Sookkyung Lim

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RESEARCH INTERESTS

Mathematical Biology, Computational Fluid Dynamics, Scientific Computing,
Biomechanics, Mathematical Modeling, Dynamical Systems, Systems Biology.

EDUCATION

May 2003	Ph.D.	Mathematics, Courant Institute, NYU, USA. (Advisor: C.S. Peskin)
Feb 1996	M.S.	Mathematics, Ewha Women's University, South Korea.
Feb 1994	B.A.	Mathematics, Ewha Women's University, South Korea.

EMPLOYMENT

2017-present	Professor, Department of Mathematical Sciences, UC.
2012-2017	Associate Professor, Department of Mathematical Sciences, UC.
2006-2012	Assistant Professor, Department of Mathematical Sciences, University of Cincinnati.
2003-2006	Postdoctoral researcher, Mathematical Biosciences Institute, Ohio State University.
2000-2003	Junior Research Scientist employed by Dr. Charles Peskin, New York University.

AWARDS AND FELLOWSHIPS

- NSF DMS Mathematical Biology, PI, $150K (8/1/2019-7/31/2022). Fluid-mechanical Interaction of a Bacterial Swimmer with Flagella and Bacterial Chemotaxis.
- Taft Research Travel, $3100 (Dec, 2019).
- UC Collaborative Advancement Grants Program - Strategic Teams, co-PI, $70000 (6/1/2019-11/30/2020). Integrated Theoretical and Experimental Approach to Design Elastic Pillar-Tethered Stent To Enhance Carotid Stenosis Treatment (with PI Y. Park, UC and a co-PI V. Shanov, UC)
- Simons Foundation, PI, $42000 (9/1/2018-8/31/2023). Mathematical modeling of fluid-structure interaction problems in biology.
- Taft Summer Fellowship, $8100 (May-June, 2018).
- Taft Research Support - Cost Sharing, $6100 (5/01/2016-7/30/2017).
- NSF DMS Mathematical Biology, PI, $200K (8/15/2014-7/31/2018). Collaborative Research: Understanding bacterial flagellar propulsion (with B. Griffith, UNC at Chapel Hill).
- DARPA Biochronicity, Co-PI (total-$3.7 million, Lim-$897K) (1/1/2012-12/31/2016). Uncovering general principles of network dynamics of circadian rhythms, cell cycle, DNA damage response, and metabolism as interconnected modules. (with C. Hong (PI), College of Medicine, UC; S. Moore, Cincinnati Children's Hospital; S. Song, Dept. of Math. Sci., UC).

- Taft Research Support - Cost Sharing, $5000 (9/01/2012-8/30/2013).
- University Research Council Interdisciplinary Grant, co-PI, $25K (7/1/2011-6/30/2012). Pathogen Persistence Mediated by Biofilms in Urban Water Distribution Systems and River Networks (with B. Vaughan, D. French, and M. Kupferle at UC).
- NSF DMS Mathematical Biology, a single PI, $144,874 (8/15/2008-7/31/2011). Understanding the hydrodynamic interaction among flagella of *E. coli* using the immersed boundary method combined with the Kirchhoff rod theory.
- Taft Research Fellowship, $9400 (6/01/2010-7/30/2010).
- Taft Research Fellowship, $9500 (6/01/2008-7/30/2008).
- NSF funded Mathematical Biosciences Institute Postdoctoral Researcher Fellowship (2003-2006).
- Young Researcher Fellowship, 2nd MIT Conference on Solid & Fluid Mechanics (2003).

PUBLICATIONS

- W. Lee, Y. Kim, C.S. Peskin, and S. Lim, Microswimmers propelled by bacterial flagella, preprint.
- Y. Park, Y. Kim, and S. Lim, Flagellated bacteria swim in circles near a rigid wall, Physical Review E 100:063112 (2019).
- X. Liu, A. Chen, A. Caicedo-Casso, G. Cui, M. Du, Q. He, S. Lim, H.J. Kim, C.I. Hong and Y. Liu, FRQ-CK1 interaction determines the period of circadian rhythms in *N*eurospora, Nature Communications, 10(1):4352 (2019)
- M. Baek, S. Virgilio, T. Lamb, A. Dovzhenok, O. Ibarra, J. M. Andrade, S. Lim, D. Bell-Pedersen, M. C. Bertolini, and C. Hong, Circadian clock regulation of the glycogen synthase (gsn) gene by WCC is critical for rhythmic glycogen metabolism in Neurospora crassa, PNAS 1815360116 (2019)
- Y. Park, Y. Kim and S. Lim, Locomotion of a single-flagellated bacterium, J. Fluid Mech., 859:585-612 (2019)
- W. Lee, Y. Kim, B.E. Griffith and S. Lim, Bacterial flagellar bundling and unbundling via polymorphic transformations, Phys. Rev. E 98:052405 (2018).
- J. Bellman, J.K. Kim, C.I. Hong, S. Lim, Systematic modeling reveals light-dependent of WC-1 as a key molecular mechanism to reset the Neurospora circadian clock, Biophys. J. 115(6):1093-1102 (2018).
- T. Matsu-ura, A. Dovzhenok, S.T. Coradetti, K.R. Subramanian, D.R. Meyer, J.J. Kwon, C. Kim, N. Salomonis, N. Louise Glass, S. Lim, and C.I. Hong, Synthetic gene network with positive feedback loop amplifies cellulase gene expression in *Neurospora crassa*, ACS Synth. Biol. (2018).
- W. Ko, S. Lim, W. Lee, Y. Kim, H.C. Berg, and C.S. Peskin, Modeling polymorphic transformation of rotating bacterial flagella in a viscous fluid, Phys. Rev. E 95, 063106 (2017) - **Editors' Suggestion**.

- W. Lee, S. Lim, and Y. Kim, The role of myosin II in glioma invasion: A mathematical model, PLoS ONE 12(2): e0171312 (2017).
- Y. Park, W. Ko, Y. Kim, and S. Lim, Instabilities of a rotating helical rod in a viscous fluid, Phys. Rev. E, 95:022410 (2017) - **Editors' Suggestion**.
- T. Matsu-ura, A. Dovzhenok, E. Aihara, J. Rood, Y. Ren, T. Zhang, M.H. Montrose, S. Lim, S.R. Moore, and C.I. Hong, Intercellular coupling of cell cycle and circadian clock in adult stem cell cultures, Molecular Cell, 64(5):900-912 (2016).
- Y. Kim, Y. Park, and S. Lim, 3D simulations of blood flow dynamics in compliant vessels: normal, aneurysmal, and stenotic arteries. Comm. Comput. Phys. 19(05):1167-1190 (2016).
- Y. Ren, C.I. Hong, S. Lim, and S. Song, Finding clocks in genes: a Bayesian approach to estimate periodicity, BioMed Research International 3017475 (2016).
- A. Caicedo, H. Kang, C.I. Hong, and S. Lim, Robustness and period sensitivity analysis of minimal models for biochemical oscillators, *Scientific Reports* (Nature Publishing Group), 5:13161 (2015).
- A. Dovzhenok, M Baek, S. Lim, and C.I. Hong, Mathematical modeling and validation of glucose compensation of the Neurospora circadian clock, *Biophys. J.* 108(7):1830-1839(2015).
- W. Lee, Y. Kim, S. Olson, and S. Lim, Nonlinear dynamics of a rotating elastic rod in a viscous fluid, *Phys. Rev. E*, 90, 033012 (2014).
- Y. Kim, J. Lee and S. Lim, Nodal flow simulations by the immersed boundary method, *SIAM J. Appl. Math.,* 74(2):263-283 (2014).
- S. Olson, S. Lim, and R. Cortez, Modeling the dynamics of an elastic rod with intrinsic curvature and twist using a regularized Stokes formulation, *J. Comput. Phys.*, 238:169-187 (2013).
- D. Swigon, S. Lim, and Y. Kim, Dynamical simulations of DNA supercoiling and compression, *Biochem. Soc. Trans.*, Apr 1;41(2):554-8 (2013).
- S. Lim and C. S. Peskin, Fluid-mechanical interaction of flexible bacterial flagella by the immersed boundary method, *Phys. Rev. E*, 85, 036307 (2012).
- B. Griffith and S. Lim, Simulating an elastic ring with bend and twist by an adaptive generalized immersed boundary method, *Commun. Comput. Phys.*, 12(2):433-461 (2012).
- W. Lee, S. Lim, and E. Jung, Dynamical motion driven by periodic forcing to an open elastic tube in fluid, *Commun. Comput. Phys.*, 12(2) 494-514 (2012).
- S. Lim, Y. Kim, and D. Swigon, Dynamics of an electrostatically charged elastic rod in fluid, *Proc. R. Soc. A*, 467:569-590 (2011).
- S. Lim, Dynamics of an open elastic rod with intrinsic curvature and twist in a viscous fluid, *Phys. Fluids*, 22:024104 (2010).
- S. Lim and E. Jung, A three-dimensional model of a closed valveless pump system immersed in a viscous fluid, *SIAM J. App. Math.*, 70(6):1999-2022 (2010).

- Y. Kim and S. Lim, The role of the microenvironment in tumor invasion, *Proceedings of the SIAM Conference on Mathematics for Industry: Challenges and Frontiers* (MI09) pp. 84-92 (2010). (http://www.siam.org/proceedings/industry/2009/mi09.php).
- Y. Kim, S. Lim, S. Raman, O. Simonetti, and A. Friedman, Blood flow in a compliant vessel by the immersed boundary method, *Ann. Biomed. Eng.*, 37(5):927-942 (2009).
- S. Lim, Supercoiling dynamics of a circular DNA in fluid,*Proceedings of International Conference on Computational Methods for Coupled Problems in Science and Engineering* (2009).
- S. Lim, A. Ferent, X. Sheldon Wang and C.S. Peskin, Dynamics of a closed rod with twist and bend in fluid, *SIAM J. Sci. Comput.*, 31(1):273-302 (2008).
- E. Jung, S. Lim, W. Lee, and S. Lee, Computational models of valveless pumping using the immersed boundary method, *Comput. Methods Appl. Mech. Engrg.*, 197(25-28): 2329-2339 (2008).
- S. Lim and C.S. Peskin, Simulations of the whirling instability by the immersed boundary method, *SIAM J. Sci. Comput.*, 25(6):2066-2083 (2004).
- S. Lim and C.S. Peskin, Subcritical bifurcation of a rotating elastic filament in a viscous fluid by the immersed boundary method, *Proceedings of the Second MIT Conference on Computational Fluid and Solid Mechanics*, pp. 1409-1412 (2003).

BOOK CHAPTER

- Y. Kim, W. Lee, H. Jeon, S. Lim, S. Roh, D. Lee, J. Lee, and S. Lawler, Cell Movement: Modeling and Applications, Birkhäuser, p27-60 (2018)

SELECTED TALKS

- Jan. 17, 2020, Graduate Students Seminar, Chemical Engineering, UC
- Dec. 16, 2019, Seminar, University of Cambridge, Cambridge, UK
- Dec. 12, 2019, Seminar, Imperial College London, London, UK
- Nov. 23-26 2019, Minisymposium, Americal Physical Society, Division of Fluid Dynamics
- Nov. 22 2019, Colloquium, University of British Columbia, Vancouver, Canada
- Sept. 27 2019, Colloquium, Simon Fraser University, Vancouver, Canada
- July 29 2019, Seminar, Pusan National University, Pusan, Korea
- July 15-19 2019, Minisymposia, International Congress on Industrial and Applied Mathematics, Valencia, Spain
- July 8-9 2019, Seminar, Korea University, Seoul, Korea
- June 20-22 2019, Minisymposium, Korean Society for Mathematical Biology, Jeju, South Korea

- May 12-17 2019 Women In Numerical Methods for PDEs and their Applications, Banff International Research Station, Alberta, Canada
- April 5 2019 Colloquium, Howard University, Washington, D.C., USA
- Dec 27 2018 Mathbio Seminar, UNIST, Ulsan, Korea
- Oct 2018 AMS Sectional meeting, Ann Arbor, MI
- Aug 2018 Minisymposium, SIAM LS, Minnesota
- July 5-9 2018 Minisymposium, AIMS Taipei, Taiwan
- Jun 18-22 2018 Lecture series on the IB method, Konkuk University, Seoul, Korea
- May 29-31, 2018 IMA Workshop for women in Mathematical Biology, IMA, University of Minnesota
- March 17-18, 2018 AMS Sectional meeting, Ohio State University, Columbus, OH
- Aug. 9-12, 2017 US-Korea Conference, Washington D.C.
- July 17-21, 2017 Society for Mathematical Biology, Salt Lake City, UT
- June 22-25, 2017 EASIAM-KSIAM Joint Conference, Seoul, Korea
- June 8, 2017 Seminar, Ulsan Institute of Science and Technology, Ulsan, Korea
- Jun, 2017 Lecture Series on perturbation theory, Konkuk University, Seoul, Korea
- May 29-Jun. 2, 2017 Workshop on Numerical methods for PDEs and their applications, Institute Mittag-Leffler, Djursholm, Sweden.
- May 17, 2017 Seminar, Yonsei University, Seoul, Korea
- Nov. 20-22, 2016 American Physical Society - Division of Fluid Dynamics, Portland, Oregon
- Jul. 24-29, 2016 World Congress on Computational Mechanics (WCCM), Minisymposium on "Biofluids," Seoul, Korea
- Jun. 2016 Workshop on Frontiers in Applied and Computational Mathematics (FACM), NJIT, Newark, NJ
- Mar. 2016 Applied Math Seminar, Ohio State University, Columbus, OH
- Feb. 2016 MathBio Seminar, University of California at Davis, Davis, CA
- Sept 4, 2015 Colloquium, NJIT, Newark, NJ
- Aug 10-14, 2015 International Congress on Industrial and Applied Mathematics (ICIAM), Minisymposium on "Fluid-structure interaction problems in biological and physical systems," Beijing, China

- Jul 20-25, 2014 World Congress on Computational Mechanics (WCCM), Minisymposium on "Fluid-structure interaction algorithms and application I," Barcelona, Spain.
- Jul 7-11, 2014 SIAM Annual Meeting, Minisymposium on "The mechanics of flagellar locomotion," Chicago, IL.
- Dec. 20, 2013 Seminar on Circadian Clock, Konkuk University, Seoul, South Korea.
- Dec. 9-11, 2013 Lecture and Seminar on the DNA dynamics, Chung-Ang University, Seoul, South Korea.
- Nov. 24-26, 2013 APS Annual Meeting, Division of Fluid Dynamics, Pittsburgh, PA.
- Jun. 12-14, 2013 MIT Conference on Computational Fluid & Solid Mechanics, Boston, MA.
- Jun. 3-5, 2013 Hot Topic Workshop on "Special highlights on Mathematical Biology," NIMS, Daejeon, South Korea.
- Oct. 18, 2012 Workshop on "Mathematical and computational challenges in cilia- and flagella-induced fluid dynamics," MBI, OSU, Columbus, OH.
- Oct. 5, 2012 Colloquium. WPI, Worcester, MA. *Hydrodynamics of bundling/unbundling helical flagella driven by rotary motors*.
- Aug. 8, 2012 SIAM Conferences on Life Sciences, Minisymposium on "Modeling biological thin filaments in fluid flow," San Diego, CA.
- Dec. 12-14, 2011 Hot Topic Workshop on "Fluid Dynamics," NIMS, Daejeon, South Korea.
- Sept. 7, 2011 Seminar. Computational Science and Engineering, Yonsei University, Seoul, South Korea. *Generalized immersed boundary method applied to mathematical modeling in biology.*
- March 15, 2011 Seminar. Center for Computational Science, Tulane University, New Orleans, LA. *Generalized immersed boundary method applied to mathematical modeling in biology.*
- Sept. 10, 2010 Seminar. Department of Naval Architecture and Ocean Engineering, Seoul National University, Seoul, South Korea. *A general version of the immersed boundary method applied to biological problems.*
- Aug. 8, 2010 Workshop on "Fluid motion driven by immersed structures," Field Institute, Canada.
- July 22, 2010 World Congress on Computational Mechanics (WCCM), Minisymposium on "Computational nano-bio mechanics," Sydney, Australia.
- July 14, 2010 SIAM-LS and SIAM annual meeting, Minisymposium on "Challenges in computational biofluid dynamics," Pittsburgh, PA.
- Apr. 2, 2010 Applied Math Seminar. School of Mathematics, Georgia Institute of Technology, Atlanta, GA. *Dynamics of an electrostatically charged DNA in fluid by the generalized immersed boundary method*.
- Dec. 16-20, 2009 AMS-KMS Joint Meeting, Minisymposium on "Mathematical Biology," Ewha Women's University, Seoul, South Korea.

- Dec. 14, 2009 Seminar. Korean Institute of Advanced Studies (KIAS), Seoul, South Korea. *The Hydrodynamic interaction of bacterial flagella*.
- Nov. 13, 2009 Colloquium. University of Pittsburgh, Pittsburgh, PA. *Flexible bacterial flagella motion by the immersed boundary method*.
- June 8, 2009 Conference on Computational methods for coupled problems in science and engineering, Minisymposium on "Multiphysics Multiscale Enabling Materials I: Nano- and Biosystems," Ischia Island, Italy.
- Feb. 2, 2009 Seminar. IUPUI, Indianapolis, IN. *The generalized immersed boundary method applied to mathematical modeling in Biology*.
- Sept. 2008 Seminar. Korean Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea. *Dynamics of a ring with twist and bend in a fluid*.
- Aug. 2008 SIAM Conferences on Life Sciences, Minisymposium on "Modeling, Analysis and Simulation in Blood Flow," Montreal, Canada.
- June 2008 Gordon Research Conferences, Theoretical Biology and Biomathematics, , II Ciocco, Italy. *Simulation of blood flow in a compliant vessel by the immersed boundary method.*
- April 18, 2008 Colloquium. Cleveland State University, Cleveland, OH. *Simulation of blood flow in a compliant vessel by the immersed boundary method.*
- Nov. 19 2007 MathBio seminar. University of Houston, Houston, TX. *Blood flow in a compliant vessel by the immersed boundary method*.
- July 2006 World Congress on Computational Mechanics (WCCM), Minisymposia on "The immersed boundary method and its extension," Los Angeles, CA.
- Sept. 2005 Colloquium. University of Iowa, Iowa City, Iowa. *Mathematical models in biofluids using the immersed boundary method.*
- Sept. 2005 Seminar. Seoul National University, Seoul, Korea. *Simulations of the whirling instability of a rotating elastic filament in a viscous fluid by the immersed boundary method.*
- July 2005 European Society for Mathematical and Theoretical Biology, Minisymposia. Dresden, Germany. *Mathematical modeling of aortic aneurysms.*

PROFESSIONAL ACTIVITIES

- NSF Grant Reviewer
- July 2020, Co-organizer of minisymposia, WCCM, Paris, France
- July 2019, Co-organizer of minisymposia, ICIAM, Valencia, Spain
- Co-organizer of special session, AIMS Conference on Dynamical Systems and Differential Equations 2018, Taipei, Taiwan

- International Scientific Committee for World Congress on Computational Mechanics (WCCM), 2016
- Co-organizer of minisymposia in honor of Dr. Peskin's 70th birthday, SIAM Life Sciences 2016, Boston, MA
- Organizer of a Minisymposium on Biofluids, WCCM 2016, Seoul, Korea
- Organizer of a Minisymposium on Fluid-structure interaction problems in biological and physical systems, ICIAM 2015, Beijing, China
- Co-organizer of a special session on Biofluids, KSIAM, 2014, Jeju Island, Korea
- KSEA (Korean-American Scientists and Engineers Association), Tech Group (Mathematics & Statistics) Councilor, 2014-2017
- Executive Committee, KAMSA (Korean-American Mathematics Scientists Association), 2013-present
- Co-organizer of Hot Topic Workshop on "Special highlights on mathematical biology," NIMS, Daejeon, Korea, June, 2013
- Organizer of Minisymposium on Mathematical Biology, US-Korea Conference, East Rutherford, NJ, Aug. 2013
- Co-organizer of Minisymposium on Biological locomotion, SIAM conferences on Life Sciences, San Diego, CA, Aug. 7-10, 2012
- Organizer of Nonlinear Dynamics Seminar: Department of Mathematical Sciences, University of Cincinnati, 2011-present
- Co-organizer of Seminar in Mathematical Biology: Department of Mathematical Sciences, University of Cincinnati, Sept. 2006 - 2011
- Organizer of Minisymposium on *Fluid-structure interaction problems in biomechanics*, European Conference on Mathematical and Theoretical Biology and Annual Meeting of the Society for Mathematical Biology, Kraków, June 28-July 2, 2011
- Co-organizer of Taft Research Seminar: Department of Mathematical Sciences, University of Cincinnati, Sept. 2009 - Dec. 2009
- Organizer of Barnett Lecture, Mathematical Biology, 2008
- Workshop Co-organizer: Second Young Researchers Workshop in Math Biology, Mathematical Biosciences Institute, Columbus, Ohio, March 27 - 30, 2006
- Postdoctoral seminar organizer: Mathematical Biosciences Institute, Ohio State University, Sept. 2004 - July 2006
- Organizer of Minisymposium on *Blood flow and electrophysiology of the heart*, European Society for Mathematical and Theoretical Biology, Dresden, Germany, July 18 - 22, 2005

- Workshop Co-organizer : First Young Researchers Workshop in Math Biology, Mathematical Biosciences Institute, Columbus, Ohio, March 29 - April 1, 2005

JOURNAL REVIEWER

• PLOS ONE • Physics of Fluids • Fluids • Physical Review Fluids • Journal of Theoretical Biology • American Mathematical Society • Journal of Experimental Biology • Journal of Computational Physics • International Journal of Multiscale Computational Engineering • Journal of Computational Methods in Applied Mechanics and Engineering • American Society of Mechanical Engineering • The Journal of Analysis • Biomechanics and Modeling in Mechanobiology • Journal of Biological Systems, • Journal of the Royal Society Interface • Bulletin of Mathematical Biology • Physical Review E • Journal of Fluid Mechanics • Computational and Structural Biotechnology Journal

EDITORIAL BOARD

Journal of Biological Systems, 2015-present

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

European Society for Mathematical and Theoretical Biology
The Society for Mathematical Biology
Society for Industrial and Applied Mathematics
American Physical Society

MENTOR TO POSTDOCS

- Jeungeun Park (VAP), Department of Mathematical Sciences, University of Cincinnati, 2019-present.
- Andrey Dovzhenok, Department of Mathematical Sciences, University of Cincinnati, 2012-2016.
- William Ko, Department of Mathematical Sciences, University of Cincinnati, 2015-2017.

ADVISOR TO GRADUATE STUDENTS

- Nayana Wanasingha, 2017-present
- Jacob Bellman, 2013-2016, Ph.D. Mathematics, University of Cincinnati.
- Angelica Caicado, 2011-2015, Ph.D. Mathematics, University of Cincinnati.

MENTOR TO UNDERGRADUATE STUDENTS

- Lulu Zhang, Women in Science and Engineering (WISE) program, Summer 2018
- Kairavee Thakkar, Women in Science and Engineering (WISE) program, Summer 2016
- Desiree Lehn, Women in Science and Engineering (WISE) program, Summer 2011.
- Krista Palmer, Women in Science and Engineering (WISE) program, Summer 2010 - 2011.

TEACHING EXPERIENCES SINCE 2006

- Dynamical Systems (19SS, 19FS, 20SS)
- Differential Equations (18FS)
- Linear Algebra (19FS)
- ODEs (Graduate course) (17FS)
- Advanced Mathematical Modeling (Graduate course) (15FS, 17SS)
- Scientific Computing (Graduate course) (17SS, 19SS)
- Advanced Numerical Analysis (Graduate course) (11S, 17SS)
- Applied ODEs (Graduate course) (14FS, 16FS)
- Special Topics in Mathematical Biology (Graduate course) (07S, 09W, 10A)
- Calculus I (08A), Calculus II (09W), Calculus III (09S, 10W, 11W), Calculus IV (09A, 10S, 11S)
- Applied Calculus I (06A, 08S), Applied Calculus II (07W, 07A, 08W, 14SS)
- Mathematical Modeling (14SS, 15FS, 18FS)
- Introduction to Abstract Mathematics (16SS)

SERVICE ON GRADUATE STUDENT COMMITTEES

- Aditya-Sriram Challa (CEAS - Chemical Eng.), Master Thesis Committee, 2019-present
- Richard Ballweg (Department of Molecular and Cellular Physiology), Advanced Exam Committee, 2017-present
- Don Dermaco: Master Dissertation Committee, 2019
- Mokryun Baek (Department of Molecular and Cellular Physiology), Advanced Exam Committee, 2015-2019
- Jacob Bellman: Advanced Exam Committee (Chair, 2014), Dissertation Committee (Chair, 2016)
- Kristen Fox: Advanced Exam Committee (2013), Dissertation Committee (2016)
- Angelica Caicado: Advanced Exam Committee (Chair, 2012), Dissertation Committee (Chair, 2015)
- Suayip Toprakseven: Advanced Exam Committee (2013), Dissertation Committee (2014)
- Jhules A. Clack: Advanced Exam Committee (2011), Dissertation Committee (2014)
- Sadiqah Almarzooq, Advanced Exam Committee, 2014
- Mauricio Osorio, Advanced Exam Committee, Dissertation Committee, 2008-2010

- Carolyn Ottesen, Master Dissertation Committee, 2009
- Zeynep Teymuroglu, Dissertation Committee, 2007-2008

DEPARTMENTAL SERVICE

- Graduate Affair Committee, 2012-2014, 2016-2017, 2018-present
- RPT committee, 2018-present
- VAP Search Committee, 2018-2019
- Prelim Exam Committee, 2017-2019
- Tenure-Track Assistant Professor Search Committee, 2016-2017
- VAP Search Committee, 2016
- Graduate Student Evaluation Committee, 2014-2015
- Hiring Committee (Department of Molecular and Cellular Physiology), 2013-2015
- Curriculum Committee for Systems Biology Programs 2013-2017
- Applied Calculus II coordinator, 2014
- Executive Committee 2013-2014
- Coordinator for graduate student seminar, 2011-2015
- Academic Committee, 2012-2014
- Advisor for undergraduate students, 2011-2012
- Hiring Committee, 2010
- Institute Partner's Meeting, Mathematical Biosciences Institute, 2009
- Presenter at UC Show Case 2008
- Executive Committee, 2007-2009
- Barnett Lecture Organizer, May, 2007