
◊ Education**◊ The University of California at Santa Barbara (UCSB)**

Ph.D. in Mechanical Engineering, Advisor: Mustafa Khammash (2003-2008)

Dissertation topic: *Modeling and Analysis of Stochastic Networks in Biological Systems.***◊ The Pennsylvania State University at University Park (PSU)**

M.S. in Aerospace Engineering, Advisor: Farhan Gandhi (2000-2002)

Thesis topic: *Fluid/Structural/Acoustic Analyses of Helicopter Blade-Vortex Interactions.***◊ The Pennsylvania State University at University Park (PSU)**

B.S. in Aerospace Engineering, Advisors: Farhan S. Gandhi and Edward C. Smith (1996-2000)

Honors thesis topic: *Active/Passive Damping Treatments to Alleviate Resonant Oscillations.***Highlight**—*My discovery of the Finite State Projection method won the 2007-2008 USCB Department of Mechanical Engineering Best Ph.D. Dissertation Award and led to several influential publications, which have been cumulatively cited over 1,000 times worldwide since 2006.*

◊ Experience (details/publications on pages 2-6)**◊ Associate Professor**, Chemical and Biological Engineering (CBE) and the School of Biomedical Engineering, Colorado State University, Fort Collins, CO (06/2020-Present).**◊ Assistant Professor**, Chemical and Biological Engineering (CBE) and the School of Biomedical Engineering, Colorado State University, Fort Collins, CO (01/2014-06/2020).**◊ Research Scientist**, New Mexico Consortium, Los Alamos, New Mexico (2013-2017).**◊ Staff Scientist**, Information Sciences Group (CCS-3), Los Alamos National Lab (04/2013-12/2013).**◊ Richard P. Feynman Distinguished Postdoctoral Fellow in Theory and Computing**, Center for Nonlinear Studies (CNLS), Los Alamos National Laboratory, (04/2010-04/2013).**◊ Directors Postdoctoral Fellow**, Center for Nonlinear Studies (CNLS), Los Alamos National Laboratory, (06/2008-04/2010).**◊ Chancellor's Graduate Research Fellow**, Mechanical Engineering, UCSB (09/2003-06/2008).**◊ Graduate Research Fellow**, Aerospace Engineering, PSU (05/2000-09/2002).**◊ Undergraduate Research Assistant**, Aerospace Engineering, PSU (01/1999-05/2000).**Highlights**—*I have a strong publication record of 60 peer-reviewed articles and four book chapters, including articles in **Science** (2012 and 2013), **Nature Biotech.** (2012), **Mol. Syst. Biol.** (2009), **Cell Reports** (2014), **PNAS** (2018), **Molec. Cell** (2019), and **Nature Struct. & Mol. Biol.** (2020) and **Nature Comms.** (2021). Since joining CSU, I have been awarded **\$5,447,000** in external research funding, including a **W. M. Keck Foundation Award** (2016), a **NIGMS Maximizing Innovator Research Award** (2017, 2022) and an **NSF CAREER Award** (2019).*

◊ Research Mentoring Experience (details on pages 6-9)**◊ q-bio Summer School Organizer and Lecturer**, LANL and NMC (06/2008-present).**◊ Sponsor for postdocs:** Dr. Douglas Shepherd (LANL, 2011-2013), Dr. Vijay Gupta (2014-2015), Dr. Luis U. Aguilera (2017-), Dr. Linda Forero Quintero (2017-2022), Dr. Huy Vo (2017-2022), Dr. Kenneth Lyon (2019-2019), Dr. Tatsuya Morisaki (2020-2021).**◊ Adviser for graduate students:** Zachary Fox (CSU, 2014-2019), Lisa Weber (2015-), Mohammad Tanhaemami (2016-2020), Michael May (2017-), William Raymond (2018-), Jaron Thompson (2018-2020), Eric Ron (2020-), and Joshua Cook (2021-).**Highlights**—*As the lead organizer for the (2010-19) q-bio and (2021-22) UQ-Bio Summer Schools, I helped train >900 students to use quantitative analyses to understand cellular processes. As contact MPI on an NIH R25 award (\$685,000), I supported eleven different scientific programs in New Mexico (2013-16), California (2013-16) and Colorado (2015-17). I led a team of 70 authors to write a **textbook on quantitative biology** which was published in 2018 by MIT Press. My NSF-CAREER award allowed me to create the **Undergraduate Q-bio Summer School at CSU, Fort Collins, CO** (2021-present).*

◇ Research Experience Details

- ◇ **Associate Professor**, Chemical and Biological Engineering, Colorado State University
My group's focus has shifted to the computational design and control of single-cell experiments. By combining predictive realtime image processing, single-cell gene regulation models, machine learning and uncertainty quantification, and model-predictive feedback control, we are discovering new protocols for the automated design and control of single-cell experiments (Jul. 2020 to Present).
- ◇ **Assistant Professor**, Chemical and Biological Engineering, Colorado State University
My group is developing computational tools to complement experimental investigations aimed at the multi-scale modeling, system identification, uncertainty quantification and experiment design to understand and predict single-cell gene regulatory dynamics in various organisms relevant in field ranging from the health sciences to biofuel production (Jan. 2014 to Jun 2020).
- ◇ **Staff Scientist**, Information Sciences (CCS-3), Los Alamos National Laboratory
I develop computational tools to analyze and predict single-cell heterogeneity and temporal dynamics in bacterial, yeast, algal and mammalian cell populations (Apr. 2013 to Dec., 2013).
- ◇ **Richard P. Feynman Distinguished Postdoctoral Fellow in Theory and Computing**, Center for Nonlinear Studies (CNLS), Information Sciences (CCS-3) and Advanced Measurement Sciences (B-9), Los Alamos National Laboratory
As an independent postdoctoral fellow, I initiated numerous multidisciplinary collaborations with engineers, physicists, and experimental biologists. I also was the main organizer who led the rapid expansion of the q-bio Summer School from 2010-2013. (Jul. 2008 to Apr. 2013).
- ◇ **Graduate Research Fellow**, Mechanical Engineering, UC-Santa Barbara.
I developed the Finite State Projection approach for the analysis of single-cell gene regulation dynamics. Working closely with experimental biologists, I used this approach to identify and validate a stochastic model of the Pap Pili epigenetic switch in *E. coli* (Aug. 2003 to Jun. 2008).
- ◇ **Graduate Research Fellow**, Aerospace Engineering, Penn State University.
I developed a Finite Element aeroelastic model to simulate the effects of helicopter flight trajectories on the noise due to Blade-Vortex Interactions (May 2000–Aug. 2002).
- ◇ **Undergraduate Research Assistant**, Aerospace Engineering, Penn State University.
I used Finite Element Analysis to optimize the design and control of piezoelectric and viscoelastic materials to alleviate resonant oscillations. I also helped analyze, design, and build a piezoelectric actuator for rotor blade trailing edge flaps (Jan. 1999–May. 2000).

◇ Peer-Reviewed Publications Since Joining CSU

Download full papers at: <http://www.engr.colostate.edu/~munsky>

Contributions: †BEM is 1st or equal contributing 1st author. #BEM is a senior corresponding author.
Students and postdoc advisees from LANL, q-bio and CSU are underlined.

- 60) **LS Forero-Quintero, W Raymond**, T Handa, MN Saxton, T Morisaki, H Kimura, E Bertrand, **B Munsky**, TJ Stasevich, Visualization, Quantification, and Modeling of Endogenous RNA Polymerase II Phosphorylation at a Single-copy Gene in Living Cells, *Bio-Protocol*, **12**:15, 2022. (Impact Factor: 5.78)
- 59) C Shaheen, C Hastie, K Metera, S Scott, Z Zhang, S Chen, G Gu, **L Weber**, **B Munsky**, F Kouzine, D Levens, C Benham, and S Leslie, Non-equilibrium structural dynamics of supercoiled DNA plasmids exhibit asymmetrical relaxation, *Nucleic Acids Research*, 2022. (Impact Factor: 19.16)
- 58) TP Campbell, DEM Ulrich, J Toyoda, **J Thompson**, **B Munsky**, MBN Albright, VL Bailey, MM Tfaily, J Dunbar, Microbial Communities Influence Soil Dissolved Organic Carbon Concentration by Altering Metabolite Composition, *Frontiers in Microbiology*, in press, 2022. (Impact Factor: 5.64)
- 57) **MP May**, **B Munsky**[#], Exploiting noise, non-linearity, and feedback for differential control of multiple synthetic cells with a single optogenetic input, *ACS Synthetic Biology*, **10**:12, 2021. (Impact Factor: 5.57)
- 56) H Jashnsaz, **Z Fox**, **B Munsky**, G Neuert, Building predictive signaling models by perturbing yeast cells with time-varying stimulations resulting in distinct signaling responses, *STAR Protocols*, **2**:3, 2021.

- 55) ME Kroeger, MR DeVan, **J Thompson**, R Johansen, LV Gallegos-Graves, D Lopez, A Runde, T Yoshida, **B Munsky**, S Sevanto, MB Albright. Microbial community composition controls carbon flux across litter types in early phase of litter decomposition. *Environmental Microbiology*, **23**:11, 2021. (Impact Factor: 4.93)
- 54) **LS Forero-Quintero**, **W Raymond**, T Handa, MN Saxton, T Morisaki, H Kimura, E Bertrand, **B Munsky**[#], TJ Stasevich,[#] Live-cell imaging reveals the spatiotemporal organization of endogenous RNA polymerase II phosphorylation at a single gene. *Nature Communications*, **12**:1, 2021. [#]co-senior authors. (Impact Factor: 14.92)
- 53) D Kalb*, **HD Vo***, S Adikari, E Hong-Geller, **B Munsky**[#], J Werner[#], Visualization and modeling of inhibition of IL-1 β and TNF- α mRNA transcription at the single-cell level. *Scientific Reports*, **11**:1, 2021. *co-first authors, [#]co-senior authors. (Impact Factor: 4.379)
- 52) AL Koch, **LU Aguilera**, T Morisaki, **B Munsky**[#], TJ Stasevich[#], Quantifying the spatiotemporal dynamics of IRES versus Cap translation with single-molecule resolution in living cells, *Nat Struct Mol Biol*, **27**, 2020. [#]co-senior authors. (Impact Factor: 11.98).
- 51) MBN Albright, R Johansen, **J Thompson**, D Lopez, LV Gallegos-Graves, M Kroeger, A Runde, R C Mueller, A Washburne, **B Munsky**, T Yoshida, J Dunbar, Soil bacterial and fungal richness forecast patterns of early pine litter decomposition, *Frontiers in Microbiology, section Terrestrial Microbiology*, **11**, 2020. (Impact Factor: 4.235).
- 50) TA Catanach, **HD Vo**, **B Munsky**, Bayesian inference of Stochastic reaction networks using Multifidelity Sequential Tempered Markov Chain Monte Carlo, *Intl. J for Uncertainty Quantification*, **10**:6, 2020. (Impact Factor: 3.16).
- 49) MBN Albright, **J Thompson**, ME Kroeger, R Johansen, DEM Ulrich, LV Gallegos-Graves, **B Munsky**, J Dunbar, Differences in substrate use linked to divergent carbon flow during litter decomposition, *FEMS Microbiology Ecology*, **96**:8, 2020. (Impact Factor: 4.194)
- 48) H Jashnsaz, **Z Fox**, J Hughes, G Li, **B Munsky**[#], G Neuert[#], Diverse cell stimulation kinetics identify predictive signal transduction models, *iScience*, **23**:10, 2020. [#]co-senior authors. (Impact Factor 4.45).
- 47) **Z Fox**, G Neuert, **B Munsky**[#], Optimal Design of Single-Cell Experiments within Temporally Fluctuating Environments,” *Complexity*, 2020. (Impact Factor: 2.591).
- 46) **LU Aguilera**, **W Raymond**, **ZR Fox**, **MP May**, **E Djokic**, T Morisaki, TJ Stasevich, **B Munsky**[#], Computational design and interpretation of live-cell, single-RNA translation experiments, *PLoS Computational Biology*, **15**:10, e1007425, 2019. (Impact Factor: 4.43)
- 45) **J Thompson**, R Johansen, J Dunbar, **B Munsky**[#], Machine learning to predict microbial community functions: An analysis of dissolved organic carbon from litter decomposition, *PLoS ONE*, **14**(7): e0215502, 2019. (Impact Factor: 2.78).
- 44) **M Tanhaemami**, E Alizadeh, C Sanders, B Marrone, **B Munsky**[#], Identification of Label Free Signatures for Flow Cytometry Analyses, *Physical Biology*, **16**:5, 2019. (Impact Factor: 1.82).
- 43) KR Lyon Jr., **LU Aguilera**, T Morisaki, **B Munsky**[#], TJ Stasevich[#], Live-cell single RNA imaging reveals bursts of translational frameshifting, *Molecular Cell*, **75**:1, 2019. [#]co-senior authors. (Impact Factor: 14.25).
- 42) **HD Vo**, **ZR Fox**, **A Baetica**, **B Munsky**[#], Bayesian estimation for stochastic gene expression using multifidelity models, *J Physical Chemistry B*, **123**:10, 2217-2234, 2019. (Impact Factor: 3.15)
- 41) **ZR Fox**, **B Munsky**[#], The finite state projection based Fisher information matrix approach to estimate and maximize the information in single-cell experiments, *PLoS Computational Biology*, **15**:1, e1006365, 2019. (Impact Factor: 4.43).
- 40) [†]**B Munsky**[#], G Li, **ZR Fox**, **DP Shepherd**, G Neuert [#], Distribution shapes govern the discovery of predictive models for gene regulation, *Proc. of the National Academy of Science, USA*, **115**:29, 7533-7538, 2018. (Impact Factor: 9.58)
- 39) **L Weber**, **W Raymond**, **B Munsky**[#], Identification of Gene regulation models from single-cell data, *Physical Biology*, **15**:5, 055001, 2018. (Impact Factor: 1.82).

- 38) LF Hartje, **B Munsky**, TW Ni, CJ Ackerson, CD Snow, Adsorption-Coupled Diffusion of Gold Nanoclusters within a Large-Pore Protein Crystal Scaffold, *The Journal of Physical Chemistry B*, **121**:32, 7652-7659, 2017. (Impact Factor: 3.15).
- 37) #**R Johnson**, **B Munsky**, The finite state projection approach to analyze dynamics of heterogeneous populations, *Physical Biology*, **14**:3, 035002, 2017. (Impact Factor: 1.82).
- 36) **ZR Fox**, G Neuert, **B Munsky**#, Finite state projection based bounds to compare chemical master equation models using single-cell data, *J. Chemical Physics*, **145**:7, 074101, 2016. (Impact Factor: 3.00).
- 35) †**B Munsky**#, **ZR Fox**, G Neuert, Integrating Single-Molecule Experiments and Discrete Stochastic Models to Understand Heterogeneous Gene Transcription, *Methods*, **85**, 12-21, 2015. (Impact Factor: 3.50).
- 34) †**B Munsky**#, G Neuert, From analog to digital models of gene regulation, *Physical Biology*, **12**:4, 045004, 2015. (Impact Factor: 1.82).
- 33) **P Szymanska**, **N Gritti**, **JM Keegstra**, **M Soltani** and **B Munsky**#, Using noise to control heterogeneity of isogenic populations in homogenous environments, *Physical Biology*, **12**:4, 045003, 2015. (Impact Factor: 1.82).
- 32) A Senecal, **B Munsky**, F Proux, N Ly, FE Braye, C Zimmer, F Mueller, X Darzacq, Transcription factors modulate c-Fos transcriptional bursts, *Cell Reports*, **8**:1, 75-83, 2014.

◇ Peer-Reviewed Publications Prior to Joining CSU

- 31) **D Shepherd**, N Li, S Micheva-Viteva, **B Munsky**, E Hong-Geller, and J Werner, Counting small RNA in pathogenic bacteria. *Analytical Chemistry*, **85**:10, 4938-4943, 2013. **Cover Article**.
- 30) †**G. Neuert***, **B Munsky***, R-Z. Tan, L. Teytelman, M Khammash, A van Oudenaarden, Systematic Identification of Signal-Activated Stochastic Gene Regulation, *Science*, **339**:6119, 584-587, 2013. *Contributed Equally.
- 29) **C Lou**, B Stanton, Y-J Chen, **B Munsky**, CA Voigt, Ribozyme-based “insulator parts” buffer synthetic circuits from genetic context, *Nature Biotechnology*, **30**:11, 1137-1142, Nov. 2012.
- 28) #†**B Munsky***, G Neuert*, A van Oudenaarden, Using Gene Expression Noise to Understand Gene Regulation, *Science*, **336**:6078, 183-187, Apr. 2012. *Contributed Equally.
- 27) **J Tapia**, J Faeder, **B Munsky**#, Adaptive Coarse-Graining for Transient and Quasi-Equilibrium Analyses of Stochastic Gene Regulation, *Proc. of the 51st IEEE Conference on Decision and Control*, 5361-5366, Maui, HI, Dec. 2012.
- 26) **D Shepherd**, N Li, E Hong-Geller, **B Munsky**, and J Werner, New tools for discovering the role sRNA plays in cellular regulation, *Proc. SPIE* 8228:822808, San Francisco, CA, Jan. 2012.
- 25) #†**B Munsky** and M Khammash, Identification from stochastic cell-to-cell variation: A genetic switch case study, *IET Systems Biology*, **4**:6, 356-366, Nov. 2010.
- 24) #†**G Bel***, **B Munsky***, and I. Nemenman, Simplicity of Completion Time Distributions for Common Complex Biochemical Processes, *Physical Biology*, **7**:016003, Mar. 2010. *Contributed Equally. **Most read article of 2010 at *Physical Biology*. Reviewed at *sciencedaily.com*, *biology-online.org*, *PhysOrg.com* and many others.**
- 23) †**B. Munsky**, I. Nemenman, and G. Bel, Specificity and Completion Time Distributions of Biochemical Processes, *J. of Chemical Physics*, **131**:235103, Dec. 2009.
- 22) #†**B. Munsky**, B. Trinh and M. Khammash, Listening to the Noise: Random Fluctuations Reveal Gene Network Parameters, *Molecular Systems Biology*, **5**:318, Oct. 2009. **Faculty of 1000 Biology Must Read and awarded the 2010 Leon Heller Postdoctoral Publication Prize.**
- 21) †**B. Munsky** and M. Khammash, Using Noise Transmission Properties to Identify Stochastic Gene Regulatory Networks, *Invited Paper: Proc. of the 47th IEEE Conference on Decision and Control*, Cancun, Mexico, Dec. 2008.
- 20) #†**B. Munsky** and M. Khammash, Transient Analysis of Stochastic Switches and Trajectories with Applications to Gene Regulatory Networks, *IET Systems Biology*, **2**:5, 323-333, Sept. 2008.

- 19) †B. Munsky and M. Khammash, Computation of Switch Time Distributions in Stochastic Gene Regulatory Networks, *Invited Paper-Proc. of the 27th American Control Conference*, Seattle, WA, Jun. 2008. **Best Presentation Award.**
- 18) †B. Munsky and M. Khammash, The FSP Approach for the Analysis of Stochastic Noise in Gene Networks, *IEEE Trans. Automat. Contr./IEEE Trans. Circuits and Systems: Part 1*, **52**:1, 201-214, Jan. 2008.
- 17) P. Inglesias, M. Khammash, B. Munsky, E. Sontag and D. Del Vecchio, Systems Biology and Control – A Tutorial, *46th IEEE Conference on Decision and Control*, New Orleans, LA, Dec. 2007.
- 16) †B. Munsky and M. Khammash, A Multiple Time Interval Finite State Projection Algorithm for the Solution to the Chemical Master Equation, *J. Comp. Phys.*, **226**:1, 818-835, Sept. 2007.
- 15) †B. Munsky and M. Khammash, Analysis of Noise Induced Stochastic Fluctuations in Gene Regulatory Networks, *J. SICE*, **46**:5, 405-411, May 2007.
- 14) †M. Khammash* and B. Munsky*, Systems Theory Applications in Biology: From Stochastic Chemical Kinetics to Deterministic Model Invalidation, *Invited Paper-Proc. of the European Control Conference*, Kos, Greece, Jul. 2007.*Contributed Equally.
- 13) †B. Munsky, S. Peleš and M. Khammash, M., Stochastic Analysis of Gene Regulatory Networks Using Finite State Projection and Singular Perturbation, *Invited Paper-Proc. of the 26th American Control Conference*, 1323-1328, New York, NY, Jul. 2007.
- 12) †B. Munsky and M. Khammash, A Reduced Model Solution for the Chemical Master Equation Arising in Stochastic Analyses of Biological Networks, *Proc. of the 45th IEEE Conference on Decision and Control*, 25-30, San Diego, CA, Dec. 2006.
- 11) †S. Peleš*, B. Munsky* and M. Khammash, Reduction and Solution of the Chemical Master Equation Using Time Scale Separation and Finite State Projection, *J. of Chemical Physics*, **125**:204104, Nov. 2006. *Contributed Equally.
- 10) †B. Munsky and M. Khammash, Modeling and Analysis of a Bacterial Stochastic Switch, *Proc. of the 14th Mediterranean Conference on Control and Automation*, Ancona, Italy, Jun. 2006.
- 9) †B. Munsky and M. Khammash, The Finite State Projection Algorithm for the Solution of the Chemical Master Equation, *J. of Chemical Physics*, **124**:044104, Jan. 2006.
- 8) †B. Munsky, A. Hernday, D. Low, and M. Khammash, Stochastic Modeling of the Pap Pili Epigenetic Switch, *Proc. of Foundations of Systems Biology in Engineering*, 145-148, Santa Barbara, CA, Aug. 2005.
- 7) †B. Munsky, F. Gandhi and L. Tauszig, Analysis of Helicopter Blade-Vortex Interaction Noise with Flight Path or Attitude Modification, *J. American Helicopter Society*, **50**:2, 123-137, Apr. 2005.
- 6) †F. Gandhi and B. Munsky, Effectiveness of Active Constrained Layer Damping Treatments in Attenuating Resonant Oscillations, *J. of Vibration and Controls*, **8**:6, 747-775, 2002.
- 5) †B. Munsky, F. Gandhi and L. Tauszig, *Proc. of the 58th Annual Forum of the AHS, Acoustic Session*, **2**, 1531-1551, Montreal, Canada, Jun. 2002.
- 4) †F. Gandhi and B. Munsky, Comparison of Damping Augmentation Mechanisms with Position and Velocity Feedback in Active Constrained Layer Treatments, *J. of Intelligent Material Systems and Structures*, **13**:5, 259-326, May 2002.
- 3) L. Centolanza, E. Smith and B. Munsky, Design, Fabrication, and Experimental Testing of an Induced-Shear Piezoelectric Actuator for Rotor Blade Trailing Edge Flaps, *Smart Materials and Structures*, **11**, 24-35, Feb. 2002.
- 2) †B. Munsky and F. Gandhi, *Proc. of the AIAA/ ASME/ ACSE/ AHS/ ASC Structures, Structural Dynamics, and Materials Conference*, Seattle, Washington, Apr. 2001.
- 1) †F. Gandhi and B. Munsky, *Proc. of SPIE Smart Structures and Materials*, **3989**, Orange County, CA, pp. 61-72, Mar. 2000.

◇ Submitted Manuscripts and Preprints

- 61) **HD Vo, B Munsky**,# A Parallel Implementation of the Finite State Projection Algorithm for the Solution of the Chemical Master Equation, *bioRxiv*, 2020

- 62) **J Thompson**, N Lubbers, M E Kroeger, R DeVan, R Johansen, J Dunbar, **B Munsky**[#], Probabilistic Ranking Of Microbiomes Plus Taxa Selection to discover and validate microbiome function models for multiple litter decomposition studies, *bioRxiv*, 2020
- 63) **HD Vo**, **B Munsky**[#], Analyzing and designing single-cell experiments to harvest fluctuation noise while rejecting measurement noise, *under review*, 2023

◇ Books Edited

- 64) **B Munsky**[#], WS Hlavacek, and LS Tsimring, eds., Quantitative Biology: Theory, Computational Methods and Examples of Models. MIT Press, 1st ed., 2018.
I planned, solicited contributions, edited, and published this 30-chapter, community-written textbook on quantitative biology. The project involved contributions from more than 70 authors and was published in 2018 by MIT Press.

◇ Book Chapters

- 65) **L Weber**, **W Raymond**, **B Munsky**[#], Identification of Gene Regulation Models from Single-Cell Data, in *Quantitative Biology: Theory, Computational Methods and Examples of Models* (B. Munsky, L. S. Tsimring, and W. S. Hlavacek, eds.), ch. 30, MIT Press, Cambridge, Massachusetts, 2018.
- 66) **ZR Fox**, **B Munsky**[#], Stochasticity or noise in biochemical reactions, in *Quantitative Biology: Theory, Computational Methods and Examples of Models* (B Munsky, LS Tsimring, and WS Hlavacek, eds.), ch. 5, MIT Press, Cambridge, Massachusetts, 2018.
- 67) **B Munsky**, Modeling Cellular Variability, in *Quantitative Biology From Molecular to Cellular Systems*, pp. 234-266, M. Wall, Ed., Taylor & Francis Group, New York, NY, 2012.
- 68) M Khammash* and **B Munsky**^{*}, Stochastic Gene Expression: Modeling, Analysis, and Identification, in B Levine, *The Control Handbook, Second Edition*, Taylor & Francis Group, New York, NY, 2010.
*Contributed equally.

◇ Published Meeting Reports

- 69) W S Hlavacek, S Gnanakaran, **B Munsky**, M E Wall, J R Faeder, Y Jiang, I Nemenman, O Resnekov, The eighth q-bio conference: meeting report and special issue preface, *Physical Biology*, **12**:6, 060401, 2015.
- 70) I Nemenman, J R Faeder, S Gnanakaran, W S Hlavacek, **B Munsky**, M E Wall, Y Jiang, The Seventh q-bio Conference: meeting report and preface, *Physical Biology*, **11**:4, 040301, 2014.
- 71) O Resnekov, **B Munsky**, WS Hlavacek, Perspective on the q-bio Summer School and Conference: 2007–2014 and beyond, *Quantitative Biology*, **2**:1, 54-58, 2014.
- 72) I Nemenman, S Gnanakaran, **B Munsky**, M E Wall, Y Jiang, W S Hlavacek, J R Faeder, Special section dedicated to the sixth q-bio conference: meeting report and preface, *Physical Biology*, **10**:3, 030301, 2013.
- 73) I Nemenman, S Gnanakaran, W Hlavacek, Y Jiang, **B Munsky**, M Wall and J Faeder. The Fifth Annual q-bio Conference on Cellular Information Processing. *Physical Biology*, **9**:5, 050201, 2012.

◇ Mentoring

- ◇ **Postdocs**: Douglas Shepherd (2011-2013); Vijay Gupta (2014-2015); Luis U. Aguilera (2017-present); Linda Forero Quintero (2017-2022); Huy Vo (2017-2022)
- ◇ **Graduate Students Mentored**: Zachary Fox (Ph.D. 2014-2019); Lisa Weber (Ph.D. 2015-present); Mohammad Tanhaemami (M.S. 2016-2020); Michael May (Ph.D. 2017-present); Jaron Thompson (M.S. 2018-2020); William Raymond (Ph.D. 2018-present); Eric Ron (M.S. 2020-present); Joshua Cook (M.S. 2021-present)
- ◇ **Undergraduate Students**: Lucas Suazo (2015-2016); Michael May (2015-2017); Chase Hunter (2016-2017); Andrew Fox (2016-2018); William Raymond (2016-2018); Charlotte Mitchell (2017-2018); Jaron Thompson (2017-2018); Elliot Djokic (2018-2019); Charis Ellis (2018-2019); Zachary Haigh (2019-2020); Torin Moore (2019-2020); Joshua Cook (2020-2021); Rachel Keating (2020-2021); Katie Davis (2020-2021); Stuart McKnight (2020-2021); Brooke Silagy (2020-2021); Sawyer Halingstadt (2022-present); Alison Shad (2022-present)
- ◇ **Ph.D. Student Committees**: Todd Zurlinden (Ph.D. 2016), Elaheh Alizadeh (Ph.D. 2018), Wenlong Xu (Ph.D. 2018), Ania Baetica (Ph.D. 2018), Kenneth Lyon (Ph.D. 2019), Bryce Assay (Ph.D. 2019), Zachary Fox (Ph.D. 2019), Xinran Xu (Ph.D. 2020), Amanda Koch (Ph.D. 2021), Kristen Eaton (Ph.D. 2021)

- ◇ **M.S. Student Committees:** Mohammad Tanhaemami (M.S. 2020), Jaron Thompson (M.S. 2020), Ryan Arey (2020), Sohaib Habiballah (2020)

◇ Selected Tutorials and Lectures

- ◇ B. Munsky, **Z. Fox**, **W. Raymond**, The Stochastic System Identification Toolkit, *The 11th q-bio Conference*, New Brunswick, NJ, July 2017.
- ◇ B. Munsky, Analyzing and Identifying Stochastic Models Using Flow Cytometry and Fluorescence Microscopy, *The 4th q-bio Conference on Cellular Information Processing*, Santa Fe, NM, Jul.-Aug. 2010. (Updated and presented with Gregor Neuert at the *The 5th q-bio Conference*, Santa Fe, NM, Aug. 2012.)
- ◇ B. Munsky, Stochastic effects in systems biology: Theoretical Foundations and Experimental Results, Part I and II, *The 2nd q-bio Summer School on Cellular Information Processing*, Los Alamos, NM, Jul.-Aug. 2008 (Also updated and presented at *The 3rd q-bio Summer School on Cellular Information Processing*, Los Alamos, NM, Jul.-Aug. 2009).
- ◇ B. Munsky and M. Khammash, Stochastic Gene Expression in Systems Biology, *The 2nd q-bio Conference on Cellular Information Processing*, Santa Fe, NM, Aug. 6, 2008.
- ◇ M. Khammash and B. Munsky, Stochastic Gene Expression in Systems Biology, *The 8th Intl. Conference on Systems Biology*, Long Beach, CA, Oct. 2007.

◇ Invited Talks (since 2014)

◇ International

- ◇ *Society for Mathematical Biology*, Methods for Biological Modeling Subgroup, Online Seminar Series, June 2021.
- ◇ *Banff International Research Station*, Workshop on Advances in Theoretical and Experimental Methods for Analyzing Complex Regulatory Networks, Banff, Canada, February 2020.
- ◇ *Department of Biosystems Science and Engineering*, Eidgenossische Technische Hochschule, Basel, Switzerland, October 2017.
- ◇ *Department of Bioengineering Seminar*, Imperial College in London, England, January 2017.
- ◇ *Biomedical Research Seminar*, Friedrich-Miescher-Institute, Basel, Switzerland, December 2016
- ◇ *Dahlem Colloquium in Molecular Genetics*, Max Planck-Institute for Molecular Genetics, Berlin, Germany, December 2016.
- ◇ *Mathematical and Computational Medicine Conference*, Cancun, Mexico, December, 2014.

◇ Domestic

- ◇ *The Biological Physics/Physical Biology Seminar Series*, Virtual Seminar Series, Nov., 2022.
- ◇ *Center for Quantitative Systems Biology*, Vanderbilt University, Nashville, TN, Nov., 2022.
- ◇ *The Complexity of Dynamics and Kinetics from Single Molecules to Cells Workshop at the Telluride Science Research Center*, Telluride, Colorado, June 2022.
- ◇ *Center for Control, Dynamical Systems and Computation Seminar Series*, University of California, Santa Barbara, February 2022.
- ◇ *Department of Applied Physics and Material Science Colloquium*, University of Northern Arizona, October, 2021.
- ◇ *Insights in Signaling Dynamics and Encoding*, Online Seminar Series, September 2021.
- ◇ *The Complexity of Dynamics and Kinetics from Single Molecules to Cells Workshop at the Telluride Science Research Center*, Telluride, Colorado, June 2019.
- ◇ *Computational Biology Program Seminar*, University of Pittsburgh and Carnegie Mellon University, Pittsburgh, PA, November 2018.
- ◇ *Mathematics Colloquium*, Georgia State University, Atlanta, GA, October 2018.
- ◇ *Center for Quantitative Systems Biology*, Vanderbilt University, Nashville, TN, April 2018.
- ◇ *Northwestern Institute on Complex Systems*, Northwestern University, Evanston, IL, April 2018.

- ◇ *Chemistry Department Seminar*, Portland State University, Portland, OR, February 2018.
- ◇ *Biophysics Department Seminar*, Purdue University, West Lafayette, IN, February 2018.
- ◇ *The Complexity of Dynamics and Kinetics from Single Molecules to Cells Workshop at the Telluride Science Research Center*, Telluride, Colorado, June 2017.
- ◇ *Center for Cyber-Physical Systems and the Internet of Things*, University of Southern California, Los Angeles, CA, March 2017.
- ◇ *Center for Nonlinear Studies Seminar*, Los Alamos National Laboratory, Los Alamos, NM, June 2016.
- ◇ *Mathematical Biosciences Institute: Workshop on Modeling and Inference from Single Molecules to Cells*, Columbus, Ohio, February 2016.
- ◇ *Institute for Mathematics and its Applications: Biological Systems and Networks*, Minneapolis, Minnesota, November 2015.
- ◇ *The Complexity of Dynamics and Kinetics from Single Molecules to Cells Workshop at the Telluride Science Research Center*, Telluride, Colorado, June 2015.
- ◇ *SIAM Conference on Applications of Dynamical Systems*, Snowbird, Utah, May 2015.
- ◇ *University of Alabama, Tuscaloosa*, Mathematics Department Seminar, April 2015.
- ◇ *American Physical Society March Meeting*, San Antonio, Texas, March 2015.
- ◇ *California Institute of Technology*, Computing and Mathematical Sciences Colloquium, January, 2015.
- ◇ *Harvard Medical School*, Systems Biology Theory Lunch Chalk Talk, October 2014.
- ◇ *University of Colorado, Boulder*, iQBiography, October 2014.
- ◇ *University of Colorado, Denver*, Pediatric Heart Lung Center, September 2014.

◇ Other Presentations

◇ Oral Presentations by Advised Students and Postdocs

- ◇ **Linda S Forero-Quintero**, “Live-cell imaging reveals the spatiotemporal organization of endogenous RNA polymerase II phosphorylation at a single copy gene,” *Fragile Nucleosome Seminar Series* (Online Talk), May 2021.
- ◇ **Luis U Aguilera**, “A computational framework to study single-molecule translation dynamics,” *Colloquium for the presentation of alumni research areas. Center for Research and Advanced Studies of the National Polytechnic Institute*, (Online Talk) Monterrey, Mexico, March 2021.
- ◇ **Luis U Aguilera**, “A computational framework to study single-molecule translation dynamics,” *American Physical Society (APS) March Meeting*, (Online Talk) March 2021.
- ◇ **Huy Vo**, “Maximizing Information from Noisy Measurements of Single-Cell Gene Expression Distributions,” *American Physical Society (APS) March Meeting*, (Online Talk) March 2021.
- ◇ **Michael P May**, “Three Pillars Of Stochastic Control: Autoregulation, Noise and Feedback Control,” *American Physical Society (APS) March Meeting*, (Online Talk) March 2021.
- ◇ **Huy Vo**, “Measurement Noise and Optimal Design of Single-Cell Experiments,” *Workshop on Visualizing Living Systems, Los Alamos National Laboratory*, February 2021, Invited talk.
- ◇ **Linda S Forero-Quintero**, “Live-cell imaging reveals the spatiotemporal organization of endogenous RNA polymerase II phosphorylation at a single gene,” *Workshop on Visualizing Living Systems, Los Alamos National Laboratory*, February 2021, Invited talk.
- ◇ **Luis U Aguilera**, “A computational framework to study single-molecule canonical and non-canonical translation dynamics,” *Workshop on Visualizing Living Systems, Los Alamos National Laboratory*, February 2021, Invited talk.
- ◇ **Huy Vo**, “New Tools for the Design and Analysis of Single-Cell Experiments,” *Society for Mathematical Biology Annual Meeting*, July 2019, Invited talk.
- ◇ **Luis U Aguilera**, “Stochastic Modeling of Single RNA Translation Dynamics,” *Gordon Conference on Stochastic Physics in Biology*, Ventura, CA, January 2019.
- ◇ **Linda S Forero-Quintero**, “Single-gene transcription dynamics at the HIV-1 reporter,” *Colorado Chromatin Meeting*, Fort Collins, CO, Aug. 2018, Contributed talk.

- ◇ **Zachary Fox**, “Fisher Information for the Design of Single-Cell Experiments with Discrete Stochastic Models,” *Annual meeting for the Society of Industrial and Applied Mathematics*, July 2018, Contributed talk.
- ◇ **Huy Vo**, “Noise Makes Gene Regulation Mechanisms Harder to Analyze But Easier to Identify and Predict,” *Annual meeting for the Society of Industrial and Applied Mathematics*, July 2018, Invited talk.
- ◇ **Zachary Fox**, “Designing Single-Cell Experiments with Discrete Stochastic Models,” *The 62nd Annual Meeting of the Biophysical Society*, San Francisco, CA, Feb. 2018, Contributed talk.
- ◇ **Michael May**, **Zachary Fox**, *The 11th q-bio Conference on Cellular Information Processing*, New Brunswick NJ, July, 2017, Contributed talk.
- ◇ **Zachary Fox**, *The 11th q-bio Conference on Cellular Information Processing*, New Brunswick NJ, July, 2017, Poster spotlight talk.
- ◇ **Zachary Fox**, *ISCB Rocky Mountain Bioinformatics Conference*, Snowmass, CO, December 2016, Contributed talk.
- ◇ **Zachary Fox**, *The Complexity of Dynamics From Single Molecules to Cells*, Telluride Science Research Center, July 2015, Contributed talk.
- ◇ **Contributed Oral Presentations by Brian Munsky**

- ◇ *The 11th q-bio Conference on Cellular Information Processing*, New Brunswick NJ, July, 2017.
- ◇ *The 8th q-bio Conference on Cellular Information Processing*, Santa Fe, NM, August, 2014.
- ◇ *The 5th Intl. Conference on Algal Biomass, Biofuels and Bioproducts*, Santa Fe, NM, June, 2014.
- ◇ *The 3rd q-bio Conference on Cellular Information Processing*, Santa Fe, NM, August, 2009.
- ◇ *The 47th IEEE Conference on Decision and Control*, Cancun, Mexico, December 2008.
- ◇ *The 8th Intl. Conference on Systems Biology*, Long Beach, CA, October 2008.
- ◇ *The 1st q-bio Conference on Cellular Information Processing*, Santa Fe, NM, August 2007.
- ◇ *The 27th American Control Conference*, Seattle, WA, June 2008. **Best Presentation Award.**
- ◇ *The 26th American Control Conference*, New York, NY, July 2007.
- ◇ *The 45th IEEE Conference on Decision and Control*, San Diego, CA, December 2006.
- ◇ *The 58th Annual Forum of the American Helicopter Society*, Montreal, Canada, June 2002.
- ◇ *The AIAA/ ASME/ ACSE/ AHS/ ASC Structures, Structural Dynamics, and Materials Conference*, Seattle, WA, April 2001.
- ◇ *SPIE Smart Structures and Materials*, Orange County, CA, March 2000.
- ◇ **Poster Presentations by Advised Students**

- ◇ **Zachary Fox** and B Munsky, “Model-driven design of single-cell and single-molecule experiments,” Gordon Conference on Stochastic Physics in Biology, Ventura, CA, January 2019.
- ◇ **Luis U Aguilera**, T Morisaki, TJ Stasevich, B Munsky, “Stochastic Modeling of Single RNA Translation Dynamics,” 62nd Annual Meeting-Biophysical Society, Feb. 2018.
- ◇ **Linda S. Forero-Quintero**, M May, E Bertrand, E Basyuk, H Kimura, B Munsky, T Stasevich, “Transcription dynamics at the HIV-1 reporter locus,” 62nd Annual Meeting-Biophysical Society, Feb. 2018.
- ◇ **Lisa Weber**, **William Raymond**, and B Munsky, “Identification of Gene Regulation Models from Single Cell Data,” 11th Annual q-bio Conference, New Brunswick NJ, July, 2017.
- ◇ **Mohammad Tanhaemami**, E Alizadeh, C Sanders, B Marrone, and B Munsky, 11th Annual q-bio Conference, New Brunswick NJ, July, 2017.
- ◇ **Zachary Fox** and B Munsky, “Systematic Integration of Single-Cell Experiments and Discrete Stochastic Models,” Gordon Conference on Stochastic Physics in Biology, Ventura, CA, January 2017.
- ◇ **Zachary Fox** and B Munsky “Identifying Models and Predicting Gene Expression: New Computational Tools,” 10th Annual q-bio Conference, Nashville TN. July 2016.

- ◇ **Zachary Fox**, A Baetica, H Vo, and B Munsky, “Data-Driven Reduction and Identification of Stochastic Gene Regulatory Models,” 10th Annual q-bio Conference, Nashville TN. July 2016.

◇ Honors and Awards (see also page 1) _____

◇ Advised Students _____

- ◇ **Michael May**, GAUSSI Fellowship, 2018-2019; Chemical and Biological Engineering Undergraduate Research Award, 2017.
- ◇ **Jaron Thompson**, Walter Scott Jr. College of Engineering Graduate Fellowship, 2018.
- ◇ **Lisa Weber**, Walter Scott, Jr. College of Engineering Graduate Teaching Fellowship, 2017-2018 and 2018-2019.
- ◇ **Zachary Fox**, GAUSSI Fellowship, 2015-2016; Colorado State University VPR Fellowship, 2017; SBME Outstanding Graduate Student Overall Excellence Award, 2017.
- ◇ **Lucas Suazo**, Denver Metro Chamber Leadership Foundation, Student Leader of the Year, 2015.

◇ Brian Munsky _____

- ◇ 2019, NSF CAREER Award, Div Of Molecular and Cellular Bioscience, USA
- ◇ 2019, George T. Abell Outstanding Early-Career Faculty Award, Walter Scott, Jr. College of Engineering, Colorado State University, Fort Collins, Colorado, USA
- ◇ 2016,2022, Maximizing Investigators’ Research Award (MIRA), National Institute of General Medical Sciences (NIGMS), Bethesda, Maryland, USA
- ◇ 2012 Los Alamos National Laboratory Postdoctoral Distinguished Performance award.
- ◇ 2009-2010 Leon Heller Postdoctoral Publication Prize at the Los Alamos National Laboratory.
- ◇ 2010 SIAM Conference in the Life Sciences (LS10) Poster Award
- ◇ 2008 Best Ph. D. Dissertation Award–UCSB Department of Mechanical Engineering.
- ◇ Best Presentation in Session, 27th American Controls Conference in Seattle, WA, (June 2008)
- ◇ American Controls Conference Student Travel Award (2007, 2008)
- ◇ University of California Student Travel Grant (2007)
- ◇ NSF Graduate Fellowship Honorable Mention (2001)
- ◇ Penn State Schreyer Ambassador Travel Grant (1999)
- ◇ American Helicopter Society Vertical Flight Foundation Award (Twice: 1999, 2000)
- ◇ Mary Ilgen Memorial Scholarship (1999–2000)
- ◇ Graduated with Honors from the Penn State Schreyer Honors College (May 2000).
- ◇ Penn State Deans List (7 times).

◇ Fellowships and Research Support _____

Awards to CSU in bold font (CSU total = \$5,447k).

- ◇ **NIH/NIHMS R25 1R35GM124747 (09/2022-08/2027): “Integrating Multi-Scale Imaging, Reaction-Diffusion Simulation, and Markov Model Inference to Enhance Predictive Design and Interpretation of Single-Molecule Gene Regulation Experiments,”** Awarded \$1,613k over five years, Role: PI.
- ◇ **NSF CAREER Award:** “CAREER: Stochastic Analyses to Optimize Designs for Single-Cell Optical Microscopy Experiments,” \$809k over five years, Role: PI.
- ◇ **DOE-NNSA-Los Alamos National Laboratory (01/2018-08/2021):** “Microbial Carbon Cycling in Terrestrial Ecosystems,” CSU Subcontract for \$150k over three years, Role: CSU-PI.
- ◇ **NIH/NIHMS R25 1R35GM124747 (09/2017-08/2022): “Using cellular fluctuations and computational analyses to probe biological mechanisms,”** Awarded \$3,220k over five years, Role: PI.
- ◇ **W.M. Keck Foundation Medical Research Grant (07/2016-06/2021):** “Multiplexed Real-Time Quantification of RNA to Protein Translation in Live Cells” Awarded \$1,200k over four years, Role: coPI.

- ◇ **DTRA FRCALL 12-3-2-0002 (09/2016-08/2017)**: “Bet-hedging in pathogens: Targeting bacterial persistence to combat infectious disease” CSU Subcontract for \$65k for one year. Role: CSU-PI.
- ◇ NIH/NIHMS R25 1R25GM105608-01 (04/2013-01/2017): “The q-bio Summer School,” NMC Awarded \$685k over four years, Role: Contact PI.
- ◇ 2011 NSF/I2CAM Workshop Support Award (\$25,000 in support).
- ◇ DOE/LANL/LDRD: “Illuminating the Dark Matter of the Genome: Small RNAs as Novel Targets for Bioterrorism Countermeasures”, Oct. 2010–Oct. 2013, co-investigator.
- ◇ Richard P. Feynman Distinguished Postdoctoral Fellowship at LANL (March 2008–March 2013).
- ◇ Director’s Postdoctoral Fellowship at LANL (July 2008–March 2010).
- ◇ UCSB Chancellor’s Graduate Research Fellowship (Sep. 2003–May 2008).
- ◇ UCSB Department of Mechanical Engineering Graduate Fellowship (Sep. 2003–May 2008).
- ◇ National Defense Science and Engineering Graduate (NDSEG) Fellowship (2001–2002).
- ◇ Penn State University College of Engineering Graduate Fellowship (2000–2001).

◇ **Service Activities and Community Outreach**

- ◇ Founder and lead organizer for the Undergraduate Quantitative Biology (uq-bio) Summer School, Fort Collins, CO (2021-present).
- ◇ Proposal review panelist for NIGMS Maximizing Investigatory Research Award (MIRA, 2021).
- ◇ NSF proposal review panelist for the Division of Molecular and Cellular Biosciences (2020).
- ◇ Proposal review panelist for NIH Innovative Programs to Enhance Research Training (IPERT, 2019).
- ◇ Proposal review for Los Alamos National Laboratory, Laboratory Directed Research and Development (LDRD) Program (2019).
- ◇ Proposal review panelist for NIH Modeling and Analysis of Biological Systems (MABS, 2018).
- ◇ Organizer and Stochastic Gene Regulation Theme Leader for the 4th-13th *q-bio Summer Schools in Cellular Information Processing* in Los Alamos NM (2010-11), Santa Fe NM (2012-12), Albuquerque NM (2013-14), Fort Collins CO (2015-17), and Houston TX (2018-19).
- ◇ Founding member of the *q-bio Board of Directors* (2012-2017).
- ◇ NSF proposal review panelist for the Division of Molecular and Cellular Biosciences (2016).
- ◇ NIH proposal review panelist for the Big Data to Knowledge (BD2K) Open Educational Resources for Skills Development in Biomedical Big Data Science (2016).
- ◇ Member of the following academic committees: CSU Chemical and Biological Engineering Diversity, Equity, and Inclusion Committee (2020-present); CSU Chemical and Biological Engineering Undergraduate Affairs Committee (2015-present); CSU School of Biomedical Engineering Graduate Curriculum Committee (2015-present); CSU School of Biomedical Engineering Undergraduate Affairs Committee (2015-2017, Chair 2018-present); CSU College of Engineering Technology Committee (2015-2017, Chair in 2016); CSU Engineering Student Technology Committee (2015-2017)
- ◇ Faculty mentor for the CSU student chapter of the International Society of Pharmaceutical Engineers (2014-present).
- ◇ Co-Organizer for 5th-8th *q-bio Conferences* (Santa Fe, New Mexico, 2011-2014).
- ◇ Co-Organizer for a special session on Stochastic Analysis and Inference of Biochemical Processes at the 51st *IEEE Conference on Decision and Control*, Maui, HI, Dec. 2012.
- ◇ Co-Organizer for a tutorial workshop on Identification, Analysis and Design of Biological Networks at the 51st *IEEE Conference on Decision and Control*, Maui, HI, Dec. 2012.
- ◇ Co-Chair for the Biological Systems and Control Dynamics session in the Bioinformatics and Systems Biology track at the Biomedical Engineering Society 2012 Annual Meeting, Atlanta, GA, Oct. 2012.
- ◇ Co-Organizer of *The 3rd Workshop on Stochasticity in Biochemical Reaction Networks* at the Banff International Research Station (BIRS) in Banff, Canada, Sept. 11-16, 2011. **Registration, lodging and meals paid for all 42 participants through competitive BIRS grant. Airfare paid for junior researchers through a competitive ICAM grant.**

- ◇ Co-Organizer of *The 2nd Workshop on Stochasticity in Biochemical Reaction Networks* at BIRS in Banff, Canada on Sep. 25-27, 2009. **Registration, lodging and meals paid for all 25 participants through competitive BIRS grant.**
- ◇ Co-Organizer of *The 2009-10 Center for NonLinear Studies q-bio Seminar Series*, Los Alamos National Laboratory. Duties include choosing, inviting, scheduling and arranging funding for external visitors.
- ◇ Referee for *iScience*, *Soil Biology and Biochemistry*, *Open Biology*, *Nature Communications*, *Science Signaling*, *Cell Reports*, *Nature Structural and Molecular Biology*, *Physical Biology*, *Automatica*, *Physics Review Letters*, *Journal of Physics A: Mathematical and Theoretical*, *Physics Letters A*, *The IEEE Conference on Decision and Control*, *The IEEE American Controls Conference*, *The IFAC Symposium on System Identification*, *IET Systems Biology*, *Biotechnology Progress*, *PLoS Computational Biology*, and *Smart Materials and Structures*, and others.
- ◇ Past or current member of the Institute of Electrical and Electronics Engineers (IEEE), American Physical Society (APS), the American Association for the Advancement of Science (AAAS), the Society for Industrial and Applied Mathematics (SIAM), the International Society for the Advancement of Cytometry (ISAC), and the Biomedical Engineering Society (BMES).