
120	Sifting noisy data for truths about noisy systems. Physics of Life Reviews, 2015, 13, 141-143.	2.8	1
121	The non-linear $\tilde{f}$ -model to. Nuclear Physics, Section B, Proceedings Supplements, 1989, 9, 653-657.	0.4	0
122	Computer Simulation of Vortex Formation During Domain Growth. Physica Scripta, 1990, T33, 180-184.	2.5	0
123	1/N-expansions of $\tilde{f}$ -models in 2 and 4 dimensions: Taking them to their technical limits. Nuclear Physics, Section B, Proceedings Supplements, 1991, 20, 44-47.	0.4	0
124	Interpolating between O(N)-symmetric $\tilde{f}$ -models with N = 1,2,3. Nuclear Physics, Section B, Proceedings Supplements, 1991, 20, 685-688.	0.4	0
125	Efficient evaluation of Feynman diagrams on lattices. Computer Physics Communications, 1992, 69, 59-64.	7.5	0
126	Quantum mechanics on the personal computer. Computer Physics Communications, 1993, 77, 300-301.	7.5	0



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127	530: Microarray Based Measurement of Autoantibodies Identifies Early Development of BOS in Lung Transplant Patients. Journal of Heart and Lung Transplantation, 2008, 27, S250-S251.	0.6	0
128	Modeling of DNA in Nanochannels using Linear Elasticity Theory. Biophysical Journal, 2010, 98, 195a.	0.5	0
129	Optimal Estimation of the Diffusion Coefficient from Noisy Time-Series Measurements. Biophysical Journal, 2010, 98, 188a.	0.5	0
130	Optimizing Super Resolution Microscopy. Biophysical Journal, 2010, 98, 182a.	0.5	0
131	Data-Driven Analysis of Cell Motility on Nanostructured Surfaces. Biophysical Journal, 2010, 98, 575a.	0.5	0
132	Optimal Estimation of Location and Orientation of Myosin V Lever Arm from Focused Diffraction-Limited Images of Single, Double-Bound Fluorophore. Biophysical Journal, 2011, 100, 477a.	0.5	0
133	Biological Structure from Precise and Accurate Estimation of Fluorophore Orientations and Distances: Proof-of-Principle using Internally Labeled dsDNA. Biophysical Journal, 2012, 102, 419a-420a.	0.5	0
134	Calibration on the Spot of EMCCD Cameras for Super Resolution Microscopy. Biophysical Journal, 2013, 104, 668a.	0.5	0
135	Nanofluidics to Enhance Single Molecule DNA Imaging: Detecting Genomic Structural Variation in Humans. Biophysical Journal, 2014, 106, 395a.	0.5	0
136	Harmonic Force Spectroscopy Reveals a Force-Velocity Curve from a Single Human Beta Cardiac Myosin Motor. Biophysical Journal, 2014, 106, 453a.	0.5	0
137	The $O(N)$ -Symmetric Non-Linear $\phi^4$ -Model to Three Leading Orders in $1/N$ . NATO ASI Series Series B: Physics, 1990, , 153-166.	0.2	0
138	A self-organized critical pin-ball machine. NATO ASI Series Series B: Physics, 1995, , 303-311.	0.2	0