CURRICULUM VITAE of Nicholas G. Reich [1]

CONTACT

Lab website:	https://reichlab.io
Email:	nick [at] umass.edu
Mailing address:	Department of Biostatistics and Epidemiology University of Massachusetts - Amherst School of Public Health and Health Sciences 425 Arnold House, 715 North Pleasant Street Amherst, MA 01003-9304
GitHub:	Reich Lab, personal
Telephone:	(413) 545-4534

EDUCATION

Ph.D. in Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2010
Thesis title: *Statistical methods for incomplete data from infectious disease outbreaks*
Thesis advisor: Ron Brookmeyer

B.A. in English, Carleton College, 2001, *magna cum laude*

PROFESSIONAL EXPERIENCE

2017 -	Associate Professor, Department of Biostatistics and Epidemiology University of Massachusetts, Amherst
2013 - 2017	Assistant Professor, Department of Biostatistics and Epidemiology University of Massachusetts, Amherst
2011 - 2013	Research Assistant Professor, Department of Biostatistics and Epidemiology University of Massachusetts, Amherst
2010 - 2011	Post-doctoral fellow, Department of Epidemiology & Department of Hospital Epidemiology and Infection Control, Johns Hopkins University
2006 - 2010	Research Assistant, Department of Biostatistics, Johns Hopkins University
2006 - 2008	Statistical Consultant, Maryland League of Conservation Voters
2005	Research Assistant, Framingham Heart Study, Boston, MA

HONORS AND AWARDS

2015	First place, Award for Outstanding Research Articles in Biosurveillance, International Society of Disease Surveillance
2015	Nominated for College Outstanding Teacher Award, UMass-Amherst SPHHS
2013	Honorable Mention for coarseDataTools R package, Open Source Software Initiative
2012	Open Education Initiative Award Provost's Office and the University Libraries at UMass-Amherst
2010	Statistics in Epidemiology Young Investigator Award American Statistical Association, Statistics in Epidemiology Section
2010	First prize, Student Research Competition American Public Health Association, Statistics Section
2009	Helen Abbey Award for excellence in teaching Department of Biostatistics, Johns Hopkins School of Public Health

[1] Last updated March 4, 2018

ORIGINAL RESEARCH

Full citation list at Google Scholar

Under review, under revision, or submitted ____ = mentored student author

42. **Reich NG**, Lessler J, Varma JK, Vora NM. Quantifying the Risk and Cost of Active Monitoring for Infectious Diseases. [preprint]

41. Lauer SA, Sakrejda K, Ray EL, Suangtho P, Hinjoy S, Iamsirithaworn S, Suthachana S, Cummings DAT, Lessler J, **Reich NG**. Prospective forecasts of annual dengue hemorrhagic fever incidence in Thailand, 2010-2014.

40. Whitcomb B, Madonna L, Roy A, **Reich NG**, Bertone-Johnson E, Healy A. Inflammation during gestation; a longitudinal study of plasma cytokine measures in uncomplicated pregnancies.

Published

39. Ray EL, **Reich NG**. Prediction of infectious disease epidemics via weighted density ensembles. To appear in *PLOS Comp Bio*. [preprint]

38. Ray EL, Sakrejda K, Lauer SA, Johansson MA, **Reich NG**. Infectious disease prediction with kernel conditional density estimation. *Statistics in Medicine*. 2017. 36(30): 4908-4929. [html; preprint — html]

37. Tushar A, **Reich NG**. flusight: interactive visualizations for infectious disease forecasts. *The Journal of Open Source Software*. 2017, 2(13). [html]

36. Wang X, **Reich NG**, Horton N. Enriching Students' Conceptual Understanding of Confidence Intervals: An Interactive Trivia-based Classroom Activity. To appear in *American Statistician*. [preprint]

35. **Reich NG**, Lauer SA, Sakrejda K, Iamsirithaworn S, Hinjoy S, Suangtho P, Suthachana S, Clapham H, Salje H, Cummings DAT, Lessler J. Challenges in real-time prediction of infectious disease: a case study of dengue in Thailand. *PLOS Neglected Tropical Diseases*. 2016, 10(6): e0004761. [html; pdf]

34. **Reich NG**, Lessler J, Sakrejda K, Lauer SA, Iamsirithaworn S, Cummings DAT. Case studies in evaluating time series prediction models using the relative mean absolute error. *American Statistician*. 2016, 70(3):285-292. [html; pdf]

33. Lessler J, Ott CT, Carcelen AC, Konikoff JM, Williamson J, Bi Q, **Reich NG**, Cummings DAT, Kucirka LM, Chaisson LH. Time to Key Events in the Course of Zika Infection and their Implications for Surveillance: A Systematic Review and Pooled Analysis. *Bulletin of the World Health Organization*. 2016, 94:841-849. [pdf]

32. Johansson MA, **Reich NG**, Hota A, Brownstein JS, Santillana M. Evaluating the performance of infectious disease forecasts: A comparison of climate-driven and seasonal dengue forecasts for Mexico. *Scientific Reports*. 2016, 6: 33707. [html ; pdf]

31. Radonovich LJ, Bessesen M, Cummings DAT, Eagan A, Gaydos C, Gibert C, Gorse G, Nyquist C, **Reich NG**, Rodriguez-Barradas M, Savor-Price C, Shaffer R, Simberkoff M, Perl TM. The Respiratory Protection Effectiveness Clinical Trial (ResPECT): A Cluster-Randomized Comparison of Respirator and Medical Mask Effectiveness against Respiratory Infections in Healthcare Personnel. *BMC Infectious Diseases*. 2016. 16:243. [html ; pdf]

30. Hart V, Sturgeon SR, **Reich NG**, Sievert LL, Crawford SL, Gold EB, Avis NE, Reeves KW. Menopausal vasomotor symptoms and incident breast cancer risk in the Study of Women's Health Across the Nation. *Cancer Causes & Control*. 2016, 27(11):1333-1340. [html]

29. Silveira M, Wexler L, Chamberlain J, Straubaur KM, Spencer R, **Reich NG**, Bertone-Johnson ER. Seasonality of Suicide Behavior in Northwest Alaska: 1990-2009. *Public Health*. 2016, 137: 35-43. [html ; pdf]

28. **Reich NG**, Cummings DAT, Lauer SA, Zorn M, Robinson C, Nyquist AC, Price CS, Simberkoff M, Radonovich LJ, Perl TM. Triggering Interventions for Influenza: The ALERT Algorithm. *Clinical Infectious Diseases*. 2015, 60(4): 499–504. [html ; pdf]

27. Lauer SA, Kleinman KP, **Reich NG**. The Effect of Cluster Size Variability on Statistical Power in Cluster Randomized Trials. *PLoS ONE*. 2015, 10(4): e0119074 [html ; pdf]

26. Hart V, Reeves KW, Sturgeon SR, **Reich NG**, Sievert LL, Kerlikowske K, Ma L, Shepherd J, Tice J, Sprague BL. The effect of weight change on volumetric measures of mammographic density. *Cancer Epidemiol Biomarkers Prev*. 2015, 24(4):761. [html]

25. Barney LE, Dandley EC, Jansen LE, **Reich NG**, Mercurio AM, Peyton SR. Integrin Expression and Phenotype Predict Breast Cancer Metastasis. *Integrative Biology*. 2015, 7: 198-212. [html ; pdf]

24. Elfawal M, Towler MJ, **Reich NG**, Weathers PJ, Rich SM. Dried whole plant Artemisia annua slows evolution of malaria drug resistance and overcomes resistance to artemisinin. *PNAS*. 2015, 112(3): 821–826. [html ; pdf]

23. Hart V, Reeves KW, Sturgeon SR, **Reich NG**, Sievert LL, Kerlikowske K, Ma L, Shepherd J, Tice J, Mahmoudzadeh AP, Malkov S, Sprague BL. The effect of change in body mass index on volumetric measures of mammographic density. *Cancer Epi Biomarkers Prev*. 2015, 24:1724-1730. [html ; pdf]

22. **Reich NG**, Shrestha S, King AA, Rohani P, Lessler J, Kalayanarooj S, Yoon IK, Gibbons RV, Burke DS, Cummings DAT. Interactions between serotypes of dengue highlight epidemiological impact of cross-immunity. *Journal of the Royal Society Interface*. 2013, 10 (86), 20130414. [html ; pdf]

21. Milstone AM, **Reich NG**, Advani S, Yuan G, Bryant K, Coffin SE, Huskins C, Livingston R, Saiman L, Smith PB, Song X. Catheter Dwell Time and CLABSIs in Neonates with PICCs: A Multicenter Cohort Study. *Pediatrics*. 2013, 132(6): 21609-e1615. [html ; pdf]

20. Lee RM, Lessler J, Lee RA, Rudolph KE, **Reich NG**, Perl TM and Cummings DAT. Incubation periods of viral gastroenteritis: a systematic review. *BMC Infectious Diseases*. 2013, 13: 446. [html ; pdf]

19. Milstone AM, Elward A, Song X, Zerr DM, Orscheln R, Speck K, Obeng D, **Reich NG**, Coffin SE, Perl TM for the Pediatric SCRUB Trial Study Group. Daily Chlorhexidine Bathing To Reduce Bacteremia in Critically Ill Children: a Multicenter, Cluster-Randomized, Two-Period Crossover Trial. *The Lancet*. 381 (9872), 1099-1106. [html ; pdf]

18. Passaretti CL, Otter JA, **Reich NG**, Myers JA, Shepard J, Howard T, Carroll KC, Lipsett P, Perl TM. Environmental decontamination with hydrogen peroxide vapor reduces the risk of patient acquisition of multidrug-resistant organisms. *Clinical Infectious Diseases*. 2013, 56(1): 27-35. [html ; pdf]

17. Jumani K, Advani S, **Reich NG**, Gosey L, Milstone AM. Complications Associated with Peripherally Inserted Central Venous Catheters in Children. *JAMA Pediatrics*. 2013, 167 (5): 429–435. [html ; pdf]

16. Xu G, Wesker J, White C, Campbell J, **Reich NG**, Rich SM. Detection and heterogeneity of Borrelia burgdorferi in Ixodes ticks by culture-dependent and culture-independent methods. *Journal of Clinical Microbiology*. 2013, 51(2): 615-617. [html ; pdf]

15. Popoola V, Tamma P, **Reich NG**, Perl TM, Milstone AM. Risk Factors for Persistent MRSA Colonization in Children with Multiple Intensive Care Unit Admissions. *Infection Control and Hospital Epidemiology*. 2013, 34(7): 748–750.[html]

14. Popoola VO, Carroll KC, Ross T, **Reich NG**, Perl TM and Milstone AM. Impact of Colonization Pressure and Strain Type on MRSA Transmission in Children. *Clinical Infectious Diseases*. 2013, 57(10): 1458–1460. [html ; pdf]

13. Rock C, Harris AD, **Reich NG**, Johnson JK, Thom KA. Is hand hygiene before donning non-sterile gloves in the ICU a waste of health care worker time? A randomized controlled trial. *American Journal of Infection Control*. 2013, 41(11): 994–996. [html ; pdf]

12. **Reich NG**, Myers JA, Obeng D, Milstone AM, Perl TM. Empirical power and sample size calculations for cluster-randomized and cluster-randomized crossover studies. *PLoS ONE* 2012, 7(4): e35564. [html ; pdf]

11. **Reich NG**, Lessler J, Cummings DAT, Brookmeyer R. Estimating absolute and relative case fatality ratios from infectious disease surveillance data. *Biometrics*. 2012, 68(2): 598-606. [html ; pdf]

10. Elfawal M, Towler MJ, **Reich NG**, Golenbock D, Weathers PJ, Rich SM. Dried Whole Plant Artemisia annua as an Antimalarial Therapy. *PLoS ONE*. 2012, 7(12): e52746. [html ; pdf]

9. Huntington I, Shrestha S, **Reich NG**, Hagopian A. Career intentions of Nepali medical students: A survey-based cross-sectional study. *Health Policy and Planning*. 2012, 27(5): 417-428. [html ; pdf]

8. **Reich NG**, Lessler J, Perl TM, Cummings DAT. Visualizing clinical evidence: citation networks for the incubation periods of respiratory viral infections. *PLoS ONE*. 2011, 6(4): e19496. [html ; pdf]

7. An M, **Reich NG**, Crawford SO, Brookmeyer R, Louis TA, Nelson KE. Stochastic simulation of a blood product donation environment with demand spikes and supply shocks. *PLoS ONE* 2011, 6(7): e21752. [html; pdf]

6. Advani S, **Reich NG**, Sengupta A, Gosey L, Milstone AM. Central Line Associated Bloodstream Infections in Hospitalized Children with Peripherally Inserted Central Venous Catheters. *Clinical Infectious Diseases*. 2011, 52(9): 1108-1115. [html; pdf]

5. **Reich NG**, Lessler J, Cummings DAT, Brookmeyer R. Estimating incubation periods with coarse data. *Statistics in Medicine*. 2010, 28(22): 2769–2784. [html;pdf]

4. Lessler J, Brookmeyer R, **Reich NG**, Nelson KE, Cummings DAT, Perl TM. Identifying Probable Sources of Infection for Respiratory Viruses. *Infection Control and Hospital Epidemiology*. 2010, 31(8): 809-15. [html;pdf]

3. Lessler J, **Reich NG**, Cummings DAT and The DOHMH Swine Influenza Investigation Team. Outbreak of 2009 Pandemic Influenza A (H1N1) at a New York City School. *New England Journal of Medicine*. 2009, 361(27): 2628-2636. [html;pdf]

2. Lessler J, **Reich NG**, Brookmeyer R, Perl TM, Nelson KE, Cummings DAT. A systematic review of the incubation periods of acute respiratory viral infections. *Lancet Infectious Diseases*. 2009, 9(5): 291–300. [html;pdf]

1. Crawford SO, **Reich NG**, An M, Brookmeyer R, Louis TA, Nelson KE, Notari EP, Trouern-Trend J, and Zou S. Regional and temporal variation in American Red Cross blood donations, 1995–2005. *Transfusion*. 2009, 48: 1576-1583. [html;pdf]

COMMENTARIES & REVIEWS

5. Johansson MA, **Reich NG**, Myers LA, Lipsitch M. Embrace preprints to accelerate outbreak science. [under review]

4. **Reich NG**, Milstone AM. Improving efficiency in cluster-randomized study design and implementation: taking advantage of a crossover. *Open Access Journal of Clinical Trials*. 2014, 6: 11-15. [pdf]

3. Shardell M, **Reich NG**, Perencevich EN. Commentary: Back to the future with Sir Bradford Hill: statistical analysis with hospital-acquired infections. *International Journal of Epidemiology*. 2013, 42(5): 1509-1510. [html ; pdf]

2. Bessesen MT, Savor-Price C, Simberkoff M, **Reich NG**, Pavia AT, Radonovich LJ. 95 Respirators or Surgical Masks to Protect Healthcare Workers Against Respiratory Infections: Are We There Yet? *American Journal of Respiratory and Critical Care Medicine*. 2013, 187(9): 904-905. [html ; pdf]

1. **Reich NG**, Lessler J, Chu H, Cole S. Commentary: Identification of the asymptomatic ratio. *Epidemiology*. 2011, 22(3): 333-335. [html]

PUBLISHED DATA RESOURCES & WEB APPS

5. Tushar A, **Reich NG**. FluSight. November 2016. http://dx.doi.org/10.5281/zenodo.192509.

4. **Reich NG**. Determining Durations for Active Monitoring. July 2016. http://iddynamics.jhsph.edu/apps/shiny/activemonitr/.

3. CDCepi, Johansson MA, **Reich NG**, Rivers C, Yu Z, Chen D. zika: Data repository of publicly available Zika data. February 2016. http://dx.doi.org/10.5281/zenodo.46717

2. **Reich NG**, Ray EL. Predictions from CDC influenza prediction competition, 2015-2016. March 2016. http://dx.doi.org/10.5281/zenodo.46840.

1. Lauer SA, **Reich NG**. The ALERT Algorithm. November 2014. http://iddynamics.jhsph.edu/apps/shiny/ALERT/.

GRANTS AND CONTRACTS

NIH, R35 research grant ($1.9m Total Costs) Sept 2016 - Aug 2021
Statistical methods for real-time forecasts of infectious disease: dynamic time-series and machine learning approaches
PI: Reich. The R35 mechanism is the NIGMS-sponsored Maximizing Investigators' Research Award.

DARPA, Young Faculty Award ($470K TC) Sept 2016 - Sept 2018
Optimal Infectious Disease Prediction with Multi-Scale Ensemble Models
PI: Reich.

NIH, R21 research grant ($450K TC) Dec 2014 – Nov 2016
Inference for interacting pathogens with mechanistic and phenomenological models.
PI: Reich

NIH, R01 research grant ($2.5m TC) Feb 2013 – Jan 2018
Methods for reducing spatial uncertainty and bias in disease surveillance.
PI: Justin Lessler (JHSPH). Co-Is: Reich, Derek Cummings (JHSPH), Sopon Iamsirithaworn (Thailand MoPH).
Lessler, Reich, and Cummings contribute equally to modeling efforts on this grant.
Reich is PI of subcontract ($650K TC, 25% of total).

NSF, PESO ($590K TC) Sept 2012 – Aug 2015
Materials and Multivariable Models to Predict Tissue Tropism in Metastasis.

PI: Shelly Peyton, co-PI: Reich. Reich responsible for 100% of the statistical modeling effort (10% of award).

CDC/VA, IPA contract ($200K TC) Sept 2011 – Aug 2015
The Respiratory Protection Effectiveness Clinical Trial (The ResPECT Study).
PIs of ResPECT: Trish Perl (Johns Hopkins) and Lew Radonovich (Gainesville VA).
PI of subcontract to VA: Reich. He serves as the Senior Biostatistician for this cluster-randomized trial.

NIH, R21 research grant ($390K TC) Aug 2012 - May 2014
Premenstrual syndrome and subsequent hypertension.
PI: Dr. Elizabeth Bertone-Johnson. co-I: Reich.

CLASSROOM INSTRUCTION

Biostat Methods 2: Applied Regression Modeling (BIOSTATS 690NR)
Spring '14 - '16 Graduate-level course in linear regression (3 credits). Core requirement for Biostatistics graduate students. [course website]

Telling Stories with Data: Statistics, Modeling, and Visualization (PUBHLTH 490ST)
Spr '16, Fall '16-'17 Undergraduate-level course in linear regression and data visualization (3 credits). [course website]

Introduction to Statistical Computing using R (BIOSTATS 597D)
Fall 2014 Graduate introductory course in statistical computing (1 credit).

Introduction to Statistical Computing and Data Visualization (BIOSTATS 590F)
Fall 2012 Sponsored by the Open Education Initiative at UMass, this course was being designed to introduce upper-level undergraduate and graduate students to the world of open-source computing for public health and other scientific research. This course was taught as a hands-on, project-based data analysis workshop.

STUDENT MENTORSHIP & ADVISING

Post-doctoral fellows
Alexandria Brown, 2015-present
Evan Ray, 2015-2017
Krzysztof Sakrejda, 2015-2017

PhD student advisees
Stephen Lauer, Biostatistics PhD, 2014-present
Xi Meng, Biostatistics PhD, 2015-present
Graham Casey Gibson, Biostatistics PhD, 2017-present

MS thesis advisees
Justin Baldwin, Biostatistics MS, 2016-2017
Coco Kusiak, Biostatistics MS, 2017-2018

Undergraduate Honors thesis advisees
Kristina Yamkovoy, 2017-2018

MS and PhD thesis committees
Jonviea Chamberlain, Epidemiology MS, 2011-2012
Nikki Nixon, Epidemiology MS, 2012-2013
Vicki McLaughlin, Epidemiology PhD, 2012-2014
Eric Cohen, Biostatistics MS, 2013-2014
Charlie Curtsinger, Computer Science PhD, 2014-2016
Mark Hagemann, Civil and Environmental Engineering PhD, 2015-2016
Alex Bogdan, Biostatistics MS, 2016
David Arbour, Computer Science PhD, 2015-present
Sangsoo Park, Kinesiology PhD, 2015-present
Sra Sontisirikit, Computer Science, Asian Institute of Technology, 2015-present (role: expert advisor)

Graduate research assistants
Guoshu Yuan (2012-2013), Emily Ramos (fall 2014), Sangsoo Park (summer 2014), Krzysztof Sakrejda (2014-2015), Xi Meng (2015-present), Stephen Lauer (2013-present).

statsTeachR.org curriculum developers (2013-2014)
Eric Cohen, Harrel Blatt, Eric Reed, Sara Nuñez, Emily Ramos.

Undergraduate research assistants
Eric Doty (Spring 2012), Courtney Yannace (Fall 2014), Harley Jean (Summer 2016 - Spring 2017).

WORKSHOPS & DATAFESTS

Five College DataFest (Amherst, MA)
2014-16 — UMass team coordinator: responsible for recruiting teams of undergraduate students to compete in weekend-long data competition. [datafest website]

HackEbola (UMass-Amherst)
November 2014 — Co-organized three-day HackEbola hackathon/datafest at UMass with Graduate Researchers interested in Data student group.

Data Sciences for the Life Sciences in a High Performance Computing Environment (Holyoke, MA)
February 2014 — Directed and taught a one-day hands-on high-performance statistical computing workshop for researchers. Workshop held at the MGHPCC.

Data Analysis and Visualization using R, Social and Demographic Research Institute (UMass)
July 2012 — Designed and taught a two-day hands-on data analysis workshop for researchers.

Outbreak investigation workshops, Thai Ministry of Public Health (Bangkok, Thailand)
March 2009 and March 2012 — Designed and taught a three-day workshop on statistical modeling of outbreaks for field epidemiologists with Justin Lessler from the Johns Hopkins Epidemiology Dept. The workshop was sponsored by the NIH Fogarty International Center.

SOFTWARE & COMPUTING

General software development from Reich Lab: see lab webpage.
R package development: coarseDataTools and clusterPower, R packages (available on CRAN)
Open source teaching curricula: Co-founder of statsTeachR.org

PRESS

"Letter to editor: critical of measles headline for down-playing risks" *Daily Hampshire Gazette*. 11 Feb 2015.
"Flu Season Made Easy With New Tool." *New England Public Radio*. 24 Nov 2014.
"HackEbola at UMass aids fight against West African epidemic " *Daily Hampshire Gazette*. 22 Nov 2014.
"Understanding the Protective Side of Dengue Virus." *New York Times*. 9 July 2013.

INVITED TALKS

1. "Forecasting Infectious Disease Transmission." Symposium on the Population Biology of Vector-borne Diseases, Center for the Ecology of Infectious Diseases, University of Georgia, Athens, GA. 24 February 2018.
2. "Algorithm Soup: Improving Influenza Forecasting in the US using Ensemble Learning." COBRE Center for Computational Biology of Human Disease Seminar Series, Brown University, Providence, RI. 24 January 2018.
3. "Collaborative Influenza Forecasting in the U.S." WHO Influenza Incidence Analytics Group. Virtual presentation. 20 December 2017.
4. "Comparison of ensemble methods for forecasting influenza in the United States." Epidemics6 Conference, Barcelona, Spain. 28 November 2017.
5. "Forecasting Infectious Disease Outbreaks." UMass Molecular and Cellular Biology Seminar Series, Amherst, MA. 31 October 2017.
6. "Forecasting Infectious Disease Outbreaks via Weighted Density Ensembles." Yale Public Health Modeling Concentration Seminar Series, New Haven, CT. 2 October 2017.
7. "Building a Collaborative Ensemble to Forecast Influenza in the US." CDC, Atlanta, GA. 29 August 2017.
8. "Prediction of Infectious Disease Epidemics via Weighted Density Ensembles." MIDAS Network Meetings, Atlanta, GA. May 2017.
9. "Analytical approaches for illuminating Zika and Dengue transmission dynamics." CDC Dengue Branch, San Juan, Puerto Rico. 24 February 2017.
10. "Real-time Prediction of Infectious Disease Outbreaks." Johns Hopkins Biostatistics Seminar Series, Baltimore, MD. 3 October 2016.
11. "New Approaches for Predicting Outbreaks." Pandemic Prediction and Forecasting Working Group, White House Office of Science and Technology Policy, Washington DC. 9 February 2016.
12. "Estimating Population Susceptibility in Dynamic Models of Infectious Disease." Boston University Biostatistics Seminar Series, Boston, MA. 14 May 2015.
13. "Estimating Population Susceptibility in Dynamic Models of Infectious Disease." New England Statistics Symposium. University of Connecticut, Storrs, CT. 25 April 2015.
14. **Keynote address**: "Predicting Dengue Fever Outbreaks in Thailand." Massachusetts Undergraduate Research Conference. Amherst, MA. 24 April 2015.
15. "Estimating Population Susceptibility in Dynamic Models of Infectious Disease." Computational Social Science Institute Seminar Series, UMass-Amherst. Amherst, MA. 17 April 2015.
16. "Statistical Challenges in Real-Time Infectious Disease Forecasting." Quantitative Methods Core Methods Seminar, UMass-Worcester Medical School. Worcester, MA. 7 April 2015.

17. "statsTeachR: Open Resources for Teaching Statistics." New England Statistics Symposium. Boston, MA. 26 April 2014.

18. "Open Resources for Teaching Statistics." Department of Mathematics and Statistics, University of Massachusetts. Amherst, MA. 7 April 2014.

19. "Estimating case fatality ratios from infectious disease surveillance data." American Public Health Association Annual Conference. Boston, MA. 4 November 2013.

20. "Estimating case fatality ratios from infectious disease surveillance data." Joint Conference by the International Chinese Statistical Association and the International Society for Biopharmaceutical Statistics (ICSA-ISBS), Washington DC. 10 June 2013.

21. "Social coding with RStudio and GitHub." Pioneer Valley and Five College R Statistical Meetup. 13 February 2013.

22. "Drawing inference about interactions between pathogens in infectious disease systems." Department of Mathematics and Statistics, University of Massachusetts. 26 March 2012.

23. "Making inferences about infection using the incubation period." Center for Quality of Care Research, Baystate Medical Center. Springfield, MA. 16 November 2011.

24. "Making inferences about infection using the incubation period." Department of Epidemiology and Public Health Seminar Series, University of Maryland. 21 April 2011.

GRANT REVIEW ACTIVITIES

NIH ad hoc Study Section and Council Member

2017 NIGMS Advisory Council
2016 Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section (IRAP)
2015 NEI Clinical and Epidemiological Applications: Uveitis, Cornea and Refractive Error

Medical Research Council UK Peer Reviewer

2016 Review of a single application.

MEMBERSHIPS

2017- New England Statistical Society
2014- Foundation for Open Access Statistics
2014- American Society for Tropical Medicine and Hygiene
2011- UMass Center for Clinical and Translational Science
2008- American Statistical Association
2008- International Biometric Society (ENAR)

EDITORIAL ACTIVITIES

Founding Editor, *PLOS Disease Forecasting and Surveillance Channel*, 2017-
Statistical Advisory Board Member, *PLOS Medicine*, 2016-2017
Review Board Member, *PLOS Currents: Outbreaks*, 2015-present
Editorial Board Member, *PLOS ONE*, 2013-present
Guest Editor, *PLOS Neglected Tropical Diseases, 2016*.

Reviewer

Biostatistics
Statistics in Medicine
American Statistician
American Journal of Epidemiology
PLOS Medicine
PLOS Computational Biology
The Lancet Infectious Diseases
Epidemiology
British Medical Journal
PLoS Currents: Outbreaks
Epidemics
American Journal of Tropical Medicine and Hygiene
Clinical Trials
PeerJ
Emerging Infectious Diseases
Proceedings of the Royal Society B: Biological Sciences
BMC Public Health
PLOS ONE
Scientific Reports
Demography
Medical Decision Making
Influenza and Other Respiratory Viruses
Environmental Health
International Journal of Health Geographics

SERVICE

Faculty Searches

2013-2014 Member, Assistant Lecturer Search Committee
2014-2015 Member, Open-rank Tenure Track Search Committee
2014-2015 Chair, Assistant/Associate Tenure Track Search Committee
2016-2017 Member, Assistant Professor Tenure Track Search Committee
2017-2018 Member, Institute for Applied Life Sciences, Assistant Professor for Large Data Analytics

Department of Biostatistics and Epidemiology, UMass School of Public Health and Health Sciences

2011-2012 Co-organizer for Department's seminar series
2012-2013 Co-organizer for Department's seminar series
Chair, Biostatistics Curriculum Committee
2013-2014 Member, Biostatistics Curriculum Committee
Chair, Biostatistics Admissions and Student Outreach Committee
Representative, Five College Statistics Program
2014-2015 Member, Biostatistics Curriculum Committee
Member, Biostatistics Admissions and Student Outreach Committee
Representative, Five College Statistics Program
2015-2016 Chair, Biostatistics Curriculum Committee
Member, Biostatistics Admissions and Student Outreach Committee
Chair, Biostatistics Accelerated MS program
Representative, Five College Statistics Program
2016-2017 Member, Biostatistics Curriculum Committee
Chair, Biostatistics Admissions and Student Outreach Committee
Chair, Biostatistics Accelerated MS program
Representative, Five College Statistics Program
2017-2018 Member, Biostatistics Curriculum Committee
Member, Biostatistics Admissions and Student Outreach Committee
Chair, Biostatistics Accelerated MS program
Representative, Five College Statistics Program

UMass School of Public Health and Health Sciences and campus-wide service

2014-2015 Faculty Advisor, Graduate Researchers interested in Data (GRiD) student group
2015-2016 Faculty Advisor, Graduate Researchers interested in Data (GRiD) student group
Member, UMass IT Strategic Planning Research Committee
Member, ad hoc Computing committee
2015-2016 Faculty Advisor, Graduate Researchers interested in Data (GRiD) student group
Member, ad hoc Computing committee
2017-2018 Faculty Advisor, Graduate Researchers interested in Data (GRiD) student group
Member, School Personnel Committee

Other Professional Service

2013-2014 Co-organizer, Western Mass Data Science, Stats, and R Meetup
Chair, Biostatistics Admissions and Student Outreach Committee
UMass Biostatistics representative, Five College Statistics Program
Predoctoral mentor, The Math Alliance for Doctoral Studies
2014-2015 Organizer, Western Mass Data Science, Stats, and R Meetup
Member, Biostatistics Admissions and Student Outreach Committee
UMass Biostatistics representative, Five College Statistics Program
Predoctoral mentor, The Math Alliance for Doctoral Studies
2015-2016 Organizer, Western Mass Data Science, Stats, and R Meetup
Member, Biostatistics Admissions and Student Outreach Committee
Chair, Biostatistics Accelerated MS program
UMass Biostatistics representative, Five College Statistics Program
Predoctoral mentor, The Math Alliance for Doctoral Studies
2016-2017 Organizer, Western Mass Data Science, Stats, and R Meetup
Predoctoral mentor, The Math Alliance for Doctoral Studies
2017-2018 Organizer, Western Mass Data Science, Stats, and R Meetup
Secretary and Treasurer, Five College Statistics Program
Vice President for Scientific Program, New England Statistical Society
Organizing Committee, 2018 New England Statistical Symposium
Predoctoral mentor, The Math Alliance for Doctoral Studies