

**PROF. DR. FRANK JÜLICHER**

---

**Max Planck Institute for the Physics of Complex Systems**

Nöthnitzer Strasse 38 · 01187 Dresden · Germany

Tel: +49 351 871 1202 · Fax: +49 351 871 1299

Email: [julicher@pks.mpg.de](mailto:julicher@pks.mpg.de)

---

**LIST OF PUBLICATIONS**

## PUBLICATIONS IN SCIENTIFIC JOURNALS

---

- [1] **Exact Functional Renormalization Group for Wetting Transitions in 1+1 Dimensions**  
F. Jülicher, R. Lipowsky and H. Müller-Krumbhaar  
*Europhys. Lett.* **11**, 657 (1990).
- [2] **Influence of Size of Regions of Interest on PET Evaluation of Caudate Glucose Consumption**  
T. Kuwert, T. Ganslandt, P. Jansen, F. Jülicher, H. Lange, H. Herzog, D. Scholz, A. Aulich and L.E. Feinendegen  
*Journal of Computer Assisted Tomography*, **16**, 789 (1992).
- [3] **Domain-Induced Budding of Vesicles**  
F. Jülicher and R. Lipowsky  
*Phys. Rev. Lett.* **70**, 2964 (1993).
- [4] **Conformal Degeneracy and Conformal Diffusion of Vesicles**  
F. Jülicher, U. Seifert and R. Lipowsky  
*Phys. Rev. Lett.* **71**, 452 (1993).
- [5] **Phase Diagrams and Shape Transformations of Toroidal Vesicles**  
F. Jülicher, U. Seifert and R. Lipowsky  
*J. Phys. II France* **3**, 1681 (1993).
- [6] **Supercoiling Transitions of Closed DNA**  
F. Jülicher  
*Phys. Rev. E* **49**, 2429 (1994).
- [7] **Shape Equations for Axisymmetric Vesicles: A clarification**  
F. Jülicher and U. Seifert  
*Phys. Rev. E* **49**, 4728 (1994).
- [8] **Cooperative Molecular Motors**  
F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **75**, 2618 (1995).
- [9] **Quantitation of Regional Blood-flow with O-15-butanol and Positron Emission Tomography**  
H. Herzog, R.J. Seitz, L. Tellmann, E.R. Kops, F. Jülicher, G. Schlaug, A. Kleinschmidt, H.W. Müllergärtner  
*Journal of Cerebral Blood Flow and Metabolism* **16**, 645 (1996).
- [10] **Shape Transformations of Vesicles with Intramembrane Domains**  
F. Jülicher and R. Lipowsky  
*Phys. Rev. E* **53**, 2670 (1996).
- [11] **The Morphology of Vesicles of Higher Topological Genus: Conformal Degeneracy and Conformal Modes**  
F. Jülicher  
*J. Phys. II France* **6**, 1797 (1996).

- [12] **Spontaneous Oscillations of Collective Molecular Motors**  
F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **78**, 4510 (1997).
- [13] **Pulling on a Filament**  
A. Ajdari, F. Jülicher and A. Maggs  
*J. Phys. I France* **7**, 823 (1997).
- [14] **Motion of RNA polymerase along DNA: A Stochastic Model**  
F. Jülicher and R. Bruinsma  
*Biophys. J.* **74**, 1169 (1998).
- [15] **Acting on Actin: The Electric Motility Assay**  
D. Riveline, A. Ott, F. Jülicher, D.A. Winkelmann, O. Cardoso, J.J. Lacapère, S. Magnusdottir, J.L. Viovy, L. Gorre-Talini and J. Prost  
*Eur. Biophys. J.* **27**, 403 (1998).
- [16] **Self-Organized Beating and Swimming of Internally Driven Filaments**  
S. Camalet, F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **82**, 1592 (1999).
- [17] **Dynamic Fluctuations of Semiflexible Filaments**  
R. Everaers, F. Jülicher, A. Ajdari and A. Maggs  
*Phys. Rev. Lett.* **82**, 3717 (1999).
- [18] **On the Listeria Propulsion Mechanism**  
F. Gerbal, V. Noireaux, C. Sykes, F. Jülicher, P. Chaikin, A. Ott, J. Prost, R. Goldstein, E. Friedrich and D. Louvard  
*Pramana J. Phys.* **53**, (1999).
- [19] **Energy Transduction of Isothermal Ratchets: Generic Aspects and Specific Examples Close to and Far From Equilibrium**  
A. Parmeggiani, F. Jülicher, A. Ajdari and J. Prost  
*Phys. Rev. E* **60**, 2127 (1999).
- [20] **Reply “Cooperative Molecular Motors”**  
F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **83**, 5404 (1999)
- [21] **Auditory sensitivity provided by self-tuned critical oscillations of hair cells**  
S. Camalet, T. Duke, F. Jülicher and J. Prost  
*Proc. Natl. Acad. Sci. USA* **97**, 3183 (2000).
- [22] **Actively Contracting Bundles of Polar Filaments**  
K. Kruse and F. Jülicher  
*Phys. Rev. Lett.* **85**, 1778-1781 (2000).
- [23] **Generic Aspects of Axonemal Beating**  
S. Camalet and F. Jülicher  
*New. J. Phys.* **2**, 24 (2000).

- [24] **Physical Basis of Two-Tone Interference in Hearing**  
F. Jülicher, D. Andor and T. Duke  
*Proc. Natl. Acad. Sci.* **98**, 9080 (2001).
- [25] **Self-Propagating Patterns in Active Filament Bundles**  
K. Kruse, S. Camalet and F. Jülicher  
*Phys. Rev. Lett.* **87**, 138101 (2001).
- [26] **Detachment of Molecular Motors under Tangential Loading**  
A. Parmeggiani, F. Jülicher, L. Peliti and J. Prost  
*Europhys. Lett.* **56**, 603 (2001).
- [27] **Comparison of a Hair Bundle's Spontaneous Oscillations with its Response to Mechanical Stimulation Reveals the Underlying Active Process**  
P. Martin, J.A. Hudspeth and F. Jülicher  
*Proc. Natl. Acad. Sci.* **98**, 14380 (2001).
- [28] **Bidirectional Cooperative Motion of Molecular Motors**  
M. Badoual, F. Jülicher and J. Prost  
*Proc. Natl. Acad. Sci.* **99**, 6696 (2002).
- [29] **Formation and Interaction of Membrane Tubes**  
I. Derenyi, F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **88**, 238101 (2002).
- [30] **Motion of an Adhesive Gel in a Swelling Gradient: A Mechanism for Cell Locomotion**  
J.F. Joanny, F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **90**, 168102-1 (2003).
- [31] **Active Travelling Wave in the Cochlea**  
T. Duke and F. Jülicher  
*Phys. Rev. Lett.* **90**, 158101-1 (2003).
- [32] **Self-organization and Mechanical Properties of Active Filament Bundles**  
K. Kruse and F. Jülicher  
*Phys. Rev. E* **67**, 051913-1 (2003).
- [33] **Membranes with Rotating Motors**  
P. Lenz, J.-F. Joanny, F. Jülicher and J. Prost  
*Phys. Rev. Lett.* **91**, 108104-1 (2003).
- [34] **Morphogenetic Oscillations during Symmetry Breaking of Regenerating Hydra Vulgaris Cells**  
C. Fütterer, C. Colombo, F. Jülicher and A. Ott  
*Europhys. Lett.* **64**, 137 (2003).
- [35] **Continuum Theory of Contractile Fibres**  
K. Kruse, A. Zumdick and F. Jülicher  
*Europhys. Lett.* **64**, 716 (2003).

- [36] **A Motor that Makes its Own Track: Helicase Unwinding of DNA**  
M.D. Betterton and F. Jülicher  
*Phys. Rev. Lett.* **91**, 258103 (2003).
- [37] **Asters, Vortices and Rotating Spirals in Active Gels of Polar Filaments**  
K. Kruse, J.-F. Joanny, F. Jülicher, J. Prost and K. Sekimoto  
*Phys. Rev. Lett.* **92**, 078101 (2004).
- [38] **Role of Tensile Stress in Actin Gels and a Symmetry-Breaking Instability**  
K. Sekimoto, J. Prost, F. Jülicher, H. Boukellal and A. Bernheim-Grosswasser  
*Eur. Phys. J. E* **13**, 247 (2004).
- [39] **Membranes with Rotating Motors: Microvortex Assemblies**  
P. Lenz, J.-F. Joanny, F. Jülicher, and J. Prost  
*Eur. Phys. J. E* **13**, 379 (2004).
- [40] **Active Hair-Bundle Motility Harnesses Noise to Operate Near an Optimum of Mechanosensitivity**  
B. Nadrowski, P. Martin, and F. Jülicher  
*Proc. Natl. Acad. Sci. USA* **101**, 12195 (2004).
- [41] **Fluid Membranes Exchanging Material with External Reservoirs**  
P. Girard, F. Jülicher, and J. Prost  
*Eur. Phys. J. E* **14**, 387 (2004).
- [42] **Dpp Gradient Formation by Dynamin-Dependent Endocytosis: Receptor Trafficking and the Diffusion Model**  
K. Kruse, P. Pantazis, T. Bollenbach, F. Jülicher, and M. González-Gaitàn  
*Development* **131**, 4843 (2004).
- [43] **Universal Critical Behavior of Noisy Coupled Oscillators**  
T. Risler, J. Prost, and F. Jülicher  
*Phys. Rev. Lett.* **93**, 175702 (2004).
- [44] **Robust Formation of Morphogen Gradients**  
T. Bollenbach, K. Kruse, P. Pantazis, M. González-Gaitàn, and F. Jülicher  
*Phys. Rev. Lett.* **94**, 18103 (2005).
- [45] **Opening of Nucleic-Acid Double Strands by Helicases: Active Versus Passive Opening**  
M.D. Betterton and F. Jülicher  
*Phys. Rev. E* **71**, 011904 (2005).
- [46] **Generic Theory of Active Polar Gels: A Paradigm for Cytoskeletal Dynamics**  
K. Kruse, J.-F. Joanny, F. Jülicher, J. Prost, and K. Sekimoto  
*Eur. Phys. J. E* **16**, 5 (2005).
- [47] **Filament Depolymerization by Motor Molecules**  
G. Klein, K. Kruse, G. Cuniberti, and F. Jülicher  
*Phys. Rev. Lett.* **94**, 108102 (2005).

- [48] **Theory of Mitotic Spindle Oscillations**  
S.W. Grill, K. Kruse, and F. Jülicher  
*Phys. Rev. Lett* **94**, 108104 (2005).
- [49] **Universal Critical Behavior of Noisy Coupled Oscillators:  
A Renormalization Group Study**  
T. Risler, J. Prost, and F. Jülicher  
*Phys. Rev. E* **72**, 016130 (2005).
- [50] **Velocity and Processivity of Helicase Unwinding of Double-Stranded Nucleic Acids**  
M.D. Betterton, and F. Jülicher  
*J. Phys.: Condens. Matter* **17**, 3851 (2005).
- [51] **Continuum Description of the Cytoskeleton:  
Ring Formation in the Cell Cortex**  
A. Zumdieck, M. Cosentino Lagomarsino, C. Tanase K. Kruse, B. Mulder,  
M. Dogterom, and F. Jülicher  
*Phys. Rev. Lett.* **95**, 258103 (2005).
- [52] **Hydrodynamic Flow Patterns and Synchronization of Beating Cilia**  
A. Vilfan and F. Jülicher  
*Phys. Rev. Lett.* **96**, 058102 (2006).
- [53] **Postsynaptic Mad Signaling at the Drosophila Neuromuscular Junction**  
V. Dudu, T. Bittig, E. Entchev A. Kicheva, F. Jülicher, and M. González-Gaitàn  
*Current Biology* **16**, 625 (2006).
- [54] **Contractility and Retrograde Flow in Lamellipodium Motion**  
K. Kruse, J.-F. Joanny, F. Jülicher and J. Prost  
*Phys. Biol.* **16**, 3 (2006).
- [55] **Dynamics and Mechanics of Motor-Filament Systems**  
K. Kruse and F. Jülicher  
*Eur. Phys. J. E* **20**, 459 (2006).
- [56] **Calibration of Optical Tweezers with Positional Detection in the  
Back Focal Plane**  
S. Tolic-Norrelykke, E. Schäffer, J. Howard, F.S. Pavone, F. Jülicher, and  
H. Flyvbjerg  
*Review of Scientific Instruments* **77**, 103101 (2006).
- [57] **Spindle Oscillations during Asymmetric Cell Division Require a Threshold Number  
of Active Cortical Force Generators**  
J. Pecreaux, J.-C. Röper, K. Kruse, F. Jülicher, A. Hyman, S. Grill and J. Howard  
*Current Biology* **16**, 2111 (2006).
- [58] **Morphogen Transport in Epithelia**  
T. Bollenbach, K. Kruse, P. Pantazis, M. González-Gaitàn and F. Jülicher  
*Phys. Rev. E* **75**, 011901 (2007).

- [59] **Kinetics of Morphogen Gradient Formation**  
A. Kicheva, P. Pantazis, T. Bollenbach, Y. Kalaidzidis, T. Bittig, F. Jülicher and M. González-Gaitàn  
*Science* **315**, 521 (2007).
- [60] **Experimental and Theoretical Study of Mitotic Spindle Orientation**  
M. Théry, A. Jiménez-Dalmaroni, V. Racine, M. Bornens and F. Jülicher  
*Nature* **447**, 493 (2007).
- [61] **Precision of Genetic Oscillators and Clocks**  
L. Morelli and F. Jülicher  
*Phys. Rev. Lett.* **98**, 228101 (2007).
- [62] **Chemotaxis of Sperm Cells**  
B. M. Friedrich and F. Jülicher  
*Proc. Natl. Acad. Sci. USA* **104**, 13256 (2007).
- [63] **Response and Fluctuations of a Two-state Signaling Module with Feedbacks**  
M. Gopalakrishnan, P. Borowski, F. Jülicher and M. Zpatocky  
*Phys. Rev. E* **76**, 021904 (2007).
- [64] **Stress Generation and Filament Turnover during Actin Ring Constriction**  
A. Zumdick, K. Kruse, H. Bringmann, A. A. Hyman and F. Jülicher  
*Plos ONE* **2**, e696 (2007).
- [65] **Unifying the Various Incarnations of Active Hair-Bundle Motility by the Vertebrate Hair Cell**  
J. Y. Tinevez, F. Jülicher and P. Martin  
*Biophys J.* **93**, 4053 (2007)
- [66] **How Molecular Motors Shape the Flagellar Beat**  
I. H. Riedel-Kruse, A. Hilfinger, J. Howard and F. Jülicher  
*HFSP J.* **1**, 192 (2007).
- [67] **Hydrodynamic Theory for Multi-Component Active Polar Gels**  
J.-F. Joanny, F. Jülicher, K. Kruse and J. Prost  
*New. J. Phys.* **9**, 422 (2007).
- [68] **The Influence of Cell Mechanics, Cell-Cell Interactions and Proliferation on Epithelial Packing**  
R. Farhadifar, J.-C. Röper, B. Algouy, S. Eaton and F. Jülicher  
*Current Biology* **17**, 2095 (2007).
- [69] **Quantitative Differences in Tissue Surface Tension Influence Zebrafish Germ Layer Positioning**  
E.-M. Schötz, R. D. Burdine, F. Jülicher, M. S. Steinberg, C.-P. Heisenberg and R. A. Foty  
*HSFP J.* **2**, 42 (2008).
- [70] **Precision of the Dpp gradient**  
T. Bollenbach, P. Pantazis, A. Kicheva, C. Bökel, M. González-Gaitàn and F. Jülicher  
*Development* **135**, 1137 (2008).

- [71] **The Chirality of Ciliary Beats**  
A. Hilfinger and F. Jülicher  
*Phys. Biol.* **5**, 016003 (2008).
- [72] **Two-state Approach to Stochastic Hair Bundle Dynamics**  
D. Clausznitzer, B. Lindner, F. Jülicher and P. Martin  
*Phys. Rev. E* **77**, 041901 (2008).
- [73] **Dynamics of Anisotropic Tissue Growth**  
T. Bittig, O. Wartlick, A. Kicheva, M. González-Gaità and F. Jülicher  
*New J. Phys.* **10**, 63001 (2008).
- [74] **Thermal and Non-Thermal Fluctuations in Active Polar Gels**  
A. Basu, J.F. Joanny, F. Jülicher and J. Prost  
*Eur. Phys. J. E* **27**, 10364 (2008).
- [75] **Enhancement of Sensitivity Gain and Frequency Tuning by Coupling of Active Hair Bundles**  
K. Dierkes, B. Lindner and F. Jülicher  
*Proc. Natl. Acad. Sci. USA.* **105**, 18669 (2008).
- [76] **The Stochastic Dance of Circling Sperm Cells: Sperm Chemotaxis in the Plane**  
B. Friedrich and F. Jülicher  
*New J. Phys.* **10**, 123025 (2008).
- [77] **Delayed Coupling Theory of Vertebrate Segmentation**  
L. Morelli, S. Ares, L. Herrgen, C. Schröter, F. Jülicher and A. Oates  
*HFSP J.* **3**, 55 (2009).
- [78] **Generic Theory of Colloidal Transport**  
F. Jülicher and J. Prost  
*Eur. Phys. J. E* **29**, 27 (2009).
- [79] **Self-Organization of Dynein Motors Generates Meiotic Nuclear Oscillations**  
S. Vogel, N. Pavin, N. Maghelli, F. Jülicher and Iva Tolic-Norrelykke  
*Plos Biology* **7** (4) e1000087 (2009).
- [80] **Nonlinear Dynamics of Cilia and Flagella**  
A. Hilfinger, A. K. Chattopadhyay and F. Jülicher  
*Phys. Rev. E* **79**, 051918 (2009).
- [81] **Germline P Granules Are Liquid Droplets that Localize by Controlled Dissolution/Condensation**  
C. P. Brangwynne, C. R. Eckmann, D. S. Courson, A. Rybarska, C. Hoege, J. Gharakhani, F. Jülicher and A. A. Hyman  
*Science*, **324**, 1729 (2009).
- [82] **Steering Chiral Swimmers along Noisy Helical Paths**  
B. M. Friedrich and F. Jülicher  
*Phys. Rev. Lett.*, **103**, 068102 (2009).



- [83] **Comment on "Osmotic Propulsion: The Osmotic Motor"**  
F. Jülicher and J. Prost  
*Phys. Rev. Lett.*, **103**, 079801 (2009).
- [84] **Spontaneous Movements and Linear Response of a Noisy Oscillator**  
F. Jülicher, K. Dierkes, B. Lindner, J. Prost and P. Martin  
*Eur. Phys. J. E* **29**, 449 (2009).
- [85] **Quantification of Growth Asymmetries in Developing Epithelia**  
T. Bittig, W. Wartlick, González-Gaitán and F. Jülicher  
*Eur. Phys. J. E* **30**, 93 (2009).
- [86] **Increased Cell Bond Tension Governs Cell Sorting at the *Drosophila* Anteroposterior Compartment Boundary**  
K. P. Landsberg, R. Farhadifar, J. Ranft, D. Umetsu, T. J. Widmann, T. Bittig, A. Said, F. Jülicher and C. Dahmann  
*Current Biology* **19**, 1950 (2009).
- [87] **Local Exponents of Nonlinear Compression in Periodically Driven Noisy Oscillators**  
B. Lindner, K. Dierkes and F. Jülicher  
*Phys. Rev. Lett.* **103**, 250601 (2009).
- [88] **Centrosome Size Sets Mitotic Spindle Length in *Caenorhabditis elegans* Embryos**  
G. Greenan, C. P. Brangwynne, S. Jaensch, J. Gharakhani, F. Jülicher and A. A. Hyman  
*Current Biology* **20**, 353 (2010).
- [89] **High-precision Tracking of Sperm Swimming Fine Structure Provides Strong Test of Resistive Force Theory**  
B. M. Friedrich, I. H. Riedel-Kruse, J. Howard and F. Jülicher  
*Journal of Experimental Biology* **213**, 1226 (2010).
- [90] **Bipedal Locomotion in Crawling Cells**  
E. L. Barnhart, G. M. Allen, F. Jülicher and J. A. Theriot  
*Biophys J.* **98**, 933 (2010).
- [91] **Coupling a Sensory Hair-Cell Bundle to Cyber Clones Enhances Nonlinear Amplification**  
J. Barral, K. Dierkes, B. Lindner, F. Jülicher and P. Martin  
*Proc. Natl. Acad. Sci. USA* **107**, 10765 (2010).
- [92] **Intercellular Coupling Regulates the Period of the Segmentation Clock**  
L. Herrgen, S. Ares, L. G. Morelli, C. Schröter, F. Jülicher and A. C. Oates  
*Current Biology* **20**, 1244 (2010).
- [93] **The interplay between Active Hair Bundle Motility and Electromotility in the Cochlea**  
D. O Maoileidigh and F. Jülicher  
*J. Acoust. Soc. Am.*, **128**, 1175 (2010).
- [94] **Cell Flow Reorients the Axis of Planar Polarity in the Wing Epithelium of *Drosophila***  
B. Aigouy, R. Farhadifar, D. B. Staple, A. Sagner, J.-C. Röper, F. Jülicher and S. Eaton  
*Cell* **142**, 773 (2010).

- [95] **Anisotropies in Cortical Tension Reveal the Physical Basis of Polarizing Cortical Flows**  
M. Mayer, M. Depken, J. Bois, F. Jülicher and S. Grill  
*Nature* **467**, 617 (2010).
- [96] **Collective Behavior of Antagonistically Acting Kinesin-1 Motors**  
C. Leduc, N. Pavin, F. Jülicher and S. Diez  
*Phys. Rev. Lett.* **105**, 128103 (2010).
- [97] **Mechanics and Remodelling of Cell Packings in Epithelia**  
D.B. Staple, R. Fahardifar, J.-C. Röper, B. Aigouy, S. Eaton and F. Jülicher  
*Eur. Phys. J. E* **33**, 117, (2010).
- [98] **Fluidization of Tissues by Cell Division and Apoptosis**  
J. Ranft, M. Basan, J. Elgeti, J.-F. Joanny, J. Prost and F. Jülicher  
*Proc. Natl. Acad. Sci. USA* **107**, 20863 (2010).
- [99] **Pattern Formation in Active Fluids**  
J. S. Bois, F. Jülicher and S. Grill  
*Phys. Rev. Lett.* **106**, 028103 (2011).
- [100] **Dynamics of Dpp Signaling and Proliferation Control**  
O. Wartlick, P. Mumcu, A. Kicheva, T. Bittig, C. Seum, F. Jülicher and M. Gonzalez-Gaitan  
*Science* **331**, 1154 (2011).
- [101] **Hydrodynamics of Active Permeating Gels**  
A. C. Callan-Jones and F. Jülicher  
*New. J. Phys.* **13**, 093027 (2011).
- [102] **The Taylor–Couette motor:  
Spontaneous Flows of Active Polar fluids between Two Coaxial Cylinders**  
S. Fürthauer, M. Neef, S. W. Grill, K. Kruse and F. Jülicher  
*New. J. Phys.* **14**, 023001 (2012)
- [103] **Response to Comment on  
„Dynamics of Dpp Signaling and Proliferation Control“**  
O. Wartlick, P. Mumcu, F. Jülicher and M. Gonzalez-Gaitan  
*Science* **335**, 401 (2012).
- [104] **Cortical Dynein Controls Microtubule Dynamics to Generate Pulling Forces that Position Microtubule Asters**  
L. Laan, N. Pavin, J. Husson, G. Romet-Lemonne, M. van Duijn, M. Preciado López, R. D. Vale, F. Jülicher, S. L. Reck-Peterson and M. Dogterom  
*Cell* **148**, 502 (2012).
- [105] **Physical Mechanisms Shaping the *Drosophila* Dorsoventral Compartment Boundary**  
M. Aliee, J.-C. Röper, K. P. Landsberg, C. Pentzold, T. J. Widmann, F. Jülicher and C. Dahmann  
*Current Biology* **22**, 967 (2012).
- [106] **Collective Modes of Coupled Phase Oscillators with Delayed Coupling**  
S. Ares, L. G. Morelli, D. J. Jörg, A. C. Oates and F. Jülicher  
*Phys. Rev. Lett.* **108**, 204101 (2012).

- [107] **A Mean-field Approach to Elastically Coupled Hair Bundles**  
K. Dierkes, F. Jülicher and B. Lindner  
*Eur. Phys. J. E* **35**, 37 (2012).
- [108] **Tissue Dynamics with Permeation**  
J. Ranft, J. Prost, F. Jülicher and J.-F. Joanny  
*Eur. Phys. J. E* **35**, 46 (2012).
- [109] **Topology and Dynamics of the Zebrafish Segmentation Clock Core Circuit**  
C. Schröter, S. Ares, L. G. Morelli, A. Isakova, K. Hens, D. Soroldoni, M. Gajewski,  
F. Jülicher, S. J. Maerkl, B. Deplancke and A. C. Oates  
*PLoS Biol* **10**, e1001364 (2012).
- [110] **Establishment of Global Patterns of Planar Polarity during Growth of the Drosophila Wing Epithelium**  
A. Sagner, M. Merkel, B. Aigouy, J. Gaebel, M. Brankatschk, F. Jülicher and S. Eaton  
*Current Biology* **22**, 967 (2012).
- [111] **A General Theoretical Framework to Infer Endosomal Network Dynamics from Quantitative Image Analysis**  
L. Foret, J. E. Dawson, R. Villaseñor, C. Collinet, A. Deutsch, L. Bruschi, M. Zerial,  
Y. Kalaidzidis and F. Jülicher  
*Current Biology* **22**, 1381 (2012).
- [112] **Adhesion Functions in Cell Sorting by Mechanically Coupling the Cortices of Adhering Cells**  
J.-L. Maître, H. Berthoumieux, S. F. G. Krens, G. Salbreux, F. Jülicher, E. Paluch and  
C.-P. Heisenberg  
*Science* **338**, 253 (2012).
- [113] **Investigating the Principles of Morphogen Gradient Formation: From Tissues to Cells**  
A. Kicheva, T. Bollenbach, O. Wartlick, F. Jülicher and M. Gonzalez-Gaitan  
*Curr. Opin. Genet. Dev.* **22**, 527 (2012)
- [114] **Flagellar Synchronization Independent of Hydrodynamic Interactions**  
B. M. Friedrich and F. Jülicher  
*Phys. Rev. Lett.* **109**, 138102 (2012).
- [115] **Active Chiral Fluids**  
S. Fürthauer, M. Stempel, S. W. Grill and F. Jülicher  
*Eur. Phys. J. E* **35**, 89 (2012).
- [116] **Positioning of Microtubule Organizing Centers by Cortical Pushing and Pulling Forces**  
N. Pavin, L. Laan, R. Ma, M. Dogterom and F. Jülicher  
*New J. Phys.* **14**, 105025 (2012).
- [117] **Anomalous Behavior of the Diffusion Coefficient in Thin Active Films**  
A. Basu, J.-F. Joanny, F. Jülicher and J. Prost  
*New J. Phys* **14**, 115001 (2012).

- [118] **Active Chiral Processes in Thin Films**  
S. Fürthauer, M. Stempel, S. W. Grill and F. Jülicher  
*Phys. Rev. Lett.* **110**, 048103 (2013).
- [119] **XMAP215 Activity Sets Spindle Length by Controlling the Total Mass of Spindle Microtubules**  
S. B. Reber, J. Baumgart, P. O. Widlund, A. Pozniakovsky, J. Howard, A. A. Hyman and F. Jülicher  
*Nature Cell Biol.* **15**, 1116 (2013).
- [120] **Spatial Organization of the Cell Cytoplasm by Position-Dependent Phase Separation**  
C. F. Lee, C. P. Brangwynne, J. Gharakhani, A. A. Hyman and F. Jülicher  
*Phys. Rev. Lett.* **111**, 088101 (2013).
- [121] **Cell-body Rocking is a Dominant Mechanism for Flagellar Synchronization in a Swimming Alga**  
V. F. Geyer, F. Jülicher, J. Howard, and B. M. Friedrich  
*Proc. Natl. Acad. Sci. USA*, **110**, 18058 (2013).
- [122] **General Theory for the Mechanics of Confined Microtubule Asters**  
R. Ma, L. Laan, M. Dogterom, N. Pavin and F. Jülicher  
*New J. Phys.* **16** 013018 (2014).
- [123] **Mechanically Driven Interface Propagation in Biological Tissues**  
J. Ranft, M. Aliee, J. Prost, F. Jülicher and J.-F. Joanny  
*New J. Phys.* **16** 035002 (2014).
- [124] **Wnt-regulated Dynamics of Positional Information in Zebrafish Somitogenesis**  
L. Bajard, L. G. Morelli, S. Ares, J. Pécrciaux, F. Jülicher and A. C. Oates  
*Development* **141** 1381 (2014).
- [125] **Growth Control by a Moving Morphogen Gradient during Drosophila Eye Development**  
O. Wartlick, F. Jülicher and M. Gonzales-Gaitan  
*Development* **141** 1884 (2014).
- [126] **Synchronization Dynamics in the Presence of Coupling Delays and Phase Shifts**  
D. J. Jörg, L. G. Morelli, S. Ares and F. Jülicher  
*Phys. Rev. Lett.* **112**, 174101 (2014).
- [127] **Transduction Channels' Gating can Control Friction on Vibrating Hair-Cell Bundles in the Ear**  
V. Bormuth, J. Barral, J.-F. Joanny, F. Jülicher and P. Martin  
*Proc. Natl. Acad. Sci. USA* **111**, 7185 (2014).
- [128] **Pulsatory Patterns in Active Fluids**  
K. V. Kumar, J. S. Bois, F. Jülicher and S. W. Grill  
*Phys. Rev. Lett.* **112**, 208101 (2014).
- [129] **Motor Regulation Results in Distal Forces that Bend Partially Disintegrated Chlamydomonas Axonemes into Circular Arcs**  
V. Mukundan, P. Sartori, V. F. Geyer, F. Jülicher and J. Howard  
*Biophys J.* **106**, 2434 (2014).

- [130] **Active Elastic Thin Shell Theory for Cellular Deformations**  
H. Berthoumieux, J.-L. Maître, C.-P. Heisenberg, E. K. Paluch, F. Jülicher  
and G. Salbreux  
*New J. Phys.* **16**, 065005 (2014).
- [131] **Centrosomes are Autocatalytic Droplets of Pericentriolar Material Organized by Centrioles**  
D. Zwicker, M. Decker, S. Jaensch, A. A. Hyman and F. Jülicher  
*Proc. Natl. Acad. Sci. USA*, **111**, E2636 (2014).
- [132] **A Doppler Effect in Embryonic Pattern Formation**  
D. Soroldoni, D. J. Jörg, L. G. Morelli, D. L. Richmond, J. Schindelin, F. Jülicher  
and A. C. Oates  
*Science* **345**, 222 (2014).
- [133] **Multimotor Transport in a System of Active and Inactive Kinesin-1 Motors**  
L. Scharrel, R. Ma, R. Schneider, F. Jülicher and S. Diez  
*Biophys. J.* **107**, 365 (2014).
- [134] **Active Phase and Amplitude Fluctuations of Flagellar Beating**  
R. Ma, G. S. Klindt, I. H. Riedel-Kruse, F. Jülicher and B. Friedrich  
*Phys. Rev. Lett.* **113**, 048101 (2014).
- [135] **Local Increases in Mechanical Tension Shape Compartment Boundaries by Biasing Cell Intercalations**  
D. Umetsu, B. Aigouy, M. Aliee, S. Sui, S. Eaton, F. Jülicher and C. Dahmann  
*Current Biology* **24**, 1798 (2014).
- [136] **An Active Oscillator Model Describes the Statistics of Spontaneous Otoacoustic Emissions**  
F. Fruth, F. Jülicher and B. Lindner  
*Biophys. J.* **107**, 815 (2014).
- [137] **Quantification of Surface Tension and Internal Pressure Generated by Single Mitotic Cells**  
E. Fischer-Friedrich, A. A. Hyman, F. Jülicher, D. J. Müller and J. Helenius  
*Scientific Reports* **4**, 6213 (2014).
- [138] **Stress Distributions and Cell Flows in a Growing Cell Aggregate**  
M. Delarue, J.-F. Joanny, F. Jülicher and J. Prost  
*Interface Focus* **4**, 20140033 (2014).
- [139] **The Balance of Prickle/Spiny-Legs Isoforms Controls the Amount of Coupling between Core and Fat PCP Systems**  
M. Merkel, A. Sagner, F. S. Gruber, R. Etoornay, C. Blasse, E. Myers, S. Eaton and F. Jülicher  
*Current Biology* **24**, 2111 (2014).
- [140] **Synchronization in Networks of Mutually Delay-Coupled Phase-Locked Loops**  
A. Pollakis, L. Wetzel, D. J. Jörg, W. Rave, G. Fettweis and F. Jülicher  
*New J. Phys.* **16**, 113009 (2014).

- [141] **Active Torque Generation by the Actomyosin Cell Cortex Drives left-right Symmetry Breaking**  
S. R. Naganathan, S. Fürthauer, M. Nishikawa, F. Jülicher and S. W. Grill  
*eLife* **3**, e04165 (2014).
- [142] **Dynamic Force Balances and Cell Shape Changes during Cytokinesis**  
A. Sain, M. M. Inamdar and F. Jülicher  
*Phys. Rev. Lett.* **114**, 048102 (2015).
- [143] **A Hybrid Particle-Mesh Method for Incompressible Active Polar Viscous Gels**  
R. Ramaswamy, G. Bourantas, F. Jülicher and I. Sbalzarini  
*Journal of Computational Physics* **291**, 334 (2015).
- [144] **Scaling and Regeneration of Self-Organized Patterns**  
S. Werner, T. Stückemann, M. Beirán Amigo, J. C. Rink, F. Jülicher and B. M. Friedrich  
*Phys. Rev. Lett.* **114**, 138101 (2015).
- [145] **Interplay of Cell Dynamics and Epithelial Tension during Morphogenesis of the Drosophila Pupal Wing**  
R. Etournay, M. Popovic, M. Merkel, A. Nandi, C. Blasse, B. Aigouy, H. Brandl, G. Myers, G. Salbreux, F. Jülicher and S. Eaton  
*eLife*, **4**:e07090 (2015).
- [146] **Suppression of Ostwald Ripening in Active Emulsions**  
D. Zwicker, A. A. Hyman and F. Jülicher  
*Phys. Rev. E* **92**, 012317 (2015).
- [147] **Continuum Theory of Gene Expression Waves during Vertebrate Segmentation**  
D. J. Jörg, L. G. Morelli, D. Soroldoni, A. C. Oates and F. Jülicher  
*New J. Phys.* **17**, 093042 (2015).
- [148] **Synchronization of Mutually Coupled Digital PLLs in Massive MIMO Systems**  
D. J. Jörg, A. Pollakis, L. Wetzel, M. Dropp, W. Rave, F. Jülicher and G. Fettweis  
*2015 IEEE International Conference on Communications (ICC)*, 1716 (2015).
- [149] **A Local Difference in Hedgehog Signal Transduction Increases Mechanical Cell Bond Tension and Biases Cell Intercalations along the Drosophila Anteroposterior Compartment Boundary**  
K. Rudolf, D. Umetsu, M. Aliee, L. Sui, F. Jülicher and C. Dahmann  
*Development* **142**, 3845 (2015).
- [150] **Pulled Polymer Loops as a Model for the Alignment of Meiotic Chromosomes**  
Y. T. Lin, D. Frömberg, W. Huang, P. Delivani, M. Chacón, I. M. Tolic, F. Jülicher, and V. Zaburdaev  
*Phys. Rev. Lett.* **115**, 208102 (2015).
- [151] **Polarized Endosome Dynamics by Spindle Asymmetry During Asymmetric Cell Division**  
E. Derivery, C. Seum, A. Daeden, S. Loubéry, L. Holtzer, F. Jülicher and M. Gonzalez-Gaitan  
*Nature* **528**, 280 (2015).

- [152] **Decision Making in the Arrow of Time**  
E. Roldán, I. Neri, M. Dörpinghaus, H. Meyr and F. Jülicher  
*Phys. Rev. Lett.* **115**, 250602 (2015).
- [153] **Interface Contractility between Differently Fated Cells Drives Cell Elimination and Cyst Formation**  
C. Bielmeier, S. Alt, V. Weichselberger, M. La Fortezza, H. Harz, F. Jülicher, G. Salbreux, A. Classen  
*Current Biology* **26**, 563 (2016).
- [154] **Persistence, Period and Precision of Autonomous Cellular Oscillators from the Zebrafish Segmentation Clock**  
A. B. Webb, I. M Lengyel, D. J. Jörg, G. Valentin, F. Jülicher, L. G Morelli and A. C. Oates  
*eLife* **5**: e08438 (2016).
- [155] **Antagonistic Self-Organizing Patterning Systems Control Maintenance and Regeneration of the Anteroposterior Axis in Planarians**  
T. Stückemann, J. P. Cleland, S. Werner, H. T. Vu, R. Bayersdorf, S. Liu, B. Friedrich, F. Jülicher and J. C. Rink  
*Dev. Cell* **40**, 248 (2016).
- [156] **Activity Induces Traveling Waves, Vortices and Spatiotemporal Chaos in a Model Actomyosin Layer**  
R. Ramaswamy and F. Jülicher  
*Scientific Reports* **6**, 20838 (2016).
- [157] **Autonomous Chemical Oscillator Circuit Based on Bidirectional Chemical-Microfluidic Coupling**  
G. Paschew, J. Schreiter, A. Voigt, C. Pini, J. P. Chávez, M. Allerdißen, U. Marschner, S. Siegmund, R. Schüffny, F. Jülicher and A. Richter  
*Adv. Mater. Technol.* **1**, 1600005 (2016).
- [158] **Determining Physical Properties of the Cell Cortex**  
A. Saha, M. Nishikawa, M. Behrndt, C.-P. Heisenberg, F. Jülicher and S. W. Grill  
*Biophys J.*, **110**, 1421 (2016).
- [159] **Independent Control of the Static and Dynamic Components of the Chlamydomonas Flagellar Beat**  
V. F. Geyer, P. Sartori, B. M. Friedrich, F. Jülicher and J. Howard  
*Current Biology* **26**, 1098 (2016).
- [160] **Paired Arrangement of Kinetochores together with Microtubule Pivoting and Dynamics Drive Kinetochore Capture in Meiosis I**  
G. Cojoc, A.-M. Florescu, A. Krull, A. H. Klemm, N. Pavin, F. Jülicher and I. M. Tolić  
*Scientific Reports* **6**, 25736 (2016).
- [161] **Dynamic curvature regulation accounts for the symmetric and asymmetric beats of Chlamydomonas flagella**  
P. Sartori, V. F. Geyer, A. Scholich, F. Jülicher and J. Howard  
*eLife* **5**:e13258 (2016).

- [162] **TissueMiner: a Multiscale Analysis Toolkit to Quantify how Cellular Processes Create Tissue dynamics**  
R. Etournay, M. Merkel, M. Popovic, H. Brandl, N. Dye, B. Aigouy, G. Salbreux, S. Eaton and F. Jülicher  
*eLife* **5**:e14334 (2016).
- [163] **Rheology of the Active Cell Cortex in Mitosis**  
E. Fischer-Friedrich, Y. Toyoda, C. J. Cattin, D. J. Müller, A. A. Hyman and F. Jülicher  
*Biophys J*, **111**, 589 (2016).
- [164] **The Selector Gene *apterous* and Notch Are Required to Locally Increase Mechanical Cell Bond Tension at the *Drosophila* Dorsoventral Compartment Boundary**  
M. Michel, M. Aliee, K. Rudolf, L. Bialas, F. Jülicher and C. Dahmann  
*Plos ONE* **11**, e0161668 (2016).
- [165] **Polar Positioning of Phase-Separated Liquid Compartments in Cells Regulated by an mRNA Competition Mechanism**  
S. Saha, C. A. Weber, M. Nusch, O. Adame-Arana, C. Hoege, M. Y. Hein, E. Osborne-Nishimura, J. Mahamid, M. Jahnel, L. Jawerth, A. Pozniakovski, C. R. Eckmann, F. Jülicher, and A. A. Hyman  
*Cell* **166**, 1572 (2016).
- [166] **Interface Dynamics of Competing Tissues**  
N. Podewith, F. Jülicher, G. Gompper, J. Elgeti  
*New J. Phys.* **18**, 083020 (2016).
- [167] **Polo kinase Phosphorylation Determines *C. elegans* Centrosome Size and Density by Biasing SPD-5 toward an Assembly-competent Conformation**  
O. Wueseke, D. Zwicker, A. Schwager, Y. L. Wong, K. Oegema, F. Jülicher, A. A. Hyman, and J. Woodruff  
*Biol Open* (2016) **5** (10): 1431-1440 (2016).
- [168] **Sequential Pattern Formation Governed by Signaling Gradients**  
D. J. Jörg, A. C. Oates and F. Jülicher  
*Phys. Biol.* **13** (2016).
- [169] **Curvature Regulation of the Ciliary Beat Through Axonemal Twist**  
P. Sartori, V. F. Geyer, J. Howard and F. Jülicher  
*Phys. Rev. E*, **94**, 042426 (2016).
- [170] **Growth and Division of Active Droplets Provides a Model for Protocells**  
D. Zwicker, R. Seyboldt, C. A. Weber, A. A. Hyman and F. Jülicher  
*Nature Physics* **13**, 408 (2017).
- [171] **Statistics of Infima and Stopping Times of Entropy Production and Applications to Active Molecular Processes**  
I. Neri, É. Roldán and F. Jülicher  
*Phys. Rev X*, **7**, 011019 (2017).
- [172] **Active Dynamics of Tissue Shear Flow**  
M. Popovic, A. Nandi, M. Merkel, R. Etournay, S. Eaton, F. Jülicher and G. Salbreux  
*New J. Phys.* **19**, 033006 (2017).



- [173] **Triangles Bridge the Scales: Quantifying Cellular Contributions to Tissue Deformation**  
M. Merkel, R. Etoornay, M. Popovic, G. Salbreux, S. Eaton and F. Jülicher  
*Phys. Rev. E.* **95**, 032401 (2017).
- [174] **Controlling Contractile Instabilities in the Actomyosin Cortex**  
M. Nishikawa, S. R. Naganathan, F. Jülicher and S. W. Grill  
*eLife* 2017;10.7554/eLife.19595 (2017).
- [175] **Self-organized Synchronization of Digital Phase-locked Loops with Delayed Coupling in Theory and Experiment**  
L. Wetzel, D. J. Jörg, A. Pollakis, W. Rave, G. Fettweis and F. Jülicher  
*Plos ONE* **12**, e0171590 (2017).
- [176] **Droplet Ripening in Concentration Gradients**  
C. Weber, C. F. Lee and F. Jülicher  
*New J. Phys.* **19**, 053021 (2017).
- [177] **Physical Limits of Flow Sensing in the Left-right Organizer**  
R. R. Ferreira, A. Vilfan, F. Jülicher, W. Supatto, J. Vermot  
*eLife* 2017; 6:e25078 (2017).
- [178] **Mechanics of Active Surfaces**  
G. Salbreux and F. Jülicher  
*Phys. Rev. E.* **96**, 032404 (2017).
- [179] **Generic Properties of Stochastic Entropy Production**  
S. Pigolotti, I. Neri, E. Roldán and F. Jülicher  
*Phys. Rev. Lett.* **119**, 140604 (2017).
- [180] **Cell Dynamics Underlying Oriented Growth of the Drosophila Wing Imaginal Disc**  
N. A. Dye, M. Popovic, S. Spann, R. Etoornay, D. Kainmüller, S. Ghosh, E. W. Myers, F. Jülicher and S. Eaton  
*Development* **144**, 4406 (2017).
- [181] **Friction from Transduction Channels' Gating Affects Spontaneous Hair-Bundle Oscillations**  
J. Barral, F. Jülicher and P. Martin  
*Biophys J.* **114**, 425 (2018).
- [182] **Chemical event chain model of coupled genetic oscillators**  
D. J. Jörg, L. G. Morelli and F. Jülicher  
*Phys. Rev. E.* **97**, 032409 (2018).
- [183] **Critical Point in Self-Organized Tissue Growth**  
D. Aguilar-Hidalgo, S. Werner, O. Wartlick, M. Gonzalez-Gaitan, B. M. Friedrich and F. Jülicher  
*Phys. Rev. Lett.* **120**, 198102 (2018).
- [184] **Discontinuous switching of position of two coexisting phases**  
S. Krüger, C. A. Weber, J.-U. Sommer, F. Jülicher  
*New J. Phys.* **20**, 075009 (2018).

- [185] **Morphogenetic Degeneracies in the Actomyosin Cortex**  
S. R. Naganathan, S. Fürthauer, J. Rodriguez, B. T. Fievet, F. Jülicher,  
J. Ahringer, C. V. Cannistraci and S. W. Grill  
*eLife* 2018; 7:e37677 (2018).
- [186] **Role of Hydrodynamic Flows in Chemically Driven Droplet division**  
R. Seybodt and F. Jülicher  
*New J. Phys.* **20**, 105010 (2018).
- [187] **Differential Lateral and Basal Tension Drive Folding of Drosophila Wing Discs through Two Distinct Mechanisms**  
L. Sui, S. Alt, M. Weigert, N. Dye, S. Eaton, F. Jug, E. W. Myers, F. Jülicher,  
G. Salbreux and Christian Dahmann  
*Nature Communications* **9**, 4620 (2018).
- [188] **Position of Particles in Active Droplets**  
D. Zwicker, J. Baumgart, S. Redemann, T. Müller-Reichert, A. A. Hyman and F. Jülicher  
*Phys. Rev. Lett.* **121**, 158102 (2018).
- [189] **Exactly Solvable Dynamics of Forced Polymer Loops**  
W. Huang, Y. T. Ling, D. Frömberg, J. Shin, F. Jülicher and V. Zaburdaev  
*New J. Phys.* **20**, 113005 (2018).
- [190] **Salt-Dependent Rheology and Surface Tension of Protein Condensates Using Optical Traps**  
L. M. Jawerth, M. Ijavi, M. Ruer, S. Saha, M. Jahnel, A. A. Hyman, F. Jülicher and  
E. Fischer-Friedrich  
*Phys. Rev. Lett.* **121**, 258101 (2018).
- [191] **Guiding Self-organized Pattern Formation in Cell Polarity Establishment**  
P. Gross, K. V. Kumar, N. W. Goehring, J. S. Bois, C. Hoege, F. Jülicher and S. W. Grill  
*Nature Physics* **15**, 293 (2019).
- [192] **Self-organized Shape Dynamics of Active Surfaces**  
A. Mietke, F. Jülicher and I. Sbalzarini  
*Proc. Natl. Acad. Sci. USA*, **116**, 29 (2019).
- [193] **Body Size-dependent Energy Storage Causes Kleiber's Law Scaling of the Metabolic Rate in Planarians**  
A. A. Thommen, S. Werner, O. Frank, J. Philipp, O. Knittelfelder, Y. Quek, K. Fahmy, A.  
Shevchenko, B. M. Friedrich, F. Jülicher, J. C. Rink  
*eLife* 2019; 8:e38187 (2019).
- [194] **Epithelial Viscoelasticity is Regulated by Mechanosensitive E-cadherin Turnover**  
K. Venkatesan Iyer, R. Piscitello-Gómez, J. Pajmians, F. Jülicher and S. Eaton  
*Current Biology* **29**, 1 (2019).
- [195] **Extreme Reductions of Entropy in an Electronic Double Dot**  
S. Singh, É. Roldán, I. Neri, I. M. Khaymovich, D. S. Golubev, V. F. Maisi, J. T. Peltonen,  
F. Jülicher and J. P. Pekola  
*Phys. Rev. B* **99**, 115422 (2019).

- [196] **Field Induced Cell Proliferation and Death in a Model Epithelium**  
N. Sarkar, J. Prost and F. Jülicher  
*New J. Phys.* **21**, 043035 (2019).
- [197] **Cell-Level 3D Reconstruction and Quantification of the Drosophila Wing Imaginal Disc**  
D. E. Breen, L. Sui, L. Bai, F. Jülicher and C. Dahmann  
*Int. J. Bioinformatics Research and Applications* **15** (2) (2019).
- [198] **Liquid-Crystal Organization of Liver Tissue**  
H. Morales-Navarrete, H. Nonaka, A. Scholich, F. Segovia-Miranda, W. de Back, K. Meyer, R. L. Bogorad, V. Koteliansky, L. Bruschi, Y. Kalaidzidis, F. Jülicher, B. M. Friedrich, M. Zerial  
*eLife* **2019**; 8:e44860 (2019).
- [199] **Active Cargo Positioning in Antiparallel Transport Networks**  
M. Richard, C. Blanch-Mercader, H. Ennomani, W. Cao, E. M. De La Cruz J.-F. Joanny, F. Jülicher, L. Blanchoinc, and P. Martin  
*Proc. Natl. Acad. Sci. USA*, **116**, 14835 (2019).
- [200] **Fluid Pumping and Active Flexoelectricity can Promote Lumen Nucleation in Cell Assemblies**  
C. Duclut, N. Sarkar, J. Prost and F. Jülicher  
*Proc. Natl. Acad. Sci. USA*, **116**, 19264 (2019).
- [201] **Integral Fluctuation Relations for Entropy Production at Stopping Times**  
I. Neri, E. Roldan, S. Pigolotti and F. Jülicher  
*J. Stat. Mech.*, 104006 (2019).
- [202] **Soluble Tubulin is Significantly Enriched at Mitotic Centrosomes**  
J. Baumgart, M. Kirchner, S. Redemann, A. Bond, J. Woodruff, J.-M. Verbavatz, F. Jülicher, T. Müller-Reichert, A. A. Hyman and J. Brugués  
*J Cell Biol.*, **218**, 3977 (2019).
- [203] **Minimal Model of Cellular Symmetry Breaking**  
A. Mietke, V. Jemseena, K. Vijay Kumar, I. F. Sbalzarini and F. Jülicher  
*Phys. Rev. Lett.* **123**, 188101 (2019).
- [204] **Casimir Stresses in Active Nematic Films**  
A. Basu, J.-F. Joanny, F. Jülicher and J. Prost  
*New J. Phys.* **21**, 123046 (2019).
- [205] **Phase Separation Provides a Mechanism to Reduce Noise in Cells**  
K. Klosin, F. Oltsch, T. Harmon, A. Honigmann, F. Jülicher, A. A. Hyman, C. Zechner  
*Science* **367**, 464 (2020).
- [206] **BMP Signaling Gradient Scaling in the Zebrafish Pectoral Fin**  
R. Mateus, L. Holtzer, C. Seum, Z. Hadjivasiliou, M. Dubois, F. Jülicher, and M. Gonzalez-Gaitan  
*Cell Reports* **30**, 4292 (2020).
- [207] **Active Forces Shape the Metaphase Spindle Through a Mechanical Instability**  
D. Oriola, F. Jülicher, and J. Brugués  
*Proc. Natl. Acad. Sci. USA* **117** (28), 16154-16159 (2020).

- [208] **Flagellar Length Control in Biflagellate Eukaryotes: Time-of-Flight, Shared Pool, Train Traffic and Cooperative Phenomena**  
S. Patra, F. Jülicher, and D. Chowdhury  
*New J. Phys.* **22**, 083009 (2020).
- [209] **Liquid Phase Separation Controlled by pH**  
O. Adame-Arana, C. A. Weber, V. Zaburdaev, J. Prost, and F. Jülicher  
*Biophys J.* **119**, 8, doi: 10.1016/j.bpj.2020.07.044 (2020).
- [210] **Power-Law Population Heterogeneity Governs Epidemic Waves**  
J. Neipel, J. Bauermann, S. Bo, T. Harmon, F. Jülicher  
*PLoS ONE* **15**(10), e0239678 (2020).
- [211] **Stability and Transient Dynamics of PLLs in Theory and Experiments**  
R. F. Riaz, D. Prousalis, C. Hoyer, J. Wagner, F. Ellinger, F. Jülicher, L. Wetzel  
*European Conference on Circuit Theory and Design (ECCTD)*, 1-4,  
doi: 10.1109/ECCTD49232.2020.9218377 (2020).
- [212] **Extreme-Value Statistics of Stochastic Transport Processes**  
A. Guillet, E. Roldan, and F. Jülicher  
*New J. Phys.*, doi: 10.1088/1367-2630/abcf69 (2020).
- [213] **Protein Condensates as Aging Maxwell Fluids**  
L. Jawerth, E. Fischer-Friedrich, S. Saha, J. Wang, T. Franzmann, X. Zhang, J. Sachweh, M. Ruer, M. Ijavi, S. Saha, J. Mahamid, A. A. Hyman, F. Jülicher  
*Science* **370**, 1317–1323 (2020).
- [214] **Quantification of nematic cell polarity in three-dimensional tissues**  
A. Scholich, S. Syga, H. Morales-Navarrete, F. Segovia- Miranda, H. Nonaka, K. Meyer, W. de Back, L. Bruschi, Y. Kalaidzidis, M. Zerial, F. Jülicher, B. M. Friedrich  
*PLOS Computational Biology* **17**(8): e1009349
- [215] **Continuum Theory of Active Phase Separation in Cellular Aggregates**  
H.-S. Kuan, W. Pönisch, F. Jülicher, and V. Zaburdaev  
*Phys. Rev. Lett.* **126**, 018102 (2021).
- [216] **Epithelial Colonies In Vitro Elongate through Collective Effects**  
J. Comelles, SS Soumya, L. Lu, E. Le-Maout, S. Anvitha, G. Salbreux, F. Jülicher, M. M Inamdar, D. Riveline  
*eLife* 2021;10:e57730 (2021).
- [217] **Transcription Organizes Euchromatin via Microphase Separation**  
L. Hilbert, Y. Sato, K. Kuznetsova, T. Bianucci, H. Kimura, F. Jülicher, A. Honigmann, V. Zaburdaev, and N. L. Vastenhouw  
*Nat Commun* **12**, 1360, doi: 10.1038/s41467-021-21589-3 (2021).
- [218] **Theory of Time Delayed Genetic Oscillations with External Noisy Regulation**  
J. Negrete Jr, I. M. Lengyel, L. Rohde, R. A. Desai, A. C. Oates, and F. Jülicher  
*New J. Phys.* **23**, 033030 (2021).
- [219] **Active Viscoelasticity of Odd Materials**  
D. Banerjee, V. Vitelli, F. Jülicher, and P. Surówka  
*Phys. Rev. Lett.* **126**, 138001 (2021).

- [220] **Apico-Basal Cell Compression Regulates Lamin A/C Levels in Epithelial Tissues**  
K. V. Iyer, A. Taubenberger, S. A. Zeidan, N. A. Dye, S. Eaton, and F. Jülicher  
*Nat Commun* **12**, 1756 (2021).
- [221] **Self-Organized Patterning of Cell Morphology via Mechanosensitive Feedback**  
N. A. Dye, M. Popovic, K. V. Iyer, J. Fuhrmann, R. Piscitello-Gómez, S. Eaton, and F. Jülicher  
*eLife*, doi: 10.7554/eLife.57964 (2021).
- [222] **Inferring the flow properties of epithelial tissues from their geometry**  
M. Popović, V. Druelle, N. A. Dye, F. Jülicher, and M. Wyart  
*New J. Phys.* **23** 033004 (2021).
- [223] **Mutual Synchronization with 24 GHz Oscillators**  
C. Hoyer, D. Prousalis, L. Wetzel, R. Riaz, J. Wagner, F. Jülicher, and F. Ellinger  
*IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 1-5 (2021).
- [224] **Hydraulic and Electric Control of Cell Spheroids**  
C. Duclut, J. Prost, and F. Jülicher  
*Proc. Natl. Acad. Sci. USA*, **118** (19) (2021).
- [225] **A Hydraulic Instability Drives the Cell Death Decision in the Nematode Germline**  
N. T. Chartier, A. Mukherjee, J. Pfanzer, S. Fürthauer, B. T. Larson, A. W. Fritsch, R. Amini, M. Kreysing, F. Jülicher, and S. W. Grill  
*Nat. Phys.* **20**, 920 (2021).
- [226] **Force Generation by Protein–DNA Co-Condensation**  
T. Quail, S. Golfier, M. Elsner, K. Ishihara, V. Murugesan, R. Renger, F. Jülicher, and J. Brugués  
*Nat. Phys.* **17**, 1007 (2021).
- [227] **Quantifying Entropy Production in Active Fluctuations of the Hair-Cell Bundle from Time Irreversibility and Uncertainty Relations**  
É. Roldán, J. Barral, P. Martin, J. M R Parrondo, and F. Jülicher  
*New J. Phys.* **23**, 083013 (2021).
- [228] **Local Thermodynamics Govern Formation and Dissolution of *Caenorhabditis elegans* P Granule Condensates**  
A. W. Fritsch, A. F. Diaz-Delgado, O. Adame-Arana, C. Hoegge, M. Mittasch, M. Kreysing, M. Leaver, A. A. Hyman, F. Jülicher, and C. A. Weber  
*Proc. Natl. Acad. Sci. USA* **118**, 37 (2021).
- [229] **Thermodynamics of Wetting, Prewetting and Surface Phase Transitions with Surface Binding**  
X. Zhao, G. Bartolucci, A. Honigmann, F. Jülicher and C. Weber  
*New J. Phys.* **23**, 123003 (2021).
- [230] **Nonlinear Rheology of Cellular Networks**  
C. Duclut, J. Pajmans, M. M. Inamdar, C. D. Modes, and F. Jülicher  
*Cells and Development*, <https://doi.org/10.1016/j.cdev.2021.203746> (2021).

- [231] **Stochastic dynamics of single molecules across phase boundaries**  
S. Bo, L. Hubatsch, J. Bauermann, C. A. Weber and F. Jülicher  
*Phys. Rev. Research* **3**, 043150 (2021).
- [232] **Morphogen Gradient Scaling by Recycling of Intracellular Dpp**  
M. Romanova Michailidi, Z. Hadjivasiliou, D. Aguilar-Hidalgo, D. Basagiannis, C. Seum, M. Dubois, F. Jülicher and M. Gonzalez-Gaitan  
*Nature* **602**, 287 (2022)
- [233] **Sequence-dependent Surface Condensation of a Pioneer Transcription Factor on DNA**  
J. A. Morin, S. Wittmann, S. Choubey, A. Klosin, S. Golfier, A. A. Hyman, F. Jülicher and S. W. Grill  
*Nature Physics* **18**, 271 (2022)
- [234] **A Gelation Transition Enables the Self-organization of Bipolar Metaphase Spindles**  
B. A. Dalton, D. Oriola, F. Decker, F. Jülicher and J. Brugués  
*Nature Physics* **18**, 132 (2022)
- [235] **Hydrodynamics of Chiral Squirmers**  
P.S. Burada, R. Maity and F. Jülicher  
*Phys Rev E* **105**, 024603 (2022)
- [236] **Co-condensation of Proteins with Single- and Double-stranded DNA**  
R. Renger, J. A. Morin, R. Lemaitre, M. Ruer-Gruss, F. Jülicher, A. Hermann and S. Grill  
*Proc. Natl. Acad. Sci. USA* **119**(10), e2107871119 (2022)
- [237] **Coarse-grained curvature tensor on polygonal surfaces**  
C. Duclut, A. Amiri, J. Pajmans and F. Jülicher  
*SciPost Phys. Core* **5**, 011 (2022)
- [238] **Molecular Assembly Lines in Active Droplets**  
Tyler S. Harmon and F. Jülicher  
*Phys. Rev. Lett.* **128**, 108102 (2022)
- [239] **Active T1 Transitions in Cellular Networks**  
C. Duclut, J. Pajmans, M. M. Inamdar, C. D. Modes and F. Jülicher  
*Eur. Phys. J. E.* **45**, 29 (2022)
- [240] **Passive Odd Viscoelasticity**  
R. Lier, J. Armas, S. Bo, C. Duclut, F. Jülicher and P. Surówka  
*Phys. Rev. E.* **105**, 054607 (2022)
- [241] **Flagella-like Beating of Actin Bundles Driven by Self-organized Myosin Waves**  
M. Pochitaloff, M. Miranda, M. Richard, A. Chaiyasitdhi, Y. Takagi, W. Cao, E. M. De La Cruz, J. R. Sellers, J.-F. Joanny, F. Jülicher, L. Blanchoin and P. Martin  
*Nat. Phys.* **18**, 1240 (2022)
- [242] **A Condensate Dynamic Instability Orchestrates Actomyosin Cortex Activation**  
V. T. Yan, A. Narayanan, T. Wiegand, F. Jülicher and S. W. Grill  
*Nature* **609**, 597 (2022)

- [243] **Energy and Matter Supply for Active Droplets**  
J. Bauermann, C. A. Weber and F. Jülicher  
*Ann. Phys.* **2022**, 2200132 (2022)
- [244] **Theory of Nematic and Polar Active Fluid Surfaces**  
G. Salbreux, F. Jülicher, J. Prost, A. Callan-Jones  
*Phys. Rev. Research.* **4**, 033158 (2022)
- [245] **Long-range Morphogen Gradient Formation by Cell-to-Cell Signal Propagation**  
J. E. M. Dickmann, J. C. Rink and F. Jülicher  
*Phys. Biol.* **19**, 066001 (2022)
- [246] **Chemical Kinetics and Mass Action in Coexisting Phases**  
J. Bauermann, S. Laha, P. M. McCall, F. Jülicher and C. A. Weber  
*J. Am. Chem. Soc.*, **144**, 19294 (2022)
- [247] **Broken Living Layers: Dislocations in Active Smectic Liquid Crystals**  
F. Jülicher, J. Prost and J. Toner  
*Phys. Rev. E* **106**, 054607 (2022)
- [248] **Heat Fluctuations in Chemically Active Systems**  
J. Mabillard, C. A. Weber and F. Jülicher  
*Phys. Rev. E* **107**, 014118 (2023)
- [249] **Polarized Branched Actin Modulates Cortical Mechanics to Produce Unequal-size Daughters during Asymmetric Division**  
A. Daeden, A. Mietke, E. Derivery, C. Seum, F. Jülicher and M. Gonzalez-Gaitan  
*Nature Cell Biology*, **25**, 235 (2023)
- [250] **Topological Morphogenesis of Neuroepithelial Organoids**  
K. Ishihara, A. Mukherjee, E. Gromberg, J. Brugués, E. M. Tanaka and F. Jülicher  
*Nature Physics*, **19**, 177-183 (2023)
- [251] **Entrainment of Mutually Synchronized Spatially Distributed 24 Ghz Oscillators**  
C. Hoyer, L. Wetzel, D. Prousalis, J. Wagner, F. Jülicher and F. Ellinger  
*IEEE Transactions on Circuits and Systems I: Regular Papers* (2023)
- [252] **Optimal Information Usage in Binary Sequential Hypothesis Testing**  
M. Dörpinghaus, I. Neri, É. Roldán and F. Jülicher  
*Theory Probab. Appl.*, **68**, 77-87 (2023)
- [253] **Spontaneous Flow Instabilities of Active Polar Fluids in Three Dimensions**  
A. Singh, Q. Vagne, F. Jülicher and I. F. Sbalzarini  
*Phys. Rev. Research*, **5**, L022061 (2023)
- [254] **Theory of Rheology and Aging of Protein Condensates**  
R. Takaki, L. Jawerth, M. Popović and F. Jülicher  
*PRX Life*, **1**, 013006 (2023)
- [255] **Random Traction Yielding Transition in Epithelial Tissues**  
A. Amiri, C. Duclut, F. Jülicher and M. Popovic  
*Phys. Rev. Lett.* **131**, 188401 (2023)

- [256] **Lift force in Odd Compressible fluids**  
R. Lier, C. Duclut, S. Bo, J. Armas, F. Jülicher and P. Surówka  
*Phys. Rev. E* **108**, L023101 (2023)
- [257] **Liquid spherical shells are a non-equilibrium steady state of active droplets**  
A. M. Bergmann, J. Bauermann, G. Bartolucci, C. Donau, M. Stasi, A-L. Holtmannspötter,  
F. Jülicher, C. A. Weber and J. Boekhoven  
*Nature Communications*. **14**, 6552 (2023)
- [258] **Formation of Liquid Shells in Active Droplet Systems**  
J. Bauermann, G. Bartolucci, J. Boekhoven, C. A. Weber, and F. Jülicher  
*Phys. Rev. Research* **5**, 043246 (2023)
- [259] **Odd Cosserat Elasticity in Active Materials**  
P. Surówka, A. Souslov, F. Jülicher, and D. Banerjee  
*Phys. Rev. E* **108**, 064609 (2023)
- [260] **Core PCP Mutations Affect Short-time Mechanical Properties but not Tissue Morphogenesis in the Drosophila Pupal Wing**  
R. Piscitello-Gómez, F. S. Gruber, A. Krishna, C. Duclut, C. D. Modes, M. Popovic,  
F. Jülicher, N. A. Dye, S. Eaton  
*eLife* **12**:e85581 (2023)
- [261] **Probe Particles in Odd Active Viscoelastic Fluids: How Activity and Dissipation Determine Linear Stability**  
C. Duclut, S. Bo, R. Lier, J. Armas, P. Surówka and F. Jülicher  
*Phys. Rev. E* **109**, 044126 (2024)

#### CONFERENCE PROCEEDINGS AND BOOK CHAPTERS

- [262] **Molecular Motors: From Individual to Collective Behavior**  
F. Jülicher and J. Prost  
*Prog. Theor. Phys. Supplement* **130**, 9 (1998).
- [263] **Two-Tone Interference Caused by Active Amplification**  
T. A. J. Duke, D. Andor and F. Jülicher  
published in *Biophysics of the Cochlea* Titisee 2002 Conference Proceedings.  
edited by A. W. Gummer  
Singapore: World Scientific, 2003, pp. 559-560
- [264] **The Contribution of Transduction Channels and Adaptation Motors to the Hair Cell's Active Process**  
P. Martin, F. Jülicher and A.J. Hudspeth  
published in *Biophysics of the Cochlea* Titisee 2002 Conference Proceedings.  
edited by A. W. Gummer  
Singapore: World Scientific, 2003, pp. 3-15



- [265] **Active Amplification by Critical Oscillations**  
 F. Jülicher, S. Camalet, J. Prost and T. Duke  
 published in *Biophysics of the Cochlea* Titisee 2002 Conference Proceedings.  
 edited by A. W. Gummer  
 Singapore: World Scientific, 2003, pp. 16-27
- [266] **Active Amplification by Spontaneous Hair Bundle Oscillations**  
 F. Jülicher  
 published in *Unsolved Problems of Noise and Fluctuations*  
*UPoN 2002: Third International Conference on Unsolved Problems of Noise*  
*and Fluctuations in Physics, Biology, and High Technology*  
 edited by Sergey M. Bezrukov  
 AIP Conference Proceedings, Vol. 665, Melville, New York, 2003.
- [267] **Active Amplification in Hearing**  
 F. Jülicher  
 published in *Nova Acta Leopoldina: N. F., Bd. 88, Nr. 332*  
*Nonlinear Dynamics and the Spatiotemporal Principles of Biology*  
 Conference Proceedings Darmstadt 13 - 15 May 2002  
 edited by F. Beck, M.-T. Hütt, and U. Lüttge  
 Stuttgart Wissenschaftl. Verlagsges., 2003.
- [268] **Physical Basis of Interference Effects in Hearing**  
 T. Duke, D. Andor and F. Jülicher  
 Ann. Henri Poincaré **4**, Suppl. 2, 667 (2003).  
 TH 2002 Conference Proceedings Paris, 22 - 27 July 2002.
- [269] **Active Behaviors in Living Cells**  
 F. Jülicher  
 Ann. Henri Poincaré **4**, Suppl. 2, 671 (2003).  
 TH 2002 Conference Proceedings Paris, 22 - 27 July 2002.
- [270] **Force and Motion Generation in Cells**  
 F. Jülicher  
 published in *Proc. Idea-Finding Symposium*  
*Frankfurt Institute for Advanced Studies (2003) 95-101*  
 Conference Proceedings Idea-Finding Symposium, Frankfurt 15 - 17 April 2003  
 EP Systema, Debrecen, 2004.
- [271] **Spontaneous Oscillations in Mechanosensory Hair Bundles**  
 B. Nadrowski, P. Martin and F. Jülicher  
 published in *Fluctuations and Noise in Biological, Biophysical,*  
*and Biomedical Systems III*  
 Proceedings of SPIE Vol. 5841, Austin, Texas, 24 - 26 May 2005  
 edited by N.G. Stocks, D. Abbott, R.P. Morse  
 SPIE, Bellingham, WA, 2005.
- [272] **Spontaneous Movements of Mechanosensory Hair Bundles**  
 B. Nadrowski, P. Martin and F. Jülicher  
 published in *Noise and Fluctuations: 18th International Conference on Noise and*  
*Fluctuations - ICNF 2005*  
 AIP Conference Proceedings, Vol. 780, pp 557-562, Aug. 2005.

- [273] **Active Hair-Bundle Motility Harnesses Noise to Operate Near an Optimum of Mechanosensitivity**  
P. Martin, B. Nadrowski and F. Jülicher  
published in *Auditory Mechanisms - Processes and Models*  
Proceedings of the Ninth International Mechanics of Hearing Workshop,  
Portland, Oregon, 23 - 28 July 2005  
edited by A.L. Nuttall, T. Ren, P. Gillespie, K. Grosh and E. de Boer  
World Scientific Publishing, 2006.
- [274] **Wave Propagation by Critical Oscillators**  
D. Andor, T. Duke, A. Simha and F. Jülicher  
published in *Auditory Mechanisms - Processes and Models*  
Proceedings of the Ninth International Mechanics of Hearing Workshop,  
Portland, Oregon, 23 - 28 July 2005  
edited by A.L. Nuttall, T. Ren, P. Gillespie, K. Grosh and E. de Boer  
World Scientific Publishing, 2006.
- [275] **Critical Oscillators as Active Elements in Hearing**  
T. A. J. Duke and F. Jülicher  
in *Active Processes and Otoacoustic Emissions*,  
edited by G. A. Manley, R. R. Fay, A. N. Popper  
Springer Handbook of Auditory Research,  
Springer, (2008).
- [276] **Biophysik der Zellbewegungen  
Von molekularen Motoren zu zellulärem Transport**  
F. Jülicher  
in *Nova Acta Leopoldina NF 97*, **358**, 103-114 (2008).
- [277] **Active Hair-Bundle Motility by the Vertebrate Hair Cell**  
J-Y. Tinevez, P. Martin and F. Jülicher  
published in *Concepts and Challenges in the Biophysics of Hearing*  
Proceedings of the 10th International Workshop on the Mechanics of Hearing  
Keele University, Staffordshire, UK, 27 - 31 July 2008  
edited by N. P. Cooper and D. T. Kemp
- [278] **The Interplay Between Active Hair Bundle Mechanics and Electromotility in the Cochlea**  
D. O. Maoileidigh and F. Jülicher  
published in *Concepts and Challenges in the Biophysics of Hearing*  
Proceedings of the 10th International Workshop on the Mechanics of Hearing  
Keele University, Staffordshire, UK, 27 - 31 July 2008  
edited by N. P. Cooper and D. T. Kemp
- [279] **Mechanical Properties of Coupled Hair Bundles**  
K. Dierkes, B. Lindner and F. Jülicher  
published in *Concepts and Challenges in the Biophysics of Hearing*  
Proceedings of the 10th International Workshop on the Mechanics of Hearing  
Keele University, Staffordshire, UK, 27 - 31 July 2008  
edited by N. P. Cooper and D. T. Kemp

- [280] **Microtubules and motor proteins: Mechanically regulated self-organization in vivo**  
S. K. Vogel, N. Pavin, N. Maghelli, F. Jülicher and I. M. Tolic-Norrelykke  
*Eur. Phys. J. ST* **178**, 57 (2010)
- [281] **Noise and Oscillations in Biological Systems: Multidisciplinary Approach Between Experimental Biology, Theoretical Modelling and Synthetic Biology**  
E. Ullner, S. Ares, L. G. Morelli, A.C. Oates, F. Jülicher, E. Nicola, R. Heussen, D. Whitmore, K. Blyuss, M. Fryett, A. Zakharova, A. Koseska, N. R. Nene and A. Zaikin  
*International Journal of Modern Physics B* **25**, Vol. 26, 1246009 (2012)
- [282] **Hair-bundle friction from transduction channels's gating forces**  
V. Bormuth, J. Barral, J.-F. Joanny, F. Jülicher and P. Martin  
*AIP Conf. Proc.* **1703**, 030003 (2015)
- [283] **Emergence of Tissue Shape Changes from Collective Cell Behaviours**  
F. Jülicher and S. Eaton  
*Seminars in Cell & Developmental Biology*, **67**, 103 (2017)
- [284] **An Information Theoretic Analysis of Sequential Decision-Making**  
M. Dörpinghaus, E. Roldán, I. Neri, H. Meyr and F. Jülicher  
*IEEE International Symposium on Information Theory (ISIT)*, 3050 (2017)
- [285] **Heterogeneity in Time Delays between Mutually Synchronized 24 GHz Oscillators**  
C. Hoyer, L. Wetzel, D. Prousalis, J. Wagner, F. Jülicher and F. Ellinger  
*21st IEEE Interregional NEWCAS Conference (NEWCAS), Edingburgh, United Kingdom, 2023*, pp.1-5, doi: 10.1109/NEWCAS57931.2023.10198039 (2023)

## REVIEWS, THESES, BOOKS

- [286] **Funktionale Renormierung an einem Modell zum Benetzungsübergang**  
F. Jülicher  
*Diplomarbeit, Bericht der KFA Jülich Nr. 2318* (1989).
- [287] **Die Morphologie von Vesikeln**  
F. Jülicher  
*Doktorarbeit, Bericht der KFA Jülich Nr. 2902* (1994).
- [288] **La Physique des Liposomes**  
X. Michalet, F. Jülicher, B. Fourcade, U. Seifert et D. Bensimon  
*La Recherche* **269**, Vol. 25, 1012 (1994).
- [289] **Modeling Molecular Motors**  
F. Jülicher, A. Ajdari and J. Prost  
*Rev. Mod. Phys.* **69**, 1269 (1997).

- [290] **Force and Motion Generation of Molecular Motors:  
A Generic Description**  
F. Jülicher  
published in *Transport and Structure: Their Competitive Roles in Biophysics and Chemistry*,  
edited by S.C. Müller, J. Parisi and W. Zimmermann, Lecture Notes in Physics,  
Springer, (Berlin, 1999).
- [291] **Mechanical Oscillations at the Cellular Scale**  
F. Jülicher  
*C.R. Acad Sci. (Paris) IV*, No. 6, p. 849 (2001).
- [292] **Les Houches Session LXXV  
Physics of Bio-Molecules and Cells**  
edited by H. Flyvbjerg, F. Jülicher, P. Ormos, and F. David  
EDP Sciences and Springer Verlag, (2002).
- [293] **Oscillations in Cell Biology**  
K. Kruse and F. Jülicher  
*Current Opinion in Cell Biology* **17**, 20 (2005).
- [294] **Statistical Physics of Active Processes in Cells**  
F. Jülicher  
*Physica A* **369**, 185 (2006).
- [295] **Molekulare Motoren und zelluläre Dynamik**  
F. Jülicher  
*Physik Journal* **5**, 59 (2006).
- [296] **Active Behavior of the Cytoskeleton**  
F. Jülicher, K. Kruse, J. Prost and J.-F. Joanny  
*Phys. Rep.* **449**, 3 (2007).
- [297] **The Remarkable Cochlear Amplifier**  
J. Ashmore, P. Avan, W.E. Brownell, P. Dallos, K. Dierkes, R. Fettiplace, K. Grosh,  
C.M. Hackney, A.J. Hudspeth, F. Jülicher, B. Lindner, P. Martin, J. Meaud, C. Petit,  
J.R. Santos Sacchi, B. Canlon  
*Hearing Research* **266**, 1 (2010).
- [298] **A Critique of the Critical Cochlea: Hopf—a Bifurcation—Is Better Than None**  
A. J. Hudspeth, F. Jülicher and P. Martin  
*J Neurophysiol*, **104**, 1219 (2010).
- [299] **Enhanced SnapShot: The Segmentation Clock**  
D. Roellig, L.G. Morelli, S. Ares, F. Jülicher, and A.C. Oates  
*Cell* **145**, 800 (2011).
- [300] **Active fluids and gels**  
F. Jülicher  
published in *Les Houches, Session XCII, New Trends in the Physics and Mechanics of  
Biological Systems*, edited by M. B. Amar, A. Goriely, M. M. Müller, L. F. Cugliandolo  
Oxford University Press, (2011).

- [301] **Understanding morphogenetic growth control - lessons from flies**  
O. Wartlick, P. Mumcu, F. Jülicher and M. Gonzalez-Gaitan  
*Nat. Rev. Mol. Cell Biol.* **12**, 594 (2011)
- [302] **Cell flow reorients planar polarity in the wing of *Drosophila***  
B. Aigouy, R. Etoornay, A. Sagner, D.B. Staple, R. Farhadifar, J.-C. Röper, S. Eaton,  
F. Jülicher  
*Med Sci (Paris)* **27**, 117 (2011).
- [303] **Cell flow and tissue polarity patterns**  
S. Eaton and F. Jülicher  
*Curr. Opin. Genet. Dev.* **21**, 747 (2011)
- [304] **La mécanique de l'adhésion cellulaire dans la gastrulation du poisson zèbre**  
J.-L. Maître, H. Berthoumieux, S. F. G. Krens, G. Salbreux, F. Jülicher, E. Paluch,  
C.-P. Heisenberg  
*Med Sci (Paris)* **29**, 147 (2013).
- [305] **The Role of Endocytosis during Morphogenetic Signaling**  
M. Gonzalez-Gaitan and F. Jülicher  
*Cold Spring Harb Perspect Biol.* **6**, 016881 (2014).
- [306] **Liquid-Liquid Phase Separation in Biology**  
A. A. Hyman, C. Weber and F. Jülicher  
*Annu. Rev. Cell Dev. Biol.* **30**, 39 (2014).
- [307] **Active Gel Physics**  
J. Prost, F. Jülicher and J-F. Joanny  
*Nature Physics* **11**, 111 (2015).
- [308] **The Wing and the Eye: a Parsimonious Theory for Scaling and Growth Control?**  
M. Romanova-Michaelides, D. Aguilar-Hidalgo, F. Jülicher and M. Gonzalez-Gaitan  
*Dev. Biol.* **2015**, doi: 10.1002/wdev.195 (2015).
- [309] **Theory of Cargo and Membrane Trafficking**  
L. Foret, L. Brusch and F. Jülicher  
published in *Encyclopedia of Cell Biology, Vol. 4*, Waltham, MA  
edited by R. A. Bradshaw and P. D. Stahl  
*Academic Press*, pp. 56-62 (2016).
- [310] **Mechanochemical Pattern Formation in the Actomyosin Cortex**  
M. Nishikawa, S. R. Naganathan, F. Jülicher and S. W. Grill  
*Seibutsu Busuri* **58**, 27 (2018).
- [311] **Hydrodynamic Theory of Active Matter**  
F. Jülicher, S. W. Grill and G. Salbreux  
*Rep. Prog. Phys.* **81**, 076601 (2018).
- [312] **Physics of Active Emulsions**  
C. A. Weber, D. Zwicker, F. Jülicher and C. F. Lee  
*Rep. Prog. Phys.* **82**, 064601 (2019).

- [313] **Die Physik Dynamischer Tropfen**  
C. A. Weber, L. Hubatsch, F. Jülicher  
*Physik Journal* **12**, pp. 42-47 (2020).
- [314] **Length Control of Long Cell Protrusions: Rulers, Timers and Transport**  
S. Patra, D. Chowdhury and F. Jülicher  
*Physics Reviews* **987**, pp. 1-51 (2022).
- [315] **Droplet Physics and Intracellular Phase Separation**  
F. Jülicher and C. A. Weber  
*Annu. Rev. Condens. Matter Phys.* 2024.15:237-261 (2024).

## EDITORIALS

- [316] **Focus on Physics of the Cytoskeleton**  
J. Käs and F. Jülicher  
*New. J. Phys.* **9**, 1 (2007).
- [317] **Soft Matter and Biological Physics**  
R.A.L. Jones, F. Jülicher and G. Maret  
*Eur. Phys. J. E.* **28**, 1 (2009).
- [318] **Morphogenetic Processes in Animals and Plants**  
K. Kruse and F. Jülicher  
*Eur. Phys. J. E* **33**, 97 (2010).
- [319] **Theme Issue in Memory of Tom Duke**  
F. Jülicher  
*Interface Focus* **4**, 20140072 (2014).