Stanford



Manu Prakash

Associate Professor of Bioengineering, by courtesy, of Oceans & Senior Fellow, by courtesy, at the Woods Institute for the Environment

NIH Biosketch available Online Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Contact**

  Shama Choudhry - Lab Administrator

  Email shamac@stanford.edu

Bio

BIO

We use interdisciplinary approaches including theory and experiments to understand how computation is embodied in biological matter. Examples include cognition in single cell protists and morphological computing in animals with no neurons and origins of complex behavior in multi-cellular systems. Broadly, we invent new tools for studying non-model organisms with significant focus on life in the ocean - addressing fundamental questions such as how do cells sense pressure or gravity? Finally, we are dedicated towards inventing and distributing “frugal science” tools to democratize access to science (previous inventions used worldwide: Foldscope, Abuzz), diagnostics of deadly diseases like malaria and convening global citizen science communities to tackle planetary scale environmental challenges such as mosquito surveillance or plankton surveillance by citizen sailors mapping the ocean in the age of Anthropocene.

ACADEMIC APPOINTMENTS

- Associate Professor, Bioengineering
- Associate Professor (By courtesy), Oceans
- Senior Fellow (By courtesy), Stanford Woods Institute for the Environment
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Core Leadership Team, Stanford Center for Innovation in Global Health, (2017- present)
- Board member,, Jasper Ridge Reserve, Stanford (https://jrbp.stanford.edu), (2017- present)

HONORS AND AWARDS

- MIT Ideas Sustainability Prize, MIT (2003)
- Lemelson MIT Student Finalist Award, Lemelson Foundation (2008)

- Junior Fellow (Physics), Harvard Society of Fellows (2008-2011)
- Frederick E. Terman Fellow, Stanford University (2011-2013)
- TED Senior Fellow, Technology, Entertainment and Design (TED) (2011-2013)
- Pew Scholar, Pew Foundation (2013-2017)
- Brilliant 10, Popular Science Brilliant 10 (2014)
- TR35, MIT Technology Review (2014)
- Emerging Explorer, National Geographic (2015)
- MacArthur Fellow, MacArthur Foundation (2016)
- HHMI-Gates Faculty Scholar, HHMI (2016-2021)
- 25 People Shaping the Future, Rolling Stone Magazine (2017)
- Chan Zuckerberg BioHub Investigator, Chan Zuckerberg BioHub (2017)
- INDEX Design Award, INDEX (2017)
- NSF “Vizzies” Experts’ Choice Award, Popular Science (2017)
- Tau Beta Pi Teaching Award, Tau Beta Pi (2017)
- WIRED’s Next List, WIRED (2017)
- Design of the Year Award (Paperfuge), Beazley (2018)
- Inaugural Fellow, Leading Interdisciplinary Collaborations, Stanford Woods Institute (2018)
- Town & Country's 50, Town & Country Magazine (2018)
- The Creative Class of 2019, Newsweek (2019)
- Humanitarian Award for Contributions in Science, Technology and Robotics, Rotary International (2020)
- Unilever Colworth Prize, Microbiology Society (2020)
- Ernst Abbe Award, New York Microscopical Society (2021)
- Schmidt Innovation Fellow, Schmidt Foundation (2021)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Co-founder, Foldscope Instruments (2017 - present)
- Board Member, Ciencia Puerto Rico (https://www.cienciapr.org) (2017 - present)
- Board Member, PIVOT (http://pivotworks.org) (2017 - present)

PROFESSIONAL EDUCATION

- Ph.D., Massachusetts Institute of Technology , Field of Study: Applied Physics (MAS) (2008)
- M.S., Massachusetts Institute of Technology , Field of Study: Applied Physics (MAS) (2004)
- B.Tech, Indian Institute of Technology , Field of Study: Computer Science and Engineering (2002)

COMMUNITY AND INTERNATIONAL WORK

- Planktoscope
- Octopi: Malaria diagnostics platform
- Foldscope, India
- Low-cost scanning of oral cavity, Kenya and India

PATENTS

- Manu Prakash, Anesta KOTHARIAdam George LarsonShailabh KumarHazel Soto-Montoya. "United States Patent WO2022071996A1 Co-axial plunger based home molecular diagnostics kit", Leland Stanford Junior University, Sep 30, 2020
- Manu Prakash, Hongquan LI. "United States Patent WO2020242978A1 A spectral imaging platform for infectious disease diagnosis", Leland Stanford Junior University, May 24, 2019
- Zhang, S., Mershin, A., Kaiser, K., Cook, B., Graveland-Bikker, J.F., Prakash, M., Kong, D., Maguire, Y.,. "United States Patent US9714941 Bio-sensing nanodevice", Jul 25, 2017
- Manu Prakash, Deepak Krishnamurthy. "United States Patent US11033006B2 Hydrodynamic treadmill: a tracking device to study biotic/abiotic systems in gravitational and hydrodynamic fields", Leland Stanford Junior University,, Jun 28, 2017
- Manu Prakash, Georgios Katsikis. "United States Patent US20160339425A1 Synchronous Universal Droplet Logic", Leland Stanford Junior University, May 17, 2017
- Manu Prakash, Mohammed Saad BHAMLAJames Stanley CYBULSKIChew CHAIAanchal JOHRIBrandon BENSON. "United States Patent WO2017127248A1 Paperfuge: an integrated paper-based centrifugation and microfluidics platform for low-cost diagnostics", Leland Stanford Junior University, Jan 18, 2016
- Manu Prakash, George KORIR. "United States Patent WO2014039844A2 Punch card programmable microfluidics", Leland Stanford Junior University, Sep 6, 2012
- Prakash M., Cybulski J., Clements J.. "United States Patent US9696535 Foldscope: Ultra-low-cost fluorescence microscope constructed via folding", Leland Stanford Junior University,, Jul 4, 0017
- Prakash M., Gershenfeld N.. "United States Patent US9404835 Microfluidic bubble logic", Massachusetts Institute of Technology, Aug 2, 0016
- Chow B., Joo J., Prakash M.. "United States Patent US8367435 Methods and apparatus for control of hydrothermal nanowire synthesis", Massachusetts Institute of Technology, Jun 16, 0013

LINKS

- Prakash Lab website: https://web.stanford.edu/group/prakash-lab/
- Foldscope Instruments: http://www.foldscope.com
- Planktoscope project website: www.planktoscope.org
- Gravity machine project website: https://gravitymachine.org/
- Project website for open source ventilator: https://www.pez-globo.org/
- N95 decontamination community website: https://www.n95decon.org/
- India COVID mitigation volunteer group: https://www.indiacovidsos.org/
- electricity free molecular testing for COVID: www.snapdx.org
- PrakashLab COVID projects: http://web.stanford.edu/group/prakash-lab/cgi-bin/labsite/covid19/
- Octopi malaria diagnostics project: https://octopi-imaging.org/
- Open source modular microscopy platform: https://squid-imaging.org/

Research & Scholarship

CLINICAL TRIALS

- Rapid Turnaround, Home-based Saliva Testing for COVID-19, Not Recruiting

Teaching

COURSES

2026-27

- Frugal Science: BIOE 271 (Win)
- Instability-Driven Patterns in Biology: BIOS 435 (Spr)
- Past, Present, and Future of Ocean Explorations: Scientific History and Measurements in Oceanography: BIOE 234, OCEANS 234 (Win)

2025-26

- Frugal Science: BIOE 271 (Win)
- Instability-Driven Patterns in Biology: BIOS 435 (Spr)
- Physical Learning: Embodied Computing in Living and Non-Living Substrates: BIOE 312 (Win)

2024-25

- Frugal Science: BIOE 271 (Spr)
- Introduction to Eyeless Physics: BIOS 428 (Spr)
- Physical Learning: Embodied Computing in Living and Non-Living Substrates: BIOE 312 (Spr)

2023-24

- Frugal Science: BIOE 271 (Win)
- The Art of Observation: Table Top Explorations In Natural Philosophy: ARTSINST 337, BIOE 337 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Gokul Kannan, Baba Ogunlade

Postdoctoral Faculty Sponsor

Charlotte Brannon, Ben Foster, Xinyu Mao, Alyssa Mathiowetz, Noah Toyonaga, Qing Zhang

Doctoral Dissertation Advisor (AC)

Rocky An, Ian Ho, Alex Leffell, Hope Leng, Kevin Ly, Enrico Piperno, Brandon Wong

Doctoral Dissertation Co-Advisor (AC)

Selena Chiu

Doctoral (Program)

Corey Becker, Yun Hwang, Micah Lawrence, Alex Leffell, Zijian (Carl) Ma, Kaiwen Sheng, Madhumitha Suresh, Ryan Wang

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (PhD Program)
- Biophysics (PhD Program)

Publications

PUBLICATIONS

- **Beyond the lens - visualizing the wonders of microscopic life with accessible and frugal tools.** *Journal of cell science*
  Decelle, J., Prakash, M.
  2026; 139 (21)
- **Long-range actin-driven endosymbiont mobility in an animal-algal symbiosis.** *Cell*
  Zhong, G., Toullec, G., Jouneau, P. H., Decelle, J., Prakash, M.
  2026
- **Particle Interceptor Trap Deployments Demonstrate Enhanced Export Driven by Frontal Dynamics in the Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Lauer, J. A., van Dijken, G. L., Mills, M. M., Pickart, R. S., Arlen, L., Lim, S. M., Li, E., Payne, C. M., Proctor, C., Zhong, G., Prakash, M., Michel, C., Arrigo, et al
  2026; 131 (9)

- **Evolution of an Extensive Under-Ice Phytoplankton Bloom in the Chukchi Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Proctor, C., Mills, M. M., van Dijken, G. L., Lauer, J. A., Lim, S. M., Palm, A., Payne, C. M., Pickart, R. S., Mordy, C. W., Li, E., Prakash, M., Arrigo, K. R.
  2026; 131 (9)
- **Measuring the properties of a viscoelastic fluid using a tethered swimmer** *JOURNAL OF RHEOLOGY*
  Chiu, S., Jussupov, A., Moose, C., Fuller, G. G., Prakash, M., Shaqfeh, E. S. G.
  2026; 70 (4): 809-829
- **Creases as information bottlenecks in active elastic sheets** *NATURE PHYSICS*
  Brannon, C. M., Prakash, M.
  2026
- **FlightScope: Microscopy with microfluidics in microgravity**
  Wareing, T., Stokes, A., Crompton, K., Murphy, K., Dawson, J., Ugurluoglu, Y., Richardson, C., Li, H., Prakash, M., Wollman, A. J. M.
  CELL PRESS.2026
- **EasyVoid: A Handheld Coanda Effect Uroflowmeter for Accurate and Portable Measurement of Urinary Flow Dynamics** *IEEE JOURNAL OF TRANSLATIONAL ENGINEERING IN HEALTH AND MEDICINE*
  Chang, R., Chen, Y., Chen, H., Zeng, R., Prakash, M.
  2026; 14: 210-224
- **Cilia-driven epithelial folding and unfolding in an early diverging animal.** *Proceedings of the National Academy of Sciences of the United States of America*
  Brannon, C. M., Prakash, M.
  2025; 122 (51): e2517741122
- **Fluid-Squid: DIY Multiplexed Imaging of Cells and Tissues.** *bioRxiv : the preprint server for biology*
  Hickey, J. W., Li, H., Caraccio, C., Yan, Y., Marx, K., Martin, P., Leng, H. T., Fayiah, J., Towalid, E., Dighero-Kemp, B., Nolan, G. P., Prakash, M., McIlwain, et al
  2025
- **Ballistic Microscopy (BaM).** *bioRxiv : the preprint server for biology*
  Jijumon, A. S., Chang, R., Prakash, M.
  2025
- **Ice gliding diatoms establish record-low temperature limits for motility in a eukaryotic cell.** *Proceedings of the National Academy of Sciences of the United States of America*
  Zhang, Q., Leng, H. T., Li, H., Arrigo, K. R., Prakash, M.
  2025; 122 (37): e2423725122
- **Cellular Olympics: Ultrafast Cellular Motility Across the Tree of Life.** *Annual review of microbiology*
  Chang, R., Prakash, M.
  2025
- **Microscopy with microfluidics in microgravity using FlightScope.** *NPJ microgravity*
  Wareing, T., Stokes, A., Crompton, K. E., Murphy, K., Dawson, J., Ugurluoglu, Y. F., Richardson, C., Li, H., Prakash, M., Wollman, A. J.
  2025; 11 (1): 13
- **Interview with Manu Prakash** *JOURNAL OF CELL SCIENCE*
  Prakash, M.
  2025; 138 (6)
- **Ballistic Microscopy (BaM)** *bioRxiv*
  Jijumon, A. S., Chang, R., Prakash, M.
  2025
- **Octopi 2.0: Open and Scalable Microscopy Platform for AI-powered Diagnostic Applications** *MedRxiv*
  Li, H., Lin, H., Shrestha, P., Bhansali, R., Yan, Y., Pannu, J., Marx, K., Ouyang, W., Fuentes, L., Li, E., Kothari, A., Nowak, J., Soto-Montoya, et al
  2025

- **Schistosomiasis parasite enhance transmission rates via interfacial swimming** *bioRxiv*
  Hannebelle, M., Ho, I., N'diaye, A., Prakash, M.
  2025
- **Long-range actin-driven endosymbiont mobility in a deep-diverging bilaterian** *bioRxiv*
  Zhong, G., Toullec, G., Jouneau, P., Decelle, J., Prakash, M.
  2025
- **A genetic and microscopy toolkit for manipulating and monitoring regeneration in Macrostomum lignano.** *Cell reports*
  Hall, R. N., Li, H., Chai, C., Vermeulen, S., Bigasin, R. R., Song, E. S., Sarkar, S. R., Gibson, J., Prakash, M., Fire, A. Z., Wang, B.
  2024; 43 (11): 114892
- **ESPressoscope: A small and powerful approach for in situ microscopy.** *PloS one*
  Li, E., Saggiomo, V., Ouyang, W., Prakash, M., Diederich, B.
  2024; 19 (10): e0306654
- **Inflation-induced motility for long-distance vertical migration.** *Current biology : CB*
  Larson, A. G., Chajwa, R., Li, H., Prakash, M.
  2024
- **Hidden comet tails of marine snow impede ocean-based carbon sequestration.** *Science (New York, N.Y.)*
  Chajwa, R., Flaum, E., Bidle, K. D., Van Mooy, B., Prakash, M.
  2024; 386 (6718): eadl5767
- **Escape motility of multicellular magnetotactic prokaryotes.** *Journal of the Royal Society, Interface*
  Yang, X., Prakash, M., Brumley, D. R.
  2024; 21 (219): 20240310
- **Split Luciferase Molecular Tension Sensors for Bioluminescent Readout of Mechanical Forces in Biological Systems.** *ACS sensors*
  Zhong, B. L., Elliot, J. M., Wang, P., Li, H., Hall, R. N., Wang, B., Prakash, M., Dunn, A. R.
  2024
- **Droplet tilings in precessive fields: hysteresis, elastic defects, and annealing.** *Soft matter*
  Molina, A., Prakash, M.
  2024
- **Rapid, antibiotic incubation-free determination of tuberculosis drug resistance using machine learning and Raman spectroscopy.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ogunlade, B., Tadesse, L. F., Li, H., Vu, N., Banaei, N., Barczak, A. K., Saleh, A. A., Prakash, M., Dionne, J. A.
  2024; 121 (25): e2315670121
- **Curved crease origami and topological singularities enable hyperextensibility ofL. olor.** *Science (New York, N.Y.)*
  Flaum, E., Prakash, M.
  2024; 384 (6700): eadk5511
- **Coupling and uncoupling of midline morphogenesis and cell flow in amniote gastrulation.** *eLife*
  Asai, R., Prakash, V. N., Sinha, S., Prakash, M., Mikawa, T.
  2024; 12
- **Energetics of the microsporidian polar tube invasion machinery.** *eLife*
  Chang, R., Davydov, A., Jaroenlak, P., Budaitis, B., Ekiert, D. C., Bhabha, G., Prakash, M.
  2024; 12
- **Mechanopathology of biofilm-like Mycobacterium tuberculosis cords.** *Cell*
  Mishra, R., Hannebelle, M., Patil, V. P., Dubois, A., Garcia-Mouton, C., Kirsch, G. M., Jan, M., Sharma, K., Guex, N., Sordet-Dessimoz, J., Perez-Gil, J., Prakash, M., Knott, et al
  2023
- **Topological damping in an ultrafast giant cell.** *Proceedings of the National Academy of Sciences of the United States of America*
  Chang, R., Prakash, M.

2023; 120 (41): e2303940120

- **Thermotaxis in an apolar, non-neuronal animal.** *Journal of the Royal Society, Interface*
  Zhong, G., Kroo, L., Prakash, M.
  2023; 20 (206): 20230279
- **Curved crease origami and topological singularities at a cellular scale enable hyper-extensibility of Lacrymaria olor.** *bioRxiv : the preprint server for biology*
  Flaum, E., Prakash, M.
  2023
- **Culture-Independent Multiplexed Detection of Drug-Resistant Bacteria Using Surface-Enhanced Raman Scattering.** *ACS sensors*
  Dai, T., Xiao, Z., Shan, D., Moreno, A., Li, H., Prakash, M., Banaei, N., Rao, J.
  2023
- **Emergent programmable behavior and chaos in dynamically driven active filaments.** *Proceedings of the National Academy of Sciences of the United States of America*
  Krishnamurthy, D., Prakash, M.
  2023; 120 (28): e2304981120
- **Predicting tuberculosis drug resistance with machine learning-assisted Raman spectroscopy.** *ArXiv*
  Ogunlade, B., Tadesse, L. F., Li, H., Vu, N., Banaei, N., Barczak, A. K., Saleh, A. A., Prakash, M., Dionne, J. A.
  2023
- **Coupling and uncoupling of midline morphogenesis and cell flow in amniote gastrulation.** *bioRxiv : the preprint server for biology*
  Asai, R., Prakash, V. N., Sinha, S., Prakash, M., Mikawa, T.
  2023
- **MultiSero: An Open-Source Multiplex-ELISA Platform for Measuring Antibody Responses to Infection.** *Pathogens (Basel, Switzerland)*
  Byrum, J. R., Waltari, E., Janson, O., Guo, S., Folkesson, J., Chhun, B. B., Vinden, J., Ivanov, I. E., Forst, M. L., Li, H., Larson, A. G., Blackmon, L., Liu, et al
  2023; 12 (5)
- **Active foam: the adaptive mechanics of 2D air-liquid foam under cyclic inflation.** *Soft matter*
  Kroo, L. A., Bull, M. S., Prakash, M.
  2023
- **Effect of age on wingbeat frequency of Aedes aegypti and potential application for age estimation of mosquitoes.** *Medical and veterinary entomology*
  Park, D., Bowles, J., Norrid, K., Dobson, F. S., Abebe, A., Narayanan, H. V., Prakash, M., Blagburn, B., Starkey, L., Zohdy, S.
  2023
- **Active sinking particles: sessile suspension feeders significantly alter the flow and transport to sinking aggregates.** *Journal of the Royal Society, Interface*
  Krishnamurthy, D., Pepper, R., Prakash, M.
  2023; 20 (199): 20220537
- **Energetics of the Microsporidian Polar Tube Invasion Machinery.** *bioRxiv : the preprint server for biology*
  Chang, R., Davydov, A., Jaroenlak, P., Budaitis, B., Ekiert, D. C., Bhabha, G., Prakash, M.
  2023
- **Plankton Planet: A frugal, cooperative measure of aquatic life at the planetary scale** *FRONTIERS IN MARINE SCIENCE*
  de Vargas, C., Le Bescot, N., Pollina, T., Henry, N., Romac, S., Colin, S., Haentjens, N., Carmichael, M., Berger, C., Le Guen, D., Decelle, J., Mahe, F., Poulain, et al
  2022; 9
- **PlanktoScope: Affordable Modular Quantitative Imaging Platform for Citizen Oceanography** *FRONTIERS IN MARINE SCIENCE*
  Pollina, T., Larson, A. G., Lombard, F., Li, H., Le Guen, D., Colin, S., de Vargas, C., Prakash, M.
  2022; 9
- **Basin-Scale Underway Quantitative Survey of Surface Microplankton Using Affordable Collection and Imaging Tools Deployed From Tara** *FRONTIERS IN MARINE SCIENCE*

Meriguet, Z., Oddone, A., Le Guen, D., Pollina, T., Bazile, R., Moulin, C., Trouble, R., Prakash, M., de Vargas, C., Lombard, F.
2022; 9

- **A freely suspended robotic swimmer propelled by viscoelastic normal stresses** *JOURNAL OF FLUID MECHANICS*
  Kroo, L. A., Binagia, J. P., Eckman, N., Prakash, M., Shaqfeh, E. S. G.
  2022; 944
- **Low cost centrifugal melt spinning for distributed manufacturing of non-woven media.** *PloS one*
  Molina, A., Vyas, P., Khlystov, N., Kumar, S., Kothari, A., Deriso, D., Liu, Z., Banavar, S., Flaum, E., Prakash, M.
  2022; 17 (4): e0264933
- **Engineering reconfigurable flow patterns via surface-driven light-controlled active matter** *PHYSICAL REVIEW FLUIDS*
  Gong, X., Mathijssen, A. M., Bryant, Z., Prakash, M.
  2021; 6 (12)
- **A microfluidic platform for highly parallel bite by bite profiling of mosquito-borne pathogen transmission.** *Nature communications*
  Kumar, S., Hol, F. J., Pujhari, S., Ellington, C., Narayanan, H. V., Li, H., Rasgon, J. L., Prakash, M.
  2021; 12 (1): 6018
- **Modeling epithelial tissues as active-elastic sheets reproduce contraction pulses and predict rip resistance** *COMMUNICATIONS PHYSICS*
  Armon, S., Bull, M. S., Moriel, A., Aharoni, H., Prakash, M.
  2021; 4 (1)
- **Droplet tilings for rapid exploration of spatially constrained many-body systems.** *Proceedings of the National Academy of Sciences of the United States of America*
  Molina, A., Kumar, S., Karpitschka, S., Prakash, M.
  2021; 118 (34)
- **Choosing Wisely for COVID-19: ten evidence-based recommendations for patients and physicians.** *Nature medicine*
  Pramesh, C. S., Babu, G. R., Basu, J., Bhushan, I., Booth, C. M., Chinnaswamy, G., Guleria, R., Kalantri, S. P., Kang, G., Mohan, P., Mor, N., Pai, M., Prakash, et al
  2021
- **India's COVID-19 crisis: a call for international action.** *Lancet (London, England)*
  Kuppalli, K., Gala, P., Cherabuddi, K., Kalantri, S. P., Mohanan, M., Mukherjee, B., Pinto, L., Prakash, M., Pramesh, C. S., Rathi, S., Pai, N. P., Yamey, G., Pai, et al
  2021
- **multiSero: open multiplex-ELISA platform for analyzing antibody responses to SARS-CoV-2 infection.** *medRxiv : the preprint server for health sciences*
  Byrum, J. R., Waltari, E., Janson, O., Guo, S. M., Folkesson, J., Chhun, B. B., Vinden, J., Ivanov, I. E., Forst, M. L., Li, H., Larson, A. G., Wu, W., Tato, et al
  2021
- **Motility-induced fracture reveals a ductile-to-brittle crossover in a simple animal's epithelia** *NATURE PHYSICS*
  Prakash, V. N., Bull, M. S., Prakash, M.
  2021
- **Modified full-face snorkel masks as reusable personal protective equipment for hospital personnel.** *PloS one*
  Kroo, L., Kothari, A., Hannebelle, M., Herring, G., Pollina, T., Chang, R., Peralta, D., Banavar, S. P., Flaum, E., Soto-Montoya, H., Li, H., Combes, K., Pan, et al
  2021; 16 (1): e0244422
- **Applying heat and humidity using stove boiled water for decontamination of N95 respirators in low resource settings.** *PloS one*
  Doshi, S., Banavar, S. P., Flaum, E., Kulkarni, S., Vaidya, U., Kumar, S., Chen, T., Bhattacharya, A., Prakash, M.
  2021; 16 (9): e0255338
- **Sensory Discrimination of Blood and Floral Nectar by Aedes aegypti Mosquitoes.** *Neuron*
  Jove, V., Gong, Z., Hol, F. J., Zhao, Z., Sorrells, T. R., Carroll, T. S., Prakash, M., McBride, C. S., Vosshall, L. B.
  2020

- **BiteOscope, an open platform to study mosquito biting behavior.** *eLife*
  Hol, F. J., Lambrechts, L., Prakash, M.
  2020; 9
- **Multi-scale spatial heterogeneity enhances particle clearance in airway ciliary arrays.** *Nature physics*
  Juan, G. R., Mathijssen, A. J., He, M., Jan, L., Marshall, W., Prakash, M.
  2020; 16 (9): 958-964
- **Scale-free vertical tracking microscopy.** *Nature methods*
  Krishnamurthy, D., Li, H., Benoit du Rey, F., Cambournac, P., Larson, A. G., Li, E., Prakash, M.
  2020
- **Multi-scale spatial heterogeneity enhances particle clearance in airway ciliary arrays** *NATURE PHYSICS*
  Ramirez-San Juan, G. R., Mathijssen, A. M., He, M., Jan, L., Marshall, W., Prakash, M.
  2020
- **The multiscale physics of cilia and flagella** *Nature Physics Review*
  Gilpin, W., Bull, M. S., Prakash, M.
  2020; 2: 74–88
- **An investigation of Dirofilaria immitis infection and its effects on mosquito wingbeat frequencies.** *Veterinary parasitology*
  Park, D. n., Bowles, J. n., McKenzie, B. n., Narayanan, H. V., Prakash, M. n., Blagburn, B. n., Starkey, L. n., Zohdy, S. n.
  2020; 283: 109112
- **Coupled Active Systems Encode an Emergent Hunting Behavior in the Unicellular Predator Lacrymaria olor.** *Current biology : CB*
  Coyle, S. M., Flaum, E. M., Li, H., Krishnamurthy, D., Prakash, M.
  2019
- **Collective intercellular communication through ultra-fast hydrodynamic trigger waves.** *Nature*
  Mathijssen, A. J., Culver, J., Bhamla, M. S., Prakash, M.
  2019
- **BITES, BLOOD AND BEHAVIOR: BIOPHYSICAL APPROACHES TO UNDERSTANDING MOSQUITO BLOOD-FEEDING BEHAVIOR**
  Hol, F. J., Lambrechts, L., Prakash, M.
  AMER SOC TROP MED & HYGIENE.2019: 444
- **Frugal Science in the Age of Curiosity Manu Prakash, Jim Cybulski, Rebecca Konte, Team Foldscope and the global Foldscope community**
  Prakash, M., Cybulski, J., Konte, R., Team Foldscope Global Foldscope Co
  edited by Boucher, M. P., Helmreich, S., Kinney, L. W., Tibbits, S., Uchill, R., Ziporyn, E.
  MIT PRESS.2019: 26–29
- **VECTOR CHIP: A MINIATURIZED PLATFORM FOR HIGH-THROUGHPUT INTERROGATION OF MOSQUITO-PATHOGEN DYNAMICS**
  Kumar, S., Hol, F., Prakash, M.
  AMER SOC TROP MED & HYGIENE.2019: 421–22
- **OPENMM - A LOW-COST, MODULAR, AND AUTONOMOUS MICROSCOPE FOR MALARIA DIAGNOSIS AND BEYOND**
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