

# Philip C Nelson

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3248814/publications.pdf>

Version: 2024-02-01

112  
papers

5,887  
citations

50244

46  
h-index

74108

75  
g-index

115  
all docs

115  
docs citations

115  
times ranked

3650  
citing authors

#	ARTICLE	IF	CITATIONS
1	Stochastic Modelling of Reaction-Diffusion Processes by Radek Erban and S. Jonathan Chapman. The Biophysicist, 2020, 1, .	0.1	0
2	Stochastic Simulation to Visualize Gene Expression and Error Correction in Living Cells. The Biophysicist, 2020, 1, .	0.1	1
3	A Demonstration of the Infrared Activity of Carbon Dioxide. Physics Teacher, 2019, 57, 246-249.	0.2	4
4	The Role of Quantum Decoherence in FRET. Biophysical Journal, 2018, 115, 167-172.	0.2	10
5	Time to Stop Telling Biophysics Students that Light Is Primarily a Wave. Biophysical Journal, 2018, 114, 761-765.	0.2	0
6	Light, Imaging, Vision: An Interdisciplinary Undergraduate Course. Biophysical Journal, 2017, 112, 463a.	0.2	0
7	Old and new results about single-photon sensitivity in human vision. Physical Biology, 2016, 13, 025001.	0.8	8
8	Learning Physical Biology via Modeling and Simulation: A New Course and Textbook for Science and Engineering Undergraduates. Biophysical Journal, 2016, 110, 172a.	0.2	0
9	Neural Spikes, Identification from a Multielectrode Array. , 2015, , 1019-1023.		0
10	Wavefronts and Mechanical Signaling in Early Drosophila Embryos. Biophysical Journal, 2013, 104, 329a.	0.2	0
11	Tilting and Wobble of Myosin V by High-Speed Single-Molecule Polarized Fluorescence Microscopy. Biophysical Journal, 2013, 104, 1263-1273.	0.2	58
12	Transformation of Stimulus Correlations by the Retina. PLoS Computational Biology, 2013, 9, e1003344.	1.5	16
13	The Syncytial Drosophila Embryo as a Mechanically Excitable Medium. PLoS ONE, 2013, 8, e77216.	1.1	36
14	Spare the (Elastic) Rod. Science, 2012, 337, 1045-1046.	6.0	18
15	Single Molecule Myosin V Dynamics Using High Time Resolution Polarized TIRF. Biophysical Journal, 2011, 100, 154a.	0.2	0
16	Fast, Scalable, Bayesian Spike Identification for Multi-Electrode Arrays. PLoS ONE, 2011, 6, e19884.	1.1	61
17	Changepoint Analysis for Single-Molecule Polarized Total Internal Reflection Fluorescence Microscopy Experiments. Methods in Enzymology, 2011, 487, 431-463.	0.4	17
18	First-principles calculation of DNA looping in tethered particle experiments. Physical Biology, 2009, 6, 025001.	0.8	52

#	ARTICLE	IF	CITATIONS
19	First-principles Calculation Of DNA Looping In Tethered Particle Experiments. Biophysical Journal, 2009, 96, 556a.	0.2	2
20	Calibration of Tethered Particle Motion Experiments. The IMA Volumes in Mathematics and Its Applications, 2009, , 123-138.	0.5	22
21	Concentration and Length Dependence of DNA Looping in Transcriptional Regulation. PLoS ONE, 2009, 4, e5621.	1.1	82
22	Twirling of Actin by Myosins II and V Observed via Polarized TIRF in a Modified Gliding Assay. Biophysical Journal, 2008, 95, 5820-5831.	0.2	66
23	The role of microtubule movement in bidirectional organelle transport. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10011-10016.	3.3	131
24	Hitchhiking through the cytoplasm. Europhysics Letters, 2008, 81, 18001.	0.7	3
25	Diffusive hidden Markov model characterization of DNA looping dynamics in tethered particle experiments. Physical Biology, 2007, 4, 205-219.	0.8	13
26	Elementary simulation of tethered Brownian motion. American Journal of Physics, 2007, 75, 520-523.	0.3	24
27	DNA Looping Kinetics Analyzed Using Diffusive Hidden Markov Model. Biophysical Journal, 2007, 92, L64-L66.	0.2	37
28	Elasticity of Short DNA Molecules: Theory and Experiment for Contour Lengths of $0.6 \leq L \leq 1 \mu\text{m}$ . Biophysical Journal, 2007, 93, 4360-4373.	0.2	122
29	Biological consequences of tightly bent DNA: The other life of a macromolecular celebrity. Biopolymers, 2007, 85, 115-130.	1.2	158
30	Colloidal particle motion as a diagnostic of DNA conformational transitions. Current Opinion in Colloid and Interface Science, 2007, 12, 307-313.	3.4	8
31	Tethered Particle Motion as a Diagnostic of DNA Tether Length. Journal of Physical Chemistry B, 2006, 110, 17260-17267.	1.2	91
32	Entropic Elasticity of DNA with a Permanent Kink. Macromolecules, 2006, 39, 8816-8821.	2.2	11
33	Generalized theory of semiflexible polymers. Physical Review E, 2006, 73, 031906.	0.8	91
34	High flexibility of DNA on short length scales probed by atomic force microscopy. Nature Nanotechnology, 2006, 1, 137-141.	15.6	345
35	Effect of supercoiling on formation of protein-mediated DNA loops. Physical Review E, 2006, 74, 061907.	0.8	27
36	Volume-Exclusion Effects in Tethered-Particle Experiments: Bead Size Matters. Physical Review Letters, 2006, 96, 088306.	2.9	113

#	ARTICLE	IF	CITATIONS
37	Teaching Biological Physics. <i>Physics Today</i> , 2005, 58, 46-51.	0.3	8
38	Exact theory of kinkable elastic polymers. <i>Physical Review E</i> , 2005, 71, 021909.	0.8	178
39	Reply to "Comment on "Theory of high-force DNA stretching and overstretching": <i>Physical Review E</i> , 2004, 70, 013902.	0.8	2
40	Comment on "Rotational Drag on DNA: A Single Molecule Experiment": <i>Physical Review Letters</i> , 2004, 92, 159801; author reply 159802.	2.9	2
41	Theory of high-force DNA stretching and overstretching. <i>Physical Review E</i> , 2003, 67, 051906.	0.8	175
42	The bend stiffness of S-DNA. <i>Europhysics Letters</i> , 2003, 62, 760-766.	0.7	16
43	Charge-reversal instability in mixed bilayer vesicles. <i>Physical Review E</i> , 2000, 62, 2608-2619.	0.8	10
44	Transport of torsional stress in DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 14342-14347.	3.3	118
45	Electrostatic Repulsion of Positively Charged Vesicles and Negatively Charged Objects. <i>Science</i> , 1999, 285, 394-397.	6.0	66
46	Surfactant-Mediated Two-Dimensional Crystallization of Colloidal Crystals. <i>Science</i> , 1999, 286, 2325-2328.	6.0	113
47	Elasticity theory of a twisted stack of plates. <i>European Physical Journal B</i> , 1998, 1, 95-102.	0.6	18
48	Entropic Elasticity of Twist-Storing Polymers. <i>Macromolecules</i> , 1998, 31, 6333-6347.	2.2	181
49	Dynamic Excitations in Membranes Induced by Optical Tweezers. <i>Biophysical Journal</i> , 1998, 75, 294-320.	0.2	128
50	New Measurements of DNA Twist Elasticity. <i>Biophysical Journal</i> , 1998, 74, 2501-2503.	0.2	20
51	Hard Spheres in Vesicles: Curvature-Induced Forces and Particle-Induced Curvature. <i>Physical Review Letters</i> , 1998, 80, 409-412.	2.9	130
52	Sequence-Disorder Effects on DNA Entropic Elasticity. <i>Physical Review Letters</i> , 1998, 80, 5810-5812.	2.9	57
53	Direct determination of DNA twist-stretch coupling. <i>Europhysics Letters</i> , 1997, 38, 237-242.	0.7	94
54	Spontaneous Expulsion of Giant Lipid Vesicles Induced by Laser Tweezers. <i>Physical Review Letters</i> , 1997, 78, 386-389.	2.9	30

#	ARTICLE	IF	CITATIONS
55	Torsional directed walks, entropic elasticity, and DNA twist stiffness. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 14418-14422.	3.3	262
56	Dynamically stabilized pores in bilayer membranes. Biophysical Journal, 1997, 72, 2211-2216.	0.2	91
57	Front Propagation in the Pearling Instability of Tubular Vesicles. Journal De Physique II, 1996, 6, 767-796.	0.9	55
58	Twist-Stretch Elasticity of DNA. Materials Research Society Symposia Proceedings, 1996, 463, 43.	0.1	4
59	Straightening of Thermal Fluctuations in Semiflexible Polymers by Applied Tension. Physical Review Letters, 1996, 77, 5389-5392.	2.9	55
60	Role of Bilayer Tilt Difference in Equilibrium Membrane Shapes. Physical Review Letters, 1996, 77, 5237-5240.	2.9	82
61	What Future Will We Choose for Physics?. Physics Today, 1995, 48, 25-30.	0.3	15
62	Fluctuating Membranes with Tilt Order. Journal De Physique II, 1995, 5, 1671-1678.	0.9	15
63	Dynamical Theory of the Pearling Instability in Cylindrical Vesicles. Physical Review Letters, 1995, 74, 3384-3387.	2.9	122
64	Measure factors, tension, and correlations of fluid membranes. Journal De Physique II, 1994, 4, 931-949.	0.9	62
65	Bosonization on Higher Genus Riemann Surface. , 1994, , 332-381.		2
66	BOSONIZATION IN ARBITRARY GENUS. , 1994, , 382-388.		0
67	Renormalization of chiral couplings in titled bilayer membranes. Journal De Physique II, 1993, 3, 1535-1569.	0.9	31
68	Rigid chiral membranes. Physical Review Letters, 1992, 69, 3409-3412.	2.9	62
69	New discrete states of strings near a black hole. Nuclear Physics B, 1992, 374, 123-155.	0.9	30
70	Semirigid geometry. Communications in Mathematical Physics, 1992, 147, 253-275.	1.0	8
71	Physical states of the string in a black hole background. Nuclear Physics, Section B, Proceedings Supplements, 1992, 25, 104-108.	0.5	0
72	The dilaton equation in semirigid string theory. Nuclear Physics B, 1991, 366, 255-272.	0.9	19

#	ARTICLE	IF	CITATIONS
73	Semirigid construction of topological supergravities. Nuclear Physics B, 1991, 365, 633-652.	0.9	6
74	Topological couplings and contact terms in 2d field theory. Communications in Mathematical Physics, 1991, 138, 273-290.	1.0	40
75	Semirigid supergravity. Physical Review Letters, 1991, 66, 1955-1958.	2.9	19
76	STRESS TENSOR PERTURBATIONS IN CONFORMAL FIELD THEORY. International Journal of Modern Physics A, 1991, 06, 4909-4924.	0.5	22
77	Virasoro model space. Communications in Mathematical Physics, 1990, 134, 539-554.	1.0	11
78	Effective field equations for fermionic strings. Nuclear Physics B, 1990, 332, 83-130.	0.9	27
79	Beyond Conformal Field Theory. NATO ASI Series Series B: Physics, 1990, , 409-413.	0.2	0
80	Covariant insertion of general vertex operators. Physical Review Letters, 1989, 62, 993-996.	2.9	55
81	Unambiguous fermionic-string amplitudes. Physical Review Letters, 1989, 63, 24-27.	2.9	28
82	Cohomology and the operator formalism. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 221, 31-34.	1.5	2
83	Those Magnetic Feynman Tapes. Physics Today, 1989, 42, 13-15.	0.3	0
84	Anomalies in Nonlinear Sigma Models. , 1989, , 1210-1213.		0
85	Line bundles on super Riemann surfaces. Communications in Mathematical Physics, 1988, 118, 289-302.	1.0	29
86	The geometry of super Riemann surfaces. Communications in Mathematical Physics, 1988, 116, 607-634.	1.0	58
87	Holomorphic coordinates for supermoduli space. Communications in Mathematical Physics, 1988, 115, 167-175.	1.0	13
88	Fermionic strings in the operator formalism. Nuclear Physics B, 1988, 311, 333-400.	0.9	76
89	INTRODUCTION TO SUPERMANIFOLDS. International Journal of Modern Physics A, 1988, 03, 585-590.	0.5	6
90	Torsion Constraints and Super Riemann Surfaces. Physical Review Letters, 1987, 59, 2619-2622.	2.9	28

#	ARTICLE	IF	CITATIONS
91	Semi-off-shell string amplitudes. Nuclear Physics B, 1987, 281, 127-144.	0.9	58
92	Lectures on strings and moduli space. Physics Reports, 1987, 149, 337-375.	10.3	72
93	Bosonization on higher genus Riemann surfaces. Communications in Mathematical Physics, 1987, 112, 503-552.	1.0	176
94	ANALYTIC STRUCTURE OF TWO-DIMENSIONAL QUANTUM FIELD THEORIES. , 1987, , .		0
95	An off-shell propagator for string theory. Nuclear Physics B, 1986, 267, 143-157.	0.9	162
96	Measure for moduli The Polyakov string has no nonlocal anomalies. Nuclear Physics B, 1986, 266, 58-74.	0.9	161
97	Heterotic geometry. Nuclear Physics B, 1986, 274, 509-519.	0.9	44
98	Bosonization in arbitrary genus. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1986, 178, 41-47.	1.5	110
99	Strings and supermoduli. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1986, 169, 47-53.	1.5	114
100	Modular forms and the cosmological constant. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1986, 178, 167-173.	1.5	49
101	Spin- $\hat{A}1/2$ Bosonization on Compact Surfaces. Physical Review Letters, 1986, 57, 795-798.	2.9	36
102	The aetiology of sigma model anomalies. Communications in Mathematical Physics, 1985, 100, 83-132.	1.0	75
103	A comment on sigma model anomalies. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1985, 152, 68-74.	1.5	40
104	Hamiltonian interpretation of anomalies. Communications in Mathematical Physics, 1985, 99, 103-114.	1.0	129
105	Anomalies in Nonlinear Sigma Models. Physical Review Letters, 1984, 53, 1519-1522.	2.9	103
106	What becomes of global color. Nuclear Physics B, 1984, 237, 1-31.	0.9	58
107	Fermions and the Kaluza-Klein monopole. Nuclear Physics B, 1984, 238, 638-652.	0.9	8
108	Global Color Is Not Always Defined. Physical Review Letters, 1983, 50, 943-945.	2.9	108

#	ARTICLE	IF	CITATIONS
109	Excitations of SU(5) Monopoles. Physical Review Letters, 1983, 50, 939-942.	2.9	28
110	Gluino pair production in electron-positron annihilation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1982, 115, 407-409.	1.5	16
111	Gravity with propagating pseudoscalar torsion. Physics Letters, Section A: General, Atomic and Solid State Physics, 1980, 79, 285-287.	0.9	24
112	An Application of Microprogramming to Nuclear Physics Data Acquisition. IEEE Transactions on Nuclear Science, 1980, 27, 1359-1361.	1.2	2