Sujit S. Datta

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Professional Positions
August 2017 — present: Princeton University
Assistant Professor of Chemical and Biological Engineering
Associated Faculty: Princeton Institute of Materials, Princeton Bioengineering Initiative, Andlinger Center for Energy and the Environment, High Meadows Environmental Institute

Education and Training
October 2013 — June 2017: California Institute of Technology
Postdoctoral Fellow in Chemical Engineering
Mentor: Rustem F. Ismagilov

September 2008 — September 2013: Harvard University
Ph.D. in Physics, additional concentration in Engineering and Physical Biology; A. M. in Physics
Thesis advisor: David A. Weitz

September 2004 — May 2008: University of Pennsylvania
M. S. in Physics, concentration in nanoscience; B. A. in Mathematics and Physics (honors), summa cum laude
Thesis advisor: A. T. Charlie Johnson, Jr.

Selected Honors and Awards
- International Society for Porous Media (InterPore) Award for Porous Media Research, 2022
- Pew Scholar in the Biomedical Sciences, 2021
- Outstanding paper of the year award, Biophysical Journal, 2021
- Stanley Corrsin Memorial Lecturer, Johns Hopkins University, 2021
- American Institute of Chemical Engineers (AIChE) 35 Under 35 Award, 2020
- ACS Unilever Award For Outstanding Young Investigator in Colloid & Surfactant Science, 2020
- US National Academy of Engineering (NAE) Frontiers of Engineering Selectee, 2020
- NSF CAREER Award, 2019
- Princeton Engineering Commendation for Outstanding Teaching, 2018, 2019, 2020, 2022
- Alfred Rheinstein Faculty Award recognizing excellence in teaching and scholarship, 2018
- American Chemical Society (ACS) Petroleum Research Fund Doctoral New Investigator Award, 2018
- APS Andreas Acrivos Dissertation Award in Fluid Dynamics, 2015
- American Physical Society (APS) LeRoy Apker Award, 2008

Research Overview
My lab's research focuses on the physicochemical dynamics of soft and living materials in complex environments. We focus on three prominent classes of materials: microstructured complex fluids, swellable and shrinkable gels, and bacterial communities as active matter, motivated by challenges in energy, environment, and biotechnology. Our work integrates microscopy, microfluidics, soft materials chemistry, and biophysical characterization. We also complement our experimental work with theoretical and computational modeling, applying ideas from fluid and solid mechanics, colloidal science, polymer physics and chemistry, statistical mechanics, and network science.
Publications (>3400 Google Scholar Citations; h index = 27)

Work from Princeton (*As corresponding author, †Equal contribution) — 40 total:

Submitted/under review — 3 total:
67. A biophysical threshold for biofilm formation
   J. A. Ott, S. Chiu, D. B. Amchin, T. Bhattacharjee, S. S. Datta*
   pre-print available at arxiv 2112.02683

66. Lab on a chip for a low carbon future
   S. S. Datta*, I. Battiato, M. Fernø, R. Juanes, S. Parsa,
   V. Prigiobbe, E. Santanach-Carreras, W. Song, D. Sinton*

65. Substituents dictate thermally-induced phase transition of cellulosic derivatives
   N. Bizmark, N. Caggiano, J. Liu, C. Arnold, R. K. Prud'homme, S. S. Datta, R. D. Priestley

Published or in press — 37 total:
64. Influence of confinement on the spreading of bacterial populations
   D. B. Amchin, J. A. Ott, T. Bhattacharjee, S. S. Datta*, PLoS Computational Biology (in press)
   pre-print available at arxiv 2108.02810

63. Perspectives on viscoelastic flow instabilities and elastic turbulence
   S. S. Datta*, A. M. Ardekani, P. E. Arratia, A. N. Beris, I. Bischofberger, J. G. Eggers,
   J. Esteban Lopez-Aguilar, S. M. Fielding, A. Frishman, M. D. Graham, J. S. Guasto, S. J. Haward, S. Hormozi,
   G. H. McKinley, R. J. Poole, A. Morozov, V. Shankar, E. S. G. Shaqfeh, A. O. Shen, H. Stark, V. Steinberg,
   G. Subramanian, H. A. Stone*, Physical Review Fluids (in press)
   pre-print available at arxiv 2108.09841

62. Cellular sensing governs the stability of chemotactic fronts
   R. Alert*, A. Martinez-Calvo, and S. S. Datta*, Physical Review Letters (in press)
   pre-print available at arxiv 2107.11702

61. Chemotactic smoothing of collective migration
   T. Bhattacharjee†, D. B. Amchin†, R. Alert†, J. A. Ott, S. S. Datta*, eLife, 11, e71226 (2022)
   Profiled in multiple press outlets, including Quanta.

60. Flow-driven channelization in a particle-filled porous medium
   N. Bizmark and S. S. Datta*, Album of Porous Media Structure and Dynamics, Springer publishing (in press)

59. Thermo-responsive polymers for water treatment and collection
   X. Xu, N. Bizmark, K. Christie, S. S. Datta, Z. J. Ren, R. D. Priestley, Macromolecules (in press)
   Selected as an ACS Editors’ Choice.

58. Elastic turbulence generates anomalous flow resistance in porous media
   C. A. Browne and S. S. Datta*, Science Advances, 7, eabj2619 (2021)
   Profiled in multiple press outlets, including Scientific American and Quanta.

57. Forced imbibition in stratified porous media: fluid dynamics and breakthrough saturation
   N. B. Lu†, D. B. Amchint, S. S. Datta*, Physical Review Fluids, 6, 114007 (2021)

56. A geometric criterion for the optimal spreading of active polymers in porous media
   C. Kurzthaler†, S. Mandal†, T. Bhattacharjee, H. Löwen, S. S. Datta, H. A. Stone,
   Nature Communications, 12, 7088 (2021)
55. Scaling laws to predict humidity-induced swelling and stiffness in hydrogels
Y. Gao, N. K. K. Chai, N. Garakani, S. S. Datta*, H. J. Cho*, Soft Matter, 17, 9893 (2021)

54. Chemotactic migration of bacteria in porous media
T. Bhattacharjee†, D. B. Amchini†, J. A. Ott, F. Kratz, S. S. Datta*, Biophysical Journal, 120, 3483 (2021)
Selected by the Editors of Biophysical Journal as one of three most outstanding papers of the year.

53. Active transport in complex environments
A. Martinez-Calvo, C. Trenado-Yuste, S. S. Datta*, Book chapter in Out-of-Equilibrium Soft Matter: Active Fluids, RSC press (in press)

52. Under pressure: Hydrogel swelling in a granular medium
J-F Louf, N. B. Lu, M. G. O’Connell, H. J. Cho, S. S. Datta*, Science Advances, 7, eabd2711 (2021)

51. Poroelastic relaxation of hydrogel particles
J-F Louf and S. S. Datta*, Soft Matter, 17, 3840 (2021)

50. Using colloidal deposition to mobilize immiscible fluids from porous media
J. Schneider, R. D. Priestley, S. S. Datta*, Physical Review Fluids, 6, 014001 (2021)

49. Infection percolation: a dynamic network model of disease spreading
C. A. Browne†, D. B. Amchin†, J. Schneider†, S. S. Datta*, Frontiers in Physics, 9, 645954 (2021)

48. Reversible pH-driven flocculation of ionomer-coated nanoparticles for rapid filtration and concentration
K. D. Ristroph, J. A. Ott, L. A. Issah, B K. Wilson, A. Kujović, M. Armstrong, S. S. Datta, R. K. Prud’homme
ACS Applied Nano Materials, 4, 8690 (2021)

47. Evolution of polymer colloid structure during precipitation and phase separation
J. Liu, N. Bizmark, D. Scott, R. A. Register, M. Haataja, S. S. Datta, C. B. Arnold, R. D. Priestley,
JACS Au, 1, 936 (2021)

46. Numerical investigation of multistability in the unstable flow of a polymer solution through porous media
M. Kumar, S. Aramideh, C. A. Browne, S. S. Datta, A. Ardekani, Physical Review Fluids, 6, 033304 (2021)

45. Bioinspired elastic hydrogel for solar-driven clean water purification
X. Xu, S. Ozden, N. Bizmark, C. B. Arnold, S. S. Datta, R. D. Priestley, Advanced Materials, 33, 2007833 (2021)

44. Impact of confined geometries on hopping and trapping of motile bacteria in porous media
L. J. Perez, T. Bhattacharjee, S. S. Datta, R. Parashar, N. L. Sund, Physical Review E, 103, 012611 (2021)

43. Multi-scale dynamics of colloidal deposition and erosion in porous media
N. Bizmark, J. Schneider, R. D. Priestley, S. S. Datta*, Science Advances 6, eabc2530 (2020)
Profiled in multiple press outlets, including the Times of India.

42. Elastocapillary network model of inhalation
J-F Louf†, F. Kratzi, S. S. Datta*, Physical Review Research, 2, 043382 (2020)

41. Forced imbibition in stratified porous media
N. B. Lu†, A. A. Pahlavan†, C. A. Browne, D. B. Amchini, H. A. Stone, S. S. Datta*, Physical Review Applied, 14, 054009 (2020)

40. Bistability in the unstable flow of polymer solutions through pore constriction arrays
C. A. Browne, A. Shih, S. S. Datta*, Journal of Fluid Mechanics, 890, A2 (2020)

39. In silico design enables the rapid production of surface-active colloidal amphiphiles
T. I. Morozova, V. E. Lee, N. Bizmark, S. S. Datta, R. K. Prud’homme, A. Nikoubashman, R. D. Priestley,
ACS Central Science, 6, 166 (2020)
38. Pore-scale flow characterization of polymer solutions in microfluidic porous media  
C. A. Browne, A. Shih, S. S. Datta*, Small, 16, 1903944 (2020)

37. Confinement and activity regulate bacterial motion in porous media  
T. Bhattacharjee and S. S. Datta*, Soft Matter, 15, 9920 (2019)

36. Scaling law for cracking in shrinkable granular packings  
H. J. Cho and S. S. Datta*, Physical Review Letters, 123, 158004 (2019)

35. Transport of polymer colloids in porous media  
N. Bizmark, J. Schneider, E. K. De Jong, S. S. Datta*, book chapter in Polymer Colloids, RSC press (2019)

34. Controlling capillary fingering using pore size gradients in disordered media  
N. B. Lu, C. A. Browne, D. B. Amchin, J. K. Nunes, S. S. Datta*, Physical Review Fluids 4, 084303 (2019)  
Selected as an Editor’s Suggestion in Physical Review Fluids.

33. Crack formation and self-closing in shrinkable, granular packings  
H. J. Cho, N. B. Lu, M. P. Howard, R. A. Adams, S. S. Datta*, Soft Matter 15, 4689 (2019)

32. Bacterial hopping and trapping in porous media  
T. Bhattacharjee and S. S. Datta*, Nature Communications 10, 2075 (2019)

31. Cooperative size sorting of deformable particles in porous media  
M. G. O’Connell†, N. B. Lu†, C. A. Browne†, S. S. Datta*, Soft Matter 15, 3620 (2019)

30. Adsorption and denaturation of structured polymeric nanoparticles at an interface  
C. Tian, J. Feng, H. J. Cho, S. S. Datta, R. K. Prud’homme, Nano Letters 18, 4854 (2018)

29. Suppressing viscous fingering in structured porous media  
H. S. Rabbani, D. Or, Y. Liu, C-Y Lai, N. B. Lu, S. S. Datta, H. A. Stone, and N. Shokri, PNAS 115, 4833 (2018)

28. Microfluidic Model Porous Media: Fabrication and Applications  
A. Anbari, H-T Chien, S. S. Datta*, W. Deng, D. A. Weitz, and J. Fan*, Small 14, 1703575 (2018)

Work Conducted Prior To Princeton — 27 total:

27. High-molecular-weight polymers from dietary fiber drive aggregation of particulates in the murine small intestine  
A. Preska Steinberg, S. S. Datta, T. Naragon, J. C. Rolando, S. R. Bogatyrev, R. F. Ismagilov, eLife 8, e40387 (2019)

26. Polymers in the gut compress the colonic mucus hydrogel  
S. S. Datta, A. Preska Steinberg, and R. F. Ismagilov, PNAS 113, 7041 (2016)

25. Individually addressable arrays of replica microbial cultures enabled by splitting SlipChips  
L. Ma, S. S. Datta, M. Karymov, O. Pan, S. Begolo, and R. F. Ismagilov, Integrative Biology 6, 796 (2014)

24. Breakup of fluids in steady-state two-phase flow through a porous medium  
S. S. Datta, J. B. Dupin, and D. A. Weitz, Physics of Fluids 26, 062004 (2014)  
Highlighted in the textbook “Multiphase Flow in Permeable Media: A Pore-Scale Perspective” by M. J. Blunt.

23. Mobilization of a trapped non-wetting fluid from a three-dimensional porous medium  
S. S. Datta, T. S. Ramakrishnan, and D. A. Weitz, Physics of Fluids 26, 022002 (2014)  
Highlighted in the textbook “Multiphase Flow in Permeable Media: A Pore-Scale Perspective” by M. J. Blunt.
22. Double emulsion templated solid microcapsules: mechanics and controlled release
   S. S. Datta†, A. Abbaspourrad†, E. Amstad, J. Fan, S. H. Kim, M. Romanowsky, H. C. Shum, B. Sun, A. S. Utada, M. Windbergs, S. Zhou, and D. A. Weitz, Advanced Materials 26, 2205 (2014)*Equal contribution

21. The microfluidic post-array device: high throughput production of single emulsion drops
   E. Amstad, S. S. Datta, and D. A. Weitz, Lab on a Chip 14, 705 (2014)

20. Ultrathin shell double emulsion-templated giant unilamellar lipid vesicles with controlled microdomain formation
   L. R. Arriaga, S. S. Datta, S. H. Kim, E. Amstad, F. Monroy, and D. A. Weitz, Small 10, 950 (2014)

19. Controlling the morphology of polyurea microcapsules using microfluidics
   I. Polenz, S. S. Datta, and D. A. Weitz, Langmuir 30, 13405 (2014)

18. Spatial fluctuations of fluid velocities in flow through a three-dimensional porous medium
   S. S. Datta, H. Chiang, T. S. Ramakrishnan, and D. A. Weitz, Physical Review Letters 111, 064501 (2013)

17. Expansion and rupture of charged microcapsules
   S. S. Datta†, A. Abbaspourrad†, and D. A. Weitz, Materials Horizons 1, 92 (2013)

16. Drainage in a model stratified porous medium
   S. S. Datta and D. A. Weitz, EPL 101, 14002 (2013)

15. Visualizing multiphase flow and trapped fluid configurations in a model three-dimensional porous medium
   A. T. Krummel†, S. S. Datta†, S. Munster, and D. A. Weitz, AIChE Journal 59, 1022 (2013)

14. Controlling release from pH-responsive microcapsules
   A. Abbaspourrad†, S. S. Datta†, and D. A. Weitz, Langmuir 29, 12697 (2013)

13. Thermally switched release from nanoparticle colloidosomes
   S. Zhu†, J. Fan†, S. S. Datta, X. Guo, M. Guo, and D. A. Weitz, Advanced Functional Materials 23, 5925 (2013)

12. Microfluidic fabrication of stable gas-filled microcapsules for acoustic contrast enhancement
   A. Abbaspourrad†, W. J. Duncanson†, N. Lebedeva, S. H. Kim, A. Zhushma, S. S. Datta, S. S. Sheiko, M. Rubinstein, and D. A. Weitz, Langmuir 29, 12352 (2013)

11. Delayed buckling and guided folding of inhomogeneous capsules
   S. S. Datta†, S-H Kim†, J. Paulose†, A. Abbaspourrad, D. R. Nelson, and D. A. Weitz, Physical Review Letters 109, 134302 (2012)

10. Rheology of attractive emulsions
    S. S. Datta, D. D. Gerrard, T. S. Rhodes, T. G. Mason, and D. A. Weitz, Physical Review E 84, 041404 (2011)

9. Controlled buckling and crumpling of nanoparticle-coated droplets
   S. S. Datta, H. C. Shum, D. A. Weitz, Langmuir, 26, 18612 (2010)

8. Wetting and energetics in nanoparticle etching of graphene
   S. S. Datta, Journal of Applied Physics 108, 024307(2010)

7. Gate coupling to nanoscale electronics
   S. S. Datta, D. R. Strachan, A. T. Johnson, Physical Review B 79, 205404 (2009)

6. Crystallographic etching of few-layer graphene
   S. S. Datta, D. R. Strachan, S. M. Khamis, A. T. Johnson, Nano Letters 8, 1912 (2008)
5. Surface potentials and layer charge distributions in few-layer graphene films
S. S. Datta, D. R. Strachan, E. J. Mele, A. T. Johnson, Nano Letters 9, 7 (2009)

4. Real-time TEM imaging of the formation of crystalline nanoscale gaps
D. R. Strachan, D. E. Johnston, B. S. Guiton, S. S. Datta, P. K. Davies, D. A. Bonnell, A. T. Johnson,
Physical Review Letters 100, 056805 (2008)

3. Electrostatic force microscopy of nanofibers and carbon nanotubes: Quantitative analysis using theory and experiment
S. S. Datta, C. Staii, N. J. Pinto, D. R. Strachan, A. T. Johnson, MRS Proceedings 1025-B13-03 (2007)

2. Functionalized carbon nanotubes for detecting viral proteins
Y-B Zhang, M. Kanungo, A. J. Ho, P. Freimuth, D. van der Lelie, M. Chen, S. M. Khamis, S. S. Datta,
A. T. Johnson, B. Panessa-Warren, J. A. Misewich, S. S. Wong, Nano Letters 7, 3086 (2007)

1. Detection of viral proteins using human receptor functionalized carbon nanotubes
M. Chen, S. M. Khamis, S. S. Datta, Y-B Zhang, M. Kanungo, A. J. Ho, P. Freimuth, D. van der Lelie,
A. T. Johnson, J. A. Misewich, S. S. Wong, MRS Proceedings 1065-004-05 (2007)

**Intellectual Property**

8. Method to 3D-Print Engineered Living Materials,
S. S. Datta, R. D. Priestley, X. Xu, R. K. Bay, US Provisional Application Filed on 11/4/21

7. Method to Homogenize Flow and Heat/Mass Transport in Heterogeneous Porous Media Using Polymeric Additives,
S. S. Datta, C. A. Browne, R. Huang, and C. Zheng, US Provisional Application Filed on 10/26/21

6. SHApe RElaxation (SHARE): A method to characterize the poroelastic properties of swellable soft materials,
S. S. Datta and J-F Louf, US Provisional Application Filed on 01/04/21

5. Hand Sanitizer Gels from Sustainable Resources for Various Skin Types,
R. D. Priestley, S. S. Datta, and N. Bizmark, US Provisional Application Filed on 10/02/20

4. Bacteria in 3D porous media, S. S. Datta and T. Bhattacharjee,
US Patent Application Filed on 4/28/20 (PCT Application number PCT/US2020/030213)

3. Controlling immiscible fluid displacement in porous media using controlled colloid or solute deposition,
S. S. Datta, N. B. Lu, J. Schneider, C. A. Browne, D. B. Amchin, and N. Bizmark,
US Provisional Application Filed on 07/03/19

2. Polymeric compositions and related systems and methods for regulating biological hydrogels,
R. F. Ismagilov, S. S. Datta, A. Preska Steinberg, S. R. Bogatyrev,
US Patent Application Filed on 1/5/17 (PCT Application number PCT/US2017/012398)

1. Atomically precise nanoribbons and related methods,
S. S. Datta, D. R. Strachan, S. M. Khamis, A. T. Johnson, Y. Dan,
US Patent Application Filed on 6/1/09 (US Application Number 12/995,562)
Invited Talks While at Princeton

87. Fall 2022: University of Minnesota, Chemical Engineering and Materials Science, Minneapolis, MN

86. Fall 2022: Northwestern University, Science for Protection of Engineered Environments, Evanston IL

85. July 2022: SIAM Annual Meeting, Stability and Modeling in Non-Newtonian Flows mini-symposium, Pittsburgh PA

84. July 2022: SIAM Conference on the Life Sciences, Pittsburgh PA

83. June 2022: U.S. National Congress of Theoretical and Applied Mechanics meeting, Austin TX

82. June 2022: InterPore Annual Meeting, Abu Dhabi, UAE

81. May 2022: Mechanics of Life workshop, Flatiron Institute, New York NY

80. May 2022: Center for Computational Biology Colloquium, Flatiron Institute, New York NY

79. May 2022: MIT, Mechanics—Modeling, Experimentation, & Computation Seminar, Cambridge MA

78. April 2022: Bucknell University, Physics and Astronomy, Lewisburg PA

77. April 2022: Spring Meeting of the Korean Physical Society, Pioneer Symposium on Nano-Rheology and Physics of Complex Fluids (virtual).

76. March 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
UCSB, Chemical Engineering, Santa Barbara CA

75. February 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
Georgia Institute of Technology, Chemical and Biomolecular Engineering, Atlanta GA

74. February 2022: “Life in a tight spot: How bacteria move in crowded spaces”
Best of Biophysical Journal: Molecules to Health symposium, Biophysical Society 66th Annual Meeting, San Francisco CA

73. February 2022: “Viscoelastic polymer flows in 3D porous media”, Cornell University, Cornell Fluids Seminar, Ithaca NY (virtual)

72. February 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
UC Berkeley, Chemical and Biomolecular Engineering, Berkeley CA

71. January 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
Florida A&M University – Florida State University, Chemical and Biomedical Engineering, Tallahassee FL

70. January 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
Northwestern University, Engineering Sciences and Applied Mathematics, Complex Systems, Center for Computation & Theory of Soft Materials, Evanston IL

69. January 2022: “Life in a tight spot: How bacteria behave in crowded spaces”
California Institute of Technology, Chemistry and Chemical Engineering, Pasadena CA

68. January 2022: “Viscoelastic polymer flows in 3D porous media”, The Dow Chemical Company (virtual)

67. December 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, TU Delft, Chemical Engineering, Delft, Netherlands (virtual)

66. December 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, NYU, Courant Institute of Mathematical Sciences, Applied Math Seminar, New York NY
65. November 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, University of Toronto, Chemical Engineering and Applied Chemistry, Toronto Canada (virtual)

64. October 2021: “Viscoelastic polymer flooding and flow instabilities in 3D porous media”, Argentinean Physics Association Annual Meeting (virtual)

63. October 2021: “In a tight spot: In situ dynamics of gels in porous media”, 5th international EOR conference, Chongqing, China (virtual)

62. October 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, University of Michigan, Chemical Engineering, Ann Arbor MI

61. September 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, Leiden University, Institute of Physics, Netherlands (virtual)

60. September 2021: “In a tight spot: In situ dynamics of soft matter in porous media”, Kimberly-Clark Corporation, Horizons keynote lecture (virtual)

59. September 2021: “Life in a tight spot: How bacteria behave in crowded spaces”, University of Pennsylvania, Condensed and Living Matter seminar, Philadelphia PA (virtual)

58. August 2021: “Viscoelastic polymer flooding and flow instabilities in 3D porous media”, InterPore Brazil Annual Meeting (virtual)

57. July 2021: “Life in a tight spot: How bacteria move in porous media”, 5th Summer School on Flow and Transport in porous & fractured media, Cargèse France (virtual)

56. July 2021: “Viscoelastic polymer flooding and flow instabilities in 3D porous media”, TU Delft/Heriot-Wyatt GeoScience & GeoEnergy Webinar (virtual)

55. June 2021: “Using complex fluids to get trapped droplets out of a tight spot”, ACS Colloid and Surface Science Symposium (virtual)

54. June 2021: “Life in a tight spot: How bacteria move in crowded spaces”, ACS Colloid and Surface Science Symposium (virtual)

53. June 2021: “Elastic turbulence in porous media”, 20th International Workshop on Numerical Methods in Non-Newtonian Flows (virtual)

52. May 2021: “In a tight spot: In situ dynamics of soft matter in porous media”, UCLA, Civil and Environmental Engineering, Los Angeles CA (virtual)

51. May 2021: “Life in a tight spot: How bacteria swim in complex spaces”, ETH Zurich, Soft Materials Lecture, Zurich Switzerland (virtual)

50. April 2021: “Viscoelastic polymer flooding in 3D porous media”, MES2021 International Microfluidics and Energy Symposium (virtual)

49. April 2021: “Life in a tight spot: How bacteria swim in complex spaces”, PoreLab Lecture Series, Norwegian University of Science and Technology / University of Oslo, Norway (virtual)

48. April 2021: “Life in a tight spot: How bacteria swim in complex spaces”, UCSD, Fluid Mechanics Seminar, San Diego CA (virtual)

47. April 2021: “Life in a tight spot: How bacteria swim in complex spaces”, The Stanley Corrsin Memorial Lecture in Fluid Mechanics, Johns Hopkins University, Chemical and Biomolecular Engineering, Baltimore MD (virtual)
46. March 2021: “Life in a tight spot: How bacteria move in porous media”, University of Pennsylvania, Chemical and Biomolecular Engineering, Philadelphia PA (virtual)

45. March 2021: “Life in a tight spot: How bacteria move in porous media”, German Physical Society (DPG) Annual Meeting (virtual)

44. March 2021: “Patches of patches: Elastic turbulence in porous media”, APS March Meeting (virtual)

43. February 2021: “Life in a tight spot: How bacteria move in heterogeneous media”, University of Rhode Island, Chemical Engineering, Kingston RI (virtual)

42. January 2021: “Life in a tight spot: How bacteria move in heterogeneous media”, Rice University, Center for Theoretical Biological Physics, Houston TX (virtual)

41. December 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, SEG/SPWLA Workshop on Pore Media: Structure, Flow and Dynamics, Beijng China (virtual)

40. December 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, Brown University, Center for Fluid Mechanics, Providence RI (virtual)

39. November 2020: “Patches of patches: Elastic turbulence in porous media”, Journal of Non-Newtonian Fluid Mechanics Virtual Seminar Series (virtual)

38. November 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, AIChE Annual Meeting, Plenary lecture (virtual)

37. October 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, University of Illinois, Materials Science and Engineering, Urbana-Champaign IL (virtual)

36. October 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, Rice University, Chemical and Biomolecular Engineering, Houston TX (virtual)

35. October 2020: “Patches of patches: Elastic turbulence in porous media”, Okinawa Institute of Science and Technology, Okinawa Japan (virtual)

34. October 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, Yale University, Chemical and Environmental Engineering, New Haven CT (virtual)

33. September 2020: “Life in a tight spot: How bacteria move in heterogeneous media”, California Institute of Technology, Frontiers of Chemical Engineering Symposium, Pasadena CA (virtual)

32. September 2020: “Life in a tight spot: Bacterial motility in heterogeneous media”, Rockefeller University, Center for Studies in Physics and Biology, New York NY (virtual)

31. September 2020: “Patches of patches: Elastic turbulence in porous media”, University of Virginia, Mechanical and Aerospace Engineering, Charlottesville VA (virtual)

30. September 2020: “Life in a tight spot: Bacterial motility in heterogeneous media”, Technion-Israel Institute of Technology, Physics, Haifa Israel (virtual)

29. August 2020: “Life in a tight spot: Bacterial motility in heterogeneous media”, BPPB Virtual Biological Physics/Physical Biology Seminar Series (virtual)

28 July 2020: “Heterogeneous Dynamics in Porous Media: from Gels to Cells” Unilever Research & Development (virtual)
27. June 2020: “Life in a tight spot: How bacteria move in heterogeneous media”
   Princeton Center for the Physics of Biological Function Summer School (virtual)
26. June 2020: “Life in a tight spot: Transport and collective behavior of bacteria in heterogeneous media”
   ACS Colloids and Surface Science Symposium, Keynote lecture (virtual)
25. February 2020: “Life in a tight spot: Bacterial motility in porous media”
   Yale University, Quantitative Biology Institute, New Haven CT
24. December 2019: “Heterogeneous Dynamics in Porous Media: from Gels to Cells”
   New York University, Center for Soft Matter Research, New York NY
23. November 2019: “Cracking and self-healing of shrinkable granular media”
   SPWLA Porous Media: Structure, Flow, and Dynamics workshop, Cambridge MA
22. October 2019: “Heterogeneous Dynamics in Porous Media: from Gels to Cells”
   MIT Soft Materials Structures and Devices Seminar, Cambridge MA
21. October 2019: “Heterogeneous Dynamics in Porous Media: from Gels to Cells”
   Cornell University, Chemical and Biomolecular Engineering, Ithaca NY
20. October 2019: “In a tight spot: Heterogeneous Transport in Porous Media”
   Annual Meeting of the Society of Engineering Science, St Louis WA
19. September 2019: “Heterogeneous Dynamics in Porous Media: from Gels to Cells”
   Levich Institute for Physico-Chemical Hydrodynamics, CCNY, New York NY
18. May 2019: “Bacterial Hopping and Trapping in Porous Media”
   16th Annual Conference on Frontiers in Applied and Computational Mathematics, Newark NJ
17. May 2019: “Heterogeneous dynamics of cells and gels in complex spaces”
   MIT Physical Mathematics Seminar, Cambridge MA
16. May 2019: “Desiccation cracking of shrinkable granular media”
   MIT “Clays, New Perspectives, Challenges & Opportunities” workshop, Cambridge MA
15. April 2019: “Dynamics of cells and gels in complex spaces”, Tufts University, Physics, Somerville MA
14. April 2019: “Dynamics of cells and gels in complex spaces”
   University of Virginia, Chemical Engineering, Charlottesville VA
13. April 2019: “Heterogeneous dynamics of cells and gels in complex spaces”
   New Jersey Institute of Technology, Chemical and Materials Engineering, Newark NJ
12. March 2019: “All Stressed Out: Cracking and Self-Healing of Shrinkable Granular Packings”
   APS March Meeting, Boston MA
11. November 2018: “Getting Out of a Tight Spot: Heterogeneous Transport in Porous Media”
   George Washington University, Mechanical and Aerospace Engineering, Washington DC
10. November 2018: “Stressing cells and gels: exploiting gradients in two different systems”
   University of Maryland, Biophysics Seminar, College Park MD
9. October 2018: “Life in a tight spot: bacterial communities in 3D porous media”
   University of Florida Soft Matter Symposium, Gainesville FL
8. August 2018: “Stressing Gels Out”, Mid-Atlantic Soft Matter Workshop,
   Georgetown University, Washington DC
7. July 2018: “Stressing Gels Out”, Complex Fluids in Biological Systems workshop, Banff International Research Station for Mathematical Innovation and Discovery
6. July 2018: “Stressing Gels Out”, Gordon Research Conference on Flow/Transport in Permeable Media
5. April 2018: “Getting Out of a Tight Spot: Heterogeneous Transport in Porous Media”, City College of New York, Mechanical Engineering, New York NY
4. April 2018: “Getting Out of a Tight Spot: Heterogeneous Transport in Porous Media”, Princeton University, Mechanical and Aerospace Engineering, Princeton NJ
3. January 2018: “Soft materials in complex environments: from porous rocks to the gut”, University of Pennsylvania, Physics, Philadelphia PA
2. January 2018: “Soft materials in complex environments: from porous rocks to the gut”, 8th Northeast Complex Fluids and Soft Matter Workshop, New York NY
1. October 2017: “Complex fluids in the gut”, Keynote lecture at AIChE Annual Meeting, Minneapolis MN

Mentoring and Teaching at Princeton

Current postdoctoral researchers
- February 2022-present: Babak Vajdi Hokmabad (PhD, Max Planck Institute for Dynamics and Self-organization, Göttingen Germany)
- September 2021-present: Alejandro Martinez-Calvo (PhD, Universidad Carlos III de Madrid; co-advised with Ned Wingreen)
- September 2021-present: Carolina Trenado Yuste (PhD, Universidad Carlos III de Madrid; co-advised with Celeste Nelson and Ned Wingreen)
- September 2021-present: Hongbo Zhao (PhD, MIT; co-advised with Andrej Košmrlj and Cliff Brangwynne)
- July 2020-present: R. Konane Bay (PhD, U. Massachusetts Amherst); moving on to next position as an Assistant Professor at CU Boulder in August 2022
- May 2018-present: Navid Bizmark (PhD, U. Waterloo; co-advised with Rodney Priestley)

Former postdoctoral researchers
- June 2019-July 2021: Jean-François Louf (PhD, Aix-Marseille University, France); went on to next position as an Assistant Professor at Auburn University
- June 2018-June 2021: Tapomoy Bhattacharjee (PhD, U. of Florida); went on to next position as an Assistant Professor at The National Centre for Biological Sciences, India
- April 2018-July 2018: Maziar Derakhshandeh (PhD, U. of British Columbia); went on to next position as a Scientist at Mondelez International, Inc.
- October 2017-June 2019: Jeremy Cho (PhD, MIT); went on to next position as an Assistant Professor at the University of Nevada, Las Vegas

Current graduate students
- January 2022-present: Emily Chen (PhD candidate in CBE)
- January 2021-present: Anna Hancock (PhD candidate in CBE)
- December 2020-present: Sebastian Gonzalez La Corte (PhD candidate in QCB; co-advised with Ned Wingreen)
January 2019-present: Jenna Ott (PhD candidate in CBE)
January 2019-present: Joanna Schneider (PhD candidate in CBE; co-advised with Rodney Priestley)
January 2018-present: Daniel Amchin (PhD candidate in CBE); scheduled to graduate May 2022
January 2018-present: Christopher Browne (PhD candidate in CBE); scheduled to graduate May 2022

Former graduate students
September 2019-May 2021: Galen Mandes (MSE candidate in CBE; co-advised with Sankaran Sundaresan); went on to next position as an Instructor at the United States Military Academy, West Point
April 2017-April 2021: Nancy Lu (PhD candidate in CBE); graduated April 2021; went on to next position as a Management Consultant at Qral Group

Current undergraduate student researchers
January 2022-May 2022: Arabella Dill-Macky (CBE, Junior research)
September 2021-May 2022: Brianna Royer (CBE, Senior thesis)
September 2020-May 2022: Selena Chiu (CBE, Junior research, Stoll summer fellowship, Senior thesis)
June-December 2021: Yaxin Duan (CBE, HMEI Environmental Scholars Program, Junior research)
June 2021-May 2022: Caroline Adkins (CEE, HMEI summer internship, Senior thesis)
September-December 2021: Caroline Adkins (CEE, HMEI summer internship, Senior thesis)
June 2021-December 2021: Hao Nghi Luu (CBE, Junior research)
June 2020-May 2021, September-December 2021: Richard Huang (CBE, ReMatch program, Junior research)
June 2021-December 2021: Cecilia Quirk (ORFE, ReMatch+ program, Junior research)
Summer 2019-May 2020, September 2021-May 2022: Kimberly Lu (CBE, OURSIP program, Senior thesis)

Former undergraduate student researchers
June 2021-August 2021: Callie Zheng (CBE, Andlinger summer internship)
February 2021-May 2021: Malcolm Slutzky (Physics, Junior research)
September 2020-May 2021: MaryKate Neff (CBE, Senior thesis); went on to next position as a Master's student at Duke University in Management Studies
June 2020-January 2021: Cristian Arens (CBE, Junior research, Reiner G. Stoll summer fellowship)
June-August 2020: Kevin Yeung (CBE, ReMatch+ program)
September 2018-May 2020: Audrey Shih (CBE, Junior research, Senior thesis, Andlinger summer internship); went on to next position as a PhD student in Chemical Engineering at Stanford
February 2018-May 2020: Maggie O’Connell (CBE, ReMatch+ program, Sophomore/Junior research, Senior thesis); went on to next position as a PhD student in Chemical Engineering at Northwestern
Fall 2019-May 2020: Glenda Chen (CBE, Senior thesis); went on to next position as a High Meadows Fellow at the Environmental Defense Fund
September 2018-May 2019: Emily de Jong (CBE, Senior thesis); went on to next position as a PhD student in Mechanical Engineering at Caltech
September 2018-May 2018: Emmanuel Mintah (CBE, Sophomore research)
Summer 2018: Rebekah Adams (CBE, ReMatch+ program)
Summer 2018: Shalaka Madge (CBE, OURSIP program)
September 2017-May 2019: Rhea Braun (CBE, Junior research, Senior thesis); went on to next position as a CBE PhD student at the University of Virginia
September 2017-May 2018: Florence Odigie (CBE, Sophomore research); went on to next position as a Management Associate at Con Edison

August 2017-May 2018: Nathanael Ji (CBE, Senior thesis); went on to next position as a Software Engineer at Capital One

Visiting student research mentored
- Summer 2018, Fall 2019: Nadine Ziegler (PhD student, RU Bochum, REACH & PR.INT programs); went on to next position in R&D at Dillinger
- Summer 2019: Felix Kratz (MS student, TU Dortmund, REACH program)
- Summer 2018: Anvitha Sudhakar (Visiting Undergraduate from IIT Bombay, ISIP program); went on to next position as a PhD student in MAE at Princeton

Teaching
- Fall 2022: CBE 507 – Graduate seminar: Research Topics in Chemical & Biological Engineering
- Fall 2022: CBE 430 – Squishy Engineering: Using Soft Materials to Solve Hard Problems
- Spring 2022: CBE 346 – Chemical & Biological Engineering Lab (with 4 other instructors); 25 students
- Fall 2021: CBE 430 – Squishy Engineering: Using Soft Materials to Solve Hard Problems; 39 students
  Instructor-specific lecture quality rating: 4.72/5; Overall student rating: 4.81/5;
  evaluated as “amazing” and “this is the best course I have taken at Princeton... It reminded me that it is supposed to be fun and interesting to be an engineer.”
- Spring 2021: CBE 346 – Chemical & Biological Engineering Lab (virtual with 4 other instructors); 34 students
  Instructor-specific lecture quality rating: 3.85/5; Overall course rating: 2.58/5;
  lectures evaluated as “really helpful”
- Fall 2020: CBE 503 – Graduate-Level Advanced Thermodynamics (virtual); 21 students
  Instructor-specific lecture quality rating: 4.42/5; Overall course rating: 4.33/5;
  evaluated as “amazing”, “WOW”
- Spring 2020: CBE 430 – Squishy Engineering: Using Soft Materials to Solve Hard Problems; 27 students
  Instructor-specific lecture quality rating: 4.95/5; Overall student rating: 4.84/5;
  evaluated as “amazing”, “one of the best professors I’ve had”, and “a course that you should definitely take”
- Fall 2019: CBE 503 – Graduate-Level Advanced Thermodynamics; 23 students
  Instructor-specific lecture quality rating: 4.64/5; Overall student rating: 4.43/5;
  evaluated as “best lectures I have ever had”
- Fall 2018: CBE 503 – Graduate-Level Advanced Thermodynamics; 22 students
  Instructor-specific lecture quality rating: 4.58/5; Overall student rating: 4.47/5;
  evaluated as “probably the best lecture I had the entire semester”
- Fall 2017: CBE 503 – Graduate-Level Advanced Thermodynamics; 17 students
  Instructor-specific lecture quality rating: 4.57/5; Overall student rating: 4.64/5; evaluated as “amazing”
Professional Activities and Service

Referee for journals
Nature, Science, Science Advances, Proceedings of the National Academy of Sciences, Nature Communications, Physical Review Letters, Soft Matter, Advanced Materials, Angewandte Chemie, Journal of the American Chemical Society, Journal of Fluid Mechanics, AIChE Journal, Langmuir, ChemPhysChem, Microfluidics and Nanofluidics, ACS Applied Materials and Interfaces, Physical Review Materials, Physical Review Applied, Biophysical Journal, Advances in Water Resources, Journal of Membrane Science, eLife, Biotechnology and Bioengineering, Applied Physics Letters, Lab on a Chip, Physical Review Fluids, Critical Reviews in Environmental Science and Technology, Physical Review E, Accounts of Chemical Research, Water Resources Research, Journal of Physical Chemistry Letters, Energy and Fuels, Journal of Non-Newtonian Fluid Mechanics, Geophysical Review Letters, Environmental Science and Technology, Science of the Total Environment, International Journal of Multiphase Flow, Journal of Rheology, Physics of Fluids, Transport in Porous Media

Organizer/co-organizer of sessions at scientific meetings
- “Geochemical and Environmental Systems” session, ACS Colloid & Surface Science Symposium, 2022
- “Innovative Methods for Characterization, Monitoring, and In-Situ Remediation of Contaminated Soils and Aquifers” minisymposium, InterPore Meeting, 2022
- “Deformation and assembly of materials and structures at solid-liquid interfaces” mini-symposium, U.S. National Committee on Theoretical and Applied Mechanics, 2022
- “Biological active matter” focus session, APS March Meeting, 2022
- “Active matter in complex environments” focus session, APS March Meeting, 2020, 2021, 2022
- “Soft materials in disordered environments” focus session, APS March Meeting, 2019
- “Polymer-mediated structural transitions in soft materials” focus session, APS March Meeting, 2019
- “Swelling and shrinking porous media” focus session, InterPore Meeting, 2019
- “Complex Fluid Flows in Porous Media” focus session, APS Fluid Dynamics Meeting, 2018

Chair/co-chair of sessions at scientific meetings
- “Rheology of living and active systems” session, International Congress on Rheology, 2023
- “Rheology of soil, mud and construction materials” session, Society of Rheology, 2022
- “Biological active matter” focus session, APS March Meeting, 2022
- “Active Matter in Complex Environments” focus session, APS March Meeting, 2020, 2021, 2022
- “Soft and Active Systems” session, AIChE Meeting, 2021
- “Complex Fluids” session, AIChE Meeting, 2021
- “Technologies for Understanding Microbial Interactions” session, AIChE Meeting, 2021
- “Fundamentals of Interfacial Phenomena” session, AIChE Meeting, 2020, 2021
- “Active and Biological Materials” sessions, Society of Rheology, 2021
- “Microbial Interactions with Biomaterials and Host Cells” session, AIChE Meeting, 2020
- “Microfluidic and Microscale Flows” session, AIChE Meeting, 2020
- “Microfluidic and Confined Flows” session, Society of Rheology Meeting, 2019
- “Microfluidic and Nanoscale Flows” session, AIChE Meeting, 2019
- “Jamming/Gelation/Rheology” session, ACS Colloids and Surfaces Symposium, 2019
- “Novel Complex Flows” session, AIChE Meeting, 2018
- “Drops and Bubbles” session, APS March Meeting, 2018
- “Complex Fluids: Macromolecules” session, AIChE Meeting, 2017
- “Complex Fluids: Self & Directed Assembly” session, AIChE Meeting, 2017

**Societal committees**
- Selection committee, American Physical Society Apker Prize, 2018-2021
- AIChE Area 1J Fluid Mechanics Programming Committee, 2021-2026

**Grant proposal reviewer**
- Foundation for Polish Science, 2022
- Natural Sciences and Engineering Research Council of Canada (NSERC), 2021
- National Science Center, Poland, 2021
- NSF Division of Earth Sciences, 2021
- NSF Understanding the Rules of Life panel, 2021
- ACS Petroleum Research Fund, 2019, 2020, 2021
- Human Frontier Science Program (HFSP), 2020
- NSF CMMI Biomechanics and Mechanobiology program, 2020
- University of Wisconsin Water Resources Institute (WRI), 2020
- New Jersey Alliance for Clinical and Translational Research (NJACTS), 2020
- German Research Foundation (DFG), 2019
- Netherlands Organization for Scientific Research (NWO), Applied and Engineering Sciences, 2019
- DOE Office of Basic Energy Sciences, Separation Science program, 2018
- NSF CBET Fluid Dynamics panel, 2018
- French National Research Agency (Pathophysiology), 2017

**External Thesis Committee**
- 2022-present: Haohui Zhang, Mechanical Engineering (PhD student at Georgia Tech); advisor Yuhang Hu
- 2021-present: Yasser Almoteri, Mathematical Sciences (PhD student at NJIT); advisor Enkeleida Lushi
- 2021: Shuaijun Li, Mechanical Engineering (PhD at CCNY); advisor Jing Fan

**Other Professional Activities and Service**
- Guest Editor, *Frontiers in Physics*, special issue on “Active Matter in Complex Environments”, 2021-2022
- Review Editor, *Frontiers in Soft Matter*, Biological Soft Matter, 2021-onward
Service at Princeton
Chemical and Biological Engineering Department
- Director of Graduate Studies, July 2022-onward
- Member, Target of Opportunity / senior faculty search committee, September 2020-present
- Sophomore advising, September 2019-May 2020, Fall 2022-Spring 2023
- Departmental seminar organizer, Fall 2018, Spring 2022
- Junior advising, September 2020-Spring 2022
- Graduate affairs and admissions committee, Academic Year 2017-2018, 2018-2019
- Junior faculty search committee, Academic Year 2017-2018, 2019-2020
- Website committee, Academic Year 2017-2018

School of Engineering and Applied Science
- Member, SEAS Innovation Grant review committee, Fall 2018, Spring 2022
- Member, Executive Committee, Materials Science & Engineering Program, July 2019-June 2022
- Member, Executive Committee, Engineering Physics Program, July 2019-June 2023
- BSE freshman advising, September 2018-present
- PRISM/PCCM seminar organizer, Spring 2019, Fall 2021, Spring 2022
- Member, SEAS BioEngineering faculty search committee, May 2020-May 2021
- Energy storage working group, Andlinger Center for Energy and the Environment, Summer 2019
- Member, Andlinger Center Grant Proposal review committee, Spring 2019
- Member, Andlinger Center Distinguished Postdoctoral Fellow selection committee, Fall 2018

University
- Member, Council of the Princeton University Community, July 2022-June 2025
- Member, University Committee on the Library and Computing, July 2019-June 2022
- Member, Executive Committee for the Program in Technology & Society, July 2018-July 2021

Thesis Committees
- 2021-present: Satyen Dhamankar, CBE (PhD student); advisor Michael Webb
- 2021-present: Emily Fergerson, CBE (PhD student); advisor Emily Davidson
- 2021: Lingzhi Cai, CBE (PhD student); advisor PT Brun
- 2021-present: Daniel Alber, CBE (PhD student); advisor Stas Shvartsman
- 2021: Thesis examiner for Nicholas Martin, MOL (PhD student); advisor Zemer Gitai
- 2021: Thesis reader for Matthew Heinrich, MAE (PhD student); advisors Andrej Kosmrlj and Daniel Cohen
- 2021: Thesis reader for Nan Xue, MAE (PhD student); advisor Howard Stone
- 2021-present: Marcel Louis, MAE (PhD student); advisor Howard Stone
- 2021-present: Drew Carson, CBE (PhD student); advisor Jamie Link
- 2021-present: Madeleine Chalifoux, CBE (PhD student); advisors Stas Shvartsman and Eszter Posfai
- 2021-present: Lena Sabidussi, MAE (PhD student); advisor Marcus Hultmark
2021-present: Tejas Dethe, MAE (PhD student); advisors Andrej Kosmrlj and Howard Stone
2020-present: Omar Yehia, MAE (PhD student); advisor Howard Stone
2020-present: Christopher Ushay, CBE (PhD student); advisor PT Brun
2020-present: Avery Agles, CBE (PhD student); advisor Ian Bourg
2020-present: Ye Joon Seo, CBE (PhD student); advisor Rodney Priestley
2019-present: Matthew Black, Quantitative & Computational Biology (PhD student); advisor Josh Shaevitz
2019-present: Katelyn Randazzo, CBE (PhD student); advisor Rodney Priestley
2019-present: Jared Klein, CBE (PhD student); advisor Rick Register
2019-present: Sayantan Dutta, CBE (PhD student); advisor Stas Shvartsman
2019-present: Shuwen Yue, CBE (PhD student); advisor Athanassios Panagiotopoulos
2019: Ke-Chih Lin, Physics (PhD student); advisors James Sturm and Bob Austin
2018-present: Trevor Jones, CBE (PhD student); advisor PT Brun
2018-present: Bernardo Gouveia, CBE (PhD student); advisor Howard Stone
2018-present: Ari Gilman, CBE (PhD student); advisor Bruce Koel
2018-present: Nick Caggiano, CBE (PhD student); advisors Rodney Priestley and Robert Prud'homme
2018-2020: Chang Tian, CBE (PhD student); advisor Robert Prud'homme
2018-2019: Robert Pagels, CBE (PhD student); advisor Robert Prud'homme
2018-2019: Charles Watt, CBE (Undergraduate senior thesis student); advisor Craig Arnold
2018-2019: Stephen Wong, CBE (Undergraduate senior thesis student); advisor Craig Arnold
2018: Michail Alifierakis, CBE (PhD student); advisor Ilhan Aksay
2017-present: Kurt Ristroph, CBE (PhD student); advisor Robert Prud'homme
2017-present: Leon Wang, CBE (PhD student); advisor Robert Prud'homme
2017-present: Lena Barrett, CBE (PhD student); advisor Celeste Nelson
2017-present: Michael Palmer, CBE (PhD student); advisor Celeste Nelson
2017-present: Douglas Scott, CBE (PhD student); advisors Rodney Priestley and Robert Prud'homme
2017-2020: Eric Teitelbaum, Architecture (PhD student); advisor Forrest Meggers
2017-2018: Samuel Smiddy, CBE (Undergraduate senior thesis student); advisor Howard Stone

Other Outreach Activities
Organizer, Princeton Soft Materials Coffee Hour, 2018-present
Lead organizer for “Physics in the ground beneath our feet” workshop at Princeton PCTS, 2022
Co-organizer, Northeast Complex Fluids and Soft Matter (NCS) Workshop, January 2022
Co-organizer, The Insider Outsider series on tenure track life in biophysics, 2022-present
Organizer, Soft Matter Workshop between Princeton and University College Dublin, 2021
Lead organizer, “Soft Matter For All: Celebrating Diversity and Creativity in Soft Matter” symposium, 2020, 2021
Session moderator, “Materials for Today and Tomorrow” symposium at Princeton Institute of Materials, 2021

Lead organizer for “Viscoelastic flow instabilities and elastic turbulence” workshop at Princeton PCTS, 2021

Selection committee, Intersections Science Fellows Symposium, 2021

Panelist, Princeton Pathways into Academy Program, 2020

Lecturer, Princeton Center for the Physics of Biological Function Summer School, 2020

Lecturer and panelist, Princeton University Materials Academy, 2019, 2020

Lecturer, PCCM Research Experience for Undergraduates, Summer 2019

Participant, Princeton Dia de la Ciencia Science Day, 2018, 2019, 2020

Co-organizer for “Biologic and soft materials” session at Princeton PRISM Research Symposium, 2019

Co-organizer for “Transport in Disordered Environments” workshop at Princeton PCTS, 2019

Awards and honors to lab members

April 2022: Joanna Schneider, Graduate Teaching Award

April 2022: Sebastian Gonzalez La Corte, Honorable Mention, NSF GRFP

November 2021: Joanna Schneider, SEAS Award for Excellence

November 2021: Christopher Browne, APS Padden Award finalist

November 2021: Joanna Schneider, APS DFD travel award

November 2021: Jenna Ott, 1st place, AIChE Graduate Student Competition, Microbes at Biomedical Interfaces Topical Conference

November 2021: Jenna Ott, Winner, AIChE Division 15 Poster Competition

November 2021: Navid Bizmark, ACS Environmental Chemistry Division Certificate of Merit award

November 2021: Christopher Browne, AIChE Polymers (8A) graduate student award

November 2021: Joanna Schneider, AIChE Women in Chemical Engineering travel award

November 2021: Jenna Ott, AIChE Women in Chemical Engineering travel award

October 2021: Callie Zheng, NEC Undergraduate Poster award, Andlinger Center Annual Meeting

October 2021: Navid Bizmark, ACS Polymeric Materials Science & Engineering Future Faculty Fellow

October 2021: Joanna Schneider, SoR graduate student travel award

September 2021: Alejandro Martinez-Calvo, HFSP Postdoctoral Fellowship

September 2021: Hongbo Zhao, PBI² Distinguished Postdoctoral Fellowship

June 2021: Christopher Browne, 2nd place, Langmuir Graduate Student Oral Presentation Award, ACS Colloid and Surface Science Symposium

June 2021: Selena Chiu, Reiner G. Stoll Undergraduate Summer Fellowship

June 2021: Yaxin Duan, HMEI Environmental Scholars Program awardee

May 2021: MaryKate Neff, SEAS George J. Muller awardee

May 2021: Tapomoy Bhattacharjee, finalist, Charles H. Revson Senior Fellowship in Biomedical Sciences (declined due to starting faculty position)

May 2021: Christopher Browne, ACEE Maeder Fellowship (declined due to holding Wallace Fellowship)

April 2021: Jenna Ott, HMEI Mary & Randall Hack ’69 Graduate Award winner
March 2021: Christopher Browne, Princeton Wallace Memorial Honorary Fellowship

March 2021: Jenna Ott, 2021 AAAS Student E-poster Competition, 2nd Place

November 2020: Galen Mandes, Andlinger Center Annual Meeting Graduate Presentation Award

November 2020: Christopher Browne, SEAS Award for Excellence

September 2020: Audrey Shih, NSF GRFP Fellowship

September 2020: Christopher Browne, CBE Kristine M. Layn Award winner

September 2020: Tapomoy Bhattacharjee, Carnegie Mellon BME Forum Outstanding Poster Award

September 2020: Anna Eddelbuettel Hancock, NSF GRFP awardee

July 2020: R. Konane Bay, Presidential Postdoctoral Fellowship at Princeton

June 2020: Cristian Arens, Reiner G. Stoll Undergraduate Summer Fellowship

May 2020: Audrey Shih, MSE Outstanding Senior Thesis awardee

May 2020: Audrey Shih, PRISM Best Senior Thesis awardee

May 2020: Audrey Shih, SEAS Lore von Jaskowsky Memorial Prize awardee

May 2020: Joanna Schneider, PEI Mary & Randall Hack '69 Graduate Award winner

May 2020: Maggie O'Connell, SEAS George J. Muller awardee

March 2020: Felix Kratz, APS Distinguished Student Award

November 2019: Audrey Shih, Andlinger PSEG Best Poster awardee

November 2019: Joanna Schneider, Andlinger Center ExxonMobil Best Poster Award winner

November 2019: Nancy Lu, APS DFD Travel Award winner

November 2019: Nancy Lu, 2019 SEAS Award for Excellence

October 2019: Christopher Browne, CBE SABIC Best First Proposition Award winner

September 2019: Jenna Ott, NSF GRFP awardee

September 2019: Maggie O'Connell, DuPont Senior Thesis Fellowship Grant awardee

September 2019: Audrey Shih, DuPont Senior Thesis Fellowship Grant awardee

September 2019: Emily de Jong, NSF GRFP awardee

May 2019: Christopher Browne, PEI Mary & Randall Hack '69 Graduate Award winner

May 2019: Nancy Lu, PEI Mary & Randall Hack '69 Graduate Award winner

May 2019: Emily de Jong, SEAS Hayes-Palmer prize awardee

March 2019: Nancy Lu, APS GSOFT Travel Award winner

January 2019: Jeremy Cho, Princeton Center for Theoretical Sciences Poster Award winner

November 2018: Tapomoy Bhattacharjee, Andlinger Center E-ffiliates Poster Award

November 2018: Nancy Lu, Andlinger ExxonMobil Best Poster Award winner

September 2018: Christopher Browne, NSF GRFP awardee

June 2018: Tapomoy Bhattacharjee, Andlinger Center Distinguished Postdoctoral Fellowship

May 2018: Navid Bizmark, Princeton Center for Complex Materials Postdoctoral Fellowship

May 2018: Nathanael Ji, Princeton Research Day Poster awardee

April 2018: Maziar Derakhshandeh, Canadian NSERC Postdoctoral Fellowship
- March 2018: Daniel Amchin, SEAS travel funding recipient
- March 2018: Daniel Amchin, APS DBIO Travel Award winner
- March 2018: Christopher Browne, SEAS travel funding recipient
- March 2018: Nancy Lu, SEAS Travel Award winner