

Eric J. Deeds

Curriculum Vitae

Department of Integrative Biology and Physiology
Institute for Quantitative and Computational Biosciences
University of California, Los Angeles
611 Charles E. Young Dr. East
Los Angeles, CA 90095

Office: (310) 825-1034
Email: deeds@ucla.edu

EDUCATION

Harvard University 2005
Ph.D., Department of Molecular and Cellular Biology
Advisor: Eugene Shakhnovich

Case Western Reserve University 2001
B.S., *summa cum laude*, Biochemistry, with honors
B.A., *summa cum laude*, English

PROFESSIONAL EXPERIENCE

Professor 2023-present
Associate Professor 2018-2023
Department of Integrative Biology and Physiology
Institute for Quantitative and Computational Biosciences
Vice Chair For Mathematics Education, Life Sciences Core Education Department
University of California, Los Angeles

Associate Professor 2016-2018
Assistant Professor 2010-2016
Center for Computational Biology and Department of Molecular Biosciences
The University of Kansas

External Faculty Member 2014-2017
Santa Fe Institute

Postdoctoral Fellow 2006-2010
Laboratory of Walter Fontana, Department of Systems Biology
Harvard Medical School

AWARDS AND HONORS

Chancellors Distinguished Teaching Award (2023), UCLA

New and Notable Symposium (2018), 62nd annual Biophysical Society meeting.

Graduate Teaching Award (2013), Center for Teaching Excellence, The University of Kansas

Post-Doctoral National Research Service Award (2007-2009) NIGMS, NIH

Pre-Doctoral Fellowship (2002-2005), Howard Hughes Medical Institute

John Schoff Millis Award (2001), Senior with the Best Academic Record, CWRU

Barry M. Goldwater Scholarship (2000)

Phi Beta Kappa (1999), Case Western Reserve University

PUBLICATIONS

2145 total citations for 40 published papers, **h-index: 25** (Google Scholar). First or corresponding author on 28 of 40 papers. *Indicates equal contribution of authors, †indicates co-corresponding authors. Underline indicates corresponding author.

1. Sparta, B.*, Hamilton, T.*, Hughes, S. and **Deeds, E. J.** (2024) “A lack of distinct cell identities in single-cell measurements: revisiting Waddington’s landscape” *In submission, bioRxiv preprint: <https://www.biorxiv.org/content/10.1101/2022.06.03.494765v1?rss=1>*
2. Sparta, B., Hamilton, T., Aragones, S. D. and **Deeds, E. J.** (2024) “Binomial models uncover biological variation during feature selection of droplet-based single-cell RNA sequencing” *In revision, bioRxiv preprint: <https://www.biorxiv.org/content/10.1101/2021.07.11.451989v1>*
3. Lagunes, L., Briggs, K., Martin-Holder, P., Xu, Z., Maurer, D., Ghabra, K. and **Deeds, E.J.** (2024) “Modeling reveals the strength of weak interactions in stacked ring assembly” *In revision, bioRxiv preprint: <https://www.biorxiv.org/content/10.1101/2024.02.02.578706v1>*
4. Cooley, S. M.*, Hamilton, T.*, Aragones, S. D. Ray, J. C. J.† and **Deeds, E. J.**† (2024) “A novel metric reveals previously unrecognized distortion in dimensionality reduction of scRNA-seq data” *In revision, bioRxiv preprint: <https://www.biorxiv.org/content/10.1101/689851v6>*
5. Natesan, T., Hamilton, T., **Deeds, E. J.**† and Shah, P. K. (2023) “Novel metrics reveal new structure and unappreciated heterogeneity in *C. elegans* development.” *PLoS Comput Biol* **19**(12), e1011733
6. Itagi, P., Kante, A., Lagunes, L. and **Deeds, E. J.**† (2022) “Understanding the Separation of Timescales in *Rhodococcus erythropolis* Proteasome Core Particle Assembly” *Biophys J* **121**(20), 3975
7. Vakser, I. A., Grudinin, S., Jenkins, N. W., Kundrotas, P. J. and **Deeds, E. J.** (2022) “Docking-based long timescale simulation of cell-size protein systems at atomic resolution” *Proc Natl Acad Sci USA* **119**(41), e2210249119
8. Garfinkel, A., Bennoun, S., **Deeds, E. J.** and Van Valkenburgh, B. (2022) “Teaching Dynamics to Biology Undergraduates: the UCLA Experience” *Bull Math Bio* **84**(3), 83
9. Nariya, M., Mallela, A., Shi, J., and **Deeds, E. J.** (2021) “Robustness and the evolution of length control mechanisms in the type III secretion system and flagellar hook” *Biophys J* **120**(17), 3820
10. Tang, Y., Adelaja, A., Ye, F. X.-F., **Deeds, E. J.**, Wollman, R. and Hoffmann, A. (2021) “Quantifying information accumulation encoded in the dynamics of biochemical signaling” *Nat Commun* **12**(1), 1272
11. Mallela, A., Nariya, M. and **Deeds, E. J.** (2020). “Crosstalk and ultrasensitivity in protein degradation pathways” *PLoS Comp Bio* **16**(12), e1008492
12. Adeshina, Y. O., **Deeds, E. J.** and Karanicolas, J. K. (2020) “Machine learning classification can reduce false positives in structure-based virtual screening” *Proc Natl Acad Sci USA* **117**, 18477
13. Suppahia, A., Itagi, P., Burris, A., Kim, M. F., Vontz, A., Kante, A., Kim, S., Im, W., **Deeds, E. J.**† and Roelofs, J.† (2020) “Cooperativity in proteasome core particle autocatalytic processing” *iScience* **23**(5), 101090

14. Nguyen, A. V., Trompetto, B., Tan, M., Hu, K. H., **Deeds, E. J.**, Butte, M., Chiou, E. and Rowat, A. C. (2019) "Differential contributions of actin and myosin to the physical phenotypes and invasion of pancreatic cancer cells" *Cell Mol Bioeng* <https://doi.org/10.1007/s12195-019-00603-1>
15. Shockley, E. M., Rouzer, C. A., Marnett, L. J., **Deeds, E. J.** and Lopez, C. F. (2019) "Signal integration and information transfer in an allosterically regulated network" *npj Syst Biol Appl* **5**(1), 234
16. Suderman, R. and **Deeds, E. J.** (2018) "Intrinsic limits on information transfer in cellular signaling networks" *Interface Focus* **8**(6), 20180039
17. Rowland, M. A., Greenbaum, J. M. and **Deeds, E. J.** (2017) "Crosstalk and the evolvability of intracellular communication" *Nat Commun* **8**, 16009
18. Suderman, R., Bachman, J. A., Smith, A., Sorger, P. K. and **Deeds, E. J.** (2017) "A fundamental trade-off between information flow in single cells and cellular populations" *Proc Natl Acad Sci USA* **114**, 5755
19. Nariya, M. K., Kim, J. H., Xiong, J., Kleindl, P. A., Hewarathna, A., Fisher, A. C., Joshi, S. B., Schöneich, C., Forest, M. L., Middaugh, C. R., Volkin, D. B. and **Deeds, E. J.** (2017) "Comparative Characterization of Crofelemer Samples Using Data Mining and Machine Learning Approaches With Analytical Stability Data Sets" *J Pharm Sci* **106**(11), 3270
20. Hewarathna, A., Mozziconacci, O., Nariya, M. K., Kleindl, P. A., Xiong, J., Fisher, A. C., Joshi, S. B., Middaugh, C. R., Forest, M. L., Volkin, D. B., **Deeds, E. J.** and Schöneich, C. (2017) "Chemical Stability of the Botanical Drug Substance Crofelemer: A Model System for Comparative Characterization of Complex Mixture Drugs" *J Pharm Sci* **106**(11), 3257
21. Kleindl, P. A., Xiong, J., Hewarathna, A., Mozziconacci, O., Nariya, M. K., Fisher, A. C., **Deeds, E. J.**, Joshi, S. B., Middaugh, C. R., Schöneich, C., Volkin, D. B. and Forrest, M. L. (2017) "The Botanical Drug Substance Crofelemer as a Model System for Comparative Characterization of Complex Mixture Drugs" *J Pharm Sci* **106**(11), 3242
22. Nariya, M., Israeli, Y., Shi, J.[†] and **Deeds, E. J.**[†] (2016). "Mathematical model for length control by the timing of substrate switching in the type III secretion system" *PLoS Comput Biol* **12**, e1004851
23. Wani, P. S., Rowland, M. A., Odracek, A., **Deeds, E. J.**[†] and Roelofs, J.[†] (2015) "Maturation of the proteasome core particle induces an affinity switch that controls regulatory particle association" *Nat Commun* **6**, 6384
24. Rowland, M. A., Harrison, B. and **Deeds, E. J.** (2015) "Phosphatase specificity and pathway insulation in signaling networks" *Biophys J* **108**, 986
25. Rowland, M. A. and **Deeds, E. J.** (2014) "Crosstalk and the Evolution of Specificity in Two-Component Signaling" *Proc Natl Acad Sci USA* **111**, 5550
26. Suderman, R. and **Deeds, E. J.** (2013) "Machines vs. Ensembles: Effective MAPK Signaling through Heterogeneous Sets of Protein Complexes" *PLoS Comput Biol* **9**(10): e1003278
27. Gowthaman, R., **Deeds, E. J.** and Karanicolas, J. (2013) "Structural properties of non-traditional drug targets present new challenges for virtual screening" *J Chem Inf Model* **53**, 2073
28. Rowland, M. A., Fontana, W. and **Deeds, E. J.** (2012) "Crosstalk and competition in signaling networks" *Biophys J* **103**, 2389 "Best of 2012" in *Biophys J*

29. **Deeds, E. J.**, Krivine, J., Feret, J., Danos, V. and Fontana, W. (2012) “Combinatorial complexity and compositional drift in protein interaction networks” *PLoS One* **7**, e32032
30. **Deeds, E. J.**^{*†}, Bachman, J. A.^{*} and Fontana, W.[†] (2012) “Optimizing ring assembly reveals the strength of weak interactions” *Proc Natl Acad Sci* **109**, 2348
31. Kolokotronis, T., Savage, V., **Deeds, E. J.** and Fontana, W. (2010) “Curvature in metabolic scaling” *Nature* **466**, 753
32. Savage, V. M.^{*}, **Deeds, E. J.**^{*} and Fontana, W. (2008) “Sizing up Allometric Scaling Theory” *PLoS Comput Biol* **4**, e1000171
33. **Deeds, E. J.**, Ashenberg, O., Gerardin, J. and Shakhnovich, E. I. (2007) “Robust protein-protein interactions in crowded cellular environments” *Proc Natl Acad Sci USA* **104**, 14952
34. Perlstein, E. O.^{*}, **Deeds, E. J.**^{*}, Ashenberg, O., Ramachandran, G., Shakhnovich, E. I. and Schrieber, S. L. (2007) “Quantifying fitness distributions and phenotypic relationships in recombinant yeast populations” *Proc Natl Acad Sci USA* **104**, 10553
35. Hubner, I. A.^{*}, **Deeds, E. J.**^{*} and Shakhnovich, E. I. (2006) “Understanding Ensemble Protein Folding at Atomic Detail” *Proc Natl Acad Sci USA* **103**, 17747
36. **Deeds, E. J.**, Ashenberg, O. and Shakhnovich, E. I. (2006) “A simple physical model for scaling in protein-protein interaction networks” *Proc Natl Acad Sci USA* **103**, 311
37. Hubner, I. A., **Deeds, E. J.** and Shakhnovich, E. I. (2005) “High-Resolution Protein Folding with a Transferable Potential” *Proc Natl Acad Sci USA* **102**, 18914
38. **Deeds, E. J.** and Shakhnovich, E. I. (2005) “The Emergence of Scaling in Sequence-Based Models of Protein Evolution” *Biophys J* **88**, 3905
39. **Deeds, E. J.**, Hennessey, H. and Shakhnovich, E. I. (2005) “Prokaryotic Phylogenies Inferred from Protein Structural Domains” *Genome Res* **15**, 393
40. Shakhnovich, B., **Deeds, E. J.**, DeLisi, C. and Shakhnovich, E. I. (2005) “Protein Structure and Evolutionary History Determine Sequence Space Topology” *Genome Res* **15**, 385
41. **Deeds, E. J.**, Shakhnovich, B. and Shakhnovich, E. I. (2004) “Proteomic Traces of Speciation” *J Mol Biol* **336**, 695
42. Tannenbaum, E., **Deeds, E. J.** and Shakhnovich, E. I. (2004) “Semiconservative Replication in the Quasispecies Model” *Phys Rev E* **69**, 061916
43. **Deeds, E. J.**, Dokholyan, N. V. and Shakhnovich, E. I. (2003) “Protein Evolution within a Structural Space” *Biophys J* **85**, 2962
44. Tannenbaum, E., **Deeds, E. J.** and Shakhnovich, E. I. (2003) “Equilibrium Distribution of Mutators in the Single Fitness Peak Model” *Phys Rev Lett* **91**, 138105

Review Articles and Book Chapters

45. Wei, Y., Joshi, S. B., Bhambhani, A., Zeng, Y., Larson, N. R., Hu, G., **Deeds, E. J.** and Middaugh, C. R. (2020) “Chapter 7: An Empirical Phase Diagram: High-Throughput Screening Approach to the Characterization and Formulation of Biopharmaceuticals” In: eds. Jameel, F., Skoug, J. S. and Nesbitt, R. R. *Development of Biopharmaceutical Drug-Device Products*, AAPS Advances in the Pharmaceutical Sciences, 139-185 (Springer).

46. Vakser, I. A.[†] and **Deeds, E. J.**[†] (2019) “Computational Approaches to Macromolecular Interactions in the Cell” *Curr Opin Struct Biol* **55**, 59
47. **Deeds, E. J.** and Shakhnovich, E. I. (2006) “A Structure-Centric View of Protein Evolution, Design and Adaptation” *Adv Ezymol Relat Areas Mol Biol* **75**, 133

Forthcoming Publications

1. Kante, A.*, Itagi, P.*, Nariya, M. K., Briggs, K., Xu, Z., Maurer, D., Xia, Y., Fischer, C. J., Karanicolas, J. K., Roelofs, J. and **Deeds, E. J.** (2022) “Robustness and kinetic trapping in proteasome assembly” *In preparation*

PRESENTATIONS

Invited Talks:

1. Theory Lunch, Department of Systems Biology, Harvard Medical School, Boston, MA (2023)
2. Seminar, Julia Lab, Massachusetts Institute of Technology, Boston, MA (2023)
3. Seminar, Center for Computational Biology, The University of Kansas, Lawrence, KS (2022)
4. Seminar, Collège de France, Paris, France (2019)
5. Seminar, Bioinformatics Ph.D. Program, UCLA, Los Angeles, CA (2019)
6. Seminar, Department of Microbiology, Oklahoma State University, Stillwater, OK (2019)
7. Seminar, Department of Biophysics, Johns Hopkins University, Baltimore, MD (2018)
8. Seminar, Department of Computer Science, University of Nebraska-Lincoln, Lincoln, NE (2018)
9. Keynote, Plant Sciences Retreat, University of Nebraska-Lincoln, Nebraska City, NE (2018)
10. Seminar, Department of Chemical and Biological Engineering, Colorado State University, Fort Collins, CO (2018)
11. Seminar, Center for Bioengineering, UC Santa Barbara, Santa Barbara, CA (2018)
12. Seminar, AMOLF, Amsterdam, The Netherlands (2018)
13. Seminar, Center for Cell Dynamics, Johns Hopkins Medical School, Baltimore, MD (2018)
14. Seminar, Center for the Mechanisms of Evolution, Arizona State University, Tempe, AZ (2018)
15. Seminar, OPQ Science Day, US Food and Drug Administration, Silver Spring, MD (2017)
16. Seminar, Department of Integrative Biology and Physiology, UCLA, Los Angeles, CA (2017)
17. Seminar, Department of Biology, Northeastern University, Boston, MA (2016)
18. Colloquium, Department of Systems Biology, Harvard Medical School, Boston, MA (2016)
19. Seminar, Département d'Informatique, École Normale Supérieure, Paris, France (2016)
20. Seminar, Institute for Quantitative and Computational Biosciences, UCLA, Los Angeles, CA (2016)
21. Seminar, Molecular Biology and Biochemistry Division, School of Biological Sciences, University of Missouri at Kansas City, Kansas City, MO (2016)

22. Seminar, Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS (2016)
 23. Seminar, Department of Organic Chemistry, Stockholm University, Stockholm, Sweden (2015)
 24. Seminar, Department of Systems and Computational Biology, Albert Einstein College of Medicine, Bronx, NY (2015)
 25. Theory Lunch, Department of Systems Biology, Harvard Medical School, Boston, MA (2015)
 26. Colloquium, Department of Chemistry, Seoul National University, Seoul, South Korea (2014)
 27. Seminar, Center for *In Silico* Protein Science, Korea Institute for Advanced Study, Seoul, South Korea (2014)
 28. Departmental Seminar, College of Pharmacy, Ewha Womans University, Seoul, South Korea (2014)
 29. Seminar, Department of Biomathematics, UCLA, Los Angeles, CA (2014)
 30. Systems Biology Seminar, Department of Cancer Biology, Vanderbilt School of Medicine, Nashville, TN (2013)
 31. q-bio Seminar Series, Center for Nonlinear Studies, Los Alamos National Labs, Los Alamos, NM (2013)
 32. Institute Seminar, Santa Fe Institute, Santa Fe, NM (2013)
 33. Seminar, Department of Physics and Astronomy, The University of Kansas, Lawrence, KS (2013)
 34. Seminar, Joint Carnegie-Mellon, University of Pittsburgh Graduate Program in Computational Biology, Pittsburgh, PA (2013)
 35. Colloquium, Department of Systems Biology, Harvard Medical School, Boston, MA (2013)
 36. Seminar, Department of Biochemistry and Molecular biology, University of Kansas Medical Center, Kansas City, KS (2012)
 37. Seminar, Département d'Informatique, École Normale Supérieure, Paris, France (2012)
 38. Seminar, Department of Mathematics, Tulane University, New Orleans, LA (2011)
 39. Seminar, Department of Biochemistry, Kansas State University, Manhattan, KS (2011)
- Invited Conference Presentations:*
40. Keynote, Finding Your Inner Modeler Conference, University of Alabama Birmingham, Birmingham, AL (2023)
 41. The 10th Conference on Modeling Protein Interactions, Lawrence, KS (2023)
 42. Joint Meeting of the 20th KIAS Conference on Protein Structure and Function and The 7th Korean-Polish Conference on "Protein Folding: Theoretical and Experimental Approaches", Seoul, South Korea (2022)
 43. Finding Your Inner Modeler Conference, University of Illinois at Chicago, Chicago, IL (2022)
 44. Finding Your Inner Modeler Conference, University of Illinois at Chicago, Chicago, IL (2021)
 45. JSPS Core-to-Core Meeting, Establishing International Research Network of Mathematical Oncology, Osaka, Japan (2020)

46. 33rd Gibbs Conference on Biological Thermodynamics, Carbondale, IL (2019)
47. SoCal Systems Biology Conference, Irvine, CA (2019)
48. Building the Cell Symposium, ASCB Meeting, San Diego, CA (2018)
49. The 9th Conference on Modeling Protein Interactions, Lawrence, KS (2018)
50. Finding Your Inner Modeler NSF Workshop, University of Illinois at Chicago, Chicago, IL (2018)
51. Theo Murphy Workshop on Natural Computation, Royal Society of London, Milton Keynes, United Kingdom (2018)
52. Cell Modeling Workshop, Allen Institute for Cell Science, Seattle, WA (2018)
53. **New and Notable Symposium**, 62nd Annual Biophysical Society Meeting, San Francisco, CA (2018)
54. The International Conference on Scientific Computation and Differential Equations (SciCADE2017), Bath, United Kingdom (2017)
55. The 8th Conference on Modeling Protein Interactions, Lawrence, KS (2016)
56. Logic in Systems Biology Workshop, Logic in Computer Science conference, New York, NY (2016)
57. Advances in numerical and analytical approaches for the study of non-spatial stochastic dynamical systems in molecular biology, Isaac Newton Institute for Mathematical Sciences, Cambridge University, Cambridge, United Kingdom (2016)
58. Quantifying Cellular Dynamics Workshop, UCSF, Half Moon Bay, CA (2016)
59. The 1st Annual Midwest Bioinformatics Conference, Kansas City Area Life Sciences Institute, Kansas City, MO (2015)
60. The 14th KIAS Conference on Protein Structure and Function, Korean Institute for Advanced Study, Seoul, South Korea (2014)
61. The 7th Conference on Modeling Protein Interactions, Lawrence, KS (2014)
62. The 4th International Workshop on Static Analysis and Systems Biology, Seattle WA (2013)
63. The 6th Conference on Modeling Protein Interactions, Lawrence, KS (2012)
64. Dagstuhl Seminar on Information Flow and its Applications, Wadern, Germany (2012)
65. CMACS Workshop on Systems Biology and Formal Methods, New York, NY (2012)
66. Systems Biology and Bioenergetics Symposium, Centre for Systems Biology and Bioenergetics, Nijmegen, the Netherlands (2012)
67. 2nd Workshop on Rule-based Modeling of Biochemical Systems, Santa Fe, NM (2011)
68. 27th Conference on the Mathematical Foundations of Programming Semantics, Pittsburgh, PA (2011)
69. Bio-Pathways Meeting, 16th International Conference on Intelligent Systems for Molecular Biology (ISMB), Boston, MA (2011)

Contributed Conference Presentations:

70. The 18th International Conference on Systems Biology, Blacksburg, VA (2017)
71. The 10th Annual q-bio Conference, Nashville, TN (2016)

72. The 58th Annual Meeting of the Biophysical Society, San Francisco, CA (2014)

73. The 7th Annual q-bio Conference, Santa Fe, NM (2013)

74. The 5th Annual q-bio Conference, Santa Fe, NM (2011)

MENTORING

Postdoctoral Fellows (current):

Lingyun (Ivy) Xiong (2023-present).

Leo Lagunes (2020-present). UC President's Postdoctoral Fellow, NIH IRACDA Fellow. NIH F32 funded starting 9/15/21.

Breanne Sparta (2020-present). NIH IRACDA Fellow. Former UCLA Collaboratory fellow.

Postdoctoral Fellows (former):

Anupama Kante (2021-2022). Currently a Project Scientist at Avid Biosciences.

Ph.D. Students (current):

Serena Hughes (2020-present)

Timothy Hamilton (2021-present)

Ph.D. Students (graduated):

Pushpa Itagi (2016-2021). Thesis title: "Multi-scale modeling of bacterial core particle assembly." Currently a postdoc at the Fred Hutchinson Cancer Research Center in Seattle, WA.

Anupama Kante (2015-2021). Thesis title: "A kinetic, thermodynamic and structural study of bacterial proteasome core particle assembly." Currently a Project Scientist at Avid Biosciences.

Shamus Cooley (2018-2021) Thesis title: "Distortion in dimensionality reduction and implications for the analysis of single-cell RNA sequencing data." Currently a Computational Biologist at Base 5 Genomics.

Koan Briggs (2014-2018). Thesis title: "Disrupted Pathways: generating tunable macromolecular assembly pathways." Currently a Senior Data Scientist at Main Street Data in Kansas City, Missouri.

Maulik Nariya (2014-2018). Thesis title: "Mathematical modeling of length regulation in the Type III Secretion System." Currently a postdoctoral fellow with Prof. Peter Sorger at Harvard Medical School.

Ryan Suderman (2011-2016). Thesis title: "Heterogeneity and decision-making in cellular signaling networks." Currently the Director of QSP modeling at Immunetrics.

Michael Rowland (2011-2015). Thesis title: "Crosstalk, network dynamics, and the evolution of signaling." Currently Chief of Environmental Engineering at the US Army Corps of Engineers' Engineer Research and Development Center in Vicksburg, MS.

Masters Students (current):

Nina Gilshteyn (2022-present). MS in Physiological Science

Melanie Tu (2023-present). MS in Bioinformatics

Masters Students (graduated):

Gunalan Natesan (2021-2022). CaSB Departmental Scholar

Abhishek Mallela (2015-2017).

Elizabeth Grotemeyer (2016-2017). Thesis title: “A framework for studying crucial steps in proteasome core particle assembly.”

Zaikun Xu (2012-2014). Thesis title: “BMAS: a bitwise simulator for macromolecular assembly.”

Johnny Israeli (2012-2013). Thesis title: “A mathematical model for substrate switching in the type III secretion system.” Co-advised with Prof. Jack Shi in Physics and Astronomy.

Undergraduate Students:

Juan Veragra Najar (2023-present). BIG Summer Student, UCLA, continuing in the lab.

Diego Garcia (2023). BIG Summer Student, UCLA.

Karim Ghabra (2022-present).

Geovana Ordonez (2021-present).

Paige Martin-Holder (2021-2023).

Susanna Givan (2022-2023).

Alex DiBiasi (2021). BIG Summer student, UCLA.

Mellissa Aros (2021). BIG Summer student, UCLA.

Nina Gilshteyn (2020-2022).

Hannah Farris (2020-2022).

Melanie Tu (2020-2021).

Sarah Nichols (2020-2021).

Gunalan Natesan (2020-2021).

Anna Spiro (2020). BIG Summer student, UCLA. Presentation Prize, BIG Summer 2020

Sandy Kim (2019-2020). BIG Summer student, UCLA. Poster prize, BIG summer 2019

Mark Xiang (2019). BIG Summer student, UCLA. Poster prize, BIG summer 2019

Tim Hamilton (2019). Currently a graduate student in the lab.

Jill Vesta (2017-2018). IMSD student

Sierra Seacat (2015-2017).

Adebayo Braimah (2015-2017).

Addison Schauer (2014).

Joseph Greenbaum (2014). Co-author on a published paper

Kerrigan Blake (2013-2014). Honors thesis in Mathematics

Adam Smith (2013). Co-author on a published paper

Brian Harrison (2013). Co-author on a published paper

PROFESSIONAL SERVICE

Ad Hoc Referee:

Science, PLoS Biology, Nature Methods, Nature Communications, Cell Reports, Bioinformatics, Science Signaling, PLoS Computational Biology, Journal of the Royal Society Interface, Journal of the Royal Society B, WIRES Systems Biology, Physical Biology, PROTEINS: Structure, Function and Bioinformatics

Scientific Meetings:

Organizer, NSF Finding Your Inner Modeler Conference, 2023-present

Expert Modeler, NSF Finding Your Inner Modeler Conference, 2021-2023, 2018

Member, Program Committee, “*Static analysis and systems biology meeting*”, 2017

Member, Organizing Committee, Dagstuhl Seminar on “*Self-assembly and self-organization in Computer Science and Biology*”, 9/28/15-10/2/15, Wadern, Germany

Member, Program Committee, “*Static analysis and systems biology meeting*”, 2010

Departmental, College and University Service:

Vice Chair for Mathematics Education, Life Sciences Education Department, UCLA (2019-present)

Chair, Admissions Committee, Bioinformatics Interdepartmental Ph.D. program (2022-present), UCLA

CEILS Faculty Advisory Committee (2022-present), UCLA

Faculty Advisory Committee, Science Education Minor (2019-present), UCLA

CaSB Faculty Advisory Committee (2019-present), UCLA

Admissions Committee, Bioinformatics Interdepartmental Ph.D. program, (2019-present), UCLA

Faculty Search Committee (2020-2021), Mentor Professor Search, Life Sciences Division, UCLA

CaSB Curriculum Review Committee (2020-2021), Re-vamp the concentrations in the CaSB major into pathways, UCLA

Personnel Committee (2020-2021), Department of Integrative Biology and Physiology, UCLA

Faculty Search Committee (2019-2020), Department of Integrative Biology and Physiology, UCLA

Chair of Seminar Committee (2019), Frontiers in Mathematical and Systems Biology seminar series, Institute for Quantitative and Computational Biosciences, UCLA

Search Committee (2019), UCLA Life Sciences Core, Lecturer with Potential Security of Employment, UCLA

Chair, Promotion and Tenure Committee (2016-2018), Computational Biology Program, University of Kansas

Seminar Coordinator (2010-2018), Center for Computational Biology, University of Kansas

Faculty Evaluation Committee (2016-2018), Department of Molecular Biosciences, University of Kansas

Faculty Search Committee (2016-2017), Center for Computational Biology and Department of Molecular Biosciences, University of Kansas

Academic and Electronic Communications Committee (2013-2016), Subcommittee of the Faculty Senate Executive Committee, University of Kansas

Biology Major Petitions Committee (2015-2016), Undergraduate Biology, University of Kansas

Faculty Search Committee (2014-15), Department of Molecular Biosciences, University of Kansas

Faculty Search Committee (2013-14), Center for Computational Biology and Department of Molecular Biosciences, University of Kansas

Faculty Search Committee (2012-13), Center for Computational Biology and Department of Molecular Biosciences, University of Kansas

Curriculum Advisory Committee (Fall 2012), College of Arts and Sciences, University of Kansas

Faculty Search Committee (2011-12), Center for Computational Biology and Department of Molecular Biosciences, University of Kansas