

## Biographical Information for L. Mahadevan – August 2019

### Fields of Interest

Applied mathematics. Quantitative biology. Macroscopic physics. Engineering science.

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.

### Experience

Harvard University	England de Valpine Professor of Applied Mathematics, Professor of Organismic and Evolutionary Biology, Professor of Physics	2003-present 2009-present 2010-present
Harvard University	Faculty Dean, Mather House (Mather is one of 12 undergraduate houses at Harvard College, with ~400 students)	2017-present
Senior Fellow	Howard Hughes Medical Institute Janelia Research Campus, Ashburn, VA	2018-present
University of Oxford Oxford, UK	Schlumberger Visiting Professor in Applied Mathematics	2004-2014
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

Woods Hole Oceanographic Institution, Woods Hole, USA	Guest Investigator Summer faculty	2012-present 2003-2011
Marine Biological Laboratories Woods Hole, USA	Summer Faculty	2003-present
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.	Professeur Invité 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)

Fellow of the Royal Society (of London) (elected member of the UK National Academy – Mathematics Section)	2016-
MacArthur Fellowship, MacArthur Foundation	2009-14

(amongst the most visible awards for creativity in the arts, humanities, and sciences in the USA)

John Simon Guggenheim Memorial Fellowship	2006
Shutzer Fellow, Radcliffe Institute, Harvard University	2014-15
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
Inaugural holder of the (endowed) Schlumberger Chair in Complex Physical Systems, Cambridge University, UK	2001-03
Schlumberger Visiting Professor in Mathematics, Oxford University, UK	2004-2014
Chaire Condorcet, Ecole Normale Superieure	Jan-April 2001
Chaire Paris Sciences, Ecole Superieure de Physique et de Chimie, Paris, France	May – Jun 2001
Visiting Miller Professor, Departments of Integrative Biology, Chemistry, and Mathematics, University of California, Berkeley, CA	2007
Distinguished Visiting Professor, National Center for Biological Sciences – TIFR, Bangalore, India	2007-2012
Inaugural SIGEST award – Society for Industrial and Applied Mathematics (for the best paper in SIAM J. Applied Mathematics)	1999
Francois Frenkiel Prize, American Physical Society (for the best paper in Physics of Fluids)	2006
Young Investigator Award in Applied Mechanics, American Society for Mechanical Engineering	2005
Young Investigator medal, Society for Engineering Science (inaugural recipient)	1999

Rice Medal, Society for Engineering Science (inaugural recipient) 2016

Distinguished Alumnus Award 2009  
IIT-Madras, India

**Named /Plenary Lectures (selected list)**

Inaugural Soo-Ik Oh Lecturer, Seoul National University 2018

Rapporteur, Solvay conference on physics (Biophysics) 2017

Smith Lecture, Beckman Institute, UIUC 2017

Reiss Lectures in Applied Mathematics, Northwestern 2016

Miller Institute 60<sup>th</sup> anniversary plenary talk, Berkeley 2016

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

Mathematics for Planet Lecture – Simons  
Foundation 2013

Plenary Lecture, American Math. Society Meeting  
Baltimore, 2013

Niven Lecture 2012  
University of British Columbia and  
Pacific Institute for Mathematical Sciences

Amick Lectures 2011  
Mathematics, University of Chicago

Boeing Lecture 2011  
Applied Mathematics, University of Washington

Glicksman Lecture 2011  
Brown University Commencement Exercises

Sears Lecture 2011  
Woods Hole Oceanographic Institution

Laufer Lecturer 2010  
Engineering, University of Southern California

Combined-plenary Lecture British Mathematics Colloquium and British Applied Mathematics Colloquium	2010
Singleton Lectures Brain and Cognitive Sciences, M.I.T.	2010
Statphys XVI Invited Lecturer, Genoa, Italy	2007
Plenary Lecture Society for Mathematical Biology Annual Meeting	2007
Penner Lecturer Engineering, University of California, San Diego	2008
SIAM Plenary Lecture, SIAM Annual Meeting	2005
G I Taylor Lecturer, Cambridge Philosophical Society Cambridge, UK	2001
Alan Tayler Lecturer, Smith Institute and Oxford University, UK	2003
<b>Service</b>	
Sectional Committee 1 (Mathematics) Member, Royal Society of London	2016-2019
Associate Director, NSF Science and Technology Center for Brains, Minds and Machines, MIT	2013-2015
Co-Area Chair, Applied Mathematics, Harvard University	2016-present
Lead Organizer, Mathematical Biology Program, Center of Mathematical Sciences and Applications Harvard University	2018-2019
<b>Editorial boards:</b>	
<i>Proceedings of the Royal Society of London (A)</i> <i>Mathematical, Physical and Engineering Sciences</i>	2004 - 2009
<i>Chaos (published by the American Institute of Physics)</i>	2004 – 2009
<i>Nonlinearity (published jointly by the London Mathematical</i>	2008 - 2013

*Society and the Institute of Physics, UK)*

*American Journal of Physics* 2009 - 2011

### **Advisory boards:**

*Schlumberger Private Ltd. Technology Committee* 2001 – present

*Max Planck Institute for Complex Physical Systems* 2010 – 2019  
*Dresden, Germany;*

*OCCAM: Oxford Centre for Collaborative Applied Mathematics* 2008 – 2013

*NSF Mathematical Biosciences Institute, Columbus, OH* 2010 - 2012

### **Teaching Experience**

I have taught over 20 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

### Applied Mathematics

Mathematical methods in the sciences AM21a – undergraduate (2010)  
Complex and Fourier analysis AM104– undergraduate (2010)  
Mathematical modeling AM115- undergraduate (6 years)  
Physical mathematics I AM201– graduate (4 years)  
Physical mathematics II AM202– graduate (2012)  
Inverse problems AM216 – graduate (2013,2016)  
Pattern formation in Soft Matter AM217 – graduate (2 years)

### Physics

Science of everyday life – freshman seminar (2005)  
Physics and physiology of the senses – freshman seminar (2007)  
Widely applied physics PHY125 – undergraduate (2014)  
Biophysics PHY215 – graduate (2016)

### Engineering Sciences/Physics

Fluid dynamics ES220/PHY220 – graduate (5 years)  
Sustainable energy and climate change – freshman seminar (2009)  
Ethics in science, technology and society – undergraduate (2019)

### Biology

Biological dynamics PHY215 – graduate (3 years)  
Systems cell biology BPS242– graduate (2010)

## 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,  
**Geometry and Dynamics of Low Dimensional Continua,**  
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,

Jan 05	Marine Biological Laboratory, Woods Hole, USA. 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 60 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**

Statistics: ~**300** publications, ~**20** patents, H-index ~**80**, # of Citations ~**24000**.

Most publications combine experiment, theory and computation and are at the interface of Engineering, Applied Mathematics, Biology, Physics, 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)* - **30**, *Physical Review Letters* - **40**, *Proc. Roy. Soc. (Lond.)A,B*, *Interface* - **40**. Approx ~**75** 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.

See also: *SIAM Review*, 41, no. 1, pp. 113-31, 1999, where this article is reprinted as the 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. Couillet, and L. Mahadevan, *Physical Review Letters*, **79**, pp. 2803-07, 1997.
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](http://www.msnbc.com/news/myst_front.asp)
19. “Chaotic dripping from a faucet,” Coulet, 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 Letters*, **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.
69. "Transitions to nematic states in homogeneous suspensions of high aspect ratio magnetic rods," A. Gopinath, L. Mahadevan and R.C. Armstrong, *Physics of Fluids*, **18**, 028102, 2006.
70. "Dynamics of surfactant-driven fracture of particle rafts," D. Vella, H-Y Kim, P. Aussillous and L. Mahadevan, *Physical Review Letters*, **96**, 178301, 2006.
71. "Microtubules can bear enhanced compressive loads in cells because of lateral reinforcement," C. Brangwynne, F.C. MacKintosh, S. Kumar, N. Geisse, L. Mahadevan, K. Parker, D. Ingber, D. Weitz, *Journal of Cell Biology*, **173**, 733-41, 2006.  
Featured commentary in *Current Biology* by J. McGrath.
72. "Crack-front instability in a confined film," Adda Bedia and L. Mahadevan, *Proceedings of the Royal Society of London, series A*, **462**, 3233-51, 2006.
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- Coverage in media including AIP (American Institute of Physics), Eureka-Alert etc
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251. “Controllable biomimetic birdsong,” *Journal of the Royal Society Interface*, **14**, 20170002, 2017.
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Subject of commentary in New Scientist, BBC etc.
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292. “Programming shape using kirigami tessellations,” G.P-T. Choi, L. Dudte and L. Mahadevan, *Nature Materials*, *in press*.
293. “Controlled gliding and perching through deep-reinforcement-learning, *Physical Review Fluids*, *in press*.
294. “Random sequential adsorption of spheres on a cylinder,” E. Memet, N. Tanjeem, C. Greboval, V. Manoharan and L. Mahadevan, *Europhysics Letters*, *in press*.

295. “Genetic and mechanical regulation of intestinal smooth muscle development,” T. Huycke, B. Miller, H. Gill, N. Nerurkar, D. Sprinzak, L. Mahadevan and C. Tabin, *Cell*, *in press*.

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297. “Size control of the inner ear via hydraulic feedback,” K. Mosaliganti, I. Swinburne, C. Chan, N. Obholzer, A. Green, S. Tanksale, L. Mahadevan and S. Megason, *eLife*, *in press*.

### **Selected Invited Lectures (of more than 120 in the last decade)**

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 of 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 Tayer Lecture, Oxford University, UK.

March 2004, 4 lectures on “Physics of the cell,” International Winter School, Les Houches, France.

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, Instituut 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.

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.

### **Doctoral and post-doctoral students**

I have been fortunate to have learnt from and worked with ~30 graduate students, ~60 postdoctoral fellows with an outward-looking view of the mathematical and physical sciences, and engineering – we use and create tools from a range of areas encompassing experiment, theory and computation to study real problems where we can be wrong (in interesting ways). More than 50 members of my group have gone on to faculty positions in a range of STEM departments, including mathematics, physics, biology, chemistry, computer science, geophysics, psychology, mechanical engineering, chemical engineering, bioengineering and schools of medicine.

### **Doctoral theses (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 Associate Professor of Mechanical Engineering, KAIST, Korea.

### **Doctoral theses (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 (at Harvard)**

1. Hohlfeld, E. “Creases, point bifurcations and the spontaneous breakdown of scale invariance,” 2008. Currently working in private industry (Wall Street).
2. Guo, Z. (with S. Ramanathan, Molecular and Cell Biology) “Some problems in biomechanics and neurobiology,” 2010. Currently Assistant Professor of Neurobiology, Tsinghua University, Beijing, China.
3. Mani, M. (with M. Brenner, SEAS) “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 elasto-hydrodynamics: singing and swimming,” 2012. Currently postdoc in Physics, Weizmann Institute, Israel.
6. Kolinski, 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 Duboc postdoc in Physics at Stanford University.
10. Isakov, I. “Studies in collective action,” May 2016. Currently postdoctoral fellow at Yale University.
11. Dudte, L. “Origami mathematics and mechanics,” May 2017. Currently in private industry.
12. Salcedo, M. “Morphometrics and dynamics of insect wings,” started in 2013.
13. Marantan, A. “Probabilistic learning about the physical world,” May 2017. Currently in private industry.
14. Peters, J., “Collective behavior in honey bees,” May 2018. Currently postdoctoral fellow at Cornell University.
15. Memet, E. “Geometry and biophysics: from buckling microtubules to posture control” May 2019.

16. Fronk, D. “Channel formation in active systems,” May 2018. Currently preceptor in Biology, Harvard University.
17. Mishra, S. (with C. Rycroft) “Free surface hydrodynamics,” started in 2014.
18. Plumb-Reyes, T. “Experiments on topological mechanics,” started in 2015.
19. Kennedy, J. (with R. Nagpal) “Studies in jamming architecture,” started in 2017.
20. Heyde, A. “Studies in morphogenesis and dysmorphogenesis,” started in 2016.
21. Chen, S. “Statistical mechanics and geometry,” started in 2016.
22. Choi, G. (with C. Rycroft) “Morphometrics and morphogenesis,” started in 2016.
23. Charles, N. “Topological mechanics,” started in 2017.
24. Bryde, P. “Geometry, localization, and acoustics” started in 2017.
25. Niu, L. “Problems in geometry and physics,” started in 2017.
26. Yodh, J. “Flow occlusion in nature and technology,” started in 2017.
27. Ranganathan, A. “Collective behavior in animals and humans,” started in 2018.
28. Tolkova, I. “Signal processing, acoustics and conservation biology,” started in 2019.

#### **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 (with G. McKinley). Topic: Experimental nonlinear physics. September 1998- December 1999. Currently Assistant Professor of Mechanical Science and Engineering, KAUST, Saudi Arabia.
3. Dr. A. Upadhyaya (with R. Kamm) Topic: Pattern formation in adherent and motile cells. January 2000-December 2001. Currently Assoc. Professor of Physics, University of Maryland.
4. Professor Martine Ben Amar, Universite de Paris VI, sabbatical 1998-99.
5. Professor Yves 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 Normale de Lyon.
6. Dr. Y. Forterre, Topic: Experimental soft matter physics, Aug. 2002 – present. Currently Charge de Recherche, IUSTI, Universite de Provence, Marseilles.

### **Post-doctoral associates and senior visitors (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 (with M. Brenner, D. Fisher, D. Nelson), 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 Physiochimie 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 (with M. Brenner), Topic: Elastohydrodynamics. Aug. 2006 –June 2010. Currently Asst. Prof. of Engineering, Brown University, Providence, RI.
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 Asst. Prof. of Engineering, Cambridge University, UK.
17. Dr. O. Campas (with M. Brenner), Topic: Biophysics of morphogenesis, Oct 2007 – 2011. Currently Asst. Prof. of Mechanical Engineering, U C Santa Barbara.
18. Dr. M. Venkadesan (with D. Lieberman), Topic: Human biomechanics, Oct 2008 – Dec 2010. Currently Asst Prof. of Engineering, Yale University, CT.
19. Dr. A. Slim, Topic: Flow in and deformation of porous media, Oct 2009 – Jan 2011. Currently Lecturer in Mathematics and Geosciences, Monash University, Australia.
20. Dr. K. Kamrin, Topic: Plasticity in thin geometries (NSF fellow), Sep 2008-Jan 2010. Currently Asst 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 Asst. Prof. of Physics, Okinawa Institute of Science and Technology, Japan.
23. Dr. L. Giomi, Topic: Geometry and statistical physics, July 2010 – Aug 2012. Currently Asst. Prof. of Physics, Lorentz Institut, Leiden, Amsterdam.
24. Dr. A. Concha (with R. Wood), Topic: Fluid physics and locomotion, Mar 2010 – May, 2012. Currently Asst. Prof. of Physics, U. Adolfo Ibanez, Chile.

25. Dr. P. Paoletti, Topic: Optimization and control in biological systems, July 2010 – July 2012. Currently Asst. Prof. of Engineering, U. Liverpool, UK.
26. Dr. P. Mellado, Topic: Collective dynamics in fluid and spin systems, Aug 2010 – May 2012. Currently Asst. Prof. of Physics, U. Adolfo Ibanez, Chile.
27. Dr. S. Gerbode, Topic: Tendril and flower morphogenesis, Sep 2010 – Nov. 2011. Currently Asst 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 Lecturer in Mathematics, U. Manchester, UK.
30. Dr. J. Biggins, Topic: Elasticity and morphogenesis, Oct 2010 – Oct 2012. Currently Research Fellow at Trinity Hall, and Cavendish Lab., Cambridge University, UK.
31. Dr. Dervis can Vural, Topic: Dynamics of and in complex networks, July 2012 – December 2013. Currently Asst. Prof. of Physics, U. Notre Dame, IN.
32. Dr. Eliran Boksenbojm, Topic: Statistical mechanics of nonequilibrium systems, Sep 2012 – Aug 2013. Currently in private industry.
33. Dr. Nadir Kaplan, Topic: Multiphase flow, Oct 2012 – August 2016. Currently, postdoc in Materials Science, Harvard University.
34. Dr. Hunter 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. Jun Chung, Topic: Active soft matter, Oct. 2012 – Sep. 2017. Currently at Seoul National Univeristy, Korea.
36. Dr. Etienne Vouga, Topic; Discrete differential geometry and mechanics, Oct 2013 – Aug 2014. Currently Asst. Prof. of Comp. Sci., U-T. Austin, TX
37. Dr. Andreas Carlson, Topic: Interfacial fluid mechanics, Sep 2012 – Aug 2015. Currently Asst. Prof. of Mathematics, U. Oslo, Norway.
38. Dr Renaud Bastien, Topic: Proprioceptive biophysics, Nov. 2012 – Dec 2014. Currently postdoc at Max Planck Institute- Cologne.
39. Dr. Yasmine 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. Raghu Chelakkot, Topic: Physics and dynamics of strings and ropes, Sep 2013 – May 2015. Currently Asst. Prof. of Physics, IIT- Mumbai, India.
41. Dr. Mattia Gazzola, Topic: Neurodynamics of swimming, Oct. 2013 – July 2016. Currently Asst. Prof. of Mech. Engg., U. Illinois, Urbana-Champaign.
42. Dr. Teresa Ruiz, Topic: Cellular biophysics, Oct 2013 – Jan. 2017. Currently in private industry.
43. Dr. Orit Peleg, Topic: Collective dynamics in biophysics, Jan 2014 – Nov 2017. Currently Asst. Prof. of Computer Science, U. Colorado, Boulder.
44. Dr. Baudouin Styves, Topic: Collective dynamics of robots, Jan 2014 – September 2016. Currently postdoc at MIT.
45. Dr. Ido 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. Elisabetta Matsumoto (with M. Brenner), 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 St. Gobain Research, Boston.
48. Dr. Tal Cohen, Topic: Elastic instabilities, Nov. 2015 – Oct 2016. Currently Asst. Prof. of Mechanical, and Civil and Environmental Engg., MIT, Cambridge, MA
49. Dr. Wim van Rees, Topic: Neuromechanics of locomotion, May 2015 – Oct 2017. Currently Asst. Prof. of Mechanical Engg., MIT, Cambridge, MA
50. Dr Yuval Hart, Topic: Psychophysics, Aug 2015-July 2019. Currently Asst. Prof. of Psychology, Hebrew University, Jerusalem, Israel.
51. Dr Chon U Chan, Topic: Chemotaxis of cells, February 2016 – May 2019. Currently researcher at A\*Star for Cell and Developmental Biology, Singapore.
52. Dr. Manasvi Lingam, Topic: Mathematics of active fluids, Nov 2016 – June 2017. Currently postdoc in Astrophysics, Harvard University.
53. Dr. Christoph Weber, Topic: Active matter instabilities, March 2016 – February 2018. Currently group leader, Biophysics, MPI-PKS, Dresden, Germany.
54. Dr. Thomas Michaels, Topic: Self assembly of filamentous structures, Aug. 2016 – Aug. 2019. Currently Fellow at Peterhouse, Cambridge, UK.



55. Dr. Mattia Serra, Topic: Dynamical systems in development and neuroscience, Aug. 2017 – present.
56. Dr. Aditi Chakrabarti, Topic: Instabilities in soft matter and biology, June 2017 – present.
57. Dr. Salem al-Mosleh, Topic: Geometrical and topological morphometrics, Aug. 2018 – present.
58. Dr. Vamsi Spandan, Topic: Neuroscience and physics, Aug. 2018 – present.
59. Dr. Anupam Gupta, Topic: Developmental biophysics, Sep. 2018 – present.
60. Dr. Fabio Giardina, Topic: Robotics and the evolution of locomotion, Sep. 2018 – present.
61. Dr. Vidya Raju, Topic: Control theory in neuroscience and robotics, Aug. 2019 – present.
62. Dr. Asja Radja, Topic: Morphogenesis in plants and animals, Aug. 2019 – present.
63. Dr. Ganga Prasath, Topic: Physics of social insects, Aug. 2019 – present.