M. SCOTT SHELL

shell@engineering.ucsb.edu

Department of Chemical Engineering
Mail code 5080
University of California
Santa Barbara, CA 93106-5080

office: (805) 893-4346
fax: (805) 893-4731

EDUCATION

2005 – 2007 Postdoctoral Scholar, Dept. of Pharmaceutical Chemistry, University of California San Francisco
research projects: physics-based methods for protein structure prediction and sequence design
advisor: K. Dill

2005 Ph.D. Chemical Engineering, Princeton University, Princeton, NJ
thesis: Advances in the simulation and theory of soft matter
advisors: P. G. Debenedetti and A. Z. Panagiotopoulos

2000 B.S. Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA

PROFESSIONAL EXPERIENCE

7/2017 – present Professor, Dept. of Chemical Engineering, UC Santa Barbara
7/2015 – present Vice Chair for Graduate Education, Dept. of Chemical Engineering, UC Santa Barbara
7/2013 – 6/2017 Associate Professor, Dept. of Chemical Engineering, UC Santa Barbara
7/2007 – 6/2013 Assistant Professor, Dept. of Chemical Engineering, UC Santa Barbara
6/2000 – 8/2000 Graduate Intern, Intel Corporation, Portland, OR
6/1999 – 8/1999 Intern, Procter & Gamble Company, Cincinnati, OH

HONORS AND AWARDS

- CoMSEF Impact Award, American Institute of Chemical Engineers, 2017
- Invited Lecture, 14th International Conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD), 2016
- Dudley A. Saville Lectureship, Dept. of Chemical Engineering, Princeton University, 2015
- Distinguished Teaching Award, UCSB Academic Senate, 2014
- Named among 80 seminal papers in the J. of Chemical Physics' 80th Anniversary Collection, 2013
- Outstanding Faculty Mentor, CSEP programs, CNSI, UCSB, 2013
- Outstanding Faculty Award, UCSB Housing & Residential Services, 2012
- Sloan Research Fellowship, 2012
- Northrop Grumman Excellence in Teaching Award, 2011
- Hellman Family Faculty Fellowship, 2010
- ACS PRF Doctoral New Investigator Award, 2010
- NSF CAREER Award, 2009
- Outstanding Faculty Award, UCSB Housing & Residential Services, 2009
- Camille and Henry Dreyfus New Faculty Award, 2007
- Porter Ogbus Jacobus Honorific Fellowship (Princeton), 2004
- Ticona Outstanding Second Proposition Award (Princeton ChE), 2004
- William R. Schowalter Travel Award (Princeton ChE), 2003
- Ticona Excellence in Teaching Assistantship Award (Princeton ChE), 2002
- Hertz Foundation Graduate Fellowship, 2000
- National Science Foundation Graduate Fellowship offer (declined), 2000
- Gordon Wu Fellowship (Princeton), 2000
- Andrew Carnegie Scholar (Carnegie Mellon), 1999
- Tau Beta Pi, 1998

PROFESSIONAL SERVICE AND INVOLVEMENT

Seminar, symposium, and conference organization

2018	Organizer for Pablo G. Debenedetti honorary sessions at 2018 AIChE Meeting (Pittsburgh)
2013-2015	AIChE Computational Molecular Science and Engineering Forum (ComSEF) Liaison Director
2006–2013	Session chair for the AIChE Annual Meeting; initiated the new session "Thermodynamics of biomolecular folding and assembly" with J. Mittal
2010	Organized the "UCSB-IMMS Workshop on Multiscale Modeling and Coarse-Graining"
2008	Organizer of Area 1a Centennial Symposium for AIChE Spring Meeting
2007–2012	AIChE Programming Committee for Area 1a (Thermodynamics and Transport Properties)
2007–2008	Area 1a Programming Chair for the Spring Meeting of AIChE, New Orleans, April 2008

Professional organizations
American Institute of Chemical Engineers
Biophysical Society
American Chemical Society
American Physical Society

JOURNAL ARTICLES (CITATIONS 2300+, H-INDEX 24)

Undergraduate researchers from the Shell group are underlined.

1) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "Molecular structural order and anomalies in liquid silica," Phys. Rev. E **66**, 011202 (2002). https://doi.org/10.1103/PhysRevE.66.011202

2) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "Generalization of the Wang-Laudau method for off-lattice simulations," Phys. Rev. E **66,** 056703 (2002). https://doi.org/10.1103/PhysRevE.66.056703

3) M. S. Shell, P. G. Debenedetti, F. Sciortino, and E. La Nave, "Energy landscapes, ideal glasses, and their equation of state," J. Chem. Phys. **118**, 8821 (2003). https://doi.org/10.1063/1.1566943

4) F. Sciortino, E. La Nave, P. Tartaglia, M. S. Shell, and P. G. Debenedetti, "Test of non-equilibrium thermodynamics in glassy systems: the soft-sphere case," Phys. Rev. E **68**, 032103 (2003). https://doi.org/10.1103/PhysRevE.68.032103

5) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "An improved Monte-Carlo method for direct calculation of the density of states," J. Chem. Phys. **119**, 9406 (2003). https://doi.org/10.1063/1.1615966

6) P. G. Debenedetti, F. H. Stillinger, and M. S. Shell, "Model energy landscapes," J. Phys. Chem. B **107**, 14434 (2003). https://doi.org/10.1021/jp030885b

7) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "Saddles in the energy landscape: extensivity and thermodynamic formalism," Phys. Rev. Lett. **92**, 035506 (2004). https://doi.org/10.1103/PhysRevLett.92.035506

8) M. S. Shell, P. G. Debenedetti, and F. H. Stillinger, "Inherent structure view of self diffusion in liquids," Journal of Physical Chemistry B **108**, 6772 (2004). https://doi.org/10.1021/jp0372800

9) M. S. Shell and P. G. Debenedetti, "Thermodynamics and the glass transition in model energy landscapes," Phys. Rev. E **69,** 051102 (2004). https://doi.org/10.1103/PhysRevE.69.051102

10) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "Flat histogram dynamics and optimization in density of states simulations of fluids," J. Phys. Chem. B **108**, 19748 (2004). http://dx.doi.org/10.1021/jp047677j

11) M. S. Shell, P. G. Debenedetti, and F. H. Stillinger, "Novel computational probes of diffusive motion," J. Phys. Chem. B **109**, 21329 (2005).
https://doi.org/10.1021/jp0517145

12) M. S. Shell, P. G. Debenedetti, and F. H. Stillinger, "Dynamic heterogeneity and non-Gaussian diffusion in a model supercooled liquid," J. Phys.: Condens. Matter **17**, S4035 (2005).
http://dx.doi.org/10.1088/0953-8984/17/49/002

13) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "Computational characterization of the sequence landscape in simple protein alphabets," Proteins **62**, 232 (2006).
https://doi.org/10.1002/prot.20714

14) M. S. Shell, P. G. Debenedetti, and A. Z. Panagiotopoulos, "A conformal solution theory for the energy landscape and glass transition of mixtures," Fluid Phase Equilibria **241**, 147 (2006).
https://doi.org/10.1016/j.fluid.2005.11.002

15) K. A. Dill, S. B. Ozkan, M. S. Shell, and T. R. Weikl, "The protein folding problem," Ann. Rev. Biophys. Biomolec. Struct. 37, 289 (2008).
https://doi.org/10.1146/annurev.biophys.37.092707.153558

16) M. S. Shell, R. Ritterson, and K. Dill, "A test on peptide folding of AMBER force fields with implicit solvation" J. Phys. Chem. B 112, 6878 (2008).
https://dx.doi.org/10.1021%2Fjp800282x

17) M. S. Shell, "The relative entropy is fundamental to multiscale and inverse thermodynamic problems," J. Chem. Phys. 129, 144108 (2008).
https://doi.org/10.1063/1.2992060

18) M. S. Shell, S. B. Ozkan, V. Voelz, A. Wu, and K. Dill, "Blind test of physics-based prediction of protein structures", Biophys. J. 96, 917 (2009).
https://doi.org/10.1016/j.bpj.2008.11.009

19) G. A. Watkins, E. F. Jones, M. S. Shell, H. F. VanBrocklin, M. H. Pan, S. M. Hanrahan, J. J. Feng, J. He, N. E. Sounni, K. A. Dill, C. H. Contag, L. M. Coussens and B. L. Franc, "Development of an optimized activatable MMP-14 targeted SPECT imaging probe", Bioorganic and Medicinal Chemistry 17, 653 (2009).
https://doi.org/10.1016/j.bmc.2008.11.078

20) V. Voelz, M. S. Shell, and K. Dill, "Predicting peptide structures from native proteins in physical simulations of fragments", PLoS Comput. Biol. 5, e1000218 (2009).
https://dx.doi.org/10.1371%2Fjournal.pcbi.1000281

21) A. Chaimovich and M.S. Shell, "Anomalous waterlike behavior in spherically-symmetric water models optimized with the relative entropy," Phys. Chem. Chem. Phys 11, 1901 (2009). **– Invited article in special issue on Multiscale Modeling**
https://doi.org/10.1039/b818512c

22) E. Lin and M. S. Shell, "Convergence and heterogeneity in peptide folding with replica exchange molecular dynamics,"J. Chem. Theory Comput. 5, 2062 (2009).
https://doi.org/10.1021/ct900119n

23) A. Chaimovich and M. S. Shell, "Relative entropy as a universal metric for multiscale errors," Phys. Rev. E. 81, 060104 (2010). **– Rapid Communication**
https://doi.org/10.1103/PhysRevE.81.060104

24) M. S. Shell, "A replica-exchange approach to computing peptide conformational free energies," Mol. Simulation 36, 505 (2010). – **Invited article**
https://doi.org/10.1080/08927021003720546

25) M. U. Hammer, T. H. Anderson, A. Chaimovich, M. S. Shell, and J. Israelachvili, "The search for the hydrophobic force law," Faraday Discussions 146, 299 (2010).
https://doi.org/10.1039/B926184B

26) E. Lin and M. S. Shell, "Can peptide folding simulations provide predictive information for aggregation propensity?", J. Phys. Chem. B. 114, 11899 (2010).
https://doi.org/10.1021/jp104114n

27) J. Gee and M. S. Shell, "Two-dimensional replica exchange approach to peptide-peptide interactions," J. Chem. Phys 134, 064112 (2011). **– Research Highlights Article in JCP**
https://doi.org/10.1063/1.3551576

28) A. Chaimovich and M. S. Shell, "Coarse-graining errors and optimization using a relative entropy framework," J. Chem. Phys. 134, 094112 (2011). **– Research Highlights Article in JCP**
https://doi.org/10.1063/1.3557038

29) A. Pritchard-Bell and M. S. Shell, "Smoothing protein energy landscapes by integrating folding models with structure prediction," Biophys. J. 101, 2251 (2011).
https://dx.doi.org/10.1016%2Fj.bpj.2011.09.036

30) S. Carmichael and M. S. Shell, "A New Multiscale Algorithm and its Application to Coarse-Grained Peptide Models for Self-Assembly," J. Phys. Chem. B 116, 8383 (2012). – **Invited article in special issue on Multiscale Modeling**
https://doi.org/10.1021/jp2114994

31) J. Jeon and M. S. Shell, "Charge effects on the fibril forming peptide KTVIIE: a two-dimensional replica exchange simulation study," Biophys. J. 102, 1952 (2012).
https://dx.doi.org/10.1016%2Fj.bpj.2012.03.019

32) M. S. Shell, "Systematic coarse-graining of potential energy landscapes and dynamics in liquids," J. Chem. Phys. 137, 084503 (2012). –**Named among 80 seminal papers in JCP's 80th Anniversary Collection, 2013**
https://doi.org/10.1063/1.4746391

33) C. C. Fu, P. M. Kulkarni, M. S. Shell, and L. G. Leal, "A Test of Systematic Coarse-Graining of Molecular Dynamics Simulations Thermodynamic Properties," J. Chem. Phys. 137, 164106 (2012).
https://doi.org/10.1063/1.4759463

34) J. Jeon, C. Mills, and M. S. Shell, "Molecular insights into diphenylalanine nanotube assembly: all-atom simulations of oligomerization," J. Phys. Chem. B 117, 3935 (2013).
https://doi.org/10.1021/jp308280d

35) P. M. Kulkarni, C.-C. Fu, M. S. Shell, and L. G. Leal, "Multiscale modeling with smoothed dissipative particle dynamics," J. Chem. Phys. 138, 234105 (2013).
https://doi.org/10.1063/1.4810754

36) N. D. Petsev, M. S. Shell, and L. G. Leal, "Dynamic equilibrium explanation for nanobubbles' unusual temperature and saturation dependence," Phys. Rev. E 88, 010402 (2013). – **Rapid Communication**
https://doi.org/10.1103/PhysRevE.88.010402

37) C. C. Fu, P. M. Kulkarni, M. S. Shell, and L. G. Leal, "A test of systematic coarse-graining of molecular dynamics simulations: Transport Properties," J. Phys. Chem. 139, 094107 (2013).
https://doi.org/10.1063/1.4819472

38) B. Giera, N. Henson, E. M. Kober, T. M. Squires, and M. S. Shell, "Model-free test of local-density mean-field behavior in electric double layers," Phys. Rev. E 88, 011301 (2013). – **Rapid Communication**
https://doi.org/10.1103/PhysRevE.88.011301

39) S. P. Carmichael and M. S. Shell, "A simple mechanism for emergent chirality in achiral hard particle assembly," J. Chem. Phys. 139, 164705 (2013). **– Editor's Pick Article and Top Viewed Article**
https://doi.org/10.1063/1.4826466

40) A. Chaimovich and M. S. Shell, "The length-scale crossover of the hydrophobic interaction in a coarse-grained water model," Phys. Rev. E 88, 052313 (2013).
https://doi.org/10.1103/PhysRevE.88.052313

41) A. Chaimovich and M. S. Shell, "Tetrahedrality and structural order for hydrophobic interactions in a coarse-grained water model ," Phys. Rev. E 89, 22140 (2014).
https://doi.org/10.1103/PhysRevE.89.022140

42) J. Jeon and M. S. Shell, "Self-assembly of cyclo-diphenylalanine peptides in vacuum," J. Phys. Chem. B 118, 6644 (2014).
https://doi.org/10.1021/jp501503x

43) N. D. Petsev, L. G. Leal, and M. S. Shell, "Hybrid molecular-continuum simulations using smoothed dissipative particle dynamics," J. Chem. Phys 142, 044101 (2015).
https://doi.org/10.1063/1.4905720

44) B. Giera, N. Henson, E. M. Kober, M. S. Shell, and T. M. Squires, "Electric Double-Layer Structure in Primitive Model Electrolytes: Comparing Molecular Dynamics with Local-Density Approximations," Langmuir 31, 3553 (2015).
https://doi.org/10.1021/la5048936

45) S. P. Carmichael and M. S. Shell, "Entropic (de)stabilization of surface-bound peptides conjugated with polymers," J. Chem. Phys. 143, 243103 (2015).
https://doi.org/10.1063/1.4929592

46) T. T. Foley, M. S. Shell, and W. G. Noid, "The impact of resolution upon entropy and information in coarse-grained models," J. Chem. Phys. 143, 243104 (2015).
https://doi.org/10.1063/1.4929836

47) N. D. Petsev, L. G. Leal, and M. S. Shell, "Multiscale Simulation of Ideal Mixtures Using Smoothed Dissipative Particle Dynamics," J. Chem. Phys 144, 084155 (2016).
https://doi.org/10.1063/1.4942499

48) M. S. Shell, "Coarse-graining with the relative entropy," invited chapter in *Advances in Chemical Physics,* A. Dinner and S. A. Rice, editors, volume 161, 395-442 (2016). – **Invited Review**
https://doi.org/10.1002/9781119290971.ch5

49) T. Sanyal and M. S. Shell, "Coarse-Grained Models Using Local-Density Potentials Optimized with the Relative Entropy: Application to Implicit Solvation," J. Chem. Phys. 145, 034109 (2016).
https://doi.org/10.1063/1.4958629

50) J. Jeon and M. S. Shell, "Peptide binding landscapes: specificity and homophilicity across sequence space in a lattice model," Phys. Rev. E 94, 042405 (2016).
https://doi.org/10.1103/PhysRevE.94.042405

51) M. Robinson, J. I. Monroe, and M. S. Shell, "Are modern protein force fields and implicit solvation models additive?" J. Chem. Theory & Computation 12, 5631 (2016).
https://doi.org/10.1021/acs.jctc.6b00788

52) P. Stock, J. I. Monroe, T. Utzig, D. J. Smith, M. S. Shell, and M. Valtiner, "Unraveling hydrophobic interactions at the molecular scale using force spectroscopy and molecular dynamics simulations," ACS Nano 11, 2586 (2017).
https://doi.org/10.1021/acsnano.6b06360

53) D. J. Smith and M. S. Shell, "Can Simple Interaction Models Predict Sequence-Dependent Effects in Peptide Homodimerization?" J. Chem. Phys. 121, 5928 (2017).
https://doi.org/10.1021/acs.jpcb.7b03186

54) N. D. Petsev, L. G. Leal, and M. S. Shell, "Coupling Discrete and Continuum Concentration Particle Models for Multiscale and Hybrid Molecular-Continuum Simulations," J. Chem. Phys 147, 234112 (2017). – **JCP Editor's Choice for 2017**
https://doi.org/10.1063/1.5001703

55) A. M. Schrader, J. I. Monroe, R. Sheil, H. A. Dobbs, T. J. Keller, Y. Li, S. Jain, M. S. Shell, J. N. Israelachvili, S. Han, "Surface chemical heterogeneity modulates silica surface hydration," Proceedings of the National Academy of Sciences USA 115, 2890 (2018).
https://doi.org/10.1073/pnas.1722263115

56) T. Sanyal and M. S. Shell, "Transferable coarse-grained models of liquid-liquid equilibrium using local density potentials optimized with the relative entropy," J. Phys. Chem. B 122, 5678 (2018).
https://doi.org/10.1021/acs.jpcb.7b12446

57) D. J. Smith, L. G. Leal, S. Mitragotri, and M. S. Shell, "Nanoparticle Transport Across Model Cellular Membranes: When Do Solubility-Diffusion Models Break Down?", J. Physics D: Appl. Physics 51, 29400 (2018).
https://doi.org/10.1088/1361-6463/aacac9

58) J. I. Monroe and M. S. Shell, "Computational discovery of chemically patterned surfaces that effect unique hydration water dynamics," Proceedings of the National Academy of Sciences USA 115, 8093 (2018). https://doi.org/10.1073/pnas.1807208115

59) M. P. Howard, W. F. Reinhart, T. Sanyal, M. S. Shell, A. Nikoubashman, and A. Z. Panagiotopoulos, "Evaporation induced assembly of colloidal crystals," J. Chem. Phys. 149, 094901 (2018). https://doi.org/10.1063/1.5043401

60) N. D. Petsev, L. G. Leal, and M. S. Shell, "An Integrated Boundary Approach for Colloidal Suspensions Simulated Using Smoothed Dissipative Particle Dynamics," Computers and Fluids 179, 672 (2019). https://doi.org/10.1016/j.compfluid.2018.11.025

BOOK CHAPTERS

1) C. Chipot, M. S. Shell, and A. Pohorille, "Introduction," invited chapter in *Free energy calculations: theory and applications in chemistry and biology*, Springer, 2006. https://www.springer.com/us/book/9783540384472

2) M. S. Shell, A. Z. Panagiotopoulos, and A. Pohorille, "Methods based on probability distributions and histograms," invited chapter in *Free energy calculations: theory and applications in chemistry and biology*, Springer, 2006. https://www.springer.com/us/book/9783540384472

3) M. S. Shell and A. Z. Panagiotopoulos, "Methods for examining phase equilibria," invited chapter in *Free energy calculations: theory and applications in chemistry and biology*, Springer, 2006. https://www.springer.com/us/book/9783540384472

BOOK

1) M. S. Shell, *Thermodynamics and Statistical Mechanics: An Integrated Approach*, Cambridge, 2015. http://www.cambridge.org/9781107656789

OTHER PUBLICATIONS

1) E. La Nave, F. Sciortino, P. Tartaglia, M. S. Shell, and P. G. Debenedetti, Reply to comment on "Test of nonequilibrium thermodynamics in glassy systems: the soft-sphere case," Phys. Rev. E **71**, 033102 (2005). https://doi.org/10.1103/PhysRevE.71.033102

INVITED LECTURES AND TALKS

1) **Dept. of Chemical and Biomolecular Engineering, Georgia Institute of Technology**; January 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

2) **Dept. of Chemical Engineering, Carnegie Mellon University**; January 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

3) **Dept. of Chemical Engineering, U. C. Santa Barbara**; February 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

4) **Dept. of Chemical Engineering and Materials Science, University of Minnesota**; February 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

5) **Dept. of Chemical Engineering, Massachusetts Institute of Technology**; February 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

6) **Dept. of Chemical and Biomolecular Engineering, University of Pennsylvania**; February 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

7) **Dept. of Chemical Engineering, U. C. Berkeley**; March 2005
Seminar: "Thermodynamics of complex systems: computing entropy in proteins and glassy materials"

8) **Dept. of Chemistry, UCSB**; November, 2007
Seminar: "Physics-based protein and peptide folding by zipping and assembly"

9) **Biophysical Society Annual Meeting;** Long Beach, CA; February 2008
Platform session talk: "A Computational Approach to Predicting the Structures and Properties of Therapeutic Peptides"

10) **UCSB Materials Research Outreach Program Symposium**; UCSB; February, 2008
Invited talk: "Transferable, physics-based simulations of polypeptides"

11) **American Physical Society March Meeting**; New Orleans, LA; March 2008
Invited talk: "Folding proteins and peptides with all atom physics: methods and applications"

12) **American Chemical Society Spring National Meeting;** New Orleans, LA; April 2008
Invited talk: "Protein folding using replica exchange and mechanism-based conformational searching"

13) **Dept. of Mechanical Engineering, Yale University;** April 2008
Seminar: "Folding proteins and peptides with all atom physics: methods and applications"

14) **Dept. of Biomedical Engineering, Carnegie Mellon University;** February 2009
Seminar: "New multiscale simulation methods for folding peptides and proteins with all-atom physics"

15) **American Chemical Society Spring National Meeting;** Salt Lake City, UT; March 2009
Invited talk: "The relative entropy in multiscale modeling and coarse grained model development"

16) **TSRC Workshop: Method Development for Protein Structure Prediction and Design;** Telluride, CO; June 2009
Invited talk: "Physics-based methods for interrogating protein structures and interactions"

17) **Center for Biological Physics, Arizona State University**; September 2009
Seminar: "Multiscale strategies for modeling peptides and liquid water"

18) **Protein Folding Pathways Workshop, Arizona State University;** May 2010
Seminar: "Multiscale modeling strategies for biomolecular systems"

19) **Dept. of Nanoengineering, U. C. San Diego**; June 2010
Seminar: "Multiscale strategies for modeling peptides and liquid water"

20) **Eighth Liblice Conference on the Statistical Mechanics of Liquids, Brno, Czech Republic**; June 2010
Keynote talk: "Multiscale strategies for modeling peptides and liquid water"

21) **TSRC Workshop: Protein and Peptide Interactions in Cellular Environments;** Telluride, CO; July 2010
Invited talk: "Multiscale strategies for modeling peptides and liquid water"

22) **Institute for Multiscale Materials Studies, Los Alamos National Labs;** Los Alamos, NM; July 2010
Invited talk: "Multiscale strategies for modeling peptides and liquid water"

23) **Molecular Biophysics Seminar Series, UT Austin;** Austin, Texas; September 2010
Seminar: "Multiscale strategies for modeling peptides and liquid water"

24) **XL Winter Meeting on Statistical Physics,** Taxco, Mexico; January 2011
Invited talk: "New multiscale modeling strategies in biophysics and soft matter"

25) **Complex Fluids Design Consortium Annual Workshop (UCSB);** February 2011
Invited talk: "Relative entropy coarse-graining: a new framework for multiscale modeling"

26) **Dept. of Chemical Engineering, California Institute of Technology**; March, 2011
Seminar: "Multiscale strategies for modeling peptides and liquid water"

27) **Uncertainty Quantification for Multiscale Materials Modeling Workshop;** Sante Fe, NM; June 2011
Invited Talk: "The relative entropy as a new framework for multiscale modeling and coarse graining"

28) **National Academy of Engineering Frontiers of Engineering Symposium**; Mountain View, CA; Sept. 2011
Invited participant

29) **Dept. of Chemical and Biological Engineering, Princeton University**; October 2011
Seminar: "Multiscale strategies for modeling proteins and liquid water"

30) **Dept. of Chemical Engineering, University of Washington**; January 2012
Seminar: "An information-based approach to simple models of complex molecular processes"

31) **Computational Chemistry Group, NIST**; Gaithersburg, MD; February 2012
Seminar: "An information-based approach to coarse-grained models in molecular biophysics"

32) **Dept. of Chemical Engineering, Stanford University;** May 2012
Seminar: "An information-based approach to simple models of complex molecular processes"

33) **TSRC Workshop: Algorithmic Development on Enhanced Sampling**; Telluride, CO; June 2012
Invited Talk: "An information theoretic approach to coarse-graining"

34) **KITP Conference: Physical Principles of Multiscale Modeling**; UC Santa Barbara; June 2012
Invited talk: "An information-based approach to coarse-graining"

35) **18th Symposium on Thermophysical Properties**; Boulder, CO; June 2012
Invited talk: "An information-theoretic approach to coarse-graining"

36) **American Chemical Society Fall National Meeting;** Philadelphia, PA; August 2012
Invited talk: "Information-based approach to coarse-grained models in molecular biophysics"

37) **Modeling the Dynamics of Complex Molecular Systems, Lorentz Center**; Leiden, Netherlands; August 2012
Invited talk: "Coarse-graining molecular models: overview and information-theoretic approaches"

38) **Max-Planck-Institut für Eisenforschung GmbH;** Dusseldorf, Germany; September 2012
Seminar: "Understanding peptide self-assembly with all-atom and coarse-grained simulations"

39) **Dept. of Chemical Engineering, Lehigh University**; Bethlehem, PA; September 2012
Seminar: "Understanding protein folding and assembly with coarse-grained models designed by information theory"

40) **Modeling and Design of Molecular Materials 2012**; Singapore; October 2012
Invited talk: "An information-theoretic approach to coarse-graining models in molecular biophysics"

41) **Dept. of Chemical Engineering, UC Santa Barbara**; Santa Barbara, CA; October 2012
"Understanding protein folding and assembly with molecular simulations and information theory"

42) **American Physical Society March Meeting;** Baltimore, Maryland; March 2013
Invited talk: "Coarse-graining with information theory and the relative entropy"

43) **American Chemical Society Spring National Meeting;** New Orleans, LA; April 2013
Invited talk: "Understanding peptide assembly with coarse-grained models designed by information theory"

44) **Materials Science and Engineering, UC Riverside;** Riverside, CA; April 2013
Seminar: "Understanding protein and peptide assembly with molecular simulations and information theory"

45) **University of California Lab Fees Research Symposium**; San Francisco, CA; June 2013
Invited talk: "Hybrid Computational Methods for Multiphase Materials"

46) **ExxonMobil Polymer Modeling Mini-Symposium**; Clinton, NJ; July 2013
Invited talk: "Designing coarse-grained models with information theory and the relative entropy"

47) **CECAM: Coarse-graining multicomponent soft matter systems: equilibrium and dynamics;** Mainz, Germany; August 2013
Invited talk: "Coarse-graining with information theory and the relative entropy"

48) **American Chemical Society Fall National Meeting;** Indianapolis, IN; September 2013
Invited talk: "Understanding peptide assembly with coarse-grained models designed by information theory"

49) **Department of Chemical and Biological Engineering, U. of Wisconsin – Madison;** Madison, WI; October, 2013
Seminar: "Simulation insights into self-assembly in designer nanomaterials"

50) **Department of Chemical Engineering, Carnegie Mellon University;** Pittsburgh, PA; October, 2013
Seminar: "Simulation insights into self-assembly in designer nanomaterials"

51) **Center for Bioengineering, UC Santa Barbara;** Santa Barbara, CA; October, 2013
Seminar: "Using molecular simulations to understand peptide self-assembled materials"

52) **Department of Chemical and Biomolecular Engineering, NC State;** Raleigh, NC; February 2014
Seminar: "Simulation insights into designer self-assembled nanomaterials"

53) **American Physical Society March Meeting;** Denver, CO; March 2014
Invited talk: "Coarse-graining methods for fluids and peptides"

54) **Department of Chemical and Biomolecular Engineering, Clemson University;** Clemson, SC; March 2014
Seminar: "Simulation insights into designer self-assembled nanomaterials"

55) **Center for Theoretical Science, Princeton University;** Princeton, NJ; April 2014
Invited talk: "Emergence of chirality in the assembly of hard achiral polygons"

56) **US-Poland Workshop on the Thermodynamics of Complex Fluids and Interfaces;** Warsaw, June 2014
Invited talk: "Emergence of chirality in the assembly of hard achiral polygons"

57) **Coarse-graining as a Frontier of Statistical Mechanics**; Santa Fe, NM, June 2014
Invited talk: "Statistical mechanics of coarse-graining in the relative entropy formalism"

58) **Molecular Origins of Protein Misfolding and Neurodegenerative Disease;** Vancouver, BC; July 2014
Invited talk: "Novel molecular simulation methods for understanding peptide self-assembly"

59) **American Chemical Society Fall National Meeting;** San Francisco, CA; August 2014
Invited talk: "Relative entropy approach to coarse-graining"

60) **School of Chemical and Biomolecular Engineering, Cornell University;** Ithaca, NY; October 2014
Seminar: "Simulation insights into designer self-assembled nanomaterials"

61) **American Institute of Chemical Engineers Annual Meeting;** Atlanta, GA; November, 2014
Invited talk: "Novel coarse-graining techniques based on the relative entropy"

62) **American Institute of Chemical Engineers Annual Meeting;** Atlanta, GA; November, 2014
Invited talk: "The remarkable stability of nanobubbles: theoretical and simulation insights"

63) **American Chemical Society Spring Meeting;** Denver, CO; March 2015
Invited talk: "Thermodynamics of surface-tethered peptide-polymer conjugates"

64) **Dept. of Chemistry, University of Colorado – Denver**; April 2015
Seminar: "Simulation insights into designer self-assembled nanomaterials"

65) **Dept. of Chemical and Biological Engineering, Princeton University;** April 2015
Saville Lecture: "Thermodynamic balancing acts in novel materials at interfaces"

66) **Dept. of Chemical Engineering & Materials Science, UC Irvine;** Nov. 2015
Seminar: "Thermodynamic balancing acts in novel materials at interfaces"

67) **Predictive Multiscale Materials Modelling; Cambridge University;** Dec. 2015
Invited talk: "Coarse-Graining with the Relative Entropy: Recent Theory and Algorithms"

68) **Dept. of Chemical & Biomolecular Engineering, University of Delaware;** Dec. 2015
Seminar: "Thermodynamic balancing acts in self-assembly at interfaces"

69) **Complex Fluids Design Consortium Annual Meeting, UCSB;** Feb. 2016
Invited talk: "Multiscale simulation methods for hybrid molecular-continuum problems"

70) **Materials Research Outreach Program, UCSB;** Feb. 2016
Invited talk: "Chiral materials from quasi-2D achiral colloids: a theoretical perspective"

71) **Physics and Chemistry at Hydrophobic Interfaces, KAUST;** Saudi Arabia; Feb. 2016
Invited talk: "Coarse-grained models of water, aqueous solvation, and hydrophobic interactions."

72) **American Chemical Society Spring National Meeting;** San Diego, CA; March 2016
Invited talk: "The relative entropy information-theoretic approach to multiscale modeling"

73) **International Conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD);** Porto, Portugal; May 2016
Invited lecture: "Coarse-graining with the relative entropy: recent theory and algorithms"

74) **Gordon Research Conference on Water and Aqueous Solutions;** New Hampshire; August, 2016
Invited lecture: "Coarse-grained models of water, aqueous solvation, and hydrophobic interactions"

75) **CECAM: Controlling food protein folding and aggregation: Challenges and Perspectives in Industry, Experiments and Simulation;** Dublin, Ireland; August, 2016
Invited talk: "Understanding peptide folding and assembly with coarse grained models designed by information theory"

76) **MRSEC at North Carolina State University;** Raleigh, NC; September 2016
Seminar: "Thermodynamic balancing acts in self-assembly at interfaces"

77) **Multiscale Simulation Methods for Soft Matter Systems;** Darmstadt, Germany; October 2016
Invited talk: "Coarse-graining with the relative entropy: recent theory and algorithms"

78) **Army Research Lab;** Maryland; October, 2016
Seminar: "Multiscale simulation methodologies: from atomistic to coarse to continuum"

79) **Biomolecular Interaction Technology Center;** University of Delaware; March 2017
Invited talk: "Systematic Methods to Generate Coarse-Grained Models of Peptides and Aqueous Solvation"

80) **American Chemical Society Spring National Meeting;** San Francisco, CA; April 2017
Invited talk: "Hydrophobic interactions in peptide folding, association, and assembly"

81) **Department of Chemical Engineering, University of New Hampshire;** May 2017
Seminar: "Thermodynamic balancing acts in self-assembly at interfaces"

82) **Physical Chemistry Program, University of Oregon;** June 2017
Seminar: "Less is more: using the relative entropy to create simple models of complex molecular physics"

83) **American Institute of Chemical Engineers Annual Meeting;** Minneapolis, MN; October 2017
Invited talk: "Understanding peptide assembly with coarse-grained models designed by information theory"

84) **American Institute of Chemical Engineers Annual Meeting;** Minneapolis, MN; October 2017
CoMSEF Plenary: "Systematic multiscale models and physics using the relative entropy"

85) **Department of Chemical and Biomolecular Engineering, University of Pennsylvania;** February 2018
Seminar: "Simulation design of heterogeneous interfaces through shape and chemistry"

86) **American Physical Society March Meeting;** Los Angeles, CA; March 2018
Invited talk: "Using the relative entropy to sample free energy landscapes with transferable coarse-grained models"

87) **Department of Chemical and Biological Engineering, University at Buffalo;** April 2018
Seminar: "Simulation design of heterogeneous interfaces through shape and chemistry"

88) **10th Liblice Conference on the Statistical Mechanics of Liquids;** June 2018
Invited keynote: "Coarse-grained models of liquid-state physics designed by the relative entropy"

89) **Entropy, Information, and Order in Soft Matter**; ICTS Bangalore, India; August 2018
Invited talk: "Systematic multiscale models and physics using the relative entropy"

90) **Department of Chemical Engineering, Oklahoma State University**; September 2018
Seminar: "Simulation design of heterogeneous interfaces through shape and chemistry"

91) **CECAM Workshop New Frontiers in Multiscale & CG Modeling**; Mainz, Germany; September 2018
Invited talk: "Recent results in relative entropy based coarse-graining"

92) **Statistical Physics in Biology Workshop;** Tempe, AZ; October 2018
Invited talk: "Computational design of surfaces to manipulate hydration water"

93) **American Institute of Chemical Engineers Annual Meeting;** Pittsburgh, PA; October 2018
Invited talk: "Water-Mediated Interactions Involving Heterogeneous Molecules, Surfaces, and Phases"

CONTRIBUTED CONFERENCE PRESENTATIONS

1) **Thermo 2002**; College Park, Maryland; April 2002
Poster: "Molecular structural order and anomalies in liquid silica."

2) **American Institute of Chemical Engineers Annual Meeting**; Indianapolis, IN; November 2002
Talk: "Direct Monte-Carlo calculation of the configurational density of states"

3) **The Monte Carlo Method: 50th Anniversary of the Metropolis Algorithm**; Los Alamos, NM; June 2003
Poster: "A new Monte Carlo paradigm: density of states methods for efficient simulation"

4) **NIST Fifteenth Symposium on Thermophysical Properties**; Boulder, CO; July 2003
Talk: "The energy landscape: towards a unified view of supercooled liquids and glasses"

5) **American Institute of Chemical Engineers Annual Meeting**; San Francisco, CA; November 2003
Talk 1: "A new Monte-Carlo paradigm: density of states methods (for continuum molecular models)"
Talk 2: "The energy landscape: towards a unified view of supercooled liquids and glasses"

6) **Properties and Phase Equilibria for Product and Process Design** Snowbird, UT; May 2004
Poster: "Density of states Monte Carlo methods for off-lattice molecular models"

7) **Gordon Research Conference on Water and Aqueous Solutions**; Holderness, NH; August 2004
Poster: "Density of states Monte Carlo methods for fluids"

8) **American Institute of Chemical Engineers Annual Meeting**; Austin, TX; November 2004
Talk: "Flat histogram methods for the calculation of free energies, from liquids to proteins"

9) **American Institute of Chemical Engineers Annual Meeting**; Cincinnati, OH; November 2005
Talk: "Characterization of protein sequence landscapes using flat-histogram Monte Carlo algorithms"

10) **American Institute of Chemical Engineers Annual Meeting**; San Francisco, CA; November 2006
Talk: "Protein folding by zipping and assembly"
Talk: "Ensemble optimization using a rigorous overlap function"

11) **Critical Assessment of Techniques for Protein Structure Prediction**; Pacific Grove, CA; November 2006
Poster: "Protein folding by zipping and assembly"

12) **American Institute of Chemical Engineers Annual Meeting**; Salt Lake City, UT; November 2007
Talk: "A method to predict the ensembles, interactions, and transport properties of short peptides"

13) **American Institute of Chemical Engineers Annual Meeting**; Philadelphia, PA; November 2008
Talk: "Protein structure prediction and refinement using folding mechanism replica exchange methods"
Talk: "Rigorous algorithms for ensemble overlap and model development using the relative entropy"

14) **Biophysical Society Annual Meeting;** Boston, MA; March 2009
Poster: "Protein Structure Refinement Using Physics-Based Models And Sampling"

15) **American Institute of Chemical Engineers Annual Meeting**; Nashville, TN; November 2009
Talk: "Replica exchange molecular dynamics methods for predicting peptide self-assembly and aggregation"

16) **Biophysical Society Annual Meeting**; San Francisco, CA; February 2010
Poster: "A new, fundamental multiscale modeling framework based on the relative entropy"

17) **American Institute of Chemical Engineers Annual Meeting**; Salt Lake City, UT; November 2010
Talk: "Energy and sequence landscapes in peptide binding"

18) **American Conference on Theoretical Chemistry;** Telluride, CO; July 2011
Poster: "Understanding protein energy and interaction landscapes using a relative entropy framework"

19) **American Institute of Chemical Engineers Annual Meeting**; Minneapolis, MN; October 2011
Talk: "Sequence landscapes in peptide oligomerization and self-assembly"
Talk: "Coarse-graining proteins using relative entropy theory"

20) **American Chemical Society Spring Meeting**; San Diego, CA; March 2012
Talk: "Information-theoretic approach to coarse-graining and multiscale simulations"
Talk: "Surprisingly simple, two length-scale picture of hydrophobic interactions"
Talk: "Understanding peptide oligomerization and aggregation with a multiscale simulation approach"

DEPARTMENT SERVICE

2015–present	Graduate Advisor and Vice Chair for Graduate Education
2014–present	Member, Diversity Committee
2017-18	Chair, Graduate Admissions Committee
2008–2018	Faculty advisor, Graduate Student Symposium

2012–2015	Chair, Graduate Admissions Committee
2008–2012	Member, Graduate Admissions Committee

UNIVERSITY SERVICE

2016-present	Department Representative and Mentor, UCSB Bridges to the Doctorate program
2018	Member, Graduate Division Climate Survey Committee
2016-present	Advisory Board Member, Graduate Division Dean's Advisory Board on Diversity
2016-2018	Department Diversity Champion for Graduate Division
2016-2018	Advisory Board Member, NIH MARC (Maximizing Access to Research Careers) Program, UCSB
2015	Member, Distinguished Teaching Award Committee
2013-15	Member, Faculty Executive Committee, College of Engineering
2010	Member, Graduate Division Central Continuing Fellowship Review Committee
2008-present	Given 33 workshops and participated in 19 student-faculty mixers in various student professional, diversity, and research training organizations at UCSB

EDUCATIONAL PRESENTATIONS AND ACTIVITIES

July 2018	Dinner with Faculty, CSEP Summer Programs, CNSI, UCSB
July 2018	"Engineering an exceptional talk," CSEP Summer Programs, CNSI, UCSB
April 2018	"Communicating Science," workshop leader, BASF CARA program, UCSB
April 2018	Faculty judge, Grad Slam competition, UCSB
February 2018	"Engineering an exceptional talk," SASE Regional Conference, UCSB
June 2017	"Engineering an exceptional Talk," CSEP Summer Bridge Programs, UCSB
April 2017	"Engineering an exceptional Talk," Practice of Science, CNSI, UCSB
January 2017	Faculty guest speaker, UCSB AIChE chapter
August 2016	Dinner with Faculty, SIMS Program, CNSI, UCSB
August 2016	"Engineering an exceptional talk," SIMS Program, CSEP-CNSI, UCSB
August 2016	"Engineering an exceptional talk," Condor Techs Program, CSEP-CNSI, UCSB
April 2016	Lunch with Faculty, AIChE, UCSB
November 2015	Faculty table rep. for UCSB College of Engineering at the California Diversity Forum
October 2015	Panel on applying to the NSF Graduate Fellowship Program, Graduate Division, USCB
August 2015	"Engineering an exceptional talk," SIMS Program, CSEP-CNSI, UCSB
August 2015	"Engineering an exceptional talk," Condor Techs Program, CSEP-CNSI, UCSB
July 2015	"Engineering an exceptional talk," CSEP Summer Bridge Programs, UCSB
May 2015	Lunch with Faculty, CSEP SACNAS, UCSB
April 2015	"Communicating Science" workshop organizer, Practice of Science, CNSI, UCSB
February 2015	"How to give a poster" talk, UC LEADS program, UCSB
October 2014	"Engineering an exceptional talk," Network Science IGERT, UCSB
August 2014	Dinner with Faculty, SIMS Program, CNSI, UCSB
August 2014	"Engineering an exceptional talk," SIMS Program, CSEP-CNSI, UCSB
August 2014	"Engineering an exceptional talk," Condor Techs Program, CSEP-CNSI, UCSB
July 2014	"Engineering an exceptional talk," CSEP Summer Bridge Programs, UCSB
April 2014	"Engineering an exceptional Talk," Practice of Science, CNSI, UCSB
April 2014	Invited speaker, Grad Slam workshop, UCSB
Nov. 2013	Lunch with Faculty, CSEP and SACNAS, UCSB
Nov. 2013	Faculty lunch with ESTEEM scholars, UCSB
August 2013	Dinner with Faculty, SIMS Program, CNSI, UCSB
August 2013	"Engineering an exceptional talk," SIMS Program, CNSI, UCSB
August 2013	"Communicating Science" workshop organizer, Practice of Science, CNSI, UCSB
August 2013	Lunch with Faculty, CSEP Summer Bridge Programs, UCSB
August 2013	"Engineering an exceptional talk," CSEP Summer Bridge Programs, UCSB
August 2013	Dinner with Faculty, CSEP Summer Bridge Programs, UCSB
July 2013	"Engineering an exceptional talk," Summer Bridge Programs, UCSB
July 2013	Lunch with Faculty, CSEP, UCSB
July 2013	"Engineering an exceptional talk," CNSI undergraduate research series, UCSB
April 2013	Lunch with Faculty, CSEP and SACNAS, UCSB

March 2013	"Engineering an exceptional talk," CNSI undergraduate research series, UCSB
August 2012	"Engineering an exceptional talk," Cooke Bridges Program, UCSB
July 2012	"Engineering an exceptional talk," CNSI summer undergraduate research series, UCSB
June 2012	Graduate Students for Diversity in Science, UCSB, faculty speaker
April 2012	"Life as a professor," AIChE chapter meeting, UCSB
April 2012	"Communicating Science" workshop organizer, Grad. Professional Development, CNSI, UCSB
March 2012	Graduate Students for Diversity in Science, UCSB, faculty speaker
October 2011	Graduate Students for Diversity in Science, UCSB, faculty speaker
Sept. 2011	National Society of Black Engineers, UCSB Chapter, student-faculty social event
August 2011	Workshop participant in Kavli Foundation Communicating Science Workshop, UCLA
July 2011	"Engineering an exceptional talk," CNSI summer undergraduate research series, UCSB
April 2011	"How to give a poster" workshop, Graduate Professional Development Program, CNSI, UCSB
April 2011	"Engineering an exceptional talk," Soc. Hispanic Professional Engineers Regional Conf., UCSB
Mar. 2011	"Engineering an exceptional talk," Graduate Professional Development Program, CNSI, UCSB
Aug. 2010	"How to give a presentation" talk, EUREKA program, CNSI, UCSB
Aug. 2010	"How to apply to graduate school" panel, summer intern series, CNSI, UCSB
Summer 2010	Hosted research intern through UCSB's ICB SABRE program
May 2010	"How to apply for a fellowship" talk, Early Undergraduate Research and Knowledge Acquisition (EUREKA) program, CNSI, UCSB
May 2010	"How to give a poster" talk, EUREKA program, CNSI, UCSB
Feb. 2010	"How to give a presentation" talk, EUREKA program, CNSI, UCSB
Nov. 2009	Attended the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) conference in Dallas, TX
Oct. 2009	"How to give a poster" talk, SACNAS conference workshop, CNSI, UCSB
Aug. 2009	"Dinner with Scientists," SIMS program, CNSI, UCSB
Nov. 2008	Lunch with Faculty, Expanding Pathways to Science, Engineering and Mathematics (EPSEM) program, CNSI, UCSB
Aug. 2008	"Dinner with Scientists," SIMS program, CNSI, UCSB
July 2008	Lunch with Faculty, EPSEM program, UCSB
July 2008	research presentation, MRL summer research series for undergraduates, UCSB
July 2008	"How to give a presentation" talk, EPSEM program, CNSI, UCSB
July 2008	"How to choose an advisor" talk, Graduate Research Internship Program (GRIP), Graduate Division, UCSB
Summer 2008	Hosted research intern through UCSB's Graduate Research Intern Program (GRIP)
Feb. 2008	Lunch with Faculty, EPSEM program, CSNI, UCSB

TEACHING

Chem. Eng. 5A	Introduction to Chemical Engineering Design	F18
Chem. Eng. 110A	Chemical Engineering Thermodynamics	W08-W19
Chem. Eng. 119	Current Events in Chemical Engineering	F08
Chem. Eng. 170	Molecular and Cell Biology for Engineers	F09, F10
Chem. Eng. 184B	Design of Chemical Processes	S13-S18
Chem. Eng. 210A	Thermodynamics and Statistical Mechanics	F07-F17
Chem. Eng. 210D	Principles of Modern Molecular Simulation Methods	S09, S12
Chem. Eng. 1A	Engineering and the Scientific Method	F15

RESEARCH STUDENTS MENTORED

Postdoctoral students	*years active*	*comments*
Madhu Venkata Rama Krishna Majji	1/2019-present	
Kevin Shen	10/2018-present	

Ph.D students	*year graduated*	*comments*
Sally Jiao		NSF Graduate Research Fellowship 2018.

Stephen Lillington		Joint with M. O'Malley
Jacob Monroe		NSF Graduate Research Fellowship 2015.
My Nguyen		Joint with G. Fredrickson.
Dennis Robinson-Brown		
Nicholas Sherck		Joint with G. Fredrickson. UCSB ChE Dow Fellowship.
Tanmoy Sanyal	December 2018	
David Smith	December 2018	Joint with G. Leal and S. Mitragotri.
Brian Lynch	December 2017 (M.S.)	Joint with G. Leal.
Nikolai Petsev	March 2015	Joint with G. Leal. UCSB ChE Dow Fellowship.
Scott Carmichael	Dec. 2015	ACS Graduate Student Award in Computational Science. UCSB Deans Fellowship.
Joohyun Jeon	Dec. 2015	
Brian Giera	May 2014	Joint with T. Squires.
Aviel Chaimovich	Jan. 2013	Joint with J. Israelachvili. UCSB ChE Eastman Teaching Fellowship. Received Humboldt Fellowship after UCSB.

Undergraduates	*year graduated*	*comments*
Fox Bernhard	expected 2020	
Jun Lu	expected 2020	
Tristan O'Neil	expected 2019	
Melina Robinson	2017	Operations Analyst at Genentech
Francis Cunningham	2017	PhD program at Berkeley.
Bob Feng	2016	McNair Scholar at UCSB. PhD program at Stanford,
Sean Garner	2016	PhD program in Materials Science at UC San Diego.
Cody Hegel	2016	Process engineer at APEEL Sciences.
Kenneth Yun	2016	
Wen-Kang Chou	2015	PhD program in Chemical and Biological Engineering at Princeton
Carolyn Mills	2013	Beckman Scholar at UCSB, NSF Graduate Research Fellowship 2013. PhD program in Chemical Engineering at MIT.
Doga Ulupinar	2013	Master's program in Computer Science at UCLA.
Rafael Prato	2013	Master's program in Materials Chemistry at University of Oslo.
Rahul Lele	2012	RISE fellowship at UCSB. Masters program in Computer Science at UC Irvine.
Ari Pritchard-Bell	2011	PhD program in Chemical Engineering at Univ. Pittsburgh.
Todd Smith	2011	R&D engineer at Spirosure.
Fernanda Wolf	2011	Senior engineer at Shire.
Tommy Foley	2011	PhD program in Chemistry at Penn State
Jason Gee	2010	RISE fellowship at UCSB. PhD program in Chemical Engineering at Georgia Tech.
Sean Ponce	2010	Master's program in Chemical and Biomolecular Engineering at Johns Hopkins.
Christine Yueh	2010	PhD program in Biomedical Engineering at Boston Univ.
Edmund Lin	2009	RISE fellowship at UCSB. Now at Graphene Technologies.
Saul Kavonic	2008	Now at Woodside in Perth, Australia.

Summer interns	*year interned*	*comments*
Francis Agama	2010	Ph.D. program at U. of Florida.
Dwight McGee	2008	Ph.D. program at U. of Florida.