

LAUREN ANCEL MEYERS
SECTION OF INTEGRATIVE BIOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN
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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
2000-2002 *Postdoctoral Fellow at Emory University* (Advisor: Bruce Levin), *Santa Fe Institute*, and *University of Houston* (Advisor: Michael Trivisano)

ACADEMIC POSITIONS

- 2011- Full Professor, Integrative Biology, University of Texas at Austin (UT)
Promotion approved, effective September 2011
Member, Center for Computational Biology and Bioinformatics,
Environmental Science Institute, Institute for Cellular and Molecular Biology
- 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, Santa Fe, New Mexico

AWARDS & FELLOWSHIPS

- 2010-2011 Donald D. Harrington Faculty Fellowship, UT
- 2003-2012 Three consecutive three-year appointments to the External Faculty of the Santa Fe Institute, Santa Fe, New Mexico
- 2006-2010 Fellow, University of Texas Institute for Molecular and Cellular Biology
- 2005 College of Natural Sciences Teaching Excellence Award, UT
- 2004 MIT Technology Review TR100: One of 100 Top Global Innovators Under 35
- 2004 Austin Business Success Center Award for Technological Innovation
- 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
- 1991-1996 U.S. Congressional National Science Scholar

Updated January 2011

RESEARCH INTERESTS

I conduct research in two general areas. The first is *mathematical epidemiology*. Over the last ten years, I have been developing new network-based mathematical approaches for predicting the spread of infectious diseases and collaborating with public health officials in the US and Canada to apply these methods to designing optimal control measures. My second research area is *theoretical evolutionary biology*. I have been working in this area since graduate school, with a particular focus on (a) the impact of environmental heterogeneity on evolutionary dynamics and (b) the structure of complex fitness landscapes.

PUBLICATIONS

2011

- Cornforth, D., T. Reluga, A. Galvani, C. Bauch, E. Shim, L.A. Meyers (*in press*) Erratic flu vaccination emerges from short-sighted behaviour in contact networks. *PLoS Computational Biology*.
- Dimitrov, N., S. Goll, N. Hupert, B. Pourbohloul, L.A. Meyers (*in press*) Optimizing Tactics for use of the U.S. Antiviral Strategic National Stockpile for Pandemic Influenza. *PLoS ONE*. (Earlier version published on *PLoS Currents Influenza* (2009))
- Li, M., G.B. Chapman, Y. Ibuka, L.A. Meyers, A.P. Galvani (*in press*) Who got vaccinated against H1N1 pandemic flu? A longitudinal study. *Psychology and Health*.
- E. Shim, L.A. Meyers, A.P. Galvani. (*in press*) Optimal H1N1 vaccination strategies based on self-interest versus group interest. *BMC Public Health*.

2010

- Craft, M.E., E. Volz, C. Packer, L.A. Meyers (2010) Disease transmission in territorial populations: The small-world network of Serengeti lions. *Journal of the Royal Society Interface* doi:10.1098/rsif.2010.0511.
- 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.
- Dimitrov, N.B. and L.A. Meyers (2010) Mathematical Approaches to Infectious Disease Prediction and Control. J. J. Hasenbein, ed. *INFORMS TutORials in Operations Research* **7**: 1-25.
- Ibuka, Y., G.B. Chapman, L.A. Meyers, M. Li, A.P. Galvani (2010) The dynamics of risk perceptions and precautionary behavior in response to 2009 (H1N1) pandemic influenza. *BMC Infectious Diseases* **10**: 296.
- Bansal, S., B. Pourbohloul, N. Hupert, B. Grenfell, L.A. Meyers (2010) The Shifting Demographic Landscape of Pandemic Influenza. *PLoS ONE* **5**: e9360. (Earlier version published on *PLoS Currents Influenza* (2009))

PUBLICATIONS (Continued)

2009

- Medlock, J., L.A. Meyers, A. Galvani (2009) Optimizing allocation for a delayed influenza vaccination campaign. *PLoS Currents: Influenza*: RRN1134.
- Bansal, S., S. Khandelwal, L.A. Meyers (2009) Exploring Biological Network Structure with Clustered Random Networks. *BMC Bioinformatics* **10**: 405.
- Pourbohloul, B., A. Ahued, B. Davoudi, R. Meza, L.A. Meyers, et al. (2009) Initial human transmission dynamics of the pandemic (H1N1) 2009 virus in North America. *Influenza and other Respiratory Viruses* **3**: 215-222.
- Craft, M.E., E. Volz, C. Packer, L.A. Meyers (2009) Distinguishing epidemic waves from disease spillover in a wildlife population. *Proceedings of the Royal Society B: Biological Sciences* **276**: 1777-1785.

2008

- L.A. Meyers (2008) *Statistics Primer*. To accompany *Life: The Science of Biology*, Eighth Edition. Sinauer Associates.
- Cowperthwaite, M.C., E.P. Economo, W.R. Harcombe, E.L. Miller, L.A. Meyers (2008) A Simple Rule Shapes Phenotype Evolution. *PLoS Computational Biology* **4**: e1000110.
- Volz, E., L.A. Meyers (2008) Static network approximations and epidemic thresholds for a simple SIR model in dynamic contact networks. *Journal of the Royal Society Interface* **6**: 233-241.

2007

- Volz, E., L.A. Meyers (2007) Susceptible–infected–recovered epidemics in dynamic contact networks. *Proceedings of the Royal Society B: Biological Sciences* **274**: 2925-2933.
- Bansal, S., B.T. Grenfell, L.A. Meyers (2007) When individual behavior matters: homogeneous and network models in epidemiology. *Journal of the Royal Society Interface* **4**: 879-891.
- Meyers, L.A. (2007) Contact network epidemiology: Bond percolation applied to infectious disease prediction and control. *Bulletin of the American Mathematical Society* **44**: 63-86.
- Cowperthwaite, M., L.A. Meyers (2007) How mutational networks shape evolution: Lessons from RNA models. *Annual Review of Ecology, Evolution, and Systematics* **38**: 203-230.

2006

- Bansal, S., B. Pourbohloul, L.A. Meyers (2006) A comparative analysis of influenza vaccination programs. *PLoS Medicine* **3**: e387.
- Ferrari, M.J., S. Bansal, L.A. Meyers, O.N. Bjørnstad (2006) Network frailty and the geometry of herd immunity. *Proceedings of the Royal Society B: Biological Sciences* **273**: 2743-2748.

PUBLICATIONS (Continued)

Meyers, L.A., M.E.J. Newman, B. Pourbohloul (2006) Predicting epidemics on directed contact networks. *Journal of Theoretical Biology* **240**: 400-418

Cowperthwaite, M., J.J. Bull, L.A. Meyers (2006) From bad to good: Fitness reversals and the ascent of deleterious mutations. *PLoS Computational Biology* **2**: e141.

Meyers, L.A., D.A. Levin (2006) On the abundance of polyploids in flowering plants. *Evolution* **60**: 1198-1206.

2005

Meyers, L.A., B. Pourbohloul¹, M.E.J. Newman, D.M. Skowronski, R.C. Brunham (2005) Network theory and SARS: Predicting outbreak diversity. *Journal of Theoretical Biology* **232**: 71-81.

Pourbohloul, B., L.A. Meyers¹, Kraiden, M., Patrick, D.M., Brunham, R.C. (2005) A quantitative comparison of control strategies for respiratory-borne pathogens. *Emerging Infectious Diseases* **11**: 1249-1256.

Meyers, L.A., F. Ancel, M. Lachmann (2005) Evolution of genetic potential. *PLoS Computational Biology* **1**: 236-243.

Cowperthwaite, M., J.J. Bull, L.A. Meyers (2005) Distributions of beneficial fitness effects in RNA. *Genetics* **170**: 1449-1457.

Bull, J.J., L.A. Meyers, M. Lachmann (2005) Quasispecies made simple. *PLoS Computational Biology* **1**: 450-460.

Meyers, L.A. (2005) Constraints on variation from genotype through phenotype to fitness, in "Variation: A Hierarchical Examination of a Central Concept in Biology" (B. Hallgrímsson and B. Hall, Eds.), Academic Press.

Meyers, L.A. and W. Fontana (2005) Evolutionary lock-in and the origin of modularity in RNA structure, in "Modularity – Understanding the Development and Evolution of Complex Natural Systems" (W. Callebaut and D. Rasskin-Gutman, Eds.), MIT Press.

2004

Meyers, L.A. (2004) Book review of Gerhard Schlosser and Günter Wagner (Eds.), "Modularity in Development and Evolution" *Science* **306**: 814-815.

Meyers, L.A. (2004) Book review of Bruce H. Weber and David J. Depew (Eds.), "Evolution and Learning: The Baldwin Effect Reconsidered" *American Journal of Human Biology* **16**: 495-496.

Meyers, L.A., J.F. Lee, M. Cowperthwaite, A.D. Ellington (2004) The robustness of naturally and artificially selected nucleic acid secondary structures. *Journal of Molecular Evolution* **58**: 681-691.

¹ First two authors contributed equally.

PUBLICATIONS (Continued)

Lee, J.F., J.R. Hesselberth, L.A. Meyers, and A.D. Ellington (2004) Aptamer database. *Nucleic Acids Research*, **32**: D95-D100.

2003

Meyers, L.A., B.R. Levin, A.R. Richardson and I. Stojilkovic (2003) Epidemiology, hypermutation, within-host evolution and the virulence of *Neisseria meningitidis*. *Proceedings of the Royal Society B: Biological Sciences* **270**: 1667-1677.

Meyers, L.A., M.E.J. Newman, M. Martin and S. Schrag (2003) Applying network theory to epidemics: Control measures for *Mycoplasma pneumoniae* outbreaks. *Emerging Infectious Diseases* **9**: 204-210.

De Visser, J.A.G.M., J. Hermisson, G.P. Wagner, L.A. Meyers, et al. (2003) Perspective: Evolution and Detection of Genetic Robustness. *Evolution* **57**: 1959-1972.

2002

Meyers, L.A. and J.J. Bull (2002) Fighting change with change: adaptive variation in an uncertain world. *Trends in Ecology and Evolution* **17**: 551-557.

Prior to 2002 (Published under maiden name L.W. AnceI)

AnceI, L.W. and W. Fontana (2000) Plasticity, evolvability and modularity in RNA. *Journal of Experimental Zoology (Molecular and Developmental Evolution)* **288**: 242-283.

AnceI, L.W. (2000) Undermining the Baldwin expediting effect: How phenotypic plasticity influences the rate of evolution. *Theoretical Population Biology*, **58**: 307-319.

AnceI, L.W. (1999) A quantitative model of the Simpson-Baldwin effect. *Journal of Theoretical Biology* **196**: 197-209.

AnceI, L.W. and M. W. Hero (1998) One-way intervals of circle maps. *Proceedings of the American Mathematical Society* **126**: 1191-1197.

AnceI, L.W. (1992,94) National Security Agency Cryptologic Mathematics Papers: Three classified internal publications.

GRANT SUPPORT

CURRENT SUPPORT

NIH MIDAS, U01GM087719-01, "Impacts of Individual and Social Behavior on Influenza Dynamics and Control." \$2,986,225, 6/09-5/14 (PI)

NIH, 1R21DA024611-01A, "Combining empirical and theoretical network approaches to HIV transmission" \$345,277, 6/09-5/11 (Co-I)

NSF, DEB-0749097, "The Spread and Evolution of Parasites on Host Networks." \$429,999, 9/08-8/11 (PI)

James S. McDonnell Foundation Research Award, The Evolutionary and Epidemiological Potential of Pathogens. \$210,727 (direct costs), 01/07-1/11 (PI)

GRANT SUPPORT (Continued)

NSF 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 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.) Total: \$25,000,000, Expected UT share: \$2,500,000, 8/10-10/15

PRIOR SUPPORT:

Texas Department of State Health Services (DSHS) “Assessment of Texas Influenza Surveillance Program.” \$35,000, 8/09-7/10 (PI)

NSF, SES-0940071, “COLLABORATIVE RESEARCH: Dynamic Risk Perceptions about Mexican Swine Flu”, \$17,872, 7/09-6/10 (PI)

Canadian Institutes of Health Research (CIHR), Evaluation of Ontario’s Influenza Immunization Program. CAD\$1,099,808, 01/07-12/09 (Co-I)

Bill and Stephanie Sick Research Award, Quantitative Prediction and Control of Epidemics. \$100,000 (direct costs), 09/07-12/09 (PI)

Canadian Institutes of Health Research (CIHR) Mathematical modeling of pandemic influenza. CAD\$344,645, 09/06-08/09 (Co-I)

NSF, DEB-0445351, "Evolution, Conflict and Cooperation in Mixed-species Bacterial Communities." \$449,903, 3/05-2/09 (PI)

NSF, “ITR Collaborative Research: Building the Tree of Life - A National Resource for Phyloinformatics and Computational Phylogenetics” \$694,680, 9/03-8/08 (Co-PI)

Canadian Institutes of Health Research (CIHR), Public Health Preparedness for the Vancouver 2010 Olympic Games. CAD\$100,000, 4/06-3/07 (Co-I)

Canadian Institutes of Health Research (CIHR), The spread and evolution of SARS coronaviruses through contact networks: Prediction, recognition & Control, CAD\$250,000, 7/04-12/05 (Co-PI)

NSF, DEB-0303636, “Evolving better biofilms: The dynamics of community-level natural selection in bacteria.” \$50,000, 2/03-1/04 (PI)

Canadian Institutes of Health Research (CIHR), “SARS: A Scientific Collaborative to Support Public Health Response through Vaccination.” CAD \$500,000, 5/03-3/04 (Co-I)

NSF Postdoctoral Fellowship in Bioinformatics, \$100,000, 11/00-10/02

INTERVIEWS AND MEDIA EVENTS

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)

Epidemiology research featured in *Slate.com* (February 2009)

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

INTERVIEWS AND MEDIA EVENTS (Continued)

- Interviewed for LA Times article, *To protect us all, vaccinate school kids* (November 2006)
- Epidemiology 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)
- Epidemiology research featured in MIT Technology Review, *Technology Review 100* (October 2004)
- Epidemiology research featured in Austin American Statesman (September 2004)
- Epidemiology research featured in National Review of Medicine (June 2004)
- Epidemiology research featured in Die Zeit (February 2004)
- Epidemiology research featured in Newsweek, *The Battle Against Bugs Gets Serious* (January 2004)
- Television interview by Dan Robertson on KXAN 36 News (November 2003)
- Epidemiology 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)
- Epidemiology research featured by Clark Boyd on NPR’s *The World* (June 2003)
- Radio interview by Anita Anand on BBC’s *Five Live* (June 2003)
- Epidemiology research featured in WIRED, *Behind the Six Degrees of SARS*, (May 2003)

INVITED PRESENTATIONS

2010

- Invited symposium lecture, I² Integration and Innovation Public Health Preparedness Symposium, Texas Department of State Health Services (July)
- Plenary Lecture, International Conference on Drug Development (February)
- Seminar, Operations Research and Industrial Engineering Program, The University of Texas at Austin (February)
- Public Lecture, Santa Fe Institute 2010 Public Lecture Series at the James A. Little Theater (January)

2009

- Panelist, LBJ School of Public Affairs’s Center for Health and Social Policy: Managing the H1N1 Virus: Immunizations Development and Distribution Policy, The University of Texas at Austin (December)

INVITED PRESENTATIONS (Continued)

Lecture, Santa Fe Institute Annual Business Network and Board of Trustees' Symposium (November)

Public Lecture, Rice University (October)

Dean's Advisory Council, The University of Texas at Austin (October)

Seminar, University of Wisconsin-Milwaukee (August)

Seminar, BARDA: Biomedical Advanced Research and Development Authority, Washington, DC (July)

Conference speaker, MIDAS Network Meeting, Emory University (June)

Seminar, Rice University (February)

2008

Seminar, Cornell University (October)

Seminar, University of Pennsylvania (October)

Conference speaker, National Security Agency (June)

Seminar, University of Houston (April)

Seminar, University of Wisconsin, Milwaukee (April)

Goldschmidt Keynote Lecture, Texas Branch of the American Society for Microbiology Spring Meeting (March)

Seminar, Emory University (March)

Workshop speaker, Working Group on Efficient Wildlife Vaccination, National Center for Ecological Analysis and Synthesis (NCEAS) (March)

2007

Workshop speaker, Santa Fe Institute workshop on Models of Emergent Behavior in Complex Adaptive Systems (December)

Seminar, Yale University (November)

Carnegie Lecture, School of Journalism, University of Texas at Austin (November)

Workshop speaker, NIH Models of Infectious Disease Agent Study (MIDAS) Workshop on Representation of Microbial Evolution in Epidemic Models (November)

Conference lecture, Gordon Research Conference on Microbial Population Biology (July)

Special lecture, University of Texas Chancellor's Salon Series (April)

2006

Plenary speaker, NSF Theoretical Biology Workshop (October)

Invited Public Lecture, Cultural Life Program at Furman University (October)

INVITED PRESENTATIONS (Continued)

- Symposium lecture, Ecology Society of America Annual Meeting, Symposium on ecological and evolutionary processes in complex networks (August)
- Seminar, Los Alamos National Laboratory (June)
- Seminar, University of Tokyo, Department of Pure and Applied Sciences (May)
- Symposium lecture, Frontiers in Dynamics: Physical and Biological Systems, 9th Tamura Symposium, Tokyo (May)
- Seminar, Texas State University, Department of Mathematics (April)
- Seminar, Lawrence Livermore National Labs, Los Alamos, New Mexico (April)
- Seminar, University of Michigan, Bioinformatics Program (March)
- Seminar, University of Maryland, Behavior, Evolution, Ecology and Systematics Department (March)
- Intelligence briefing, National Intelligence Council, Science and Technology Expert Partnership, Infectious Disease Modeling Conference (March)
- Seminar, Introduction to Mathematical Research Seminar, University of Texas (March)
- Workshop lecture, Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), Epidemiology and Evolution of Influenza Workshop (January)
- 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)

2005

- Symposium lecture, Spread of Pathogens of Social Animals with Particular Reference to the Morbilliviruses, Penn State University (November)
- Keynote Address, Regional Finals, Siemens-Westinghouse Science and Mathematics Competition (November)
- Seminar, Texas State University, Biology Department (November)
- Conference lecture, 3rd Annual Ecology & Evolution of Infectious Disease Conference, Colorado State University (May)
- Seminar, University of Minnesota, Ecology, Evolution, and Behavior Department (May)
- Seminar, University of Texas, Non-linear Dynamics Seminar, Department of Physics (April)
- Seminar, Introduction to Mathematical Research Seminar, University of Texas (April)
- Seminar, University of Texas, Planets and Life Seminar, Astronomy Department (February)
- Symposium lecture, Symposium on Network Science: Implications for Biology and Medicine, Peter Wall Institute for Advanced Studies, Vancouver, Canada (January)

INVITED PRESENTATIONS (Continued)

2004

- Seminar, University of Michigan, Center for the Study of Complex Systems (November)
- Panelist, University of Texas, Freshman Women in Science Seminar (October)
- Panelist, MIT Technology Review Emerging Technologies Conference (September)
- Seminar, Los Alamos National Labs, Los Alamos, New Mexico (May)
- Seminar, Introduction to Mathematical Research Seminar, University of Texas (April)
- Special lecture, Mathematical Sciences Research Institutes (MSRI), Annual Meeting of Academic Sponsors (March)
- Seminar, Brown University, Department of Ecology and Evolutionary Biology (February)

2003

- Seminar, University of Texas Dean's Scholars Seminar (November)
- Special lecture, Santa Fe Institute, Business Network and Board of Trustees Annual Meeting (November)
- Seminar, Texas Department of Health (October)
- Conference lecture, Gordon Research Conference on Evolutionary and Ecological Functional Genomics (August)

2002

- Seminar, National Center for Genome Resources (NCGR) Santa Fe, New Mexico (May)
- Session chair, *Workshop on the Evolution and Measurement of Robustness in Organisms*, Santa Fe Institute, Organizer: Günter Wagner (April)
- Seminar, University of Arizona, Ecology and Evolutionary Biology Department (January)

2000

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

1999

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

EDUCATIONAL OUTREACH ACTIVITIES

- AJA Elementary School Science Fair, judge (2009, 2010) and keynote speaker (2010)
- 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)
- Texas State Honors Summer Math Camp, Texas State University: Student research project advisor and guest lecturer (2006, 2007, 2009)

EDUCATIONAL OUTREACH ACTIVITIES (Continued)

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

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)

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

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

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

Associate Editor, *Epidemics* (2009-present)

Interdisciplinary Perspectives on Infectious Diseases

Associate Editor (2007-present)

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

SERVICE (Continued)

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

Associate Editor, *Evolution* (2008-2010)

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

Guest Editor, *PLoS Medicine* (2006)

UNIVERSITY SERVICE

Associate Director, Division of Statistics and Scientific Computation (2008-2010): Help to establish new research, teaching and service unit at UT (which does not have a statistics department). In the first two years, we hired 3 new faculty and enlisted over 75 faculty members representing all colleges at UT; and we developed 16 new courses, 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 (which we ran in May 2008, 2009, 2010 and included 18 courses and enrollment of over 400 graduate students and faculty each year), and full-time statistical consulting services.

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

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

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

Elected Member, UT Faculty Council (2008-2010)

Faculty search committees: 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)

REFEREE & GRANT REVIEWER ACTIVITIES

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)

TEACHING AND ADVISING

GRADUATE STUDENTS/POSTDOCS SUPERVISED

Masters students: Sherri Jones, Math (2004-05), Ashley Brown, Math (2006-08), Ruben Kubiak, Physics (2007-08), Sebastian Goll (2008-2010)

TEACHING AND ADVISING (Continued)

Ph.D. students: Matthew Cowperthwaite, ICMB (2003-08), Shweta Bansal, CAM (2004-08), Eric Miller, EEB (2003-2010), Tom Hladish, EEB (2006-), Sam Scarpino, EEB (2007-), Eamon O'Dean, EEB (2008-), Kelly Pierce, EEB (2008-), Raj Balasubramanian, ECE (2009-)

Postdoctoral Associates: Sam Brown (2003-07), Robert Goldman (2006-08), Erik Volz (2006-07), Meggan Craft (2008-09), Damien Caillaud (2009-), Ozgur Araz (2010-)

COURSES TAUGHT (UNIVERSITY OF TEXAS AT AUSTIN)

| <i>Semester</i> | <i>Course</i> | <i>Number of Students</i> | <i>Instructor Rating (out of 5)</i> | <i>Course Rating (out of 5)</i> |
|-----------------|---------------------------------------------------|-----------------------------------|---------------------------------------------|-----------------------------------------|
| Fall 2003 | BIO 318M, Biostatistics | 62 | 4.8 | 4.2 |
| Spring 2004 | BIO384K, Evolutionary Model Systems | 8 | 4.6 | 4.6 |
| Fall 2004 | BIO 384K, Evolution in Complex Biological Systems | 6 | 4.8 | 4.6 |
| Spring 2005 | BIO 318M, Biostatistics | 61 | 4.4 | 3.7 |
| Fall 2005 | BIO 318M, Biostatistics | 31 | 4.8 | 4.4 |
| Spring 2006 | BIO 384K, Evolution and Selection of Communities | 10 | - | - |
| Fall 2006 | BIO 318M, Biostatistics | 55 | 4.6 | 4.2 |
| Spring 2009 | BIO 337, Introduction to Computational Biology | 18 | 4.9 | 4.5 |
| Spring 2010 | BIO 384K, Modeling Infectious Disease Dynamics | 8 | 4.0 | 4.0 |