

# Frank Julicher

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

290  
papers

23,431  
citations

79  
h-index

148  
g-index

361  
ext. papers

28,248  
ext. citations

8.1  
avg, IF

7.26  
L-index

#	Paper	IF	Citations
290	Hydrodynamics of chiral squirmers.. <i>Physical Review E</i> , <b>2022</b> , 105, 024603	2.4	2
289	Active T1 transitions in cellular networks.. <i>European Physical Journal E</i> , <b>2022</b> , 45, 29	1.5	1
288	Co-condensation of proteins with single- and double-stranded DNA.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2107871119	11.5	2
287	Molecular Assembly Lines in Active Droplets.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 108102	7.4	0
286	Transcription organizes euchromatin via microphase separation. <i>Nature Communications</i> , <b>2021</b> , 12, 136017.4	29	
285	Active Viscoelasticity of Odd Materials. <i>Physical Review Letters</i> , <b>2021</b> , 126, 138001	7.4	10
284	Inferring the flow properties of epithelial tissues from their geometry. <i>New Journal of Physics</i> , <b>2021</b> , 23, 033004	2.9	7
283	Self-organized patterning of cell morphology via mechanosensitive feedback. <i>ELife</i> , <b>2021</b> , 10,	8.9	8
282	Theory of time delayed genetic oscillations with external noisy regulation. <i>New Journal of Physics</i> , <b>2021</b> , 23, 033030	2.9	3
281	A hydraulic instability drives the cell death decision in the nematode germline. <i>Nature Physics</i> , <b>2021</b> , 17, 920-925	16.2	9
280	Hydraulic and electric control of cell spheroids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	4
279	Epithelial colonies in vitro elongate through collective effects. <i>ELife</i> , <b>2021</b> , 10,	8.9	11
278	Continuum Theory of Active Phase Separation in Cellular Aggregates. <i>Physical Review Letters</i> , <b>2021</b> , 126, 018102	7.4	4
277	Apico-basal cell compression regulates Lamin A/C levels in epithelial tissues. <i>Nature Communications</i> , <b>2021</b> , 12, 1756	17.4	5
276	Force generation by proteinDNA co-condensation. <i>Nature Physics</i> , <b>2021</b> , 17, 1007-1012	16.2	7
275	Quantifying entropy production in active fluctuations of the hair-cell bundle from time irreversibility and uncertainty relations. <i>New Journal of Physics</i> , <b>2021</b> , 23, 083013	2.9	4
274	Local thermodynamics govern formation and dissolution of elegans P granule condensates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	9

273	Nonlinear rheology of cellular networks. <i>Cells and Development</i> , <b>2021</b> , 203746		3
272	Morphogen gradient scaling by recycling of intracellular Dpp.. <i>Nature</i> , <b>2021</b> ,	50.4	3
271	Protein condensates as aging Maxwell fluids. <i>Science</i> , <b>2020</b> , 370, 1317-1323	33.3	75
270	BMP Signaling Gradient Scaling in the Zebrafish Pectoral Fin. <i>Cell Reports</i> , <b>2020</b> , 30, 4292-4302.e7	10.6	10
269	Active forces shape the metaphase spindle through a mechanical instability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 16154-16159	11.5	9
268	Phase separation provides a mechanism to reduce noise in cells. <i>Science</i> , <b>2020</b> , 367, 464-468	33.3	101
267	Quantification of nematic cell polarity in three-dimensional tissues. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1008412	5	3
266	Power-law population heterogeneity governs epidemic waves. <i>PLoS ONE</i> , <b>2020</b> , 15, e0239678	3.7	18
265	Flagellar length control in biflagellate eukaryotes: time-of-flight, shared pool, train traffic and cooperative phenomena. <i>New Journal of Physics</i> , <b>2020</b> , 22, 083009	2.9	5
264	Extreme-value statistics of stochastic transport processes. <i>New Journal of Physics</i> , <b>2020</b> , 22, 123038	2.9	6
263	Liquid Phase Separation Controlled by pH. <i>Biophysical Journal</i> , <b>2020</b> , 119, 1590-1605	2.9	17
262	Power-law population heterogeneity governs epidemic waves <b>2020</b> , 15, e0239678		
261	Power-law population heterogeneity governs epidemic waves <b>2020</b> , 15, e0239678		
260	Power-law population heterogeneity governs epidemic waves <b>2020</b> , 15, e0239678		
259	Power-law population heterogeneity governs epidemic waves <b>2020</b> , 15, e0239678		
258	Active cargo positioning in antiparallel transport networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 14835-14842	11.5	2
257	Fluid pumping and active flexoelectricity can promote lumen nucleation in cell assemblies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 19264-19273	11.5	16
256	Body size-dependent energy storage causes Kleiber's law scaling of the metabolic rate in planarians. <i>ELife</i> , <b>2019</b> , 8,	8.9	31

255	Extreme reductions of entropy in an electronic double dot. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	12
254	Physics of active emulsions. <i>Reports on Progress in Physics</i> , <b>2019</b> , 82, 064601	14.4	72
253	Epithelial Viscoelasticity Is Regulated by Mechanosensitive E-cadherin Turnover. <i>Current Biology</i> , <b>2019</b> , 29, 578-591.e5	6.3	71
252	Field induced cell proliferation and death in a model epithelium. <i>New Journal of Physics</i> , <b>2019</b> , 21, 043035.9	5.9	5
251	Soluble tubulin is significantly enriched at mitotic centrosomes. <i>Journal of Cell Biology</i> , <b>2019</b> , 218, 3977-3985	3.9	13
250	Integral fluctuation relations for entropy production at stopping times. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2019</b> , 2019, 104006	1.9	14
249	Casimir stresses in active nematic films. <i>New Journal of Physics</i> , <b>2019</b> , 21, 123046	2.9	
248	Minimal Model of Cellular Symmetry Breaking. <i>Physical Review Letters</i> , <b>2019</b> , 123, 188101	7.4	14
247	Liquid-crystal organization of liver tissue. <i>ELife</i> , <b>2019</b> , 8,	8.9	25
246	Cell-level 3D reconstruction and quantification of the Drosophila wing imaginal disc. <i>International Journal of Bioinformatics Research and Applications</i> , <b>2019</b> , 15, 174	0.9	
245	Self-organized shape dynamics of active surfaces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 29-34	11.5	48
244	Guiding self-organized pattern formation in cell polarity establishment. <i>Nature Physics</i> , <b>2019</b> , 15, 293-300	6.2	51
243	Friction from Transduction Channels' Gating Affects Spontaneous Hair-Bundle Oscillations. <i>Biophysical Journal</i> , <b>2018</b> , 114, 425-436	2.9	10
242	Mechanochemical Pattern Formation in the Actomyosin Cortex. <i>Seibutsu Butsuri</i> , <b>2018</b> , 58, 027-030	0	
241	Hydrodynamic theory of active matter. <i>Reports on Progress in Physics</i> , <b>2018</b> , 81, 076601	14.4	104
240	Chemical event chain model of coupled genetic oscillators. <i>Physical Review E</i> , <b>2018</b> , 97, 032409	2.4	10
239	Computational modeling of dynein activity and the generation of flagellar beating waveforms <b>2018</b> , 192-212		0
238	Critical Point in Self-Organized Tissue Growth. <i>Physical Review Letters</i> , <b>2018</b> , 120, 198102	7.4	16

237	Morphogenetic degeneracies in the actomyosin cortex. <i>ELife</i> , <b>2018</b> , 7,	8.9	24
236	Discontinuous switching of position of two coexisting phases. <i>New Journal of Physics</i> , <b>2018</b> , 20, 075009	2.9	6
235	Differential lateral and basal tension drive folding of <i>Drosophila</i> wing discs through two distinct mechanisms. <i>Nature Communications</i> , <b>2018</b> , 9, 4620	17.4	58
234	Salt-Dependent Rheology and Surface Tension of Protein Condensates Using Optical Traps. <i>Physical Review Letters</i> , <b>2018</b> , 121, 258101	7.4	73
233	Positioning of Particles in Active Droplets. <i>Physical Review Letters</i> , <b>2018</b> , 121, 158102	7.4	14
232	Role of hydrodynamic flows in chemically driven droplet division. <i>New Journal of Physics</i> , <b>2018</b> , 20, 105109	10.9	11
231	Exactly solvable dynamics of forced polymer loops. <i>New Journal of Physics</i> , <b>2018</b> , 20, 113005	2.9	3
230	Triangles bridge the scales: Quantifying cellular contributions to tissue deformation. <i>Physical Review E</i> , <b>2017</b> , 95, 032401	2.4	40
229	Antagonistic Self-Organizing Patterning Systems Control Maintenance and Regeneration of the Anteroposterior Axis in Planarians. <i>Developmental Cell</i> , <b>2017</b> , 40, 248-263.e4	10.2	66
228	Emergence of tissue shape changes from collective cell behaviours. <i>Seminars in Cell and Developmental Biology</i> , <b>2017</b> , 67, 103-112	7.5	30
227	Growth and division of active droplets provides a model for protocells. <i>Nature Physics</i> , <b>2017</b> , 13, 408-413	16.2	182
226	Generic Properties of Stochastic Entropy Production. <i>Physical Review Letters</i> , <b>2017</b> , 119, 140604	7.4	84
225	Statistics of Infima and Stopping Times of Entropy Production and Applications to Active Molecular Processes. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	50
224	Cell dynamics underlying oriented growth of the wing imaginal disc. <i>Development (Cambridge)</i> , <b>2017</b> , 144, 4406-4421	6.6	46
223	Self-organized synchronization of digital phase-locked loops with delayed coupling in theory and experiment. <i>PLoS ONE</i> , <b>2017</b> , 12, e0171590	3.7	9
222	Physical limits of flow sensing in the left-right organizer. <i>ELife</i> , <b>2017</b> , 6,	8.9	28
221	An information theoretic analysis of sequential decision-making <b>2017</b> ,		1
220	Droplet ripening in concentration gradients. <i>New Journal of Physics</i> , <b>2017</b> , 19, 053021	2.9	21

219	Mechanics of active surfaces. <i>Physical Review E</i> , <b>2017</b> , 96, 032404	2.4	54
218	Active dynamics of tissue shear flow. <i>New Journal of Physics</i> , <b>2017</b> , 19, 033006	2.9	31
217	Controlling contractile instabilities in the actomyosin cortex. <i>ELife</i> , <b>2017</b> , 6,	8.9	54
216	Polar Positioning of Phase-Separated Liquid Compartments in Cells Regulated by an mRNA Competition Mechanism. <i>Cell</i> , <b>2016</b> , 166, 1572-1584.e16	56.2	206
215	Curvature regulation of the ciliary beat through axonemal twist. <i>Physical Review E</i> , <b>2016</b> , 94, 042426	2.4	19
214	Paired arrangement of kinetochores together with microtubule pivoting and dynamics drive kinetochore capture in meiosis I. <i>Scientific Reports</i> , <b>2016</b> , 6, 25736	4.9	11
213	Activity induces traveling waves, vortices and spatiotemporal chaos in a model actomyosin layer. <i>Scientific Reports</i> , <b>2016</b> , 6, 20838	4.9	19
212	Sequential pattern formation governed by signaling gradients. <i>Physical Biology</i> , <b>2016</b> , 13, 05LT03	3	11
211	Determining Physical Properties of the Cell Cortex. <i>Biophysical Journal</i> , <b>2016</b> , 110, 1421-9	2.9	48
210	Interface Contractility between Differently Fated Cells Drives Cell Elimination and Cyst Formation. <i>Current Biology</i> , <b>2016</b> , 26, 563-74	6.3	86
209	Persistence, period and precision of autonomous cellular oscillators from the zebrafish segmentation clock. <i>ELife</i> , <b>2016</b> , 5,	8.9	59
208	Dynamic curvature regulation accounts for the symmetric and asymmetric beats of <i>Chlamydomonas</i> flagella. <i>ELife</i> , <b>2016</b> , 5,	8.9	91
207	TissueMiner: A multiscale analysis toolkit to quantify how cellular processes create tissue dynamics. <i>ELife</i> , <b>2016</b> , 5,	8.9	77
206	Author response: TissueMiner: A multiscale analysis toolkit to quantify how cellular processes create tissue dynamics <b>2016</b> ,		2
205	The Selector Gene <i>apterous</i> and <i>Notch</i> Are Required to Locally Increase Mechanical Cell Bond Tension at the <i>Drosophila</i> Dorsoventral Compartment Boundary. <i>PLoS ONE</i> , <b>2016</b> , 11, e0161668	3.7	10
204	Interface dynamics of competing tissues. <i>New Journal of Physics</i> , <b>2016</b> , 18, 083020	2.9	15
203	Theory of Cargo and Membrane Trafficking <b>2016</b> , 56-62		
202	Independent Control of the Static and Dynamic Components of the <i>Chlamydomonas</i> Flagellar Beat. <i>Current Biology</i> , <b>2016</b> , 26, 1098-103	6.3	27

201	Polo-like kinase phosphorylation determines <i>Caenorhabditis elegans</i> centrosome size and density by biasing SPD-5 toward an assembly-competent conformation. <i>Biology Open</i> , <b>2016</b> , 5, 1431-1440	2.2	35
200	Rheology of the Active Cell Cortex in Mitosis. <i>Biophysical Journal</i> , <b>2016</b> , 111, 589-600	2.9	76
199	Autonomous Chemical Oscillator Circuit Based on Bidirectional Chemical-Microfluidic Coupling. <i>Advanced Materials Technologies</i> , <b>2016</b> , 1, 1600005	6.8	24
198	Continuum theory of gene expression waves during vertebrate segmentation. <i>New Journal of Physics</i> , <b>2015</b> , 17, 093042	2.9	21
197	A local difference in Hedgehog signal transduction increases mechanical cell bond tension and biases cell intercalations along the <i>Drosophila</i> anteroposterior compartment boundary. <i>Development (Cambridge)</i> , <b>2015</b> , 142, 3845-58	6.6	23
196	Suppression of Ostwald ripening in active emulsions. <i>Physical Review E</i> , <b>2015</b> , 92, 012317	2.4	79
195	Dynamic force balances and cell shape changes during cytokinesis. <i>Physical Review Letters</i> , <b>2015</b> , 114, 048102	7.4	13
194	Pulled Polymer Loops as a Model for the Alignment of Meiotic Chromosomes. <i>Physical Review Letters</i> , <b>2015</b> , 115, 208102	7.4	8
193	Decision Making in the Arrow of Time. <i>Physical Review Letters</i> , <b>2015</b> , 115, 250602	7.4	46
192	Hair-bundle friction from transduction channels gating forces <b>2015</b> ,		1
191	The wing and the eye: a parsimonious theory for scaling and growth control?. <i>Wiley Interdisciplinary Reviews: Developmental Biology</i> , <b>2015</b> , 4, 591-608	5.9	16
190	Scaling and regeneration of self-organized patterns. <i>Physical Review Letters</i> , <b>2015</b> , 114, 138101	7.4	44
189	A hybrid particle-mesh method for incompressible active polar viscous gels. <i>Journal of Computational Physics</i> , <b>2015</b> , 291, 334-361	4.1	8
188	Polarized endosome dynamics by spindle asymmetry during asymmetric cell division. <i>Nature</i> , <b>2015</b> , 528, 280-5	50.4	81
187	Synchronization of mutually coupled digital PLLs in massive MIMO systems <b>2015</b> ,		6
186	Active gel physics. <i>Nature Physics</i> , <b>2015</b> , 11, 111-117	16.2	384
185	Interplay of cell dynamics and epithelial tension during morphogenesis of the <i>Drosophila</i> pupal wing. <i>ELife</i> , <b>2015</b> , 4, e07090	8.9	192
184	Author response: Interplay of cell dynamics and epithelial tension during morphogenesis of the <i>Drosophila</i> pupal wing <b>2015</b> ,		2

183	Quantification of surface tension and internal pressure generated by single mitotic cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 6213	4.9	105
182	Growth control by a moving morphogen gradient during <i>Drosophila</i> eye development. <i>Development (Cambridge)</i> , <b>2014</b> , 141, 1884-93	6.6	35
181	Centrosomes are autocatalytic droplets of pericentriolar material organized by centrioles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, E2636-45	11.5	122
180	Liquid-liquid phase separation in biology. <i>Annual Review of Cell and Developmental Biology</i> , <b>2014</b> , 30, 39-58	12.6	1383
179	Wnt-regulated dynamics of positional information in zebrafish somitogenesis. <i>Development (Cambridge)</i> , <b>2014</b> , 141, 1381-91	6.6	44
178	The balance of prickle/spiny-legs isoforms controls the amount of coupling between core and fat PCP systems. <i>Current Biology</i> , <b>2014</b> , 24, 2111-2123	6.3	52
177	Multimotor transport in a system of active and inactive kinesin-1 motors. <i>Biophysical Journal</i> , <b>2014</b> , 107, 365-372	2.9	22
176	Local increases in mechanical tension shape compartment boundaries by biasing cell intercalations. <i>Current Biology</i> , <b>2014</b> , 24, 1798-805	6.3	65
175	Genetic oscillations. A Doppler effect in embryonic pattern formation. <i>Science</i> , <b>2014</b> , 345, 222-5	33.3	83
174	The role of endocytosis during morphogenetic signaling. <i>Cold Spring Harbor Perspectives in Biology</i> , <b>2014</b> , 6, a016881	10.2	17
173	An active oscillator model describes the statistics of spontaneous otoacoustic emissions. <i>Biophysical Journal</i> , <b>2014</b> , 107, 815-24	2.9	17
172	Motor regulation results in distal forces that bend partially disintegrated <i>Chlamydomonas</i> axonemes into circular arcs. <i>Biophysical Journal</i> , <b>2014</b> , 106, 2434-42	2.9	21
171	Transduction channels' gating can control friction on vibrating hair-cell bundles in the ear. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 7185-90	11.5	27
170	Synchronization in networks of mutually delay-coupled phase-locked loops. <i>New Journal of Physics</i> , <b>2014</b> , 16, 113009	2.9	14
169	Active elastic thin shell theory for cellular deformations. <i>New Journal of Physics</i> , <b>2014</b> , 16, 065005	2.9	26
168	General theory for the mechanics of confined microtubule asters. <i>New Journal of Physics</i> , <b>2014</b> , 16, 013018	2.9	23
167	Mechanically driven interface propagation in biological tissues. <i>New Journal of Physics</i> , <b>2014</b> , 16, 035002	2.9	16
166	Active phase and amplitude fluctuations of flagellar beating. <i>Physical Review Letters</i> , <b>2014</b> , 113, 048101	7.4	64

165	Synchronization dynamics in the presence of coupling delays and phase shifts. <i>Physical Review Letters</i> , <b>2014</b> , 112, 174101	7.4	23
164	Pulsatory Patterns in Active Fluids. <i>Physical Review Letters</i> , <b>2014</b> , 112,	7.4	40
163	Stress distributions and cell flows in a growing cell aggregate. <i>Interface Focus</i> , <b>2014</b> , 4, 20140033	3.9	39
162	Theme Issue in memory of Tom Duke. <i>Interface Focus</i> , <b>2014</b> , 4, 20140072	3.9	78
161	Active torque generation by the actomyosin cell cortex drives left-right symmetry breaking. <i>ELife</i> , <b>2014</b> , 3, e04165	8.9	137
160	XMAP215 activity sets spindle length by controlling the total mass of spindle microtubules. <i>Nature Cell Biology</i> , <b>2013</b> , 15, 1116-22	23.4	87
159	Cell-body rocking is a dominant mechanism for flagellar synchronization in a swimming alga. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 18058-63	11.5	85
158	Spatial organization of the cell cytoplasm by position-dependent phase separation. <i>Physical Review Letters</i> , <b>2013</b> , 111, 088101	7.4	110
157	3D surface reconstruction and visualization of the <i>Drosophila</i> wing imaginal disc at cellular resolution <b>2013</b> ,		1
156	Active chiral processes in thin films. <i>Physical Review Letters</i> , <b>2013</b> , 110, 048103	7.4	49
155	Physical mechanisms shaping the <i>Drosophila</i> dorsoventral compartment boundary. <i>Current Biology</i> , <b>2012</b> , 22, 967-76	6.3	94
154	NOISE AND OSCILLATIONS IN BIOLOGICAL SYSTEMS: MULTIDISCIPLINARY APPROACH BETWEEN EXPERIMENTAL BIOLOGY, THEORETICAL MODELLING AND SYNTHETIC BIOLOGY. <i>International Journal of Modern Physics B</i> , <b>2012</b> , 26, 1246009	1.1	1
153	Investigating the principles of morphogen gradient formation: from tissues to cells. <i>Current Opinion in Genetics and Development</i> , <b>2012</b> , 22, 527-32	4.9	51
152	Epithelial cell reconstruction and visualization of the developing <i>Drosophila</i> wing imaginal disc <b>2012</b> ,		2
151	Establishment of global patterns of planar polarity during growth of the <i>Drosophila</i> wing epithelium. <i>Current Biology</i> , <b>2012</b> , 22, 1296-301	6.3	85
150	Cortical dynein controls microtubule dynamics to generate pulling forces that position microtubule asters. <i>Cell</i> , <b>2012</b> , 148, 502-14	56.2	288
149	Active chiral fluids. <i>European Physical Journal E</i> , <b>2012</b> , 35, 89	1.5	51
148	A mean-field approach to elastically coupled hair bundles. <i>European Physical Journal E</i> , <b>2012</b> , 35, 37	1.5	12

147	Tissue dynamics with permeation. <i>European Physical Journal E</i> , <b>2012</b> , 35, 46	1.5	22
146	A general theoretical framework to infer endosomal network dynamics from quantitative image analysis. <i>Current Biology</i> , <b>2012</b> , 22, 1381-90	6.3	51
145	Adhesion functions in cell sorting by mechanically coupling the cortices of adhering cells. <i>Science</i> , <b>2012</b> , 338, 253-6	33.3	358
144	The Taylor-Couette motor: spontaneous flows of active polar fluids between two coaxial cylinders. <i>New Journal of Physics</i> , <b>2012</b> , 14, 023001	2.9	53
143	Topology and dynamics of the zebrafish segmentation clock core circuit. <i>PLoS Biology</i> , <b>2012</b> , 10, e1001364	9.7	84
142	Anomalous behavior of the diffusion coefficient in thin active films. <i>New Journal of Physics</i> , <b>2012</b> , 14, 115001	2.9	6
141	Positioning of microtubule organizing centers by cortical pushing and pulling forces. <i>New Journal of Physics</i> , <b>2012</b> , 14, 105025	2.9	30
140	Collective modes of coupled phase oscillators with delayed coupling. <i>Physical Review Letters</i> , <b>2012</b> , 108, 204101	7.4	40
139	Flagellar synchronization independent of hydrodynamic interactions. <i>Physical Review Letters</i> , <b>2012</b> , 109, 138102	7.4	75
138	Response to Comment on "Dynamics of Dpp Signaling and Proliferation Control". <i>Science</i> , <b>2012</b> , 335, 401-401	33.3	16
137	Pattern formation in active fluids. <i>Physical Review Letters</i> , <b>2011</b> , 106, 028103	7.4	149
136	SnapShot: the segmentation clock. <i>Cell</i> , <b>2011</b> , 145, 800-800.e1	56.2	5
135	Cell flow and tissue polarity patterns. <i>Current Opinion in Genetics and Development</i> , <b>2011</b> , 21, 747-52	4.9	47
134	Understanding morphogenetic growth control -- lessons from flies. <i>Nature Reviews Molecular Cell Biology</i> , <b>2011</b> , 12, 594-604	48.7	94
133	Hydrodynamics of active permeating gels. <i>New Journal of Physics</i> , <b>2011</b> , 13, 093027	2.9	36
132	Dynamics of Dpp signaling and proliferation control. <i>Science</i> , <b>2011</b> , 331, 1154-9	33.3	256
131	Anisotropies in cortical tension reveal the physical basis of polarizing cortical flows. <i>Nature</i> , <b>2010</b> , 467, 617-21	50.4	353
130	High-precision tracking of sperm swimming fine structure provides strong test of resistive force theory. <i>Journal of Experimental Biology</i> , <b>2010</b> , 213, 1226-34	3	190

129	Collective behavior of antagonistically acting kinesin-1 motors. <i>Physical Review Letters</i> , <b>2010</b> , 105, 128103-4	7.4	30
128	Coupling a sensory hair-cell bundle to cyber clones enhances nonlinear amplification. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 8079-84	11.5	34
127	Fluidization of tissues by cell division and apoptosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 20863-8	11.5	281
126	The interplay between active hair bundle motility and electromotility in the cochlea. <i>Journal of the Acoustical Society of America</i> , <b>2010</b> , 128, 1175-90	2.2	37
125	A critique of the critical cochlea: Hopf--a bifurcation--is better than none. <i>Journal of Neurophysiology</i> , <b>2010</b> , 104, 1219-29	3.2	83
124	Bipedal locomotion in crawling cells. <i>Biophysical Journal</i> , <b>2010</b> , 98, 933-42	2.9	78
123	The remarkable cochlear amplifier. <i>Hearing Research</i> , <b>2010</b> , 266, 1-17	3.9	165
122	Cell flow reorients the axis of planar polarity in the wing epithelium of <i>Drosophila</i> . <i>Cell</i> , <b>2010</b> , 142, 773-86	6.2	500
121	Mechanics and remodelling of cell packings in epithelia. <i>European Physical Journal E</i> , <b>2010</b> , 33, 117-27	1.5	152
120	Centrosome size sets mitotic spindle length in <i>Caenorhabditis elegans</i> embryos. <i>Current Biology</i> , <b>2010</b> , 20, 353-8	6.3	140
119	Intercellular coupling regulates the period of the segmentation clock. <i>Current Biology</i> , <b>2010</b> , 20, 1244-53	6.3	122
118	Local exponents of nonlinear compression in periodically driven noisy oscillators. <i>Physical Review Letters</i> , <b>2009</b> , 103, 250601	7.4	20
117	Nonlinear dynamics of cilia and flagella. <i>Physical Review E</i> , <b>2009</b> , 79, 051918	2.4	60
116	Steering chiral swimmers along noisy helical paths. <i>Physical Review Letters</i> , <b>2009</b> , 103, 068102	7.4	65
115	Delayed coupling theory of vertebrate segmentation. <i>HFSP Journal</i> , <b>2009</b> , 3, 55-66		107
114	Comment on "Osmotic propulsion: the osmotic motor". <i>Physical Review Letters</i> , <b>2009</b> , 103, 079801; author reply 079802	7.4	17
113	Self-organization of dynein motors generates meiotic nuclear oscillations. <i>PLoS Biology</i> , <b>2009</b> , 7, e1000087	7.7	103
112	Increased cell bond tension governs cell sorting at the <i>Drosophila</i> anteroposterior compartment boundary. <i>Current Biology</i> , <b>2009</b> , 19, 1950-5	6.3	236

111	Generic theory of colloidal transport. <i>European Physical Journal E</i> , <b>2009</b> , 29, 27-36	1.5	117
110	Spontaneous movements and linear response of a noisy oscillator. <i>European Physical Journal E</i> , <b>2009</b> , 29, 449-60	1.5	22
109	Quantification of growth asymmetries in developing epithelia. <i>European Physical Journal E</i> , <b>2009</b> , 30, 93-9	1.5	26
108	Microtubules and motor proteins: Mechanically regulated self-organization in vivo. <i>European Physical Journal: Special Topics</i> , <b>2009</b> , 178, 57-69	2.3	2
107	Germline P granules are liquid droplets that localize by controlled dissolution/condensation. <i>Science</i> , <b>2009</b> , 324, 1729-32	33.3	1476
106	ACTIVE HAIR-BUNDLE MOTILITY BY THE VERTEBRATE HAIR CELL <b>2009</b> ,		2
105	The chirality of ciliary beats. <i>Physical Biology</i> , <b>2008</b> , 5, 016003	3	71
104	Quantitative differences in tissue surface tension influence zebrafish germ layer positioning. <i>HFSP Journal</i> , <b>2008</b> , 2, 42-56		113
103	The stochastic dance of circling sperm cells: sperm chemotaxis in the plane. <i>New Journal of Physics</i> , <b>2008</b> , 10, 123025	2.9	74
102	Precision of the Dpp gradient. <i>Development (Cambridge)</i> , <b>2008</b> , 135, 1137-46	6.6	111
101	Enhancement of sensitivity gain and frequency tuning by coupling of active hair bundles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 18669-74	11.5	61
100	Dynamics of anisotropic tissue growth. <i>New Journal of Physics</i> , <b>2008</b> , 10, 063001	2.9	60
99	Two-state approach to stochastic hair bundle dynamics. <i>Physical Review E</i> , <b>2008</b> , 77, 041901	2.4	13
98	Thermal and non-thermal fluctuations in active polar gels. <i>European Physical Journal E</i> , <b>2008</b> , 27, 149-60	1.5	29
97	Critical Oscillators as Active Elements in Hearing <b>2008</b> , 63-92		4
96	Unifying the various incarnations of active hair-bundle motility by the vertebrate hair cell. <i>Biophysical Journal</i> , <b>2007</b> , 93, 4053-67	2.9	101
95	Stress generation and filament turnover during actin ring constriction. <i>PLoS ONE</i> , <b>2007</b> , 2, e696	3.7	88
94	Active behavior of the Cytoskeleton. <i>Physics Reports</i> , <b>2007</b> , 449, 3-28	27.7	295

93	Experimental and theoretical study of mitotic spindle orientation. <i>Nature</i> , <b>2007</b> , 447, 493-6	50.4	319
92	The influence of cell mechanics, cell-cell interactions, and proliferation on epithelial packing. <i>Current Biology</i> , <b>2007</b> , 17, 2095-104	6.3	762
91	Kinetics of morphogen gradient formation. <i>Science</i> , <b>2007</b> , 315, 521-5	33.3	296
90	How molecular motors shape the flagellar beat. <i>HFSP Journal</i> , <b>2007</b> , 1, 192-208		227
89	Response and fluctuations of a two-state signaling module with feedback. <i>Physical Review E</i> , <b>2007</b> , 76, 021904	2.4	4
88	Precision of genetic oscillators and clocks. <i>Physical Review Letters</i> , <b>2007</b> , 98, 228101	7.4	53
87	Morphogen transport in epithelia. <i>Physical Review E</i> , <b>2007</b> , 75, 011901	2.4	40
86	Chemotaxis of sperm cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 13256-61	11.5	157
85	Hydrodynamic theory for multi-component active polar gels. <i>New Journal of Physics</i> , <b>2007</b> , 9, 422-422	2.9	96
84	Postsynaptic mad signaling at the Drosophila neuromuscular junction. <i>Current Biology</i> , <b>2006</b> , 16, 625-35	6.3	50
83	Postsynaptic Mad Signaling at the Drosophila Neuromuscular Junction. <i>Current Biology</i> , <b>2006</b> , 16, 1256	6.3	
82	Spindle oscillations during asymmetric cell division require a threshold number of active cortical force generators. <i>Current Biology</i> , <b>2006</b> , 16, 2111-22	6.3	143
81	Contractility and retrograde flow in lamellipodium motion. <i>Physical Biology</i> , <b>2006</b> , 3, 130-7	3	142
80	Hydrodynamic flow patterns and synchronization of beating cilia. <i>Physical Review Letters</i> , <b>2006</b> , 96, 058102	7.4	165
79	Calibration of optical tweezers with positional detection in the back focal plane. <i>Review of Scientific Instruments</i> , <b>2006</b> , 77, 103101	1.7	234
78	Statistical physics of active processes in cells. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2006</b> , 369, 185-200	3.3	11
77	Dynamics and mechanics of motor-filament systems. <i>European Physical Journal E</i> , <b>2006</b> , 20, 459-65	1.5	9
76	Robust formation of morphogen gradients. <i>Physical Review Letters</i> , <b>2005</b> , 94, 018103	7.4	84

75	Spontaneous oscillations in mechanosensory hair bundles (Keynote Address) <b>2005</b> , 5841, 17		
74	Generic theory of active polar gels: a paradigm for cytoskeletal dynamics. <i>European Physical Journal E</i> , <b>2005</b> , 16, 5-16	1.5	381
73	Theory of mitotic spindle oscillations. <i>Physical Review Letters</i> , <b>2005</b> , 94, 108104	7.4	120
72	Oscillations in cell biology. <i>Current Opinion in Cell Biology</i> , <b>2005</b> , 17, 20-6	9	141
71	Velocity and processivity of helicase unwinding of double-stranded nucleic acids. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, S3851-69	1.8	15
70	Continuum description of the cytoskeleton: ring formation in the cell cortex. <i>Physical Review Letters</i> , <b>2005</b> , 95, 258103	7.4	44
69	Universal critical behavior of noisy coupled oscillators: a renormalization group study. <i>Physical Review E</i> , <b>2005</b> , 72, 016130	2.4	22
68	Filament depolymerization by motor molecules. <i>Physical Review Letters</i> , <b>2005</b> , 94, 108102	7.4	52
67	Opening of nucleic-acid double strands by helicases: active versus passive opening. <i>Physical Review E</i> , <b>2005</b> , 71, 011904	2.4	105
66	Asters, vortices, and rotating spirals in active gels of polar filaments. <i>Physical Review Letters</i> , <b>2004</b> , 92, 078101	7.4	417
65	Universal critical behavior of noisy coupled oscillators. <i>Physical Review Letters</i> , <b>2004</b> , 93, 175702	7.4	30
64	Dpp gradient formation by dynamin-dependent endocytosis: receptor trafficking and the diffusion model. <i>Development (Cambridge)</i> , <b>2004</b> , 131, 4843-56	6.6	86
63	Active hair-bundle motility harnesses noise to operate near an optimum of mechanosensitivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 12195-200	11.5	133
62	Role of tensile stress in actin gels and a symmetry-breaking instability. <i>European Physical Journal E</i> , <b>2004</b> , 13, 247-59	1.5	35
61	Membranes with rotating motors: microvortex assemblies. <i>European Physical Journal E</i> , <b>2004</b> , 13, 379-90	1.5	15
60	Fluid membranes exchanging material with external reservoirs. <i>European Physical Journal E</i> , <b>2004</b> , 14, 387-94	1.5	12
59	Morphogenetic oscillations during symmetry breaking of regenerating <i>Hydra vulgaris</i> cells. <i>Europhysics Letters</i> , <b>2003</b> , 64, 137-143	1.6	28
58	Continuum theory of contractile fibres. <i>Europhysics Letters</i> , <b>2003</b> , 64, 716-722	1.6	30

57	Active traveling wave in the cochlea. <i>Physical Review Letters</i> , <b>2003</b> , 90, 158101	7.4	68
56	Physical Basis of Interference Effects in Hearing. <i>Annales Henri Poincare</i> , <b>2003</b> , 4, 667-669	1.2	1
55	Active Behaviors in Living Cells. <i>Annales Henri Poincare</i> , <b>2003</b> , 4, 671-678	1.2	1
54	Motion of an adhesive gel in a swelling gradient: a mechanism for cell locomotion. <i>Physical Review Letters</i> , <b>2003</b> , 90, 168102	7.4	50
53	Membranes with rotating motors. <i>Physical Review Letters</i> , <b>2003</b> , 91, 108104	7.4	55
52	Self-organization and mechanical properties of active filament bundles. <i>Physical Review E</i> , <b>2003</b> , 67, 051913	7.4	77
51	A motor that makes its own track: helicase unwinding of DNA. <i>Physical Review Letters</i> , <b>2003</b> , 91, 258103	7.4	50
50	ACTIVE AMPLIFICATION BY CRITICAL OSCILLATIONS <b>2003</b> ,		3
49	Active Behaviors in Living Cells <b>2003</b> , 671-678		
48	Physical Basis of Interference Effects in Hearing <b>2003</b> , 667-669		
47	Formation and interaction of membrane tubes. <i>Physical Review Letters</i> , <b>2002</b> , 88, 238101	7.4	350
46	Bidirectional cooperative motion of molecular motors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2002</b> , 99, 6696-701	11.5	156
45	Mechanical oscillations at the cellular scale. <i>Comptes Rendus Physique</i> , <b>2001</b> , 2, 849-860		5
44	Comparison of a hair bundle's spontaneous oscillations with its response to mechanical stimulation reveals the underlying active process. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2001</b> , 98, 14380-5	11.5	180
43	Physical basis of two-tone interference in hearing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2001</b> , 98, 9080-5	11.5	67
42	Self-propagating patterns in active filament bundles. <i>Physical Review Letters</i> , <b>2001</b> , 87, 138101	7.4	50
41	Detachment of molecular motors under tangential loading. <i>Europhysics Letters</i> , <b>2001</b> , 56, 603-609	1.6	34
40	Auditory sensitivity provided by self-tuned critical oscillations of hair cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2000</b> , 97, 3183-8	11.5	299

39	Actively contracting bundles of polar filaments. <i>Physical Review Letters</i> , <b>2000</b> , 85, 1778-81	7.4	158
38	Generic aspects of axonemal beating. <i>New Journal of Physics</i> , <b>2000</b> , 2, 24-24	2.9	163
37	Jülicher and Prost Reply:. <i>Physical Review Letters</i> , <b>1999</b> , 83, 5404-5404	7.4	2
36	Dynamic Fluctuations of Semiflexible Filaments. <i>Physical Review Letters</i> , <b>1999</b> , 82, 3717-3720	7.4	96
35	Energy transduction of isothermal ratchets: generic aspects and specific examples close to and far from equilibrium. <i>Physical Review E</i> , <b>1999</b> , 60, 2127-40	2.4	213
34	Self-Organized Beating and Swimming of Internally Driven Filaments. <i>Physical Review Letters</i> , <b>1999</b> , 82, 1590-1593	7.4	164
33	On the Bacterial Propulsion mechanism <b>1999</b> , 53, 155-170		21
32	Force and motion generation of molecular motors: A generic description <b>1999</b> , 46-74		7
31	Acting on actin: the electric motility assay. <i>European Biophysics Journal</i> , <b>1998</b> , 27, 403-8	1.9	120
30	Motion of RNA polymerase along DNA: a stochastic model. <i>Biophysical Journal</i> , <b>1998</b> , 74, 1169-85	2.9	68
29	Molecular Motors: From Individual to Collective Behavior. <i>Progress of Theoretical Physics Supplement</i> , <b>1998</b> , 130, 9-16		39
28	Spontaneous Oscillations of Collective Molecular Motors. <i>Physical Review Letters</i> , <b>1997</b> , 78, 4510-4513	7.4	188
27	Modeling molecular motors. <i>Reviews of Modern Physics</i> , <b>1997</b> , 69, 1269-1282	40.5	1481
26	Shape transformations of vesicles with intramembrane domains. <i>Physical Review E</i> , <b>1996</b> , 53, 2670-2683	2.4	236
25	Quantitation of regional cerebral blood flow with 15O-butanol and positron emission tomography in humans. <i>Journal of Cerebral Blood Flow and Metabolism</i> , <b>1996</b> , 16, 645-9	7.3	55
24	The Morphology of Vesicles of Higher Topological Genus: Conformal Degeneracy and Conformal Modes. <i>Journal De Physique II</i> , <b>1996</b> , 6, 1797-1824		25
23	Cooperative molecular motors. <i>Physical Review Letters</i> , <b>1995</b> , 75, 2618-2621	7.4	277
22	Shape equations for axisymmetric vesicles: A clarification. <i>Physical Review E</i> , <b>1994</b> , 49, 4728-4731	2.4	78

21	Supercoiling transitions of closed DNA. <i>Physical Review E</i> , <b>1994</b> , 49, 2429-2435	2.4	34
20	Conformal degeneracy and conformal diffusion of vesicles. <i>Physical Review Letters</i> , <b>1993</b> , 71, 452-455	7.4	49
19	Domain-induced budding of vesicles. <i>Physical Review Letters</i> , <b>1993</b> , 70, 2964-2967	7.4	277
18	Phase diagrams and shape transformations of toroidal vesicles. <i>Journal De Physique II</i> , <b>1993</b> , 3, 1681-1705		18
17	Influence of size of regions of interest on PET evaluation of caudate glucose consumption. <i>Journal of Computer Assisted Tomography</i> , <b>1992</b> , 16, 789-94	2.2	18
16	Exact Functional Renormalization Group for Wetting Transitions in 1 + 1 Dimensions. <i>Europhysics Letters</i> , <b>1990</b> , 11, 657-662	1.6	24
15	Sequence-dependent surface condensation of a pioneer transcription factor on DNA. <i>Nature Physics</i> ,	16.2	7
14	Mechanosensitive binding of p120-Catenin at cell junctions regulates E-Cadherin turnover and epithelial viscoelasticity		1
13	Liquid-crystal organization of liver tissue		1
12	Soluble tubulin is locally enriched at mitotic centrosomes in <i>C. elegans</i>		2
11	Epithelial colonies in vitro elongate through collective effects		1
10	Self-organized patterning of cell morphology via mechanosensitive feedback		1
9	A hydraulic instability drives the cell death decision in the nematode germline		3
8	Force generation by protein-DNA co-condensation		1
7	Surface condensation of a pioneer transcription factor on DNA		7
6	Transcription organizes euchromatin similar to an active microemulsion		12
5	Field induced cell proliferation and death in a thick epithelium		1
4	Cell dynamics underlying oriented growth of the <i>Drosophila</i> wing imaginal disc		2

3	Cell-autonomous generation of the wave pattern within the vertebrate segmentation clock	5
2	A gelation transition enables the self-organization of bipolar metaphase spindles	1
1	Co-condensation of proteins with single- and double-stranded DNA	1