

LAUREN ANCEL MEYERS
PROFESSOR OF INTEGRATIVE BIOLOGY AND STATISTICS & DATA SCIENCE
THE UNIVERSITY OF TEXAS AT AUSTIN

EDUCATION

1991-1996 *Harvard University*: B.A., Magna cum laude, Mathematics & Philosophy
1996-2000 *Stanford University*: Ph.D. in Biological Sciences, Advisor: Marcus W. Feldman

ACADEMIC POSITIONS

2011- Professor, Integrative Biology, University of Texas at Austin (UT)
2011-2014 Founding Chair, Department of Statistics & Data Science, UT
2007-2011 Associate Professor, Integrative Biology, UT
2008-2010 Associate Director, Division of Statistics and Scientific Computation, UT
2003-2007 Assistant Professor, Integrative Biology, UT
2003- External Faculty, Santa Fe Institute (SFI), Santa Fe, New Mexico
2000-2002 NSF Postdoctoral Fellow at Emory University (Advisor: Bruce Levin) and SFI

AWARDS & FELLOWSHIPS

2018- Denton A. Cooley Centennial Professorship, UT
2017 Joseph Lieberman Award for Significant Contributions to Science
2011-13, 16-18 William H. and Gladys G. Reeder Faculty Fellow, UT
2006-10, 14-15 Fellow, University of Texas Institute for Molecular and Cellular Biology
2013 Center for Excellence in Education - Excellence and Achievement Award
2010-2011 Donald D. Harrington Faculty Fellowship, UT
2005 College of Natural Sciences Teaching Excellence Award, UT
2004 MIT Technology Review TR100: One of 100 Top Global Innovators Under 35
2000-2002 National Science Foundation Postdoctoral Fellowship in Biological Informatics
2000-2002 Santa Fe Institute Postdoctoral Fellowship
2000 Samuel Karlin Prize for Ph.D Thesis in Mathematical Biology
1999 Steinmetz Fellowship, Santa Fe Institute
1996-1999 National Defense Science & Engineering Graduate Fellowship
1991-1995 U.S. Congressional National Science Scholar

PUBLICATIONS

Fox SJ, Bellan SE, Perkins TA, Johansson MA, Meyers LA (2019) Downgrading disease transmission risk estimates using terminal importations. *PLoS Negl Trop Dis* 13(6): e0007395.
<https://doi.org/10.1371/journal.pntd.0007395>

Wells, C. R., Pandey, A., Parpia, A. S., Fitzpatrick, M. C., Meyers, L. A., Singer, B. H., & Galvani, A. P. (2019). Ebola vaccination in the Democratic Republic of the Congo. *Proceedings of the National Academy of Sciences*, 116(20), 10178 LP-10183. <https://doi.org/10.1073/pnas.1817329116>

Chen X, Dimitrov NB, Meyers LA (2019) Uncertainty analysis of species distribution models. *PLoS ONE* 14(5): e0214190. <https://doi.org/10.1371/journal.pone.0214190>

Shen, M., Xiao, Y., Rong, L., & Meyers, L. A. (2019). Conflict and accord of optimal treatment strategies for HIV infection within and between hosts. *Mathematical Biosciences*, 309, 107–117.
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Ertem Z, Raymond D, Meyers LA (2018) Optimal multi-source forecasting of seasonal influenza. *PLoS Computational Biology*. doi.org/10.1371/journal.pcbi.1006236

Perofsky AC, Lewis RJ, Meyers LA (2018) Terrestriality and bacterial transfer: a comparative study of gut microbiomes in sympatric Malagasy mammals. *The ISME Journal*. doi.org/10.1038/s41396-018-0251-5

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- Shen M, Xiao Y, Rong L, Meyers LA; Bellan, SE (2018) The cost-effectiveness of oral HIV pre-exposure prophylaxis and early antiretroviral therapy in the presence of drug resistance among men who have sex with men in San Francisco. *BMC Medicine* 16(1):58. doi: 10.1186/s12916-018-1047-1.
- Perofsky AC, Lewis RJ, Abondano LA, Di Fiore A, Meyers LA (2017) Hierarchical social networks shape gut microbial composition in wild Verreaux's sifaka. *Proceedings of the Royal Society B* DOI: 10.1098/rspb.2017.2274
- Fox SJ, Miller JC, Meyers LA (2017) Seasonality in risk of pandemic influenza emergence. *PLOS Computational Biology* DOI: 10.1371/journal.pcbi.1005749
- Huang H-C, Singh B, Morton DP, Johnson GP, Clements B, Meyers LA (2017) Equalizing access to pandemic influenza vaccines through optimal allocation to public health distribution points. *PLoS ONE* 12(8): e0182720. <https://doi.org/10.1371/journal.pone.0182720>
- Shen M, Xiao Y, Rong L, Meyers LA, Bellan SE. (2017) Early antiretroviral therapy and potent second-line drugs could decrease HIV incidence of drug resistance. *Proceedings of the Royal Society B* DOI: 10.1098/rspb.2017.0525
- Huang, H.-C., Araz, O. M., Morton, D. P., Johnson, G. P., Damien, P., Clements, B., & Meyers, L. A. (2017). Stockpiling Ventilators for Influenza Pandemics. *Emerging Infectious Diseases*, 23(6), 914–921. <http://doi.org/10.3201/eid2306.161417>
- Singh B and Meyers LA (2017) Estimation of single-year-of-age counts of live births, fetal losses, abortions, and pregnant women for counties of Texas. *BMC Research Notes* DOI: 10.1186/s13104-017-2496-x
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- Gutfraind, S. and L.A. Meyers (2015) Evaluating large-scale blood transfusion therapy for the current Ebola epidemic in Liberia. *Journal of Infectious Diseases*. DOI:10.1093/infdis/jiv042.
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- Bellan, S.E., J.R.C. Pulliam, J. Dushoff, and L.A. Meyers (2014) Letter: Ebola virus vaccine trials: the ethical mandate for a therapeutic safety net. *British Medical Journal* 349:g7518.
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- Ndeffo Mbah ML, Poolman EM, Atkins KE, Orenstein EW, Meyers LA, Townsend JP and Galvani AP (2013) Potential Cost-Effectiveness of Schistosomiasis Treatment for Reducing HIV Transmission in Africa - The Case of Zimbabwean Women. *PLoS Negl Trop Dis*. 8:e2346. PMID: 23936578
- Durham, D.P., M.L. Ndeffo Mbah, J. Medlock, P.M. Luz, L.A. Meyers, A.D. Paltiel, A.P. Galvani, A.P. (2013) Dengue dynamics and vaccine cost-effectiveness in Brazil. *Vaccine* 37: 3957-61. PMID: 23791696.
- Scarpino, S.V., N.B. Dimitrov, L.A. Meyers (2012) Optimizing Provider Recruitment for Influenza Surveillance Networks. *PLoS Computational Biology* 8: e1002472.
- Bansal, S. and L.A. Meyers (2012) The impact of past epidemics on future disease dynamics. *Journal of Theoretical Biology* 309: 176-184.
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- Volz, E., S.D.W. Frost, R. Rothenberg, L.A. Meyers (2010) Epidemiological bridging by injection drug use drives an early HIV epidemic. *Epidemics* 2: 155-164.
- Bansal, S., J. Read, B. Pourbohloul, L.A. Meyers (2010) The dynamic nature of contact networks in infectious disease epidemiology. *Journal of Biological Dynamics* 4: 478-489.
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- Cowperthwaite, M., J.J. Bull, L.A. Meyers (2005) Distributions of beneficial fitness effects in RNA. *Genetics* **170**: 1449-1457.
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¹ First two authors contributed equally.

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- Ance, L.W. (1999) A quantitative model of the Simpson-Baldwin effect. *Journal of Theoretical Biology* **196**: 197-209.
- Ance, L.W. and M. W. Hero (1998) One-way intervals of circle maps. *Proceedings of the American Mathematical Society* **126**: 1191-1197.
- Ance, L.W. (1992,94) National Security Agency Cryptologic Mathematics Papers: Three classified internal publications.

RESEARCH SUPPORT

CURRENT SUPPORT

- CDC 75D30119C05790, Modeling toolkit to evaluate multifaceted control strategies for seasonal and pandemic influenza, 8/19-8/20 (PI)
- NIH, U01GM087719-01, Dynamic data-driven decision models for infectious disease control, 8/14-4/20 (PI, Multi-PI with A. Galvani)
- UTMB/CDC U01CK000512, Western Gulf Center of Excellence for Vector-borne Diseases, 12/16-12/20 (Co-PI, Primary PI-Weaver)
- NIH T32, BD2K: Training program for inference on complex biological data, 6/16-5/21, (PI)
- Center Grant--BEACON: An NSF Science and Technology Center for the Study of Evolution in Action. (BEACON is a consortium of universities led by Michigan State University with partner institutions of North Carolina

² Papers published prior to 2012 are under maiden name, Lauren W. Ance

A&T State University, the University of Idaho, The University of Texas at Austin, and the University of Washington. Meyers is one of five PI's at UT.) 8/10-7/20

PRIOR SUPPORT:

- Texas Department of State Health Services (DSHS), Evaluation of Texas DSHS Vaccine Coverage Surveys, 1/18-6/19 (PI)
- Defense Threat Reduction Agency, Surety BioEvent App: BioEvent Surveillance, Detection and Prediction Leveraging Trusted NextGen Data Sources, 5/14-4/17 (Co-PI)
- NIH MIDAS, U01GM087719-01, Impacts of Individual and Social Behavior on Influenza Dynamics and Control. 5/09-4/15 (PI, Multi-PI with A. Galvani)
- Center for Disease Control and Prevention (CDC) and Association of Public Health Labs (APHL), Evaluating and Optimizing the National Laboratory-Based Surveillance, 1/15-6/15 (PI)
- Texas Department of State Health Services (DSHS), Arbovirus Surveillance and Control: Optimizing the detection and mitigation of West Nile Virus, Dengue Fever, and Chikungunya outbreaks, 1/15-6/15 (PI)
- Center for Disease Control and Prevention (CDC) and Association of Public Health Labs (APHL), Evaluating and Optimizing the National Laboratory-Based Surveillance, 10/13-6/14 (PI)
- Texas Department of State Health Services (DSHS), Decision-support tool for Pandemic Influenza Allocation of Antiviral Stockpile, 11/13-6/14 (PI)
- Center for Disease Control and Prevention (CDC) and Association of Public Health Labs (APHL), Evaluating and Optimizing the National Laboratory-Based Surveillance, 10/12-9/13 (PI)
- NSF, DEB-0749097, The Spread and Evolution of Parasites on Host Networks, 9/08-8/13 (PI)
- Texas Department of State Health Services (DSHS), Pandemic Flu Decision-Support Toolkit for the State of Texas, 9/12-8/13 (PI)
- NIH, 1R21DA024611-01A, Combining empirical and theoretical network approaches to HIV transmission, 6/09-5/12 (Co-I)
- James S. McDonnell Foundation Research Award, The Evolutionary and Epidemiological Potential of Pathogens. 01/07-1/11 (PI)
- Texas Department of State Health Services (DSHS), Quantitative Tools for Pandemic Flu Forecasting and Control, 4/11-7/11 (PI)
- Texas Department of State Health Services (DSHS), Assessment of Texas Influenza Surveillance Program, 8/09-7/10 (PI)
- NSF, SES-0940071, COLLABORATIVE RESEARCH: Dynamic Risk Perceptions about Mexican Swine Flu, 7/09-6/10 (PI)
- Canadian Institutes of Health Research (CIHR), Evaluation of Ontario's Influenza Immunization Program, 01/07-12/09 (Co-I)
- Bill and Stephanie Sick Research Award, Quantitative Prediction and Control of Epidemics, 09/07-12/09 (PI)
- Canadian Institutes of Health Research (CIHR), Mathematical modeling of pandemic influenza, 09/06-08/09 (Co-I)
- NSF, DEB-0445351, Evolution, Conflict and Cooperation in Mixed-species Bacterial Communities, 3/05-2/09 (PI)
- NSF, ITR Collaborative Research: Building the Tree of Life - A National Resource for Phyloinformatics and Computational Phylogenetics, 9/03-8/08 (Co-PI)
- Canadian Institutes of Health Research (CIHR), Public Health Preparedness for the Vancouver 2010 Olympic Games, 4/06-3/07 (Co-I)

Canadian Institutes of Health Research (CIHR), The spread and evolution of SARS coronaviruses through contact networks, 7/04-12/05 (Co-PI)

NSF, DEB-0303636, Evolving better biofilms: The dynamics of community-level natural selection in bacteria, 2/03-1/04 (PI)

Canadian Institutes of Health Research (CIHR), SARS: A Scientific Collaborative to Support Public Health Response through Vaccination, 5/03-3/04 (Co-I)

INTERVIEWS AND MEDIA COVERAGE OF RESEARCH

Coverage *PLoS Computational Biology* paper on influenza forecasting: *The Now TV, KXAN, KLBJ*

Coverage of *PLoS Computational Biology* paper on pandemic emergence: *New York Times, NPR* (2017)

Coverage of *BMC Infectious Diseases* paper on Zika risk assessment: *Austin American Statesman, Texas Standard, CBS Austin, Science Daily* (2017)

Coverage of *PNAS* paper on common cold and asthma: *Austin American Statesman, Medical Express, Healio, TheDoctorWillSeeYouNow.com, Fox TV Florida* (2016-2017)

Interviewed by CDC's *Beyond the Data* (2016)

Interview regarding measles outbreaks and vaccination: *Wall Street Journal* (2015)

Radio interview on pandemic influenza containment strategies: *KUT* (2015)

Podcast on 2015 West African Ebola epidemic: *Huffington Post* (2015)

Coverage of 2014-2015 Ebola research: *NBC News, Washington Post, Huffington Post, Reuters, Yahoo, BBC, Guardian, Daily Mail, KVUE* (2014-15)

Interview regarding disease outbreaks in Texas immigrant populations: *KVUE* (2014)

Interviews regarding Texas Pandemic Flu Toolkit (flu.tacc.utexas.edu): *Fox 7 Good Day Austin, KEYE morning news, Vaccine News Daily, The Alcade, UT Banner* (2012)

Interviews relating to H1N1 (swine) flu pandemic: *Austin American Statesman, Dallas Morning News, KVUE evening news, KEYE evening news, KXAN morning news, Daily Texan, Santa Fe New Mexican* (2009-2010)

Research featured in *Slate.com* (February 2009)

Radio interview, *She blinded me with science*, *KVRX Austin* (April 2008)

Interviewed for *LA Times* article, *To protect us all, vaccinate school kids* (November 2006)

Research featured in *Wall Street Journal* article, *If We Must Ration Vaccines for a Flu, Who Calls the Shots?* (October 2006)

Article describing ESI outreach lecture in *The Daily Texan* (April 2006)

Epidemiology research featured in *Austin American Statesman*, *Professor uses a new math to predict disease spread*, Front page of metro section (April 2006)

Paper on Genetic Potential (*PLoS Computational Biology*, 2005) receives coverage by *EurekAlert.com (AAAS), Iran Daily, BrightSurf.com* (August 2005)

Research featured in *Newsweek, MIT Technology Review, Technology Review 100, Austin American Statesman, National Review of Medicine, Die Zeit* (2004)

Television interview by Dan Robertson on *KXAN 36 News* (November 2003)

Research featured in *UT banner* article, *Predicting the Path of Infectious Diseases* (October 2003)

Paper on Baldwin Effect (JTB, 1999) featured by Kevin Laland in *Nature* book review as "the best theoretical analysis of the Baldwin Effect" (September 2003)

Research featured on *NPR The World, BBC Five Live, WIRED* (2003)

INVITED PRESENTATIONS

Seminar, *Dartmouth University* (2019)

Moderator, CNS Cross-Cutting Conversations: Computational Health, UT (2019)

Speaker, Annual Meeting of the American Marketing Association (2019)

Seminar, ISGlobal: Barcelona Institute for Global Health (2018)

Speaker, UC-Berkeley Miller Institute Interdisciplinary Symposium (2017)

Seminar, ISGlobal: Barcelona Institute for Global Health (2017)

Seminar, Odum School of Ecology, University of Georgia (2017)

Speaker, Santa Fe Institute 2017 Influence, Complexity and Networks: New Views for Business, Politics, Innovation, and Growth, Long Center, Austin, Texas (2017)

Seminar, Ecology and Evolutionary Biology Department, University of California, Los Angeles (March 2016)

Speaker/Panelist, CDC Director's Public Health Grand Rounds (January 2016)

Speaker/Panelist, 2015 Society of Actuaries Health Meeting (June 2015)

Speaker, James S. McDonnell Foundation Symposium Honoring John T. Bruer (May 2015)

Speaker, Mathematical Science Research Institute, Board of Trustees Annual Meeting (November 2014)

Keynote, Santa Fe Institute, Breakfast with SFI Series at HomeAway (October 2014)

Seminar, Physics Nonlinear Dynamics Series, The University of Texas at Austin (October 2014) Speaker, UT University Lecture Series (September 2014)

Keynote, Santa Fe Institute Workshop: Next Generation Surveillance for the Next Pandemic (May 2014)

Speaker, TedX Youth Conference, Austin, Texas (February 2014)

Keynote, Santa Fe Institute Workshop: Next Generation Surveillance for the Next Pandemic (May 2014)

Public Lecture, Wisconsin Institute for Discovery, University of Wisconsin, (December 2013)
<http://vimeo.com/84332584>

Speaker, 2nd International Conference on Digital Disease Detection, San Francisco, CA (November 2013)

Speaker, Centers for Disease Control and Prevention, Digital Surveillance Meeting, Atlanta, GA (August 2013)

Televised Lecture, Bill Gates Dedication of Gates Dell Computer Science Hall, The University of Texas at Austin (March 2013) http://www.youtube.com/watch?feature=player_embedded&v=UOPWYdeC6a0

Speaker and Panelist, Institute of Medicine Modeling Workshop, 2013 Public Health Preparedness Summit, Atlanta, GA (March 2013)

Morrison Institute Colloquium, Stanford University (February 2013)

Plenary, 2012 Annual meeting of the Society for Mathematical Biology Conference, Knoxville, Tennessee (July 2012)

Lecture, Texas Exes Alumni College (June 2012)

Centers for Disease Control and Prevention, Influenza Units, Atlanta, Georgia (May 2012)

Speaker, Santa Fe Institute 2012 Science Board and Board of Trustees Symposium (May 2012)

Speaker, Institute of Medicine (IOM) Preparedness Forum, Washington, DC (April 2012)

Ritchey Public Lecture, Weber State University Distinguished annual lecture for College of Sciences (February 2012)

Seminar, LBJ School, The University of Texas at Austin (February 2012)

Game Changers, The University of Texas at Austin, Public lecture televised on Longhorn Network (January 2012)

Seminar, Wireless Network & Communications Group, The University of Texas at Austin (September 2011)

Invited Address, Mathematical Association of America MathFest 2011, Kentucky (August 2011)

Symposium Presentation, Ecological Society of America Annual Meeting, Austin, Texas (August 2011)

Participant and presenter, Sci Foo Camp hosted by Nature, O'Reilly Media, and Google, Mountain View, California (August 2011)

Lecture, Texas Regional Collaborative 17th Annual Meeting for K-12 STEM Educators (June 2011)

Grand Rounds Presentation, Texas Department of State Health Services (DSHS) (May 2011)
Lecture, Harrington Foundation Symposium, Amarillo, Texas (April 2011)
Keynote Lecture, University of New Mexico Biology Research Day (March 2011)
Seminar, Trinity University (February 2011)
Lecture, City of Austin Pandemic Planning Group (February 2011)
Invited Lecture, INFORMS Annual Meeting, TutORials in Operations Research (November 2010)
Invited Symposium Lecture, I² Integration and Innovation Public Health Preparedness Symposium, Texas Department of State Health Services (July 2010)
Plenary Lecture, International Conference on Drug Development (February 2010)
Seminar, Operations Research Industrial Engineering, The University of Texas at Austin (February 2010)
Public Lecture, Santa Fe Institute Public Lecture Series, James A. Little Theater (January 2010)
Panelist, LBJ Center for Health and Social Policy, The University of Texas at Austin (December 2009)
Lecture, Santa Fe Institute Annual Business Network & Board of Trustees' Symposium (November 2009)
Public Lecture, Rice University (October 2009)
Dean's Advisory Council, The University of Texas at Austin (October 2009)
Seminar, University of Wisconsin-Milwaukee (August 2009)
Seminar, Biomedical Advanced Research & Development Authority, Washington DC (July 2009)
Conference speaker, MIDAS Network Meeting, Emory University (June 2009)
Seminar, Rice University (February 2009)
Seminar, Cornell University (October 2008)
Seminar, University of Pennsylvania (October 2008)
Conference speaker, National Security Agency (June 2008)
Seminar, University of Houston (April 2008)
Seminar, University of Wisconsin, Milwaukee (April 2008)
Goldschmidt Keynote Lecture, American Society for Microbiology Spring Meeting, Texas (March 2008)
Seminar, Emory University (March 2008)
Workshop speaker, Working Group on Efficient Wildlife Vaccination, National Center for Ecological Analysis and Synthesis (NCEAS) (March 2008)
Workshop speaker, Santa Fe Institute workshop on Models of Emergent Behavior in Complex Adaptive Systems (December 2007)
Seminar, Yale University (November 2007)
Carnegie Lecture, School of Journalism, University of Texas at Austin (November 2007)
Workshop speaker, NIH Models of Infectious Disease Agent Study (MIDAS) Workshop on Representation of Microbial Evolution in Epidemic Models (November 2007)
Conference lecture, Gordon Research Conference on Microbial Population Biology (July 2007)
Special lecture, University of Texas Chancellor's Salon Series (April 2007)
Plenary speaker, NSF Theoretical Biology Workshop (October 2006)
Invited Public Lecture, Cultural Life Program at Furman University (October 2006)
Symposium lecture, Ecology Society of America Annual Meeting, Symposium on ecological and evolutionary processes in complex networks (August 2006)
Seminar, Los Alamos National Laboratory (June 2006)
Seminar, University of Tokyo, Department of Pure and Applied Sciences (May 2006)
Symposium lecture, Frontiers in Dynamics: Physical and Biological Systems, 9th Tamura Symposium, Tokyo (May 2006)

Seminar, Texas State University, Department of Mathematics (April 2006)

Seminar, Lawrence Livermore National Labs, Los Alamos, New Mexico (April 2006)

Seminar, University of Michigan, Bioinformatics Program (March 2006)

Seminar, University of Maryland, Behavior, Evolution, Ecology & Systematics Department (March 2006)

Intelligence briefing, National Intelligence Council, Science and Technology Expert Partnership, Infectious Disease Modeling Conference (March 2006)

Seminar, Introduction to Mathematical Research Seminar, University of Texas (March 2006)

Workshop lecture, Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), Epidemiology and Evolution of Influenza Workshop (January 2006)

Conference lecture, Special Session on Current Events, 2006 Joint Mathematics Meetings of the American Mathematics Society. This is a highly publicized session at the largest US mathematics meetings. Speakers are invited personally by the President of the American Mathematics Society (AMS) to present recent advances in exciting mathematical fields. (January 2006)

Symposium lecture, Spread of Pathogens of Social Animals with Particular Reference to the Morbilliviruses, Penn State University (November 2005)

Keynote, Regional Finals, Siemens-Westinghouse Science and Math Competition (November 2005)

Seminar, Texas State University, Biology Department (November 2005)

Conference lecture, 3rd Annual Ecology & Evolution of Infectious Disease Conference, Colorado State University (May 2005)

Seminar, University of Minnesota, Ecology, Evolution, and Behavior Department (May 2005)

Seminar, University of Texas, Non-linear Dynamics Seminar, Department of Physics (April 2005)

Seminar, Introduction to Mathematical Research Seminar, University of Texas (April 2005)

Seminar, University of Texas, Planets and Life Seminar, Astronomy Department (February 2005)

Symposium lecture, Symposium on Network Science: Implications for Biology and Medicine, Peter Wall Institute for Advanced Studies, Vancouver, Canada (January 2005)

Seminar, University of Michigan, Center for the Study of Complex Systems (November 2004)

Panelist, University of Texas, Freshman Women in Science Seminar (October 2004)

Panelist, MIT Technology Review Emerging Technologies Conference (September 2004)

Seminar, Los Alamos National Labs, Los Alamos, New Mexico (May 2004)

Seminar, Introduction to Mathematical Research Seminar, University of Texas (April 2004)

Special lecture, Mathematical Sciences Research Institutes (MSRI), Annual Meeting of Academic Sponsors (March 2004)

Seminar, Brown University, Department of Ecology and Evolutionary Biology (February 2004)

Seminar, University of Texas Dean's Scholars Seminar (November 2003)

Lecture, Santa Fe Institute, Business Network & Board of Trustees Annual Meeting (November 2003)

Seminar, Texas Department of Health (October 2003)

Lecture, Gordon Research Conference on Evolutionary & Ecological Functional Genomics (August 2003)

Seminar, National Center for Genome Resources (NCGR) Santa Fe, New Mexico (May 2002)

Session chair, *Workshop on the Evolution and Measurement of Robustness in Organisms*, Santa Fe Institute, Organizer: Günter Wagner (April 2002)

Seminar, University of Arizona, Ecology and Evolutionary Biology Department (January 2002)

Conference lecture, *Modularity: Understanding the Development and Evolution of Complex Natural Systems*, Konrad Lorenz Institute for Evolution and Cognition Research, Austria (October 2000)

Seminar, Institute for Advanced Studies, Princeton, New Jersey (October 1999)

EDUCATIONAL OUTREACH

Keynote, UT Best of Texas recruitment event for class of 2021 (2017)
MathWorks: Texas State Honors Summer Math Camp, Texas State University: Student research project advisor and guest lecturer (2006, 2007, 2009, 2011, 2012, 2017)
Lecture, UT Forum (March 2016)
Panelist, *CNS Discovery Dinner on Big Data* (2015)
Speaker, Undergraduate Lecture Series: <https://ugs.utexas.edu/uls> (2014)
Santa Fe Institute Short Course, Exploring Complex Networks (2013)
AJA Elementary School Science Fair, judge (2010-2014) and keynote speaker (2010, 2015)
Blue Knot Austin Tech Initiative, Outreach lecture (2009)
Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID), Taught short course on Network Theory in Infectious Diseases (2009)
Complex Systems Summer School, Santa Fe Institute, Lecture series (2002, 2007, 2009)
Saturday Morning Math Group, Interactive outreach lecture for junior high and high school students, University of Texas at Austin (April 2006)
University of Texas Environmental Science Institute, Hot Science – Cool Talks Outreach Lecture (April 2006)
Keynote Lecture, First Bytes computer science summer camp for high school girls, UT (2005)
Advisory Board, Cogito.org: Web Site for Exceptional Young Scientists and Mathematicians (2005-present)
Outreach Lecture, University of Texas LAMP: Learning Activities for Mature People (2004, 2007)
Crazy Science Extravaganza, UT: Developed an epidemiology learning activity for interactive elementary school science fair (2003, 2004)
Research Science Institute, M.I.T., Presented lecture series: “Mathematical Modeling in Evolution, Ecology and Epidemiology” (Summer 2002)

SERVICE

Executive Committee of Steering Committee of NIGMS MIDAS Program (Chair 2014-2016; Member 2018-)
The Science Board, Santa Fe Institute, Santa Fe, New Mexico (2011-2017)
Advisory Board, Outbreak Science, a nonprofit facilitating science and data sharing during infectious disease outbreaks (2016-)

WORKSHOP ORGANIZER

Working groups: Quantitative Prediction and Control of Epidemics, Organized and directed six-person working group, Santa Fe Institute (February 2009)
Epidemics: International Conference on Infectious Disease Dynamics, Steering committee for international meeting (2008, 2009, 2013)
Network Models of Biological and Social Contagion, Organized and directed a 25-person working group (with Michelle Girvan), Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), Rutgers, New Jersey (November 2008)
The Evolution of Gene Expression in Tissues, Organized and directed a 5-person working group (with Michael Lachmann), Santa Fe Institute (June 2006)
Network Robustness to Evolving Agents, Organized and directed an 8-person working group (with Tim Keitt), Santa Fe Institute (January 2005)
Evolvability and Robustness in Molecules and Microbes, Organized and directed 25-person international workshop (with Christopher Voigt and Frances Arnold), Santa Fe Institute (February 2002)

EDITORIAL POSITIONS

Associate Editor, *Infectious Disease Modeling* (2016-)

Faculty Member, Theoretical Ecology Section, *Faculty of 1000* (2009-)

Associate Editor, *Epidemics* (2009-)

Associate Editor, *PLoS Computational Biology* (2006-2013)

Interdisciplinary Perspectives on Infectious Diseases

Associate Editor (2007-2011)

Lead Editor, Special Issue on *Network Perspectives on Infectious Disease Dynamics* (2010)

Associate Editor, *Statistical Communications in Infectious Diseases* (2009-2012)

Associate Editor, *Evolution* (2008-2010)

Associate Editor, *Journal of Molecular Evolution* (2004-2008)

Guest Editor, *PLoS Medicine* (2006)

UNIVERSITY SERVICE

Director, NIH T32 Training Grant in Big Data for Biomedicine (2018-)

Member, University Budget Council (2017-)

Team member, ASCN Systemic Change Institute (2019)

CNS Promotion & Tenure Committee (2015-16; 2016-17)

Steering Committee: Big Data T32 Training Grant (2016-)

Elected Member, UT Faculty Council (2008-2010, 2015-2017) and UT Faculty Council Executive Committee (2015-2016)

Campus Conversation Participant & Faculty Professional Development Committee (2014-2015)

Director (2011-2014), Associate Director (2008-2010), Division of Statistics and Scientific Computation (SSC):

Built and led new statistics department at UT. Hired ten new faculty, and introduced over 40 new courses, a new statistics Ph.D. program, two interdisciplinary undergraduate certificate programs and two graduate portfolio programs in statistics and scientific computation, a Graduate Student Fellows Program, a Distinguished Lecture Series, an Early Career Grant Development Program for junior faculty, a Summer Statistics Institute (annually since 2008), and full-time statistical consulting services.

Faculty Advisor, Undergraduate degree in Computational Biology (2008-2011)

Developed new degree plan in Computational Biology (2007-2008)

Advisory Committee, Institute for Cellular and Molecular Biology (2008-2011)

Faculty search committees: IB Faculty Search Committee (2015-2016), Committee chair, Director of Division of Statistics and Scientific Computation (2009-2010), Evolutionary and ecological genomics, Integrative Biology (2005-2006), Computational biology, Integrative Biology (2003-2004), Molecular evolution, Integrative Biology (2003-2004)

Faculty promotion committees: five since 2009

REFeree & GRANT REVIEWER ACTIVITIES

Study Section Member, NIH Infectious Disease, Reproductive Health, and Asthma/Pulmonary Conditions (IRAP) (June 2019)

Advisory Board, McDonnell Foundation Postdoctoral Fellowships (2011-)

NSF review panel for Evolutionary Genetics (October 2006)

NIH review panel for Biomedical Information Science and Technology Initiative (BISTI) (March 2004)

Ad Hoc Grant Reviewer for NIH, NSF, Mardsen Fund, MITACS (2002-present)

Referee for numerous journals including American Journal of Epidemiology, American Naturalist, Biology Letters, Biological Reviews, Biosystems, Ecology Letters, Evolution, Genetics, Journal Theoretical Biology, Mathematical Biosciences, Nature, Nature Physics, OIKOS, Physics Letters A, PLoS Biology, PLoS Computational Biology, PLoS Medicine, Proceedings B, Science (1999-present)