

## Biographical Sketch: Michael F. Hagan

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### (i) Professional Preparation

University of Connecticut, Storrs	Chemical Engineering	B.S.E. (summa cum laude), 1998.
University of California, Berkeley	Chemical Engineering	Ph. D., 2003 Advisor: Arup K. Chakraborty
University of California, Berkeley	Chemistry	Postdoctoral, 2003-2006 Advisor: David Chandler

### (ii) Appointments

Chair of Physics	Brandeis University	7/2021 - present
Chair, Biological Physics Program	Brandeis University	7/2013 - 6/2021
Professor of Physics	Brandeis University	5/2018 - present
Deputy Director	Brandeis MRSEC	1/2016 - present
IRG Leader	Brandeis MRSEC	9/2014 - present
Associate Professor	Brandeis University	1/2013 - 4/2018
Assistant Professor	Brandeis University	1/2007-12/2012
NIH Ruth L. Kirchstein Postdoctoral Fellow	University of California, Berkeley	2004-2006
Postdoctoral Researcher	University of California, Berkeley	2003

### (iii) Research Support

- Department of Energy, Basic Energy Sciences

*Machine learning approaches to understanding and controlling 3D active matter*

Total Costs: \$3,000,000 (4 PI, role=PI) *November 2021 – October 2024*

- National Institutes of Health NIGMS (Award No. R01GM108021)

*Computational modeling of viral capsid and bacterial microcompartment assembly*

Total Costs: \$1,290,100 (1 PI, role=PI) *December 2008 – May 2022*

- National Science Foundation (CMMT DMR-1855914)

*Computational and Theoretical Modeling of Active Nematics in 3D and Under Confinement*

Total Costs \$396,000 (1 PI, role =PI) *August 2019 – July 2022*

- National Science Foundation (OAC, Award No. 1920147)

*MRI: Acquisition of a GPU-Accelerated Research Cluster*

Total Costs \$469,510 (P. Hong PI, Hagan coPI) *October 2019 – September 2020*

- Innovative Inquiry Award (Brandeis University)

*Artificial intelligence approach to understand virus capsid assembly and improve antiviral drugs*

Total Costs \$34,980 (2 PI, role =PI) *July 2019 – June 2020*

- National Science Foundation (DMR, Award No. DMR-2011846)

*MRSEC: Bioinspired Soft Materials*

Total Costs \$18,000,000 (S. Fraden PI, roles = Primary Participant, Deputy Director, and IRG Leader)  
*September 2008 – October 2026*

### **Recent Completed Research Support (2015-Present)**

- National Institutes of Health NIGMS (Award No. R01GM100966)

Collaborative experimental and computational studies of conformational transitions in signaling proteins and enzymes

Total Costs: \$1,605,150 (2 PI's, role=PI)

*August 2013 – July 2017*

- National Science Foundation (IOS, Award No. IOS-1526941)

Memory storage by variable-size stable structures

Total Costs \$1,000,000 (2 PI's, role =PI)

*August 2015 – July 2018*

- National Science Foundation (DMR)

DMREF: Programmable Chemomechanical Materials

Total Costs: \$1,159,386 (4 PI's, role=CoPI, PI=Seth Fraden)

*September 2015-August 2018*

- National Institute of General Medical Sciences (Award No. 3R01GM108021-08S1)

Administrative supplement to R01GM108021

*August 2015 – July 2016*

Total costs: \$149,970 (1 PI, role=PI)

- Keck Foundation

Evolutionary Molecular Self-Organization under Extreme Conditions

Total Costs: \$1,000,000 (4 PI's, role=CoPI, PI Irv Epstein)

*January 2014 – December 2016*

- National Science Foundation (MCB)

Building cellular complexity: from molecular motors to synthetic cilia

Total Costs: \$185,472 (3 PI's, role=CoPI, PI Z. Dogic)

*December 2013 – December 2015*

### **(iv) Teaching**

- Numerical Modeling Methods in Biology (QB110A): Spring 2013, Spring 2009, Spring 2008, Spring 2007, Fall 2020

This is a new course that I designed for undergraduate and graduate students from physics, chemistry, biochemistry, and biology. Applies modern computational techniques to interesting and important problems in biology.

- Graduate Statistical Physics (Phys 163A): Fall 2009, Fall 2018

- Biological Physics (Phys105A): Fall 2010, Fall 2011, Fall 2013, Fall 2015, Fall 2016, Fall 2017, Fall 2019

- Statistical Physics (Phys40): Spring 2011

- Introductory Physics I (Phys11A): Fall 2012

### **(v) Publications**

#### **Submitted / Under Revision:**

**100.** Joshi, C; Ray, S; Lemma, L; Varghese, M.; Sharp, G; Dogic, Z; Baskaran, A\*; Hagan, MF\*, “*Data-driven discovery of active nematic hydrodynamics*”, [doi.org/10.48550/arXiv.2202.12854](https://doi.org/10.48550/arXiv.2202.12854)

**99.** Hayakawa, D; Videbæk, TE; Hall, DM; Fang, H; Sigl, C; Feigl, E; Dietz, H; Fraden, S; Hagan, MF; Grason, GM; Rogers, WB, “*Geometrically programmed self-limited assembly of tubules using DNA origami colloids*”, [doi.org/10.48550/arXiv.2203.01421](https://doi.org/10.48550/arXiv.2203.01421)

**98.** Mohajerani F, Tyukodi B, Schlicksup CJ, Hadden-Perilla JA, Zlotnick A, Hagan MF, “*Multiscale Modeling of Hepatitis B Virus Capsid Assembly and its Dimorphism*”, [doi.org/10.1101/2022.02.23.481637](https://doi.org/10.1101/2022.02.23.481637)

**97.** Tsidilkovski L, Hagan MF. “*Microcompartment assembly around multicomponent fluid cargoes*”, [doi.org/10.1101/2022.02.23.481520](https://doi.org/10.1101/2022.02.23.481520)

96. Asor R, Singaram SW, Levi-Kalisman Y, Hagan MF\*, Raviv U\*. “Effect of Ionic Strength on the Assembly of Simian Vacuolating Virus Capsid Protein Around Poly(Styrene Sulfonate)”, [doi.org/10.1101/2022.02.25.481942](https://doi.org/10.1101/2022.02.25.481942)
95. Tyudoki, B; Mohajerani, F; Hall, DM; Grason, GM\*, Hagan, MF\*, “Thermodynamic size control in curvature-frustrated tubules: Self-limitation with open boundaries”, [arxiv:2109.01174](https://arxiv.org/abs/2109.01174)
94. Fily, Y; Baskaran, A; Hagan, MF, “Active Particles on Curved Surfaces”, in revision, [arXiv:1601.00324](https://arxiv.org/abs/1601.00324)

#### Accepted or Published:

93. Videbaek, TE; Fang, H; Hayakawa, D; Tyukodi, B; Hagan, MF; Rogers, WB, “Tiling a tubule: How increasing complexity improves the yield of self-limited assembly”, J. Phys. Condens. Matter, 34, 134003 (2022), <https://dx.doi.org/10.1007/s11071-022-07202-2>
92. Wagner, C; Hagan, MF; Baskaran, A, “Steady states of active Brownian particles interacting with boundaries”, J. Stat. Mech. 013208 (2022), <https://doi.org/10.1088/1742-5468/ac42cf>, [arxiv:2109.06353](https://arxiv.org/abs/2109.06353)
91. Peterson, MSE; Baskaran, A; Hagan, MF, “Vesicle shape transformations driven by confined active filaments”, Nat. Comm., 12, 7247 (2021), [link](https://doi.org/10.1038/s41467-021-21027-3), [arXiv:2102.02733](https://arxiv.org/abs/2102.02733)
90. Lemma, LM; Norton, MM; DeCamp, SJ; Aghvami, SA; Fraden, S; Hagan, MF; Dogic, Z, "Multiscale dynamics in active nematics", Phys. Rev. Lett. 127, 148001 (2021), <https://doi.org/10.1103/PhysRevLett.127.148001>, [arXiv:2006.15184](https://arxiv.org/abs/2006.15184)
89. Tayar, AM; Hagan, MF; Dogic, Z, "Active liquid crystals powered by force-sensing DNA-motor clusters", Proc. Natl. Acad. Sci. (USA), 118, e2102873118 (2021), <https://doi.org/10.1073/pnas.2102873118>
88. Merminod, S; Edison, JR; Fang, H; Hagan, MF; Rogers, WB, “Avidity and surface mobility in multivalent ligand-receptor binding”, Nanoscale, 13, 12602-12612 (2021), [DOI: 10.1039/D1NR02083H](https://doi.org/10.1039/D1NR02083H)
87. Hagan, MF; Grason, GM, “Equilibrium mechanisms of self-limiting assembly”, Rev. Mod. Phys., 93, 025008 (2021), <https://doi.org/10.1103/RevModPhys.93.025008>, [arXiv:2007.01927](https://arxiv.org/abs/2007.01927)
86. Mohajerani, F; Sayer, E; Neil, C; Inlow, K; Hagan, MF, “Mechanisms of scaffold-mediated microcompartment assembly and size-control”, ACS Nano, 15, 4197–4212 (2021) <https://doi.org/10.1021/acsnano.0c05715>
85. Sigl, C; Willner, EM; Engelen, W; Sachenbacher, K; Liedl, A; Kolbe, F; Wilsch, F; Aghvami, SA; Protzer, U; Hagan, MF; Fraden, S; Dietz, H, “Programmable icosahedral shells for virus neutralization”, Nat. Mater., 20, 1281–1289 (2021), DOI:10.1038/s41563-021-01020-4, [link](https://doi.org/10.1038/s41563-021-01020-4)
84. Chelakkot, R; Hagan, MF; Mahadevan, L; Gopinath, A, “Synchronized oscillations, metachronal waves, and jammed clusters in sterically interacting active filament arrays”, Soft Matter, 17, 1091-1104, (2021) <https://doi.org/10.1039/D0SM01162B>
83. Zhou, Z; Joshi, C.; Liu, R; Norton, MM; Lemma, LM; Dogic, Z; Hagan, MF; Fraden S; Hong, P, “Machine Learning Forecasting of Active Nematics”, Soft Matter, 17, 738-747 (2021). <https://doi.org/10.1039/D0SM01316A>, [arXiv:2007.14837](https://arxiv.org/abs/2007.14837)
82. Fang, H; Hagan, MF; Rogers, WB, “Two-step crystallization and solid-solid transitions in binary colloidal mixtures”, Proc. Natl. Acad. Sci. (USA), 117, 27927-27933 (2020), <https://doi.org/10.1073/pnas.2008561117>
81. Varghese, M; Hagan, MF; Basakaran, A, “Confinement-Induced Self-Pumping in 3D Active Fluids”, Phys. Rev. Lett., 125, 268003 (2020), <https://doi.org/10.1103/PhysRevLett.125.268003>, [arXiv:2007.09277.pdf](https://arxiv.org/abs/2007.09277)
80. Norton, MM; Grover, P; Hagan, MF; Fraden, S, “Optimal Control of Active Nematics”, Phys. Rev. Lett. 125, 178005 (2020), <https://doi.org/10.1103/PhysRevLett.125.178005>, [arXiv:2007.14837](https://arxiv.org/abs/2007.14837)
79. Miller, JM; Hall, D; Robaszewski, J; Sharma, P; Hagan, MF; Grason, GM; Dogic Z, “All twist and no bend makes raft edges splay: Spontaneous curvature of domain edges in colloidal membranes”, Sci. Adv., 6, eaba2331(2020), <https://doi.org/10.1126/sciadv.aba2331>, [arXiv:1908.09966](https://arxiv.org/abs/1908.09966)
78. Duclos, G; Adkins, A; Banerjee, D; Peterson, MSE; Varghese, M; Kolvin, I; Baskaran, Ar; Pelcovits, RA; Powers, TR; Baskaran, Ap; Toschi, F; Hagan, MF; Streichan, SJ; Vitelli, V; Beller, DA; Dogic, Z,

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77. Peterson, MSE; Hagan, MF; Baskaran, A, “Statistical properties of a tangentially driven active filament”, *J. Stat. Mech.* (2020) 013216, <https://doi.org/10.1088/1742-5468/ab6097>, [arXiv:1908.11286](https://arxiv.org/abs/1908.11286)
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see News&Views commentary: <https://doi.org/10.1038/s41929-019-0326-3>
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66. Lazaro, GR; Dragnea, B; Hagan, MF, “Self-assembly of convex particles on spherocylindrical surfaces”, *Soft Matter*, **14**, 5728 - 5740 (2018) DOI: 10.1039/C8SM00129D, [link](#), PMID 3070685
65. Zeng, C; Lazaro, GR; Tsvetkova, I; Hagan, MF\*; Dragnea, B\*, “Defects and Chirality in the Nanoparticle-Directed Assembly of Spherocylindrical Shells of Virus Coat Proteins”, *ACS Nano*, **12**, 5323–5332 (2018), [DOI:10.1021/acsnano.8b00069], PMID 306481
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63. Norton, MM; Baskaran, A; Opathalage, A; Langeslay, B; Fraden, S; Baskaran, A\*; Hagan, MF\* “Insensitivity of active nematic liquid crystal dynamics to topological constraints”, *Phys. Rev. E*, **97**, 012702 (2018), [link](#)
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55. Perlmutter JD; Mohajerani, F; Hagan, MF, *Many-molecule encapsulation by an icosahedral shell*, eLife **5**, e14078 (2016); <http://dx.doi.org/10.7554/eLife.14078>
54. Lazaro, GR; Hagan, MF, “*Allosteric control in icosahedral capsid assembly*”, J. Phys. Chem B, **120**, 6306–6318 [Bill Gelbart Festschrift] [[link](#)] (2016) PMID 5367391
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51. Xie, S; Hagan, MF\*; Pelcovits, RA\*, “*Interaction of chiral rafts in self-assembled colloidal membranes*”, Phys. Rev. E, **93**, 032706 (2016), [[link](#)] [arXiv:1601.08232](https://arxiv.org/abs/1601.08232)
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43. Fily, Y; Baskaran, A; Hagan, MF, “*Dynamics and density distribution of strongly confined noninteracting nonaligning self-propelled particles in a nonconvex boundary*”, Phys. Rev. E, **91**, 012125 (2015), [[link](#)], [arXiv:1410.5151](https://arxiv.org/abs/1410.5151)
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36. Perkett, M.R., Hagan, M.F., “Using Markov State Models to Study Self-Assembly”, *J. Chem. Phys.*, **140**, 214101 (2014), [[link](#)] PMID: PMC4048447 [Cover Article]
35. Villali, J., Pontiggia, F., Clarkson, M.W., Hagan, M.F., Kern, D. “Evidence against the ‘Y-T coupling’ mechanism of activation in the response regulator NtrC”, *J. Mol. Biol.*, **426**, 1554–1567, (2014), doi: [10.1016/j.jmb.2013.12.027](#), PMC4384162
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- \* co-corresponding author
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25. Gopinath, A., Hagan, M.F., Marchetti, M.C., Baskaran, A. “Dynamical Self-regulation in Self-propelled Particle Flows” *Phys. Rev. E*, **85**, 061903 (2012)
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- \*co-corresponding author
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13. Kivenson, A.; Hagan, M.F. “*Mechanisms of Capsid Assembly around a Polymer*”, Biophys. J, **99**, 619-628 (2010)
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#### **Publications from postdoctoral and graduate work**

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5. Hagan, M. F.; Chandler, D. “*Dynamic Pathways for Viral Capsid Assembly*”, Biophys. J., **91**,42 (2006)
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3. Hagan, M. F.; Dinner, A. R.; Chandler, D.; Chakraborty, A. K. “*Atomistic Understanding of Kinetic Pathways for Single Base-Pair Binding and Unbinding in DNA*”, Proc. Natl. Acad. Sci. USA, **100**, 13922 (2003)
2. Hagan, M. F.; Majumdar, A.; Chakraborty, A. K. “*Nanomechanical Forces Generated by Surface Grafted DNA*”, J. Phys. Chem. B, **106**, 10163 (2002)
1. Wu, G.; Haifeng, J.; Hansen, K.; Thundat, T.; Datar, R.; Cote, R.; Hagan, M. F.; Chakraborty, A. K.; Majumdar, A. “*Origin of Nanomechanical Cantilever Motion Generated from Biomolecular Interactions*”, Proc. Natl. Acad. Sci. USA, **98**, 1560 (2001).

#### **(vi) Patents**

- Barry, E., Dogic, Z., Hagan, M.F., Yang, Y., Perlman, D. “*Aligned Arrays of Nanorods, and Methods of Making and Using Them*”, patent pending

#### **(vii) Selected Recent Invited Presentations/Appearances (2014 - May 2019)**

- 2019 International Workshop on Soft Matter and Biophysics Theories, Beijing, China, May 2019
- American Chemical Society Annual Meeting invited presentation, Orlando, FL, March 2019
- UMASS Condensed Matter Seminar, Amherst, MA, November 2018
- Central Florida University Physics Colloquium, Orlando, FL, October 2018
- Penn Institute for Computational Science (PICS) Symposium 2018, Philadelphia, PA, October 2018
- Cornell Chemistry Colloquium, Ithaca, NY, September 2018
- MIT Physical Math Seminar, Cambridge, MA, May 2018
- Ludwig Maximilian University of Munich, CeNS-Colloquium, Munich, Germany, April 2018
- Foundations of Nanoscience (FNANO) Conference, Snowbird, UT, April 2018
- American Physical Society March Meeting invited presentation, Los Angeles, CA March, 2018

- Indiana University Capsid Club Seminar, Bloomington, IN, February 2018
- Indiana University Biochemistry Colloquium, Bloomington, IN, February 2018
- James Frank Institute Seminar (Univ. of Chicago), Chicago, IL, January 2018
- Berkeley Statistical Mechanics Meeting (Active Matter pre-meeting), Berkeley, CA, January 2018
- Mt. Holyoke Physics Seminar, South Hadley, Mass, Nov. 2017
- UPENN Biochemistry and Biophysics Seminar, Philadelphia, PA, Nov. 2017
- Squishy Physics Seminar, Harvard, Mass, October 2017
- University of Oxford, Physics Seminar, Oxford, UK, October 2017
- University of Bristol, Joint Mathematics and Life Sciences Seminar, Bristol, UK, October 2017
- Heinrich Pette Institute - Leibniz Institute for Experimental Virology Seminar Series, Hamburg, Germany, July 2017
- “Integrative Analysis of Pathogen Replication and Spread”, International Symposium of Collaborative Research Center, Heidelberg, Germany, July 2017
- Workshop on Physical Virology, International Center for Theoretical Physics (ICTP), Trieste, Italy, July 2017 (upcoming)
- Celebration of the Life and Work of David Chandler, Berkeley, CA, June 2017
- Univ. of California Riverside Condensed Matter Seminar, Riverside, CA, April, 2017
- Carolyn and Charles Knobler Lecture, UCLA, April, 2017
- Physical Virology Gordon Conference, Il Ciocco, Tuscany, Italy, January 2017
- LBNL Molecular Foundry Seminar Series, Berkeley, CA, October 2016
- Bad Honnef Physics School on Self-assembly, Lecturer, Bad Honnef, Germany, September 2016
- European Physical Society Condensed Matter Division Annual Meeting (CMD26), Physics of Protein Nanoshells Minicolloquium, Groningen, the Netherlands, September 2016
- Partial Order in Materials: Analysis, Simulations and beyond, Montreal, June 2016
- Cell Physics 2016, Saarland University, Saarbrücken, Germany, June 2016
- 2016 Workshop on Kinetics and Markov State Models in Drug Design, Novartis Institutes for Biomedical Research, Cambridge, MA, May 2016
- University of Virginia Chemistry Colloquium, April, 2016
- Rockefeller University Physics Center Seminar Series, April, 2016
- UPENN Bioengineering Colloquium, December, 2015
- Rochester Institute of Technology Physics Colloquium, November 2015
- University of Chicago Physics Colloquium, October 2015
- Sissa Mini-Workshop 2015 on 'Statistical and Molecular Biophysics', Trieste, Italy, October 2015
- CECAM-Lorentz workshop, Virus as a whole: meso- and macroscopic structure and dynamics at all atom resolution, Lausanne, Switzerland October 2015
- Kinetic Networks: From topology to design, Sante Fe Institute, Sante Fe, NM, September 2015
- CECAM workshop, The Physics of Protein Self-Assembly, Lausanne, Switzerland June 2015
- Aspen Center for Physics, Physics and Mathematics of Viral Assembly program, June-July 2015
- Numerical Methods in Cell Biology Workshop, San Francisco, CA, March 2015, <http://qcbnet.ucsf.edu>
- Berkeley Mini Statistical Mechanics Meeting, January, 2015
- Kent State University, Liquid Crystal Institute Soft Matter Seminar Series, November, 2014
- Georgia Tech Soft Condensed Matter and Biophysics Seminar Series, November, 2014
- Statistical Mechanics in Physics, Chemistry, and Biology. A symposium celebrating David Chandler's 70th Birthday, MIT, October, 2014
- MIT Biophysics Seminar Series, October, 2014
- Johns Hopkins Biophysics Seminar Series, September, 2014
- Brown University Condensed Matter and Biological Physics Seminar Series, September, 2014
- Lecturer for the summer school on “Self-assembled soft matter nano structures at interfaces” organized by the International Graduate Research Training Group (<http://www.ssni.tu-berlin.de>) and the Research Triangle Materials Research Science and Engineering Center, August 2014, Beverly, MA
- FASEB Science Research Conferences, Virus Structure and Assembly, July, 2014, Saxons River, VT
- Northwestern Engineering Sciences and Applied Math seminar, April 2014



- Kavli Institute for Theoretical Physics workshop, Active Matter: Cytoskeleton, Cells, Tissues and Flocks, Santa Barbara, CA, Spring 2014
- APS Annual Meeting, March 2014, Denver, CO
- Harvard Physical Chemistry Seminar, February, 2014
- UMASS Boston Physics Colloquium Series, February, 2014
- MIT Physical Chemistry Seminar, February, 2014

#### **(viii) Honors and Awards**

- APS Fellow (Fellow of the American Physical Society), 2020
- Alberta Gotthardt Strage '56 and Henry Strage Award for Aspiring Young Science Faculty, 2012
- National Institutes of Health Ruth L. Kirchstein National Research Service Award, Individual Postdoctoral Fellowship, 2005
- National Science Foundation Graduate Research Fellow, 1999

#### **(ix) Outreach Activities**

- Chair for Physical Virology Gordon Conference (2023) <https://www.grc.org/physical-virology-conference/2021/>, Vice Chair for 2019
- Head organizer for the annual Greater Boston Area Statistical Mechanics Meeting (<https://sites.google.com/a/brandeis.edu/gbasmm/>)
- Co-organizer for Molecular Biophysics in the Northeast Workshop, <http://mbn2019.org>
- Advisory board member: CSSAS: The Center for the Science of Synthesis Across Scales, a DOE Energy Frontiers Research Center (EFRC) at University of Washington and PNNL.
- Portal to the Public Science Communications Fellow. This is a program in which scientists participate in 10 hours of professional development workshops to learn effective outreach and communications skills. Subsequently each Fellow develops a hands-on activity to explain his/her research to the public. I developed an activity explaining the physics and geometry of self-assembly in viruses and technology, which I presented at the Discovery Museums in Acton, MA <http://discoverymuseums.org/programs-events/portal-public>
- Member of NSF review panels
- Member of the Lawrence Berkeley National Lab Molecular Foundry Theory Facility Proposal Study Panel
- Member of DOE INCITE review panel 2017, 2018, 2019, 2020
- DOE Center for Integrated Nanotechnologies (CINT) External Proposal Review Board member
- Co-organizer for focus sessions at APS annual meetings: 2020 “Self Limiting Assembly in Biology and Programmable Materials”, 2016 “Phase Transitions and Self-Assembly in Biological Systems”; Co-organizer for CECAM workshop entitled “Self-assembly: from fundamental principles to design rules for experiment” March 2013
- Session chair at numerous meetings, including APS Annual meetings and the Berkeley Statistical Mechanics Meetings
- Reviewer for journals relevant to the field including: *Nature*, *Science*, *Science Advances*, *PNAS*, *JACS*, *Virology*, *J. Virology*, *Biophysical Journal*, *Nature Physics*, *Nature Materials*, *Nature Comm.*, *ACS Nano*, *Nano Letters*, *Physical Review Letters*, *Physical Review E*, *Journal of Chemical Physics*, *Journal of the Royal Society Interface*, *Physical Biology*, *Chemical Physics*, *J. Mol. Biol.*
- Reviewer for funding proposals from agencies including: *NIH*, *NSF*, *DOE*, *the Israel Science Foundation*, *Swiss National Science Foundation*, *the Medical Research Council (UK)*, and *the Netherlands Foundation for Fundamental Research on Matter*

- Co-wrote transition path sampling module for CHARMM

**(x) Thesis Advisor and Postgraduate-Scholar Sponsor**

Total Numbers Advised: 14 graduate students (8 graduated), 18 postdoctoral fellows

Postdoctoral Fellows: Luca Giomi (Prof., Leiden U., Netherlands), Arvind Gopinath (Asst. Prof., UC Merced), Sumedha Sumedha (Asst. Prof. NISER, Bhubaneswar, India), Raghunath Chelakkot (Asst. Prof. IIT Bombay), Yaouen Fily (Asst. Prof., Florida Atlantic Univ.), Jason Perlmutter (Google), Sudhir Pathak (Nanyang Technological University), Qing Lu (ShanghaiTech University, Shanghai, China), Dina Mirijanian (Data Scientist for NYC Police Dept.), Abhijit Ghosh (Data Scientist, Holmusk, Singapore), Guillermo Lazaro (Data Scientist, AIA / Barcelona), Abhijeet Joshi (Siemens Technology, India), Kang Liu (Data Scientist at Wolters Kluwer Health, Waltham, MA), Arvind Baskaran (Engagement Manager, Mu Sigma Inc., Boston), Michael Norton (Research Professor, Penn State), Stefan Paquay (Virtu Financial, Medford, Mass.), Surendra W. Singaram (U.S. Airforce), Botond Tyudoki (Brandeis), John Edison (Johns Hopkins), Farzaneh Mohajerani (Brandeis)

Graduate Students: Gabriel Redner (Google), Oren Elrad (Apple), Yasheng Yang (Google), Aleksandr Kivenson (Schrodinger, NY, NY), Matthew Perkett (GE Healthcare, Denver), Cong Qiao (Two Sigma, NYC), Naiyin Yu (Operations Analyst for YES Writing), Farzaneh Mohajerani (Brandeis), Lev Tsidilkovski (Brandeis), Matthew Peterson (Brandeis), Chaitanya Joshi (Brandeis), Sarvesh Uplap (Brandeis), Yingyou Ma (Brandeis), Saptorshi Ghosh (Brandeis)