Biographical Information for L. Mahadevan

Fields of Interest

Macroscopic physics. Quantitative biology.

I use experiments, theory and computation to study motion and matter at the human scale, where phenomena are robust and easy to observe, yet not always easy to explain. Areas of interest include the patterns of shape and flow of inanimate matter on scales ranging from the supramolecular to the planetary, and the dynamics of sentient living matter that can self-organize, perceive and act. In all cases, the aim is to get at a qualitative understanding using quantitative methods and get at general principles, if there be such, from answers to specific questions.

Contributions include elucidating the patterns and dynamics in soft structures, interfaces, fluids and materials, the biophysical principles underlying the morphogenesis of organs and organisms, the cognitive dynamics of embodied intelligence in social insects, the mathematics underlying art forms such as origami, and the physics of musical instruments such as musical saws and steelpan drums. My work has led to papers driven by curiosity (e.g. the cusp of an apple, the dynamics of the Venus flytrap, the opening of an envelope or the toss of a coin), experiments on unusual phenomena (e.g. teeth-like fluid patterns, cracking mud, psychology of geometric intuition, termite mound physiology, robot swarms), theorems (e.g. isometric immersions of manifolds, origami design), and patents and algorithms (e.g. additive manufacturing, soft robotics, optimal control and learning).

Experience

Harvard University	England de Valpine Professor of Applied Mathematics,	2003-present
	Professor of Organismic and Evolutionary Biology,	2009-present
	Professor of Physics	2010-present
Harvard University	Faculty Dean, Mather House (Mather is one of 12 undergraduate houses at Harvard College)	2017-present
University of Cambridge, Cambridge, UK	Schlumberger Professor of Complex Physical Systems, Dept of Applied Mathematics and Theoretical Physics	2001-2003
Trinity College Cambridge, UK	Professorial Fellow in Natural Sciences	2001-2003
Massachusetts Institute of Technology, Cambridge MA, USA	Assistant, then (tenured) Tassel Associate Professor Department of Mechanical Engineering	1996-2000

Visiting positions

Chan-Zuckerberg BioHub San Francisco	Distinguished Visiting Scientist	2019-2022
HHMI Janelia Campus Janelia, Virginia	Visiting Scientist	2018-2021
Woods Hole Oceanographic Institution, Woods Hole, USA	Guest Investigator	2012-2020
Marine Biological Laboratories Woods Hole, USA	Summer Faculty	2003-2008
University of Oxford Oxford, UK	Schlumberger Visiting Professor in Applied Mathematics	2004-2014
École Supérieure de Physique et de Chimie Industrielles, Paris, France	Professeur Associé Lab. de Physique et Méc. de Milieux Hétérogènes	Jun-July 1998 May-June 2001
Université de Provence Marseille, France	Professeur Invité IUSTI	March 1998
École Normale Supérieure Paris, France.	Chaire Condorcet Dept. de Physique	July, 1997 Feb-April 2001
Université de Nice, Nice, France	CNRS Poste Rose, Inst. Non-Linéaire de Nice	July-Aug 1995
Univ. of Cambridge, U. K. Appl. Math. & Theor. Phys.	EPSRC Visiting Scientist	July-Aug. 1994
U. Illinois at Urbana-Champaign	Visiting Asst. Prof. Theor. & Appl. Mech.	Aug. 1993-May1995

Education

Indian Inst. of Technology, Madras	B. Tech., Engineering	1986
University of Texas at Austin	M. S., Mechanics	1987
Stanford University	M.S., Mathematics	1992
Stanford University	Ph.D. (advisor: J.B. Keller, Mathematics)	1995
University of Chicago	Postdoctoral Research Associate, Mathematics and Physics (mentor: L. Kadanoff, Mathematics/Physics	1995-1996

Awards and Honors (selected)

MacArthur Fellow, MacArthur Foundation (amongst the most visible awards for creativity in the arts, humanities, and sciences in the USA)	2009-14
Fellow of the Royal Society (of London) (elected member of the oldest scientific society in continuous existence)	2016-
Member, American Academy of Arts and Sciences	2023-
Weldon Memorial Prize and Medal, Oxford University (for contributions to Mathematics applied to Biology. Early winners include Haldane, Fisher, Wright etc.)	2024
Simons Investigator in Physics/Biology, Simons Foundation	2021-26
John Simon Guggenheim Memorial Fellowship	2006
George Ledlie Prize, Harvard University (awarded biennially to someone "who has by research, discovery or otherwise made the most valuable contribution to science, or in any way for the benefit of mankind"")	2006
Edgerton Award, MIT (highest award given to untenured faculty for achievement in teaching and research at MIT)	2000
Shutzer Fellow, Radcliffe Institute, Harvard University	2014-15
Chaire Condorcet, Ecole Normale Superieure et Chaire Paris Sciences, Ecole Superieure de Physique et de Chimie, Paris, France	2001
Visiting Miller Professor, Departments of Integrative Biology, Chemistry, and Mathematics, University of California, Berkeley, CA	2007
Distinguished Alumnus Award, IIT-Madras, India	2009
Young Investigator medal, Society for Engineering Science (Inaugural recipient)	1999
Rice Medal, Society for Engineering Science (Inaugural recipient)	2016
SIGEST award, Society for Industrial and Applied Mathematics (for the best paper in SIAM J. Applied Mathematics; Inaugural recipient)	1999

Francois Frenkiel Prize, American Physical Society 2006
(for the best paper in Physics of Fluids)

Named /PlenaryLectures (selected list)

Dashen Lecture in Theoretical Physics, UC San Diego 2023

Niels Bohr Lecture, Niels Bohr Institute, Denmark 2023

(Inaugural) Willis Lamb Lectures in Theoretical Physics, Oxford 2023

(Inaugural) Soo-Ik Oh Lecturer, Seoul National University 2018

Elsevier Lecturer, Georgia Tech 2018

Smith Lecture, Beckman Institute, UIUC 2017

Reiss Lectures in Applied Mathematics, Northwestern 2016

Miller Institute 60th anniversary plenary talk, Berkeley 2016

Clay Senior Scholar, Park City - Institute for Advanced Study 2014
Summer Institute

Mathematics for Planet Lecture – Simons Foundation 2013

Plenary Lecture, American Math. Society, Baltimore 2013

Niven Lecture, U. British Columbia and 2012
Pacific Institute for Mathematical Sciences

Amick Lectures in Mathematics, University of Chicago 2011

Boeing Lecture in Applied Mathematics, , U. Washington 2011

Glicksman Lecture
Brown University Commencement Exercises 2011

Sears Lecture 2011
Woods Hole Oceanographic Institution

Laufer Lecturer
Engineering, University of Southern California 2010

Plenary Lecture
British Mathematics and Applied Mathematics Colloq, Liverpool 2010

Singleton Lectures 2010
Brain and Cognitive Sciences, M.I.T.

Statphys XVI Invited Lecturer, Genoa, Italy 2007

Plenary Lecture 2007
Society for Mathematical Biology Annual Meeting

Penner Lecturer 2008
Engineering, University of California, San Diego

SIAM Plenary Lecture, SIAM Annual Meeting 2005

G I Taylor Lecturer, Cambridge Philosophical Society 2001
Cambridge, UK

Alan Tayler Lecturer, Smith Institute and Oxford University, UK 2003

Service

Sectional Committee 1 (Mathematics) Member, 2016-2019
Royal Society of London

Associate Director, NSF Science and Technology Center 2013-2015
for Brains, Minds and Machines, MIT

Area Chair, Applied Mathematics, Harvard University 2016-2021
Applied Mathematics is the 4th largest concentration at Harvard, with about ~300 students (out of 4500).

Lead Organizer, Mathematical Biology Program, 2018-2019
Center of Mathematical Sciences and Applications
Harvard University
I organized a series of three week-long workshops that invited more than 100 participants and 30 speakers on the broad theme of geometry, biology and computation across scales.

Faculty Dean, Mather House, Harvard College 2017-present
Together with Dr. Amala Mahadevan, I have served as the Faculty Dean of Mather House, one of 12 undergraduate houses at Harvard College, where we live and learn with 450 students and 50 staff. As leaders of the house, we support our students' intellectual, social, cultural and personal growth in a diverse and inclusive community; see this essay to get a sense of this multi-dimensional role.

Editorial boards:

Proceedings of the Royal Society of London (A) Mathematical, Physical and Engineering Sciences	2004 - 2009
Chaos (published by the American Institute of Physics)	2004 – 2009
Nonlinearity (published jointly by the London Mathematical Society and the Institute of Physics, UK)	2008 - 2013
American Journal of Physics	2009 - 2011

Advisory boards:

Schlumberger Private Ltd. Technology Committee	2000 – 2020
Max Planck Institute for Complex Physical Systems Dresden, Germany, Chair - 2022	2010 – 2022
OCCAM: Oxford Centre for Collaborative Applied Mathematics	2008 – 2013
NSF Mathematical Biosciences Institute, Columbus, OH	2010 - 2012

Teaching Experience

I have taught over 30 different courses in mathematics, physics, engineering and biology over the last two decades at MIT, Cambridge, Harvard and introduced new courses on Biophysics, Inverse Problems, Data Analysis and Mathematical Modeling at these institutions.

I have been a summer school lecturer at the Mathematical Sciences Research Institute (Berkeley, CA), Les Houches (France), London Mathematical Society (Oxford), Clay Mathematical Institute (Park City, Utah), Boulder school on condensed matter physics (Boulder, CO), Theoretical Physics Retreat (MIT), Peyresq (Biomechanics), Cargese (Rheology), IUSTI-Marseilles (Granular mechanics), HHMI Janelia Research Campus (Mathematics of behavior) etc.

I was the Founding Co-director (with T. Poggio) of the newest established Summer School at the Marine Biology Laboratory at Woods Hole - on Brains, Minds and Machines, Woods Hole, MA (starting in 2013).

I was the Founding Co-director (with A. Hermundstad, V. Jayaraman, E. Kanso,) of a new Summer School at the HHMI Janelia Research Campus at Ashburn, VA – on Mathematical Analysis of Behavior (starting in 2018).

Stanford University
Numerical Analysis

Univ. Of Illinois, Urbana-Champaign
Advanced Dynamics
Asymptotic and Perturbation Methods in Science and Engineering

Massachusetts Institute of Technology

Dynamics (2 years)
Molecular, cell and tissue biomechanics (4 years)
Experimental and theoretical molecular biophysics (graduate seminar)
Mechanics and materials I (2 years)
Applied elasticity (jointly with Harvard's "Solid Mechanics I") (2 years)
Physics of sliding friction (graduate seminar)

Cambridge University

Molecular and cellular biomechanics (2 years)
Introduction to physics (1 year)
Mathematical methods for natural sciences (2 years)

Harvard University

Physics

Science of everyday life – freshman seminar (2005)
Physics and physiology of the senses – freshman seminar (2007) – new course
Widely applied physics PHY125 – undergraduate (2014)
Fluid dynamics ES220/PHY220 – graduate (5 years)
Sustainable energy and climate change – freshman seminar (2009) – new course

Biology

Systems cell biology BPS242– graduate (2010)
Acoustic ecology OEB100 – undergraduate (2012)
Biophysics PHY215 – graduate (4 years) – new course
Active Matter PHY230 – graduate (2023) – new course

Applied Mathematics

Mathematical methods in the sciences AM21a – undergraduate (2 years)
Complex and Fourier analysis AM104– undergraduate (5 years)
Mathematical modeling AM115- undergraduate (6 years) - new course
Physical mathematics I AM201– graduate (5 years)
Physical mathematics II AM202– graduate (2 years)
Inverse problems AM216 – graduate (2 years) - new course
Pattern formation in Soft Matter AM217 – graduate (2 years) - new course
Numbers, politics and society – undergraduate (3 years) – new course
Pleasures of probability – freshman seminar – new course

Summer/Winter Schools etc.

Jun 95	Lectures on Classical Mechanics & Elasticity, Institut Non-Linéaire de Nice, France
Jun 97	Lectures on Elasticity – Workshop on Elasticity and Viscoelasticity, Cargese, France
Dec 97	Lectures on Mechanics of Granular Matter Conference on Instabilities and Non equilibrium Systems, Valparaiso, Chile
Mar 98	Lectures on the Mechanics of Granular Materials, Univ. de Provence, France
Jun 99	Director, Summer Graduate Program, Mathematical Sciences Research Institute, Berkeley,California.
Dec 99	Lectures on Molecular and Cellular Biomechanics

	University of Santiago, Chile
June 01	Lectures on Fluid-Structure Interaction,
	Summer School on Nonlinear Physics, Peyresq, France
July 01	Lectures on Structural Elasticity, Workshop on Materials
	In Motion, MRSEC, University of Chicago
Sep 02	Lectures on biomechanics; from molecules to morphogenesis
	Peyresq, France.
Mar 04	Lectures on cell mechanics,
	International winter school, Les Houches, France.
Jul 04	Faculty, Physiology Program,
	Marine Biological Laboratory, Woods Hole, USA.
Jan 05	Shape, flow and motion. Lectures at MIT's Center for
	Theoretical Physics Retreat, New Hampshire, USA
Jul 06	Lectures on Elastomers, Boulder School on Condensed Matter
	Physics, Boulder, Co, USA.
Jul 09	Lecturer, London Mathematical Society School on Mathematics and
	Materials Science, Oxford, UK.
Jul 12	Lectures on Hydrodynamics, Boulder Summer School on
	Condensed Matter Physics, Boulder, Co, USA.
Jul 12	Lectures on Soft Wet Interfaces, Summer School on "Soft
	Interfaces", Les Houches, France.
Jun 14	co-Director, Summer School on Brains, Minds and Machines
	Marine Biology Laboratories, Woods Hole, MA.
Jun 18	co-Director, Summer School on Mathematics of Behavior
	HHMI Janelia Research Campus, Ashburn, VA

Outreach activities

- Lectured at various Middle Schools and High Schools in the Boston and Berkeley areas on "Everyday Science"
- Harvard Museum of Natural History Public Lectures – 2006, 2008, 2012 on "Nature of Shape and Shape of Nature"
- Invited Lecturer to Edinburgh Mathematical Society's "Meet the Mathematician Series" for High School Students, 2010.
- More than 100 articles have been covered by the media – including multiple interviews on the BBC, NPR, articles in the NY Times, Times of London, Le Monde, Figaro, Frankfurter Allgemeiner etc.

Publications – Google scholar

Statistics: ~**400** publications, ~**40** patents, H-index ~**110**, # of Citations ~**45000**.

Most publications combine experiment, theory and computation and are at the interface of multiple subjects: Biology, Physics, Engineering, Mathematics and Medicine. About half were published in interdisciplinary journals: *Nature, Nature Materials, Nature Nanotech., Nature Cell Bio.* ***- 25****, Science-* ***15****, Proc. Natl. Acad. Sci. (USA)* ***- 40****, Physical Review Letters -* ***40****, Proc. Roy. Soc. (Lond.)A,B, Interface -* ***50***. Approx ~**90** articles have been the subject of perspectives and press coverage.

1. "The shape of a Möbius band," Mahadevan, L., and J.B. Keller, *Proceedings of the Royal Society of London, Series A*, **1440, no. 409**, pp. 149-162, 1993.

2. Comment on "Behavior of a falling paper," Mahadevan, L., H. Aref, and S.W. Jones, *Physical Review Letters*, **75**, p. 1420, 1995.

3. "Periodic folding of thin sheets," Mahadevan, L., and J.B. Keller, *SIAM Journal on Applied Mathematics*, **55, no. 6**, pp. 1609-1624, 1995.
    a. See also: *SIAM Review*, 41, no. 1, pp. 113-31, 1999, where this article is reprinted as the
    b. inaugural SIGEST article on the basis of "exceptional quality and potential significance to the entire SIAM community.")

4. "Coiling of flexible ropes," Mahadevan, L., and J.B. Keller, *Proceedings of the Royal Society of London, Series A*, **1452, no. 1950**, pp. 1679-1694, 1996.

5. "Shark-teeth patterns in coating flow inside a horizontally-rotating cylinder," Thoroddsen, S.T., and L. Mahadevan, *Physics of Fluids*, **8, no. 9**, p. S10, 1996.

6. "Tumbling of a falling card," Mahadevan, L., *Comptes Rendus de l'Academie des Sciences, Paris, Series II*, **t. 323**, pp. 729-736, 1996.

7. "Experimental study of instabilities in a partially-filled horizontally-rotating cylinder," Thoroddsen, S.T., and L. Mahadevan, *Experiments in Fluids*., **23**, pp. 1-13, 1997.

8. "Colliding waves in an excitable medium: preservation, annihilation and bifurcation," Argentina, M., P. Coullet, and L. Mahadevan, *Physical Review Letters*., **79,** pp. 2803-07, 1997.

9. 9. "Fluid rope trick investigated," Mahadevan, L., W. Ryu, and A.D.T. Samuel, *Nature*, **v. 391, no. 6672**, p. 140, 1998. Corrigendum; ibid., v. 403, p. 502, 2000.
    Commentaries and press reports: *The Daily Telegraph*, London, March 12, 1998; *Le Figaro*, Paris, March 24, 1998; *The New York Times*, New York, April 7, 1998; interview on "Sounds Like Science," National Public Radio, March 14, 1998; *Pour la Science*, Paris, September, 1998; CHEMTALK (published by the American Chemical Society), September 1998, etc.

10. "Conical surfaces and crescent singularities in crumpled sheets," Cerda, E., and L. Mahadevan, *Physical Review Letters,* **80**, pp. 2358-61, 1998.
    Commentary: *Physics World*, July, 1998, p.19-20.

11. "Tumbling cards," Mahadevan, L., W. Ryu, and A.D.T. Samuel, *Physics of Fluids***, 11**, pp. 1-3, 1999.
Commentary: *Science News*, Oct. 31, 1998, pp. 285-7.

12. "Axial instability of a free-surface front in a partially-filled horizontal rotating cylinder," Hosoi, A.E., and L. Mahadevan, *Physics of Fluids***, 11**, pp. 97-106, 1999.

13. "Propagating fronts on sandpile surfaces," Mahadevan, L. and Y. Pomeau, *Europhysics Letters*, **46**, pp. 595-601, 1999.

14. "Rolling droplets," Mahadevan, L., and Y. Pomeau, *Physics of Fluids*, **11**, pp. 2449-53, 1999.

15. "Conical dislocations in crumpling," Cerda, E., S. Chaieb, F.. Melo and L. Mahadevan, *Nature*, **401**, pp. 46-49, 1999.
Commentary and press reports: *Dallas Morning News*, Sep. 6, 1999; *The Daily Telegraph* (London), Sep. 15, 1999; *Bild der Wissenschaft* (Germany), Mar. 2000; *Facts* (Switzerland), Nov. 1999; American Mathematical Society *What's new in mathematics*, Nov. 1999 etc.

16. "Elastic model of a DNA loop in the lac operon," Balaeff, A., L. Mahadevan and K. Schulten, *Physical Review Letters*, **83**, pp. 4900-03, 1999

17. "Rippling instability of a collapsing bubble" da Silveira, R.., S. Chaieb and L. Mahadevan, *Science*, **287**, pp. 1468-71, 2000.
Commentary and press reports: *Canadian Discovery Channel*, Feb 25, 2000*; New Scientist*, March 2000; *Physics World*, March 2000.

18. " Motility driven by macromolecular springs and ratchets," Mahadevan, L. and P. Matsudaira, *Science*, **288**, pp. 95-99, 2000.
Commentary and press reports: Featured on "Mysteries of the Universe," MSNBC, May 2000. http://www.msnbc.com/news/myst_front.asp

19. "Chaotic dripping from a faucet*,"* Coullet, P., L. Mahadevan and C. Riera, *Progress in Theoretical Physics Supplement*, **139**, pp. 507-516 , 2000.

20. "Folding of viscous filaments and sheets," Skorobogatiy, M., and L. Mahadevan, *Europhysics Letters*, **52**, pp. 532-38, 2000.

21. "Non-stick water," Mahadevan, L., *Nature*, **411**, pp. 895-96, 2001.

22. "Shocks in sand flowing in a silo," Samadani, A., L. Mahadevan and A. Kudrolli, *Journal of Fluid Mechanics*, **452**, pp. 293-301, 2002.

23. "Four-phase merging in compound drops," Mahadevan, L., M. Adda Bedia and Y. Pomeau, *Journal of Fluid Mechanics*, **451**, pp. 411-20, 2002.

24. "How aphids lose their marbles," Pike, N., D. Richard, W. Foster and L. Mahadevan, *Proceedings of the Royal Society of London, Series (B), Biological Sciences,* **269**, pp. 1211-15, 2002.

Commentary and press reports " *Science*: random samples", June 21, 2002, article in *American Natural History magazine,* July 2002.

25. " Wrinkling of a stretched elastic sheet," Cerda, E., K. Ravi-Chandar and L. Mahadevan, *Nature,* **419**, pp. 146-7, 2002.

26. " The viscous catenary," Teichman, J. and L. Mahadevan, *Journal of Fluid Mechanics,* **478**, pp. 71-80, 2003.

27. "Geometry and physics of wrinkling," Cerda, E. and L. Mahadevan, *Physical Review Lett*ers, **90** (7) 074302, 2003 (Physical Review Focus Article).

Commentary in the following: Perspective article in *Science*, **300**, p. 441, 2003, Nature Physics Online, Science Online, New Scientist, Naturwissenschaft, Frankfurter Allgemeine Zeitung, Discover magazine, Allure magazine, Interview with German radio, Korean Broadcasting Service etc.

28. "The force-velocity relationship for the actin-based motility of Listeria-Monocytogenes", McGrath, J., J. Eungdamrong, C. Fisher, F. Peng, L. Mahadevan, T. Mitchison and S. Kuo, *Current Biology*, **13** (1-20), 1-6, 2003.

29. "Rings, rackets and kinks in filamentous assemblies," Cohen, A. and L. Mahadevan, *Proceedings of the National Academy of Sciences (USA)*, **100**, 12141-46, 2003.

30. "Confined elastic developable surfaces: cylinders, cones and the elastica,"Cerda, E. and L. Mahadevan, *Proceedings of the Royal Society of London (A)*, **461,** 671-700, 2005.

31. "Stored elastic energy powers the 60-micron extension of the Limulus polyphemus sperm actin bundle, " Shin, J., L. Mahadevan, G. Waller, K. Langsmo and P. Matsudaira, *Journal of Cell Biology*, **162(7),** 1183-88, 2003.

32. "Dynamics of poroelastic filaments," Skotheim, J. and L. Mahadevan, *Proceedings of the Royal Society of London (A)*, **460**, 1995-2020 (2004).

33. "Multiscale methods for modeling protein-DNA complexes," Villa, E. , Balaeff, A., L. Mahadevan and K. Schulten, *SIAM Multiscale Modeling and Simulation,* **2,**527-553 (2004).

34. "Structural model for cooperative DNA binding by CAP and *Lac* repressor, " L. Mahadevan and K. Schulten, *Structure,* **12,** 123-32, 2004.

35. "Biomimetic ratcheting motion of lubricated hydrogel filaments," Mahadevan, L., S. Daniel and M. Chaudhury, *Proceedings of the National Academy of Sciences (USA)*, **101,** 23-26, 2004.

Commentary in the following: Science – random samples, Science News, MIT - Technology Review, Technology Research News, Frankfurter Allgemeine Zeitung, Scientific American etc.

36. "Popliteal instability of bent multi-walled elastic tubes," Mahadevan, L., J. Bico and G. McKinley, *Europhysics Letters***, 65** (3), 323-29, 2004.

37. "Elements of Draping," Cerda, E., L. Mahadevan and J. Passini, *Proceedings of the National Academy of Sciences (USA)*, **101** (7), 1806-10, 2004.
Commentary in: Nature – physics portal.

38. "Crack street: the cycloidal wake of a cylinder ripping through a thin solid sheet, " Ghatak, A. and L. Mahadevan, *Physical Review Letters.* **91**, 215507, 2003. Erratum, 2005.
Commentary in: Nature – physics portal.

39. "Modeling DNA loops using continuum and statistical mechanics," Balaeff, A., C. Koudella, L. Mahadevan and K. Schulten, *Philosophical Transactions of the Royal Society of London (A)*, **362**, 1355-71, 2004.
Invited paper as part of a theme on DNA mechanics.

40. " Bending stiffness of a crystalline actin bundle," Shin, J., L. Mahadevan, P.T. So and P. Matsudaira, *Journal of Molecular Biology*, **337**, 255-61, 2004.

41. "Capillarity-induced zippering of a flexible train floating on an air-water interface," Vella, D., H-Y. Kim and L. Mahadevan, *Journal of Fluid Mechanics*, **502**, 89-98, 2004.

42. "Photo-induced deformation of beams, plates and films," Warner, M. and L. Mahadevan, *Physical Review Letters*, **92**, 134302, 2004.

43. "Elastic behavior of cross-linked and bundled networks," Gardel, M., J. Shin, F. Mackintosh, L. Mahadevan, P. Matsudaira and D. Weitz, *Science*, **304**, 1301-5, 2004.
Commentary in: The Scientist.

44. "Relating microstructure to rheology of a bundled and cross-linked F-actin network in-vitro*,"* Shin, J., M. Gardel, L. Mahadevan, P. Matsudaira and D. Weitz, *Proceedings of the National Academy of Sciences (USA),* **101 (26),** 9636-41, 2004.

45. "Peeling from a patterned thin elastic film," Ghatak, A., L. Mahadevan, J. Yun, M. Chaudhury and V. Shenoy, *Proceedings of the Royal Society of London (A),* **460,** 2725-35, 2004.

46. "Hydrodynamical models of the dripping faucet,"L. Mahadevan and C. Riera, *Journal of Fluid Mechanics*, **526,** 1-17, 2005.

47. "Scaling of F-actin rheology to probe single filament elasticity and dynamics," Gardel, M., J. Shin, F. Mackintosh, L. Mahadevan, P. Matsudaira and D. Weitz, *Physical Review Letters*, **93 (18),** 188102, 2004.
Featured and reprinted in *Virtual J. Biological Physics, 2004.*

48. "Fluid-flow induced flutter of a flag*,"* Argentina, M. and L. Mahadevan, *Proceedings of the National Academy of Sciences (USA)*, **102,** 1829-34, 2005.
Press coverage in Guardian (UK), Die Zeit (Germany), …

49. "Soft lubrication," Skotheim, J. and L. Mahadevan, *Physical Review Letters*, **92 (24),** 245509, 2004.

50. "Elasticity of interfacial particle rafts," Vella, D., P. Aussillous and L. Mahadevan, *Europhysics Letters*, **68 (2),** 212-18, 2004.

51. "How the Venus flytrap snaps," Forterre, Y., J. Skotheim, J. Dumais and L. Mahadevan, *Nature*, **433,** 421-25, 2005.
Press coverage in : National Public Radio (Morning Edition, Jan 27, 2005), Canadian Broadcasting Corporation (As it happens, Jan 30, 2005), Boston Globe, Guardian (UK), Daily Telegraph (UK), International Herald Tribune …..

52. "Peeling, healing and bursting in lubricated elastic sheets," Hosoi, A. and L. Mahadevan, *Physical Review Letters,* **93**, 137802, 2004.
Featured and reprinted in *Virtual J. Nanoscale Science and Technology,* **10(15),** *Oct. 11, 2004.*

53. "Spontaneous folding of planar surfaces into three-dimensional objects by magnetic self-assembly," M. Boncheva, S. Andreev, L. Mahadevan, A. Winkelman, D. Reichman, M. Prentiss, S. Whitesides and G. Whitesides, *Proceedings of the National Academy of Sciences (USA)*, , **102**, 3924-29, 2005.

54. "Self-similar nested wrinkling patterns in skins," K. Efimenko, M. Rackaitis, E. Manias, A. Vaziri, L. Mahadevan and J. Genzer, *Nature-Materials,* **4,** 293-97, 2005.
News and Views in Nature Materials by W. Huck. Press coverage in multiple countries.

55. "Gravitational collapse of colloidal gels," S. Manley, J.M. Skotheim, L. Mahadevan, D. Weitz, *Physical Review Letters* **94**, 218302, 2005.

56. "Using the peel test to measure the work of adhesion in a confined elastic film," A. Ghatak, L. Mahadevan and M. Chaudhury, *Langmuir*, **21(4)**, 1277-81, 2005.

57. " Non-equilibration of hydrostatic pressure in blebbing cells," G. Charras, J. Yarrow, M. Horton, L. Mahadevan and T. Mitchison, *Nature,* **435**, 95-99, 2005.

58. "Buckling of drying droplets of colloidal suspensions", N. Tsapis, E. Dufresne, S. Sinha, C. Riera, J. Hutchinson, L. Mahadevan, D. Weitz, *Physical Review Letters*, **94,** 018302, 2005.

59. "Self-organized origami," L. Mahadevan and S. Rica, *Science*, **307,** 1740, 2005.
Press coverage in : New York Times (22 Mar, 2005), Geoskop, Die Welt, National Geographic…

60. " Physical limits and design principles for plant and fungal movements," J. Skotheim and L. Mahadevan, *Science,* **308,** 1308-11, 2005.
Cover article of Science. Press coverage in a variety of sources such as : National Geographic, Christian Science Monitor, Scientific American etc. …

61. "The 'Cheerios' effect'", D. Vella and L. Mahadevan, *American Journal of Physics* **73**, 817-25, 2005.
Press coverage in: AIP Physics News, MSNBC, Die Zeit, CBS radio …

62. "Soft lubrication: the elastohydrodynamics of conforming and non-conforming contacts," J. Skotheim and L. Mahadevan, *Physics of Fluids,* **17,** 092101, 2005.
Awarded the 2006 Francois Frenkiel Prize by the American Physical Society.

63. "Solenoids and plectonemes in stretched, twisted elastomeric filaments, " A. Ghatak and L. Mahadevan, *Physical Review Letters,* **95,** 057801, 2005.

64. "Powerful curves," L. Mahadevan and T. Mitchison, *Nature*, **435**, 895-96, 2005.

65. "Non spherical bubbles," A. B. Subramaniam, M. Abkarian, L. Mahadevan and H. Stone, *Nature*, **438**, 930, 2005.

66. "A simple model for the dynamics of adhesive failure," D. Vella and L. Mahadevan, *Langmuir*, **22**, 163-66, 2006.

67. " Capillary rise between elastic sheets," H-Y Kim and L. Mahadevan, *Journal of Fluid Mechanics*, **548**, 141-50, 2006.

68. "Superficial wrinkles in stretched, drying gelatin films," R. Rizzieri, L. Mahadevan, A. Vaziri and A. Donald, *Langmuir*, **22**, 3622-26, 2006.

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399. "Isometric immersions with rectifiable geodesics," Q. Han, M. Lewicka, L. Mahadevan, *Rocky Mountain J. of Math* 54 (4), 1023-55, 2024.

400. "Textile hinges enable extreme properties of mechanical metamaterials," A. Meeussen, G. Bordiga, A. Chang, B. Spoettling, K. Becker, …, L Mahadevan, *arXiv*, https://arxiv.org/abs/2408.16059, 2024.

Selected Invited Lectures (of more than 400 since 1995)

January 2001, "Buckling phenomena in fluids," G I Taylor Lecture, Cambridge Philosophical Society, Cambridge, UK

May 2002, "A search for structure: from molecules to morphogenesis" Inaugural Lecture by the Schlumberger Professor of Complex Physical Systems, Cambridge University, UK.

February 2003, "Size, shape and structure: mechanics of macromolecular assemblies", Frontiers in Science Seminar, Whitehead Institute for Biomedical Research, Cambridge, USA

May 2003, "Geometry and physics in biology," Inaugural lecture on the opening of the Corfield Institute of Applied Mathematics, Cambridge University, UK.

November 2003, "Physical packing problems: from DNA to origami," Alan Tayler Lecture, Oxford University, UK.

January, 2005, "Shape, flow, motion and locomotion," 3 lectures at the MIT Center for Theoretical Physics Retreat – Common Man Inn, NH

July 2005, "Draping, wrinkling and crumpling: geometry and physics," Plenary Lecture, Society for Industrial and Applied Mathematics Annual Meeting, New Orleans, LA

April 2006, “Mathematics, mechanics and motility,” DARPA DSRC Outlook speaker, Washington, D.C.

September 2006 – April 2007, Midwest Mechanics Lecturer. Lectures on 5 different topics at 10 Universities (Illinois, Wisconsin, Iowa, IIT, Northwestern, Purdue, Notre Dame, Michigan, MSU, Minnesota)

February 2007, “Mathematics, mechanics and motility,” NIH Director’s Lecture Series, National Institutes of Health, Bethesda, MD.

July 2007, “Soft Hydraulics: physics and physiology,” Invited Speaker, StatPhys 21, International Conference on Statistical Physics, Genoa, Italy.

December 2007, “Cellular hydraulics,” Invited lecture, American Society of Cell Biology Symposium on “Building a cell”, Washington, DC

July 2008, “Mechanochemistry and motility,” Plenary lecture , Society for Mathematical Biology Annual Meeting, Toronto, CA.

April 2009, “Motility: mathematics, mechanics, mimetics,” German-American Frontiers in Engineering Symposium sponsored by the US National Academy of Engineering, Potsdam, Germany.

July 2009, “Extending the material,” Inauguration of the Oxford Center for Collaborative Applied Mathematics, Oxford, UK.

April 2010, “Morphogenesis,” Plenary Lecture, British Mathematics Colloquium, British Applied Mathematics Colloquium, Edinburgh, UK.

Nov 2010, “Geometry and the brain,” Singleton lectures, Department of Brain and Cognitive Sciences, MIT, Cambridge, MA, USA.

May 2011, “Soft interfaces and morphogenesis,” Amick Lectures, Department of Mathematics, University of Chicago, IL, USA

April 2012, “Continuum and statistical mechanics of ribbons, “ Colloquium Ehrenfestii, Institut Lorentz, Leiden, Netherlands.

November 2012, “On growth and form: mathematics, physics and biology,” Young Lecture, University of Maryland.

September 2013, “On growth and form: mathematics, physics and biology,” Simons Foundation Lecture, Brown University.

July 2014, “Gilding the lily: morphogenesis in plants,” Clay Institute Lecture, IAS Summer School, Park City, Utah.

February 2016, “Morphogenesis,” Plenary lecture, Swiss Life Sciences Meeting, Lausanne, Switzerland.

March 2016, Reiss Memorial Lectures, “Shape”, Applied Mathematics, Northwestern University, Evanston, IL

April 2017, Smith Lecture, “Shape: mathematics, physics and biology,” Beckman Institute, Urbana, IL.

May 2018, Elsevier Lecturer in Mechanics, “Programming shape,” Georgia Tech., Atlanta, GA.

August 2018, Inaugural Soo-Ik Oh Lecture, “Programming shape,” Seoul National University, Seoul, S. Korea.

August 2018, Distinguished Presidential Lecture, “Origami: art, science and technology,” Okinawa Institute of Science and Technology, Okinawa, Japan.

May 2019, NIH Distinguished Lecture, “Geometry and the brain,” NIH, Bethesda, MD.

June 2019, EMBL Distinguished Lecture,”Guts and brains: molecules, mechanics and morphogenesis,” Heidelberg, Germany.

October 2019, CZI Biohub meeting on QBIO, “Aging in complex networks and multicellular organisms,” Berkeley, CA.

August 2020, Plenary Lecture, “Dynamic morphoskeletons,” Annual Meeting of the Society for Developmental Biology.

May 2023, Dashen Memorial Lecture in Theoretical Physics, UC San Diego, “Morphogenesis: Geometry, Physics and Biology.”

June 2023, Niels Bohr Public Lecture, Niels Bohr Institute, Copenhagen, Denmark, “Wisdom of the swarm: from bugs to bots.”

June 2023, (Inaugural) Willis Lamb Lectures in Theoretical Physics, Department of Physics, Oxford University, “Wisdom of the swarm,” “Morphogenesis: geometry, physics and biology,” “Morphogramming: geometry, physics and technology.”

Mentoring

I have been fortunate to have learnt from and worked with ~40 graduate students (10 from under-represented groups), ~80 postdoctoral fellows (20 from under-represented groups) with an outward-looking view of the mathematical and physical sciences, and engineering. We use /create tools from a range of areas encompassing experiment, theory and computation to study real problems where we can be wrong! 80 former members of my group are now faculty in a range of STEM departments, including physics, biology, mathematics, chemistry, computer science, geophysics, psychology, plant science, mechanical engineering, chemical engineering, bioengineering and medicine. Others have gone on to a range of diverse careers, e.g. science policy, private industry, defense labs, financial consulting, startups, helping indigenous groups, and monk-hood.

Since 2017, I also have had the privilege and responsibility to live and learn with 450 undergraduate students, and a staff of ~50, as Faculty Dean (along with Dr. Amala Mahadevan) of Mather House, one of 12 undergraduate houses at Harvard College. Our vision for the house has crystallized around two themes: fostering every individual's many inner (mental) worlds, and emphasizing sustainable community living in our single inter-connected outer (environmental) world. We have enabled this using inclusive programming for our diverse student body, mental well-being initiatives at multiple levels in the house and University, and recently launched "Measure Mather," a three year program to inform and empower students to change our resource consumption footprint. In addition to daily interactions with much of the community, I advise ~25 undergraduate students closely, and have guided 10 undergraduate theses in my time at Mather, and mentored many more, including two Rhodes Scholars.

Doctoral theses supervised (at MIT)

1. Teichman, J. "Wrinkling and sagging of viscous sheets," 2002. Currently at Institute for Defense Analysis, Washington D.C.

2. Eungdamrong, J. (jointly with T. Mitchison, Harvard Medical School) "Polymerization-driven force generation in *Listeria*", 2002. Later M.D. Columbia University.

3. Shin, J. (with P. Matsudaira, Biology, MIT) "Statics and dynamics of actin assemblies," 2003. Currently Professor of Mechanical Engineering, KAIST, Korea.

Doctoral theses supervised (at Cambridge)

1. Skotheim, J. "Some poroelasticity problems in biomechanics," 2004. Currently Professor of Biology, Stanford University.

2. Cohen, A. (with M Pepper, Cavendish) "Nanoscale mechanics," 2003. Currently Professor of Chemistry, Harvard University.

3. Vella, D. (with H Huppert, DAMTP) "Interfacial failure," 2007. Currently Professor of Mathematics, Oxford University.

Doctoral theses supervised (at Harvard)

1. Hohlfeld, E. “Creases, point bifurcations and the spontaneous breakdown of scale invariance,” 2008. Currently working in private industry.

2. Guo, Z. “Some problems in biomechanics and neurobiology,” 2010. Currently Assistant Professor of Neurobiology, Tsinghua University, Beijing, China.

3. Mani, M. “Dynamics at soft interfaces,” 2010. Currently Assistant Professor of Applied Mathematics, Northwestern University.

4. Yong, E-H, “Elasticity and biophysics,” 2012. Currently Assistant Professor of Physics, Nanyang Institute of Technology, Singapore.

5. Mukherjee, A. “Studies in elastohydrodynamics: singing and swimming,” 2012. Currently postdoc in Physics, Weizmann Institute, Israel.

6. Kolinksi, J. “Interfacial dynamics,” Dec. 2013. Currently Assistant Professor of Engineering, EPFL, Lausanne, CH.

7. Wei, Z. “Discrete and continuum mechanics,”Aug. 2014. Currently at Goldman Sachs, NY.

8. McCormick, A. “Discrete differential geometry and physics of curves,” Aug. 2013. Currently at Google.

9. Ocko, S. “Active porous media, “ Aug. 2015. Currently in private industry.

10. Isakov, I. “ Studies in collective action,” May 2016. Currently in private industry.

11. Dudte, L. “Origami mathematics and mechanics,” May 2017. Currently in private industry.

12. Marantan, A. “Probabilistic learning about the physical world,” May 2017. Currently in private industry.

13. Salcedo, M. “Morphometrics and dynamics of insect wings,” May 2018. Currently postdoctoral fellow at Virginia Tech.

14. Peters, J., “Collective behavior in honey bees,” May 2018. Currently postdoctoral fellow at Cornell University.

15. Fronk, D. “Channel formation in active systems,” May 2018. Currently postdoctoral fellow at UC Riverside.

16. Memet, E. “Parking, packing, puckering and peeling in small soft systems,” May 2019, Currently in private industry.

17. Choi, G. “Morphometrics and morphogenesis,” May 2020. Now Assistant Professor of Mathematics, CUHK, Hong Kong.

18. Mishra, S. “Problems in free surface hydrodynamics and locomotion,” Sep 2020. Currently in private industry.

19. Plumb-Reyes, T. “Experiments on topological mechanics,” Sep 2021. AAAS Fellow in Science and Public Policy.

20. Heyde, A. “Studies in morphogenesis and dysmorphogenesis,” June 2021. Schmidt Science Fellow, Applied Physics, Stanford University.

21. Chen, S. “Statistical mechanics and geometry,” June 2021. Currently in private industry.

22. Charles, N. “Topological mechanics,” Dec 2021. Currently a novitiate monk.

23. Kennedy, J. “Studies in jamming architecture,” Jan 2023. Currently in local govt.

24. Bryde, P. “Geometry, localization, and acoustics” June 2023. Currently a postdoc in Mathematics, MIT.

25. Niu, L. “Problems in geometry and physics,” Jan 2023. Currently a postdoc in Physics at U. Penn, Physics.

26. Yodh, J. “Flow occlusion in nature and technology,” June 2023. Currently a postdoc in Chem Engg. at Princeton.

27. Ranganathan, A. “Collective behavior in animals and humans,” June 2023. Currently in private industry.

28. Tolkova, I. “Signal processing, acoustics and conservation biology,” March 2023, Rose Postdoctoral Fellow, Ornithology, Cornell University.

29. Davenport, I., “Learning Physics,” June 2023. Currently in private industry.

30. Toyonaga, N., “Scissors across scales,” started in 2020.

31. Liu, L., “Computational problems in shape and motion,” started in 2022.

32. McKinney, M., “Morphogenetic basis for structural color,” started in 2022.

33. Dionne, A., “Studies in active matter,” started in 2022.

34. Lopez, A., “Inverse problems,” started in 2023.

35. Fernandez del Castille, J.C. , “Pattern formation in neuroscience,” started in 2024.

Post-doctoral associates and senior visitors (at MIT)

1. Dr. E. Cerda. Topic: Nonlinear Physics. February, 1997 – June, 1998. Currently Professor of Physics, U. de Santiago de Chile, Santiago, Chile.

2. Dr. S. Chaieb. Topic: Experimental nonlinear physics. September 1998- December 1999. Currently Professor of Mechanical Science and Engineering, KAUST, Saudi Arabia.

3. Dr. A. Upadhyaya. Topic: Pattern formation in adherent and motile cells. January 2000-December 2001. Currently Professor of Physics, University of Maryland.

4. Professor M. Ben Amar, Universite de Paris VI, sabbatical 1998-99.

5. Professor Y. Pomeau, Ecole Normale Superieure, Paris, April 2000.

Post-doctoral associates and senior visitors (at Cambridge)

1. Dr. D. Richard, Topic: Experimental soft matter physics. Aug. 2001 – June 2002. Dr. Richard is with Vivendi Water, Stockholm.

2. Dr. J. Dumais, Topic: Plant cell morphogenesis. Sep. 2001 – July 2003. Dr Dumais is currently an Associate Professor of Bioengineering, Adolfo Ibanez University, Chile.

3. Dr. E. Cerda, Topic: Elastic instabilities. July 2001 – Dec. 2003. Currently, Professor of Physics, U. Santiago de Chile, Chile.

4. Dr. M. Adda-Bedia. CNRS, LPS, ENS, Paris, France. February 2002 – February 2003. Currently Charge de Recherche, Laboratoire de Physique Statistique, Ecole Normalede Lyon.

5. Dr. Y. Forterre, Topic: Experimental soft matter physics, Aug. 2002 – present. Currently Charge de Recherche, IUSTI, Universite de Provence, Marseilles.

Post-doctoral associates (at Harvard)

1. Dr. C. Riera, Topic: Nonlinear physics. Sep 2002 – Sep 2004. Currently a private entrepreneur.

2. Dr. M. Argentina, Topic: Elastohydrodynamics and animal locomotion, Sep 2002 – Aug. 2004. Currently Prof. of Physics at the Univ. of Nice, France.

3. Dr. A. Ghatak, Topic: Experimental studies on adhesion, March 2002 – May 2004. Currently Professor of Chemical Engineering IIT, Kanpur, India.

4. Dr. C. Koudella, Topic: Computational molecular mechanics, Sep 2002 – Aug 2004.Currently on Wall Street.

5. Dr. M. Das, Topic: Physics of soft membranes, Sep 2004 – Oct 2005. Currently Asst. Prof. of Physics, U. Rochester, NY.

6. Dr H-Y Kim, Topic: Capillarity and elasticity, Sep 2004 – Dec 2004. Currently Prof. of Mechanical Engineering at Seoul National University, Korea.

7. Dr. A. Kabla, Topic: Physical mechanics, Dec 2004 – Jan 2007. Currently Prof. of Engineering, Cambridge University, UK..

8. Dr. A. Gopinath, Topic: Physiology and materials, Jan 2005 – Aug 2007. Currently Asst Prof. of Bioengineering, UC Merced.

9. Dr. D. Cuvelier, Topic: Experimental Biophysics, Sep 2005 – Aug 2007. Currently Maitre d'Conference at the Institut Curie and the University of Paris, France.

10. Dr. M. Wyart, Aug. 2005- July 2006. Currently Professor of Physics, EPFL, Lausanne, CH.

11. Dr. I. Kulic, Topic: Biophysics, Nov 2006 – April 2008. Currently Charge de recherché at CNRS, Laboratoire de Physiochmie polymeres, Strasbourg, France.

12. Dr. J. Higgins, MD. Topic: Sickle cell disease. Jan. 2006 – Aug. 2009. Currently Asst. Prof. of Systems Biology, Harvard Medical School, Boston, MA.

13. Dr. E. Reyssat, Topic: Elastohydrodynamics, Oct. 2007 – July 2009. Currently Charge de Recherche, Lab. de Physique et Mecanique Milieux Heterogenes, ESPCI, Paris, France.

14. Dr. S. Mandre, Topic: Elastohydrodynamics. Aug. 2006 –June 2010. Currently Prof. of Mathematics, U. Warwick, UK.

15. Dr. H. Liang, Topic: Surfaces and interfaces, April 2007 – April 2010. Currently Prof. of Mechanics, University of Science and Technology, Hefei, China.

16. Dr. T. Savin, Topic: Soft matter physics, Oct. 2007 – Dec. 2009. Currently Prof. of Engineering, Cambridge University, UK.

17. Dr. O. Campas, Topic: Biophysics of morphogenesis, Oct 2007 –2011. Currently Director, Physics of Life Cluster, MPI-CBG and TU Dresden.

18. Dr. M. Venkadesan, Topic: Human biomechanics, Oct 2008 – Dec 2010. Currently Prof. of Engineering, Yale University, CT.

19. Dr. A. Slim, Topic: Flow in and deformation of porous media, Oct 2009 – Jan 2011. Currently Prof. of Mathematics and Geosciences, Monash University, Australia.

20. Dr. K. Kamrin, Topic: Plasticity in thin geometries (NSF fellow), Sep 2008-Jan 2010. Currently Prof. of Mech. Engg., MIT.

21. Dr. G. Morrison, Topic: Statistical mechanics of networks, Oct. 2008 – May 2013. Currently Asst. Prof. of Physics, U. Houston, TX.

22. Dr. M. Bandi, Topic: Soft matter physics, Oct. 2009 – Oct. 2011. Currently Prof. of Physics, Okinawa Institute of Science and Technology, Japan.

23. Dr. L. Giomi, Topic: Geometry and statistical physics, July 2010 – Aug 2012. Currently Prof. of Physics, Lorentz Institut, Leiden, Amsterdam.

24. Dr. A. Concha, Topic: Fluid physics and locomotion, Mar 2010 – May, 2012. Currently Assoc. Prof. of Physics, U. Adolfo Ibanez, Chile.

25. Dr. P. Paoletti, Topic: Optimization and control in biological systems, July 2010 – July 2012. Currently Assoc. Prof. of Engineering, U. Liverpool, UK.

26. Dr. P. Mellado, Topic: Collective dynamics in fluid and spin systems, Aug 2010 – May 2012. Currently Assoc. Prof. of Physics, U. Adolfo Ibanez, Chile.

27. Dr. S. Gerbode, Topic: Tendril and flower morphogenesis, Sep 2010 – Nov. 2011. Currently Assoc. Prof. of Physics, Harvey Mudd College, CA.

28. Dr. T. Tallinen, Topic: Mechanical aspects of morphogenesis, Sep 2010 – April 2012. Currently Asst. Prof. of Physics, Jyvaskyla University, Finland.

29. Dr. G. Wyn Jones, Topic: Inverse problems in soft matter, Jan 2010 – Dec. 2011. Currently Prof. of Mathematics, U. Manchester, UK.

30. Dr. J. Biggins, Topic: Elasticity and morphogenesis, Oct 2010 – Oct 2012. Currently Assoc. Prof. of Engg., Cambridge University, UK.

31. Dr. D. Vural, Topic: Dynamics of and in complex networks, July 2012 – December 2013. Currently Asst. Prof. of Physics, U. Notre Dame, IN.

32. Dr. E. Boksenbojm, Topic: Statistical mechanics of nonequilibrium systems, Sep 2012 – Aug 2013. Currently in private industry.

33. Dr. N. Kaplan, Topic: Multiphase flow, Oct 2012 – August 2016. Currently, Asst. Prof. of Physics, Virginia Tech.

34. Dr. H. King, Topic: Collective dynamics of social insects and bristlebots, Oct 2012 – July 2016. Asst. Prof. of Polymer Science and Biology, U. Akron, Ohio.

35. Dr. J.Y. Chung, Topic: Active soft matter, Oct. 2012 – Sep. 2017. Currently at Seoul National Univeristy, Korea.

36. Dr. E. Vouga, Topic; Discrete differential geometry and mechanics, Oct 2013 – Aug 2014. Currently Asst. Prof. of Comp. Sci., U-T. Austin, TX

37. Dr. A. Carlson, Topic: Interfacial fluid mechanics, Sep 2012 – Aug 2015. Currently Asst. Prof. of Mathematics, U. Oslo, Norway.

38. Dr R. Bastien, Topic: Proprioceptive biophysics, Nov. 2012 – Dec 2014. Currently postdoc at Max Planck Institute- Cologne.

39. Dr. Y. Meroz, Topic: Statistical mechanics of decision making in cells and organisms, Oct 2013 –Aug 2017. Currently Asst. Prof. of Plant Sciences, Tel Aviv University, Israel.

40. Dr. R. Chelakkot, Topic: Physics and dynamics of strings and ropes, Sep 2013 – May 2015. Currently Assoc. Prof. of Physics, IIT- Mumbai, India.

41. Dr. M. Gazzola, Topic: Neurodynamics of swimming, Oct. 2013 – July 2016. Currently Asst. Prof. of Mech. Engg., U. Illinois, Urbana-Champaign.

42. Dr. T. Ruiz, Topic: Cellular biophysics, Oct 2013 – Jan. 2017. Currently in private industry.

43. Dr. O. Peleg, Topic: Collective dynamics in biophysics, Jan 2014 – Nov 2017. Currently Asst. Prof. of Computer Science, U. Colorado, Boulder.

44. Dr. B. Styves, Topic: Collective dynamics of robots, Jan 2014 – September 2016. Currently postdoc at U. Chicago.

45. Dr. I. Regev, Topic: Morphogenesis and pattern formation in biology and physics, Feb 2014 – Jan 2016. Currently Asst. Prof. of Physics, Ben Gurion University, Israel.

46. Dr. E. Matsumoto, Topic: Geometry and mechanics of soft matter, Sep 2014- July 2016. Asst. Prof. of Physics, Georgia Tech.

47. Dr. Siddharth Srinivasan, Topic: Hydrodynamics of thin viscous sheets and biofilms, Jan 2015 – Jun 2018. Currently at Apple, CA.

48. Dr. T. Cohen, Topic: Elastic instabilities, Nov. 2015 – Oct 2016. Currently Asst. Prof. of Mechanical, and Civil and Environmental Engg., MIT, Cambridge, MA

49. Dr. W.v. Rees, Topic: Inverse problems in 4d printing, May 2015 – Oct 2017. Currently Asst. Prof. of Mechanical Engg., MIT, Cambridge, MA

50. Dr Y. Hart, Topic: Psychophysics, Aug 2015-July 2019. Currently Asst. Prof. of Psychology, Hebrew University, Jerusalem, Israel.

51. Dr C.U. Chan, Topic: Chemotaxis of cells, February 2016 – May 2019. Currently researcher at A*Star for Cell and Developmental Biology, Singapore.

52. Dr. M. Lingam, Topic: Mathematics of active fluids, Nov 2016 – June 2017. Currently Asst. Prof. of Physics, Florida State.

53. Dr. C. Weber, Topic: Active matter instabilities, March 2016 – February 2018. Currently Professor of Physics, Augsburg, Germany.

54. Dr. T. Michaels, Topic: Self assembly of filamentous structures, Aug. 2016 – Aug. 2019. Currently Asst. Prof. of Biology, ETH, Zurich, Suisse.

55. Dr. M. Serra, Topic: Dynamical systems in development and neuroscience, Aug. 2017 – Aug 2020. Currently Asst Prof. of Physics, UCSD.

56. Dr. V. Spandan, Topic: Neuroscience and physics, Aug. 2018 – Aug. 2020. Presently in private industry.

57. Dr. A. Gupta, Topic: Developmental biophysics, Sep. 2018 – Mar 2020. Currently Asst Prof. of Physics, IIT Hyderabad, India.

58. Dr. A. Chakrabarti, Topic: Instabilities in soft matter and biology, June 2017 – Aug 2021. Currently at Schlumberger Research, Cambridge, USA.

59. Dr. G. Chaudhary, Topic: Soft matter, Aug. 2019 – Dec 2021. Currently at Apple.

60. Dr. S. al-Mosleh, Topic: Geometrical and topological morphometrics, Aug. 2018 – July 2023. Currently Asst. Prof. of Natural Science, U. Maryland Eastern Shores.

61. Dr. F. Giardina, Topic: Robotics and the evolution of locomotion, Sep. 2018 – Aug 2022. Currently at Swiss Bank.

62. Dr. V. Raju, Topic: Control theory in neuroscience and robotics, Aug. 2019 – Aug 2022. Currently a postdoc at NYU.

63. Dr. A. Radja, Topic: Morphogenesis in plants and animals, Aug. 2019 – May 2022. Currently Asst. Prof. of Physics, Bryn Mawr.

64. Dr. G. Prasath, Topic: Physics of social insects, Aug. 2019 – Dec. 2022. Currently Asst. Prof. of Engg., IIT-Madras.

65. Dr. S. Shankar, Topic: Active matter, Aug. 2019 – June 2023. Currently Asst. Prof. of Physics, U. Michigan.

66. Dr. Y. Jung, Topic: Topological mechanics, June 2021 – present.

67. Dr. S. Sinha, Topic: Tissue morphogenesis, Feb 2022 – present.

68. Dr. V. Krishnan, Topic: Insect and robot navigation, Jan 2022 – present.

69. Dr. S. Yin, Topic: Mechanics and morphogenesis, May 2022 – Dec 2023. Currently postdoc in MPIPKS-Dresden, Germany.

70. Dr. K. Bowal, Topic: Collective behavior across scales, May 2022 – present.

71. Dr. J. Tauber, Topic: Branching morphogenesis, Oct 2022 – present.

72. Dr. E. Rantsiou, Topic: Conservation bioacoustics, Oct 2022 – Dec 2023. Currently in industry.

73. Dr. C. Liu, Topic: Collective shape and motion in active systems, Nov 2022 – May 2023. Currently postdoc in Bioengineering at UC Berkeley.

74. Dr. M. He, Topic: Soft interfaces and suspensions, July 2023 – Nov 2024.

75. Dr. L. Hoffman, Topic: Morphogenesis in low dimensions: shape and regulation, Oct 2023 – present.

76. Dr. P. Kaneelil, Topic: Fluid dynamics for sustainability, Jan 2024 – present.

77. Dr. M. Nejad, Topic: Active matter, Jan 2024 – present.

78. Dr. D. Palmer, Topic: Discrete differential geometry, Sep 2023 – present.