

Ben T. Larson

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EDUCATION AND TRAINING

University of California, San Francisco <i>Postdoc, Biophysics, Laboratory of Cell Geometry</i> Mentor: Wallace Marshall	San Francisco, CA 2019-present
Marine Biological Laboratory <i>Physiology Course</i>	Woods Hole, MA 2016
University of California, Berkeley <i>PhD, Biophysics with Designated Emphasis in Computational Biology, Animal Origins Lab</i> Mentor: Nicole King	Berkeley, CA 2014-2019
National Institutes of Health, NHLBI <i>Postbac, Biophysics, Laboratory of Molecular and Cellular Imaging</i> Mentor: Justin Taraska	Bethesda, MD 2012-2014
Reed College <i>BA, Physics</i>	Portland, OR 2008-2012

FELLOWSHIPS, HONORS, AND AWARDS

Merck Postdoctoral Fellowship <i>Jane Coffin Childs Memorial Fund for Medical Research</i>	2020-2023
Graduate Research Fellowship <i>National Science Foundation</i>	2016-2019
Post-course Research Award <i>Marine Biological Laboratory, Physiology Course</i>	2016
Society of General Physiology Scholar <i>Society of General Physiology</i>	2016
Orloff Science Award <i>National Institutes of Health</i>	2013
Post-baccalaureate Intramural Research Training Award <i>National Institutes of Health</i>	2012-2014
Phi Beta Kappa <i>Reed College</i>	2012
Commendation for Academic Excellence <i>Reed College</i>	2008-2012
Ruby-Lankford Grant for Faculty-Student Collaborative Research <i>Reed College</i>	2010

PUBLICATIONS

[Google Scholar](#)

1. [BT Larson](#), J Garbus, JB Pollack, WF Marshall
A unicellular walker controlled by a microtubule-based finite state machine
bioRxiv doi: 10.1101/2021.02.26.433123 2021
2. NT Chartier*, A Mukherjee*, J Pfanzelter*, S Fürthauer, [BT Larson](#), M Kreysing, F Jülicher, SW Grill
A hydraulic instability drives the cell death decision in the nematode germline
Nat. Phys. doi: 10.1038/s41567-021-01235-x 2021

3. BT Larson, T Ruiz-Herrero, S Li, S Kumar, L Mahadevan, N King
Biophysical principles of choanoflagellate self-organization
Proc. Natl. Acad. Sci. 117 (3) 2020
4. T Brunet*, BT Larson*, TA Linden*, MJA Vermeij, KL McDonald, N King
Light-regulated collective contractility in a multicellular choanoflagellate
Science 366 (6463) 2019
5. D Laundon, BT Larson, KL McDonald, N King, P Burkhardt
The architecture of cell differentiation in choanoflagellates and sponge choanocytes
PLOS Bio. 17 (4) 2019
6. BT Larson, KA Sochacki, JM Kindem, JW Taraska
Systematic spatial mapping of proteins at exocytic and endocytic structures
Mol. Bio. Cell 25 (13) 2014
7. MA Bedau and BT Larson
Lessons from environmental ethics about the intrinsic value of synthetic life
 GA Kaebnick and TH Murray (Ed.)
Synthetic biology and morality: artificial life and the bounds of nature, MIT Press 2013
8. KA Sochacki, BT Larson, DC Sengupta, MP Daniels, G Shtengel, HF Hess, JW Taraska
Imaging the post-fusion release and capture of a vesicle membrane protein
Nat. Comm. 3 (1) 2012

*denotes equal contribution

SELECTED PRESENTATIONS

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| SICB Annual Meeting †
<i>Microscale Life Symposium, Society of Integrative and Comparative Biology, Austin, TX</i> | 2023 |
| APS March Meeting *
<i>American Physical Society, DBIO, Chicago, IL</i> | 2022 |
| Microbiology Seminar †
<i>Department of Microbiology and Molecular Genetics, UC Davis</i> | 2022 |
| Established and Emerging Model Organisms Course †
<i>Department of Biology, Duke University</i> | 2022 |
| ASCB/EMBO Annual Meeting *
<i>American Society for Cell Biology</i> | 2016, 2021 |
| US Protistology Network †
<i>Independently organized, various institutions</i> | 2021 |
| Biological Physics and Physical Biology Seminar †
<i>Independently organized, various institutions</i> | 2021 |
| Stochastic Physics in Biology *
<i>Gordon Research Conference and Seminar</i> | 2021 |
| Cellular Dynamics and Models *
<i>Cold Spring Harbor Laboratory</i> | 2021 |
| BioWeb Conference †
<i>Department of Biological Sciences, Smith College</i> | 2021 |
| Build-a-Cell Seminar †
<i>NSF Build-a-Cell Network</i> | 2020 |
| Electronic Symposium on Protistology †
<i>Independently organized, various institutions</i> | 2020 |
| Biophysics Seminar †
<i>Life Sciences Institute, Exeter University</i> | 2019 |

Bio Lunch† <i>Department of Applied Mathematics and Theoretical Physics, Cambridge University</i>	2019
Size and Shape Workshop* <i>European Molecular Biology Organization, NCBS/INSTEM</i>	2018
International Choanoflagellate Workshop*.* <i>Station Biologique de Roscoff, UC Berkeley</i>	2015, 2017
Integrated Microbial Biodiversity <i>Canadian Institute for Advanced Research</i>	2016
BPS Annual Meeting <i>Biophysical Society</i>	2014, 2022
	Upcoming
	†Invited talk
	*Talk selected from abstract

TEACHING AND MENTORSHIP

Undergraduate and PhD Student Mentor <i>Laboratory of Wallace Marshall, University of California, San Francisco</i>	2019-present
Biophysics PhD student Greyson Lewis (UCSF), Computer Science PhD student Jack Garbus (Brandeis), and MBL Physiology post-course research students Veronica Farmer (Vanderbilt) and Alice Herneisen (MIT).	
<i>Laboratory of Nicole King, University of California, Berkeley</i>	2017-2019
Physics undergrad Kevin Marroquin, MCB undergrads Sheel Chandra and Jake Hira, MCB PhD student Max Ferrin, and Biophysics PhD students Mike Levy and Ben McInroe (all UCB).	
Lead Instructor <i>Center for Cellular Construction, CCC Summer Course, San Francisco, CA</i>	2021, 2022
Guided research experience with students (undergrad-PhD) from SFSU and UCSF emphasizing quantitative image analysis.	
Teaching Assistant <i>Marine Biological Laboratory, Physiology Course, Woods Hole, MA</i>	2018, 2021, 2022
<i>Evolution of Genomes, Cells, and Development, University of California, Berkeley</i>	2016

SERVICE AND OUTREACH

Special Interest Subgroup Co-organizer <i>ASCB Annual Meeting, Cells in the wild: environmental influences on cell morphology and behavior</i>	2021
With Guillermina Ramirez-San Juan and David Booth.	
Protist Editor <i>International Microbiology Literacy Initiative</i>	2021-present
Aims to foster understanding and appreciation of microbes through open-access school curriculum development	
Data Science Mentor <i>Gaza Sky Geeks</i>	2018-present
Included delivering lectures to Gaza's first tech hub covering topics in exploratory data analysis, basic approaches to quantitative analysis of data, and effective communication of results.	
Cell Biology and Microscopy Outreach	2014-present
<i>Venues such as Exploratorium, California Academy of Sciences, Chabot Space & Science Center, and Oakland schools</i>	
Cellular Basis of Patterns Working Group Co-founder and Co-organizer <i>University of California, Berkeley</i>	2015-2017
Interdepartmental seminar series and collaborative network dedicated to fostering a community of researchers interested in self-organization and pattern formation in biological systems. With Amy Shyer and Mike Levy.	
Nuclear Reactor Operator <i>Reed Research Reactor</i>	2008-2012
Licensed by the Nuclear Regulatory Commission in 2009, responsibilities included training new operators, giving tours to the public, reactor operation, and detector calibration	