

BENJAMIN ALTHOUSE – CURRICULUM VITAE

CONTACT

Institute for Disease Modeling
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Bellevue, WA 98005
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Google Scholar: <http://scholar.google.com/citations?user=FUOBYjkAAAAJ>

PROFILE

RESEARCH INTERESTS

Mathematical modeling of infectious disease, ecology of infectious disease, medical/healthcare economics, statistical and time series methods.

OTHER INTERESTS

Downhill skiing, running, hiking, graphic design, jazz music, and photography.

EDUCATION

2013 – 2015

Omidyar Postdoctoral Fellowship Santa Fe Institute, Santa Fe, NM

2010 – 2013

PhD Epidemiology; Johns Hopkins University, Baltimore, MD
Thesis: *Mechanistic Modeling of Sylvatic Arboviruses in Senegal*
Advisor: Derek Cummings

2012

Complex Systems Summer School, Santa Fe Institute, Santa Fe, NM

2009 – 2010

ScM Biostatistics; Johns Hopkins University, Baltimore, MD
Thesis: *A Multi-host, Multi-vector SIR Model of Dengue Fever in Senegal*

2003 – 2008

BS Mathematics; University of Washington, Seattle, WA
BS Biochemistry; University of Washington, Seattle, WA

POSITIONS

JUNE 2018 –

Endorsed Graduate Faculty, University of Washington

JANUARY 2018 –

Senior Research Scientist, Institute for Disease Modeling

JUNE 2016 –

Affiliate Assistant Professor, Information School, University of Washington

APRIL 2015 –

Affiliate Faculty, Department of Biology, New Mexico State University

JANUARY 2015 –
DECEMBER 2017

Research Scientist, Institute for Disease Modeling

SEPTEMBER 2013 – Omidyar Fellow, Santa Fe Institute
 JUNE 2015

AUGUST 2010 – Doctoral Student – Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health
 AUGUST 2013

AUGUST 2009 – Master’s Student – Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
 AUGUST 2010

JUNE 2008 – Research Associate, Prof. Carl Bergstrom’s lab, Department of Biology, University of Washington
 AUGUST 2009

JUNE 2006 – MAY 2008 Undergraduate Research Assistant, Bergstrom lab

AWARDS

APRIL 2010 – NSF Graduate Research Fellowship
 AUGUST 2013

JUNE 2009 Best Poster, Gordon Research Conference (Microbial Population Biology)

JANUARY – JUNE 2008 Mary Gates Research Scholarship (award of \$4,000)

JANUARY – OCTOBER 2007 Howard Hughes Medical Institute Integrative Research Internship (award of \$7,000)

GRANTS

awarded

Santa Fe Institute & MIDAS Center for Communicable Disease Dynamics Harvard University, for SFI Working Group, *Next generation surveillance for the next pandemic*, \$82,794 (2014).

The Monday Campaigns, J.W. Ayers (PI) 12/13/12–1/13/13: *Is Monday the Healthiest Day?*, Role: Investigator

Institute for Global Tobacco Control, Ayers (PI) 12/1/12–12/1/13: *Harnessing the Web for Real-Time Global Tobacco Control*, Role: Investigator

Google Research Award, Ayers (PI) 7/1/11–7/1/12: *Using Aggregate Search Queries for Real-Time Mental Health Surveillance in the United States*, Role: Consultant

submitted

Department of Defense DARPA PREEMPT grant (Pending): *DISARM: Disrupting Sylvatic Arbovirus Infection via Research and Management*; N. Vasilakis, PI, K.A. Hanley co-I, **B.M. Althouse** co-I, \$16,461,408 09/01/2018 – 02/28/2022

PUBLICATIONS

63. M. M. Adnan, J. Yin, A. M. Jackson, Z. T. Ho Tse, H. Liang, K.-W. Fu, N. Saroha, **B.M. Althouse**, I. C.-H. Fung, *World Pneumonia Day 2011-16: Twitter contents and retweets*, International Health, *in press*
62. **B.M. Althouse**, S. Flasche, L. N. Minh, V. D. Thiem, M. Hashizume, K. Ariyoshi, D. D. Anh, G. L. Rogers, K. P. Klugman, H. Hu, L.-M. Yoshida *Seasonality of respiratory viruses causing hospitalizations for acute respiratory infections in children in Nha Trang, Vietnam*, International Journal of Infectious Diseases, *in press*
61. S. Chadsuthi, **B.M. Althouse**, S. Iamsirithaworn, W. Triampo, K. Grantz, D.A.T. Cummings, *Travel distance and human movement predict paths of emergence and spatial spread of Chikungunya in Thailand*, Epidemiology & Infection, *in press*

60. Q. A. ten Bosch, H. E. Clapham, L. Lambrechts, **B.M. Althouse**, A. L. Lloyd, L. A. Waller, A. C. Morrison, U. Kitron, G. M. Vazquez-Prokopec, T. W. Scott, T. A. Perkins, *Contributions from the silent majority dominate dengue virus transmission*, PLoS Pathogens, *in press*
59. L. Meyers, C. C. Ginocchio, A. Faucett, F. S. Nolte, A. Leber, D. Janowiak, V. Donovan, J. D. Bard, S. Spitzer, K. Stellrecht, H. Salimnia, R. Selvarangan, S. Juretschko, J. A. Daly, J. C. Wallentine, K. Lindsey, F. Moore, S. L. Read, M. Agüero-Rosenfeld, P. Fey, G. A. Storch, J. Meredith, S. Melnick, P. H. Gesteland, C. Cook, R. Nelson, T. Robbins, S. V. Scarpino, **B.M. Althouse**, K. M. Ririe, B. A. Malin, M. A. Poritz, *A web-based epidemiological system for real-time, pathogen-specific syndromic surveillance*, Journal of Medical Internet Research, *in press*
58. S. M. Noar, E. Leas, **B.M. Althouse**, M. Dredze, D. Kelley, J. W. Ayers, *Can a "Selfie" Promote Public Engagement with Skin Cancer? The Case of Tawny Willoughby*, American Journal of Preventive Medicine, *in press*
57. **B.M. Althouse**, M. Guerbois, D. A. T. Cummings, O. M. Diop, O. Faye, A. Faye, D. Diallo, B. D. Sadio, A. Sow, O. Faye, A. A. Sall, M. Diallo, B. Benefit, E. Simons, D. M. Watts, S. C. Weaver, K. A. Hanley, *Role of monkeys in the sylvatic cycle of chikungunya virus in Senegal*, Nature Communications, 9(1):1046, 2018
- 2017
56. S. Pollett, **B.M. Althouse**, B. Forshey, G.W. Rutherford, R. Jarman, *Internet-based biosurveillance methods for vector-borne diseases: are they novel public health tools or just novelties?*, PLoS Neglected Tropical Diseases, 11 (11), e0005871, 2017
55. GBD 2016 DALYs and HALE Collaborators, *Global, regional, and national disability-adjusted life-years (DALYs) for 333 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016*, The Lancet, 390 (10100), 1260-1344, 2017
54. A. Allard*, **B.M. Althouse***, L. Hébert-Dufresne*, S.V. Scarpino*, *The risk of sustained sexual transmission of Zika is underestimated*, PLoS Pathogens, 13 (9), e1006633, 2017 *These authors contributed equally
53. A. Allard, **B.M. Althouse**, S.V. Scarpino, L. Hébert-Dufresne, *Asymmetric percolation drives a double transition in sexual contact networks*, Proceedings of the National Academy of Sciences of the United States of America, 114 (34), 8969-8973, 2017
52. **B.M. Althouse**, L. L. Hammitt, L. Grant, B. G. Wagner, R. Reid, F. Larzelere-Hinton, R. Weatherholtz, K. P. Klugman, G. L. Rodgers, K. L. O'Brien, H. Hu, *Identifying Transmission Routes of Streptococcus pneumoniae and Sources of Acquisitions in High Transmission Communities*, Epidemiology & Infection, 145 (13), 2750-2758, 2017
51. J. R. Nahum, J. West, **B.M. Althouse**, L. Zaman, C. Ofria, B. Kerr, *Improved Adaptation in Exogenously and Endogenously Changing Environments*, European Conference on Artificial Life 14; 14, 306-313, 2017
50. J. W. Ayers, **B.M. Althouse**, E. C. Leas, M. Dredze, J-P Allem, *Web searches for suicide increased following Netflix's release of '13 Reasons Why'*, JAMA Internal Medicine, 177 (10), 1527-1529, 2017
49. J-P Allem, E. C. Leas, T. L. Caputi, M. Dredze, **B.M. Althouse**, S.M. Noar, J.W. Ayers *The Charlie Sheen Effect on Rapid In-Home Human Immunodeficiency Virus Test Sales*, Prevention Science, 18 (5), 541-544, 2017
48. J. W. Ayers, E. C. Leas, J-P Allem, A. Benton, M. Dredze, **B.M. Althouse**, T.B. Cruz, J.B. Unger, *Why Do People Use Electronic Nicotine Delivery Systems (Electronic Cigarettes)? A Content Analysis of Twitter, 2012-2015*, PLoS One, Mar 1;12(3):e0170702, 2017

47. S. L. Nuismer, **B.M. Althouse**, R. May, J. J. Bull, R. Antia, *Quantifying the efficacy of weakly transmissible vaccines*, Proceedings of the Royal Society B, 283 (1841), 20161903
46. **B.M. Althouse**, N. Vasilakis, A.A. Sall, M. Diallo, S. C. Weaver, K.A. Hanley, *Potential for Zika virus to establish a sylvatic transmission cycle in the Americas*, PLoS Neglected Tropical Diseases, 10 (12), e0005055, 2016
45. M. Espinola, J. M. Shultz, Z. Espinel, **B.M. Althouse**, J. L. Cooper, F. Baingana, L. H. Marcelin, T. Cela, S. Towers, L. Mazurik, M. C. Greene, A. Beck, M. Fredrickson, A. McLean, and A. Rechkemmer, *Fear-related behaviors in situations of mass threat*, Disaster Health, Nov 22;3(4):102-111, 2016
44. H. DeAngelis, S. V. Scarpino, **B.M. Althouse**, 'Modelling the effects of priming with the whole-cell *Bordetella pertussis* vaccine' – Reply, JAMA Pediatrics, 170 (12), 1229-1229, 2016
43. J. M. Shultz, **B.M. Althouse**, F. Baingana, J. L. Cooper, Z. Espinel, M. C. Greene, *Fear-Related Behaviors as Drivers of Pandemic Infectious Disease*, Bulletin of the Atomic Scientists, Volume 72, Issue 5, 2016
42. J. M. Shultz, J. L. Cooper, F. Baingana, M. A. Oquendo, Z. Espinel, **B.M. Althouse**, M. Espinola, M. C. Greene, C. B. McCoy, L. Mazurik, Y. Neria, A. Rechkemmer, *The Role of Fear-Related Behaviors in the 2013-2016 West Africa Ebola Outbreak*, Current Psychiatry Reports, 18(11):104, 2016
41. E. C. Leas, **B.M. Althouse**, M. Dredze, N. Obradovich, J. H. Fowler, S. M. Noar, J.-P. Allem, J. W. Ayers, *Big Data Sensors of Organic Advocacy: The Case of Leonardo DiCaprio and Climate Change*, PLoS One 11 (8), e0159885, 2016
40. M. C. Fitzpatrick, N. S. Wenzel, S. V. Scarpino, **B.M. Althouse**, K. E. Atkins, A. P. Galvani, J. P. Townsend, *Cost-effectiveness of a next-generation pertussis vaccine*, Vaccine, Jun 17;34(29):3405-11, 2016
39. J. W. Ayers, **B.M. Althouse**, M. Dredze, E. C. Leas, S. M. Noar, *News and Internet Searches About Human Immunodeficiency Virus After Charlie Sheen's Disclosure*, JAMA Internal Medicine 176 (4), 552-554, 2016
- Media coverage: Huffington Post, New York Magazine, ABC News, CNN, Fox News, BBC News, NBCNews.com, CBS News, Mirror (UK), Yahoo News, Medical Xpress, CBC
38. K.J. Margevicius, N. Generous, E. Abeyta, B. Althouse, H. Burkom, L. Castro, A. Daughton, S.Y. Del Valle, G. Fairchild, J.M. Hyman, R. Kiang, A.P. Morse, C.M. Pancerella, R. Priedhorsky, L. Pullum, A. Ramanathan, J. Schlegelmilch, A. Scott, K.J. Taylor-McCabe, A. Vespignani, A. Deshpande, *The biosurveillance analytics resource directory (BARD): Facilitating the use of epidemiological models for infectious disease surveillance*, PLoS One, 11(1): e0146600
37. H. DeAngelis, S. V. Scarpino, M. C. Fitzpatrick, A. P. Galvani, **B.M. Althouse**, *Epidemiological and economic impacts of priming with whole-cell *Bordetella pertussis* vaccine*, JAMA Pediatrics, 170(5):459-465, 2016
36. H. E. Clapham, I. Rodriguez- Barraquer, A. S. Azman, **B.M. Althouse**, H. Salje, S. Kalayanarooj, R. V. Gibbons, R. G. Jarman, A. Nisalak, B. Thaisomboonsuk, S. Nimmannitya, I.-K. Yoon, A. Rothman, D. A.T. Cummings, *Dengue neutralizing antibody kinetics in children after symptomatic primary and post-primary dengue virus infections*, Journal of Infectious Diseases 213 (9), 1428-1435, 2016
35. **B.M. Althouse***, S. V. Scarpino*, L. Ancel Meyers, J. W. Ayers, M. Bargsten, J. Baumbach, L. Castro, H. Clapham, D. Cummings, S. Del Valle, S. Epperson, S. Eubank, G. Fairchild, L. Finelli, N. Generous, D. George, D. Harper, L. Hebert-Dufresne, M. Johansson, K. Konty, M. Lipsitch, G. Milinovich, J. Miller, E. Nsoesie, D. Olson, M. Paul, P. Polgreen, R. Priedhorsky, J. Read, I. Rodríguez-Barraquer, D. J. Smith, C. Stefansen, D.L. Swerdlow, D. Thompson, A. Vespignani, A. Wesolowski, *Enhancing disease surveillance with novel data streams: challenges and opportunities*,

EPJ Data Science, 4:17, 2016

*These authors contributed equally

34. J. W. Ayers, **B.M. Althouse**, “*Tips From Former Smokers*” Can Benefit from Considering all Available Data, *American Journal of Preventative Medicine* 49 (6), e133, 2016
33. J. W. Ayers, **B.M. Althouse**, J.-P. Allem, E. C. Leas, M. Dredze, R. Williams, *Revisiting the Rise of Electronic Nicotine Delivery Systems Using Search Query Surveillance*, *American Journal of Preventive Medicine* 50 (6), e173-e181, 2016
32. J. W. Ayers, J. L. Westmaas, E. C. Leas, A. Benton, A. Y. Chen, M. Dredze, **B.M. Althouse**, *Leveraging Big Data to Improve Health Awareness Campaigns: A Novel Evaluation of the Great American Smokeout*, *JMIR Public Health and Surveillance* 2 (1), 2016

2015

31. **B.M. Althouse**, S. V. Scarpino, *Asymptomatic transmission and the resurgence of Bordetella pertussis*, *BMC Medicine*, 13:146, 2015

Media coverage: The New York Times (print edition), Minnesota Public Radio, MSN.com, Healio, U.S. Pharmacist, Univision, Medical Daily, Medical Xpress, Science Daily, Medical News Today, Health Medicine Network, Infection Control Today

30. L. Hébert-Dufresne, **B.M. Althouse**, *Complex dynamics of synergistic coinfections on realistically clustered networks*, *Proceedings of the National Academy of Sciences of the United States of America*, 112 (33) 10551-10556, doi:10.1073/pnas.1507820112, 2015
29. **B.M. Althouse**, K. A. Hanley, *The Tortoise or the Hare? Impacts of Within-Host Dynamics on Transmission Success of Arthropod-Borne Viruses*, *Phil. Trans. R. Soc. B.*, 370 (1675), 20140299
28. J.-P. Allem, J.W. Ayers, **B.M. Althouse**, R. Williams, *When a Ban Really isn't a Ban: Internet Loopholes and Djarum Flavoured Cigarettes in the United States*, *Tobacco Control*, 25 (4) 489-490, 2015
27. C. L. Jo, J. W. Ayers, **B.M. Althouse**, S. Emery, J. Huang, K. M. Ribisl, *U.S. Consumer Interest in Non-cigarette Other Tobacco Products Spikes around the 2009 Federal Tobacco Tax Increase*, *Tobacco Control*, 2013-051261
26. J.W. Ayers, **B.M. Althouse**, S. Emery, *Changes in Internet searches associated with the “Tips from Former Smokers” campaign*, *American Journal of Preventive Medicine*, 48 (6), e27, 2015
25. M. M. Tanaka, **B.M. Althouse**, C. T. Bergstrom, *Timing of antimicrobial use influences the evolution of antimicrobial resistance during disease epidemics*, *Evolution, Medicine, and Public Health*, 2014(1):150-161, 2014
24. S. M. Noar, **B.M. Althouse**, J. W. Ayers, D. B. Francis, K. M. Ribisl, *Cancer information seeking in the digital age: Effects of Angelina Jolie's prophylactic mastectomy announcement*, *Medical Decision Making*, 35(1), 16–21, January 2015
23. **B.M. Althouse**, K.A. Hanley, M. Diallo, A.A. Sall, Y. Ba, O. Faye, D. Diallo, D.M. Watts, S. C. Weaver, D.A.T. Cummings, *Impact of climate and mosquito vector abundance on sylvatic arbovirus circulation dynamics in Senegal*, *American Journal of Tropical Medicine and Hygiene*, 92(1), 88–97, January 2015

2014

22. **B.M. Althouse**, L. Hébert-Dufresne, *Epidemic Cycles Driven by Host Behaviour*, *Journal of the Royal Society Interface*, vol. 11 no. 99, October 2014
21. J. W. Ayers, **B.M. Althouse**, M. Dredze, *Could Behavioral Medicine Lead the Web Data Revolution?*, *JAMA*, 311(14), 1399–1400, 2014
20. M. Santillana, D. W. Zhang, **B.M. Althouse**, J. W. Ayers, *What Can Digital Disease Detection Learn from (an External Revision to) Google Flu Trends?*, *American Journal of Preventative Medicine*, (47)3, 341-7, 2014

19. J. W. Ayers, **B.M. Althouse**, M. Dredze, M. Johnson, J. E. Cohen, *What's the Healthiest Day? Circaseptan (Weekly) Rhythms in Healthy Considerations*, American Journal of Preventative Medicine, (47)1, 73-76, July 2014

Media coverage: The Atlantic, Medical Daily, Bloomberg Business Week, Science Daily, Men's Fitness, Prevention, Refinery 29, Montgomery Advertiser, The Business Standard (India) India.com Health, Delhi Daily News, New Tang Dynasty Television (China), iAfrica.com, Malaysian Digest, Medycyna Praktyczna (Poland), and Sassari Notizie (Italy)

18. **B.M. Althouse**, A.P. Durbin, K.A. Hanley, S.B. Halstead, S. C. Weaver, D.A.T. Cummings, *Viral Kinetics of Primary Dengue Virus Infection in Non-Human Primates: A Systematic Review and Individual Pooled Analysis*, Virology, 452-453: 237-246, March 2014
17. J. W. Ayers, **B.M. Althouse**, K. M. Ribisl, S. Emery, *Digital Detection for Tobacco Control: Online Reactions to the United States' 2009 Cigarette Excise Tax Increase*, Nicotine & Tobacco Research, 16(5): 576-583, January 2014
16. S. M. Noar, K. M. Ribisl, **B.M. Althouse**, J. F. Willoughby, J. W. Ayers, *Using Digital Surveillance to Examine the Impact of Public Figure Pancreatic Cancer Announcements on Media and Search Outcomes*, Journal of the National Cancer Institute, 47:188-94, January 2014
15. J. W. Ayers, **B.M. Althouse**, M. Johnson, J. E. Cohen, *Weekly "Circaseptan" Rhythms in Smoking Cessation Considerations*, JAMA Internal Medicine, 174(1):146-8, January 2014

Media coverage: New York Times, WebMD, USA Today, NBCNews.com, New York Daily News, Economic Times, Huffington Post, Sacramento Bee, Philadelphia Inquirer, Science World Report, Sci-Tech Today, U-T San Diego, Medical Daily, The Inquisitr, The Stir, University Herald

14. J. W. Ayers, **B.M. Althouse**, S. M. Noar, J. E. Cohen, *Do Celebrity Cancer Diagnoses Promote Primary Cancer Prevention?*, Preventive Medicine, 58: 81-84, January 2014

Media coverage: NY Times, Huffington Post, The Hindu, Science Daily, Medical Daily, Scope, The Medical News, redOrbit.com, AllVoices, Medical Xpress, India.com Health

2013

13. **B.M. Althouse**, J. Patrick-Allem, M. A. Childers, M. Dredze, J. W. Ayers, *Population Health Concerns During the United States' Great Recession*, American Journal of Preventative Medicine, 46(2):166-170, 2013

Media coverage: Times of London, New York Times, Huffington Post, Science 2.0, Science Daily, Free Press Journal, India.com Health, Imperial Valley News, RedOrbit

12. A.S. Azman, J.H. Stark, **B.M. Althouse**, C.J. Vukotich, S. Stebbins, D.S. Burke, D.A.T. Cummings, *Household Transmission of Influenza A and B in a School-based Study of Non-Pharmaceutical Interventions*, Epidemics, 5 (4), 181-186, 2013
11. O. J. Bienvenu, J. Gellar, **B.M. Althouse**, E. Colantuoni, T. Sricharoenchai, P. A. Mendez-Tellez, C. Shanholtz, C. R. Dennison, P. J. Pronovost, D. M. Needham, *Post-traumatic stress disorder symptoms after acute lung injury: a 2-year prospective longitudinal study*, Psychological Medicine, 43 (12): 2657-2671, 2013

Media coverage: New York Times, Boston Globe, Philadelphia Inquirer, Medcity News

10. J. W. Ayers, **B.M. Althouse**, J. P. Allem, J. N. Rosenquist, D. E. Ford, *Seasonality in Seeking Mental Health Information on Google*, American Journal of Preventative Medicine, Vol. 44, Issue 5, May 2013

Media coverage: New York Times, Time, The Atlantic, Popular Science, Wired, Huffington Post, Scientific American, Health Magazine, U-T San Diego, Philadelphia Inquirer, New York Daily News, Minneapolis Star Tribune, US News and World Reports, Sky News Australia, 3News New Zealand, Medical Daily, Medical Xpress, redOrbit.com, iTech Post, HealthDay News, Newsroom America, health 24, Science Daily, PsychCentral, InformationWeek

9. O. Patterson-Lomba, **B.M. Althouse**, G. M. Goerg, L. Hébert-Dufresne, *Optimizing Treatment Regimes to Hinder Antimicrobial Resistance Across Time Scales*, PLoS One, 8(3): e59529. March 2013
8. L. Hébert-Dufresne, O. Patterson-Lomba, G. M. Goerg, **B.M. Althouse**, *Pathogen mutation as coevolutionary competition between site and bond percolation*, Physical Review Letters, Vol. 110, Issue 10, Mar 2013
7. **B.M. Althouse**, O. Patterson-Lomba, G. M. Goerg, L. Hébert-Dufresne, *The Timing and Targeting of Treatment in Influenza Pandemics Influences the Emergence of Resistance in Structured Populations*, PLoS Computational Biology, 9(2): e1002912. Mar 2013.

- 2012
6. **B.M. Althouse**, J. Lessler, A.A. Sall, M. Diallo, K.A. Hanley, D.M. Watts, S. C. Weaver, D.A.T. Cummings, *Synchrony of Sylvatic Dengue Isolations: A Multi-host, Multi-vector SIR Model of Dengue Virus Transmission in Senegal*, PLoS Neglected Tropical Diseases, 6(11): e1928, Nov 2012
 5. J. W. Ayers, **B.M. Althouse**, J.P. Allem, M. A. Childers, W. Zafar, C. Latkin, K. M. Ribisl, J. S. Brownstein, *Novel Surveillance of Psychological Distress during the Great Recession*, J of Affective Disorders, Vol. 142, Issues 1-3, (323-330), Dec 2012
 4. J. W. Ayers, **B.M. Althouse**, J.P. Allem, D. E. Ford, K. M. Ribisl, J. E. Cohen, *A Novel Evaluation of World No Tobacco Day in Latin America*, J Internet Med Research 14(3):e77, May 2012

Media coverage: Los Angeles Times, Huffington Post, Baltimore Sun, India.com Health, Yahoo! Philippines News

- 2011 & earlier
3. **B.M. Althouse**, Y.Y. Ng, D.A.T. Cummings, *Prediction of Dengue Incidence using Search Query Surveillance*, PLoS Neglected Tropical Diseases, 5(8): e1258, Aug. 2011
 2. **B.M. Althouse**, T. Bergstrom, and C.T. Bergstrom, *A Public Choice Framework for Controlling Transmissible and Evolving Diseases*, Proceedings of the National Academy of Sciences of the United States of America, 107: 1696-1701, Jan. 2010
 1. **B.M. Althouse**, J.D. West, T. Bergstrom, and C.T. Bergstrom, *Differences in Impact Factor Across Fields and Over Time*, Journal of the American Society for Information Science and Technology. Vol. 60, No.1, (27-34), Jan. 2009

BOOK CHAPTERS

2. **B.M. Althouse**, S.V. Scarpino, *Contrasting ecological & evolutionary signatures of whooping cough epidemiological dynamics*, in *The integrative biology of Pertussis: epidemiology, immunology & evolution*, Rohani and Scarpino eds., Oxford University Press, *in press*
1. J. W. Ayers, **B.M. Althouse**, E. C Leas, T. Alcorn, M. Dredze, *Big Media Data Can Inform Gun Violence Prevention*, in Bloomberg Data for Good Exchange, *in press*

J. W. Ayers, **B.M. Althouse**, E. C. Leas, M. Dredze, *Big Media Data Can Inform Gun Violence Prevention, submitted*

J. W. Ayers, **B.M. Althouse**, M. Dredze, *The Distressed State of the United States, submitted*

B.M. Althouse*, S. V. Scarpino*, K. Rubin, S. Glazer, *The hidden costs of Bordetella pertussis infection in the United States of America, submitted, *These authors contributed equally*

B.M. Althouse*, K. Solovay, K. Rubin, S. Glazer, S.V. Scarpino*, *The epidemiological benefit of adult vaccination with a transmission blocking Bordetella pertussis vaccine, submitted *These authors contributed equally*

G. Otero, **B.M. Althouse***, S. V. Scarpino*, *Analysis of clinical Bordetella pertussis isolates using whole genome sequences reveals novel genomic regions associated with recent outbreaks in the United States of America, submitted, *These authors contributed equally*

B.G. Wagner, **B.M. Althouse**, N. Givon-Lavi, H. Hu, R. Dagan, *Stable dynamics of vaccine-type pneumococcal carriage in pre-PCV Israel, submitted*

B.M. Althouse, D.M. Weinberger, S.V. Scarpino, V.E. Pitzer, J.W. Ayers, E. Wenger, I. Chun-Hai Fung, M. Dredze, H. Hu, *Google searches accurately forecast respiratory syncytial virus hospitalizations, submitted*

R. Craig, E. Kunkel, N. Crowcroft, M. Fitzpatrick, H. de Melker, **B.M. Althouse**, T. Merkel, S. V. Scarpino, K. Koelle, R.-M. Carlsson, S. Bolotin, *Asymptomatic infection and transmission of pertussis in households: A systematic review, submitted*

B.M. Althouse, S. Flasche, L. N. Minh, V. D. Thiem, M. Hashizume, K. Ariyoshi, D. D. Anh, G. L. Rogers, K. P. Klugman, H. Hu, L.-M. Yoshida *Differences in clinical severity of mono and multiple respiratory viral infections in hospitalized children in Nha Trang, Vietnam, submitted*

B.M. Althouse, H. Hu, *Modeling the critical community size for Streptococcus pneumoniae transmission, in preparation*

J. W. Ayers, **B.M. Althouse**, E. C. Leas, M. Dredze, *What Does A "Quit Smoking" Internet Search Mean? Assessing the Validity of Search Query Surveillance in Tobacco Control, in preparation*

J.-P. Allem, **B.M. Althouse**, E. C. Leas, M. Dredze, M. F. Hovell, J. W. Ayers, *Ten Years of Cigarette Excise Tax Increases in the United States (2006-2016): Do Tobacco Taxes Motivate Cessation Considerations?, in preparation*

B.M. Althouse, M. Salathé, M. Lipsitch, C. T. Bergstrom, J. D. West, *Heterogeneous vaccination coverage and measles transmission dynamics, in preparation*

G. M. Goerg, O. Patterson-Lomba, L. Hébert-Dufresne, **B.M. Althouse**, *Escaping the poverty trap: modeling the interplay between economic growth and the ecology of infectious disease, in preparation*

Media coverage: Physics arXiv blog, slashdot.org

B.M. Althouse, N. Generous, *Prediction and Estimation of Lyme Disease Incidence using Search Query Surveillance, in preparation*

B.M. Althouse, J. Lessler, N. G. Riech, D.A.T. Cummings, *Heterogeneous transmission in homogenous populations: over-dispersion arises endogenously from competitive interactions between transmitters, in preparation*

POPULAR WRITING **B.M. Althouse**, *A safer world through disease mathematics*, Science in a Complex World Series, Santa Fe New Mexican, September 7, 2014

WORKSHOPS & IDEAS RCN Workshop & Santa Fe Institute Working Group, *Re-emerging Infectious Diseases; The CHALLENGES OF PERTUSSIS*, (March 2016)

Santa Fe Institute Working Group, *Next generation surveillance for the next pandemic*. Co-Organizer (May, 2014).

Santa Fe Institute Workshop, *From Co-Infection to Cultural Dissonance: New Challenges for Biological and Cultural Evolution*. Lead Organizer (September–October 2013).

Speaker, Community Engagement in the Legacy of the 2014-2015 Ebola Outbreak in West Africa, Bill & Melinda Gates Foundation, September 18, 2018

INVITED PRESENTATIONS

26. Invited participant, *Workshop: Behavioral Risk Modeling for Pandemic Prevention and Response*, Hosted by the National Science and Technology Council and the Pandemic Prediction and Forecasting Science and Technology Working Group, Washington, D.C., 22-23 October, 2018
25. *Behavioral aspects of measles and Zika virus transmission*, MBI Workshop 2: Socioepidemiology, Ohio State University, March 9, 2018
24. *Modeling the transmission dynamics of Zika virus*, Special Seminar, Northeastern University, October 5, 2017
23. *Modeling the transmission dynamics of Zika virus*, Epidemiology and Microbial Diseases Special Seminar, Yale University, September 28, 2017
22. *Answering open questions on the epidemiology and biology of S. pneumoniae with mathematical models*, IV University Speaker Series, September 14, 2017
21. Invited participant, *WHO Technical Expert Consultation on Optimization of PCV Impact: Review of Evidence and Programmatic Considerations to Inform Policy*, Geneva, Switzerland, 12-13 June 2017
20. Invited participant, *RCN- IDEAS workshop: Evolutionary Causes and Consequences of Arbovirus Emergence*, New Orleans, May 30-31, 2017
19. Invited participant, *Adaptive management of arboviral diseases*, Fogarty International Center, NIH Campus Bethesda, MD, USA, May 2-5, 2017
18. Panelist, *Measuring and Modeling Community Engagement in Health Emergencies*, Washington, DC, April 26th, 2017
17. *Modeling the transmission dynamics of Zika virus*, American Society of Tropical Medicine and Hygiene 65th Annual Meeting, November 14-17, 2016
16. *Pondering the fundamentals of disease transmission*, Healthspottr Meeting, October 14, 2016
15. *Introduction to Infectious Disease Dynamics*, Santa Fe Institute Medical Short Course, October 12-14, 2016
14. *State of the art in mathematical modeling of dengue*, 5th Pan-American Dengue Research Network Meeting Panama, April 21, 2016, Panama City
13. *Assessing the threat of establishing a sylvatic Zika virus cycle in South America*, Institute for Disease Modeling Annual Symposium, April 19, 2016, Bellevue, WA
12. *Modeling Long-term Vaccine Serotype Transmission Dynamics under Current and Alternative PCV Schedules*, WHO Technical Expert Consultation: Alternate Dosing Schedules of Pneumococcal Conjugate Vaccines 9-10 February 2016, Geneva, Switzerland

11. *Asymptomatic Transmission, the Resurgence of Bordetella pertussis and an Option for Reducing Rising Whooping Cough Incidence*, Public Health Modeling Seminar, Yale University, New Haven, CT, March 6, 2015
10. *Superspreaders, Asymptomatic Transmitters, and Pondering the Fundamentals of Disease Transmission*, Institute for Disease Modeling, Bellevue, WA, December 8, 2014
9. *Shifts in Medical Diagnostic Practice Revealed by Diagnosis Networks*, Dynamics Of and On Networks, Santa Fe Institute Workshop, December 3, 2014
8. *Epidemiological Consequences of An Ineffective Bordetella Pertussis Vaccine and an Option for Reducing Rising Whooping Cough Incidence*, INFORMS Annual Meeting 2014, San Francisco, CA, November 12, 2014
7. *Novel Data Sources and the Prediction of Dengue*, Integrating Prediction And Forecasting Models For Decision-Making: Dengue Epidemic Prediction, Convened by the White House Office of Science and Technology Policy, September 15th, 2014
6. *Why do vaccine-preventable diseases persist in highly vaccinated populations?*, Annual Science Board Symposium and Meeting, Santa Fe Institute, Santa Fe, NM, May 2nd, 2014.
5. *Infectious Disease Dynamics: Tracking and Understanding the Diseases that Kill Us*, Northern New Mexico College, March 28th, 2014.
4. *Competition between infectors leads to heterogeneous transmission patterns in homogeneous populations*, Los Alamos National Labs, Center for Nonlinear Studies, October 31st, 2013.
3. *Mechanistic Modeling of Sylvatic Arboviruses in Senegal: Understanding the Fevers in the Forest*, Department of Biology Seminar Series, New Mexico State University, October 3rd, 2013.
2. *Competition between infectors leads to heterogeneous transmission patterns in homogeneous populations*, Georgetown University, Washington, D.C., February 19th, 2013.
1. *Competition between infectors leads to heterogeneous transmission patterns in homogeneous populations*, Santa Fe Institute, Santa Fe, NM, January 31st, 2013.

GENERAL PUBLIC
PRESENTATIONS

Why do vaccine-preventable diseases still plague us?, Los Alamos Rotary Club, April 14, 2015.

Science on Screen Lecture: *Panic in the Streets*, Center for Contemporary Arts, Santa Fe, NM, March 31st, 2014.

ABSTRACTS

39. **B.M. Althouse**, S. Flasche, L. N. Minh, V. D. Thiem, M. Hashizume, K. Ariyoshi, D. D. Anh, G. L. Rogers, K. P. Klugman, H. Hu, L.-M. Yoshida, *Differences in clinical severity of mono and multiple respiratory viral infections in hospitalized children in Nha Trang, Vietnam* Oral Presentation, ASTMH, 67th Annual Meeting, October 28 to November 1, 2018, New Orleans, LA
38. **B.M. Althouse**, I. Nisar, F. Jehan, S. Ahmed, F. Kabir, S. Shakoore, A. Ali, N. Iqbal, H. Hu, *Spatiotemporal Dynamics Of Streptococcus pneumoniae In Rural Pakistan*, ASTMH, 67th Annual Meeting, October 28 to November 1, 2018, New Orleans, Louisiana
37. I. Nisar, **B.M. Althouse**, F. Jehan, S. Ahmed, F. Kabir, S. Shakoore, A. Ali, N. Iqbal, H. Hu, *Predictors Of Streptococcus pneumoniae Carriage And Estimates Of PCV10 Vaccine Effectiveness In Rural Pakistan*, ASTMH, 67th Annual Meeting, October 28 to November 1, 2018, New Orleans, LA
36. **B.M. Althouse**, I. Nisar, F. Jehan, S. Ahmed, F. Kabir, S. Shakoore, A. Ali, N. Iqbal, H. Hu, *Spatiotemporal Dynamics Of Streptococcus pneumoniae In Rural Pakistan*, ISPPD 2018, Melbourne, Australia
35. I. Nisar, **B.M. Althouse**, F. Jehan, S. Ahmed, F. Kabir, S. Shakoore, A. Ali, N. Iqbal, H. Hu, *Predictors Of Streptococcus pneumoniae Carriage And Estimates Of Pcv10 Vaccine Effectiveness In Rural Pakistan*, ISPPD 2018, Melbourne, Australia

34. B. G. Wagner, **B.M. Althouse**, N. Givon-Lavi, H. Hu, R. Dagan, *Stable Dynamics Of Streptococcus pneumoniae Over 10 Years In Pre-Pcv Israel*, ISPPD 2018, Melbourne, Australia
33. H. DeAngelis, S. V. Scarpino, M. C. Fitzpatrick, A. P. Galvani, **B.M. Althouse**, *Epidemiological and Economic Effects of Priming With the Whole-Cell Bordetella pertussis Vaccine*, *Epidemics* 6, Nov. 28th- Dec. 1st, 2017
32. **B.M. Althouse**, N. Vasilakis, A.A. Sall, M. Diallo, S. C. Weaver, K.A. Hanley, *Potential for Zika Virus to Establish a Sylvatic Transmission Cycle in the Americas*, *Epidemics* 6, Nov. 28th- Dec. 1st, 2017
31. **B.M. Althouse**, B. G. Wagner, H. Hu, *Estimating the critical community size of Streptococcus pneumoniae transmission in multiple settings*, *Epidemics* 6, Nov. 28th- Dec. 1st, 2017
30. **B.M. Althouse**, S. Flasche, L. N. Minh, Vu Dinh Thiem, M. Hashizume, K. Ariyoshi, D. D. Anh, G. L. Rodgers, K. P. Klugman, H. Hu, L.-M. Yoshida, *Spatiotemporal dynamics of common respiratory viruses causing hospitalizations for acute respiratory infections and pneumonia in children in Nha Trang, Vietnam*, Oral Presentation, ASTMH 66th Annual Meeting, November 5-9, 2017, Baltimore, MD
29. Espinel Z, Shultz JM, Cooper JL, Baingana F, **B.M. Althouse**. *Fear-related Behaviors in the 2013-2016 West Africa Ebola Virus Disease Outbreak*. (Poster). 170th American Psychiatric Association Annual Meeting. San Diego CA, 21 May 2017
28. **B.M. Althouse**, B.G Wagner, H. Hu, *Estimating The Critical Community Size Of Streptococcus pneumoniae Transmission In Multiple Settings*, ISPPD 2016, Glasgow, Scotland
27. **B.M. Althouse**, D. Krishnan, B.G Wagner, H. Hu, *Trends In Pneumonia Hospitalizations In Washington State, USA, 1990-2012*, ISPPD 2016, Glasgow, Scotland
26. **B.M. Althouse**, R. Dagan, N. Givon-Lavi, L. Grant, L.L. Hammitt, M. Knoll, K.L O'Brien, S.I. Pelton, K. Shea, B.G. Wagner, H. Hu, *Identification Of Latent Reservoirs Of Pneumococcal Conjugated Vaccine (PCV) Serotypes After Extended Vaccination*, ISPPD 2016, Glasgow, Scotland
25. **B.M. Althouse**, R. Dagan, N. Givon-Lavi, L. Grant, L.L. Hammitt, M. Knoll, K.L O'Brien, S.I. Pelton, K. Shea, B.G. Wagner, H. Hu, *Examination Of Potential Reduced-Dose Pcv Schedules Using A Mathematical Model Of S. Pneumoniae Colonization*, ISPPD 2016, Glasgow, Scotland
24. B.G. Wagner, R. Dagan, N. Givon-Lavi, **B.M. Althouse**, H. Hu, *Pneumococcal Transmission Patterns In Pre-PCV, Southern Israel*, ISPPD 2016, Glasgow, Scotland
23. **B.M. Althouse**, S. V. Scarpino, *Asymptomatic transmission and the resurgence of Bordetella pertussis*, *Epidemics* 5, Dec. 1-Dec. 4, 2015, Clearwater Beach, FL
22. **B.M. Althouse**, M. Salathé, M. Lipsitch, C.T. Bergstrom, J.D. West, *Heterogeneous vaccination coverage and measles transmission dynamics*, NetSci, Seoul, South Korea, June 2016
21. L. Hébert-Dufresne, **B.M. Althouse**, *Complex dynamics of synergistic coinfections on realistically clustered networks*, *Epidemics* 5, Dec. 1-Dec. 4, 2015, Clearwater Beach, FL
20. **B.M. Althouse**, L. Hébert-Dufresne, *Epidemic Cycles Driven by Host Behaviour*, NetSci 2015, June, 2015, Zaragoza, Spain
19. **B.M. Althouse**, S.V. Scarpino, *Enhancing disease surveillance with novel data streams*, Oral Presentation, Digital Disease Detection, May 21-22, 2015, Florence, Italy
18. **B.M. Althouse**, L. Hébert-Dufresne, *Epidemic Cycles Driven by Host Behaviour*, Oral Presentation, NetSci-x, January, 2015, Rio De Janeiro, Brazil
17. **B.M. Althouse**, S. V. Scarpino, *Vaccine induced selection mimics waning immunity in Pertussis*, Oral Presentation, European Society for Pediatric Infectious Diseases, May 6-10, 2014, Dublin, Ireland.
16. **B.M. Althouse**, O. Patterson-Lomba, G. M. Goerg, L. Hébert-Dufresne, *The Timing and Targeting of Treatment in Influenza Pandemics Influences the Emergence of Resistance in Structured Populations*, *Epidemics* 4, Nov. 19th-22nd, 2013, Amsterdam, The Netherlands.

15. **B.M. Althouse**, A. P. Durbin, K. A. Hanley, S. B. Halstead, S. C. Weaver, D. A. T. Cummings *Viral Kinetics of Primary Dengue Virus Infection in Non-Human Primates: A Systematic Review and Individual Pooled Analysis*, American Society of Tropical Medicine and Hygiene 62nd Annual Meeting, November 13-17, 2012, Washington D.C.
14. **B.M. Althouse**, M. Guerbois, A. A. Sall, M. Diallo, D. Diallo, O. Diop, B. Benefit, E. Simons, D. M. Watts, S. C. Weaver, K. A. Hanley, D. A. T. Cummings *Age-Stratified Serological Survey of Sylvatic Chikungunya Virus in Nonhuman Primates in Senegal*, Oral Presentation, American Society of Tropical Medicine and Hygiene 62nd Annual Meeting, November 13-17, 2012, Washington D.C.
13. **B.M. Althouse**, D. L. Smith, R. C. Reiner Jr, C. M. Barker, D. A. T. Cummings, *Modeling the Ecology of Generalist Pathogens in Multiple Mosquito Vectors*, American Society of Tropical Medicine and Hygiene 61st Annual Meeting, November 11-15, 2012, Atlanta, GA.
12. C. L. Jo, K. M. Ribisl, **B.M. Althouse**, J. W. Ayers, S. Emery, *Search Queries for Non-cigarette Tobacco Product Alternatives Post-2009 Federal Tax Increase*, National Conference on Tobacco or Health, August 15-17, 2012, Kansas City, MO.
11. **B.M. Althouse**, Y.Y. Ng, D.A.T. Cummings, *Prediction of Dengue Incidence using Search Query Surveillance*, Oral Presentation, American Society of Tropical Medicine and Hygiene 60th Annual Meeting, December 4-8, 2011, Philadelphia, PA.
10. A. Azman, H. Salje, B. Althouse, I. Rodriguez-Barraquer, T. P. Endy, A. Nisalak, R. Jarman, R. Gibbons, D.A.T. Cummings, *Longitudinal Characterization of Antibody Response to Dengue Virus in Bangkok Thailand*, American Society of Tropical Medicine and Hygiene 60th Annual Meeting, December 4-8, 2011, Philadelphia, PA.
9. **B.M. Althouse**, J. Lessler, N.G. Riech, D.A.T. Cummings, *Heterogeneous transmission patterns in homogeneous populations*, *Epidemics* 3, Nov. 29th-Dec. 2nd, 2011, Boston, MA.
8. S. Chadsuthi, B. Althouse, S. Iamsirithaworn, W. Triampo, D.A.T. Cummings, *Climate, land use and travel times predict the spatial advance of cases of Chikungunya during an outbreak in southern Thailand*, *Epidemics* 3, Nov. 29th-Dec. 2nd, 2011, Boston, MA.
7. **B.M. Althouse**, A. Sall, K. Hanley, M. Diallo, D. Watts, S. Weaver, D. A. T. Cummings, *A Multi-host, multi-vector SIR model of Dengue 2 virus in Senegal*, Oral Presentation, American Society of Tropical Medicine and Hygiene 59th Annual Meeting, November 3-7, 2010, Atlanta, GA.
6. B. Althouse, A. Sall, M. Diallo, S. Weaver, D. Watts, K. Hanley, D.A.T. Cummings, *A Multi-host, Multi-vector SIR Model of Dengue Virus Transmission in Senegal*, MIDAS Network Meeting, Pittsburgh Supercomputing Center, October 7-8, 2010
5. J. Nahum, **B.M. Althouse**, J.D. West, C. Ofria, B. Kerr, *Traversing Fitness Landscapes by Changing Environments*, Gordon Research Conference (Microbial Population Biology) Proctor Academy, NH, (July 20-24, 2009), *Winner: Best Poster Award*
4. **B.M. Althouse**, J.D. West, and C.T. Bergstrom, *A Novel Method for Ranking the Quality of Cardiology Literature*, American College of Cardiology Scientific Sessions, March 2009, Orlando, FL.
3. **B.M. Althouse**, J.D. West, T. Bergstrom, and C.T. Bergstrom, *Differences in Impact Factor Across Fields and Over Time*, Undergraduate Research Symposium, University of Washington, May 16, 2008
2. **B.M. Althouse**, *Directed Evolution of Human Apolipoprotein A-I Milano Protein and Expression in Escherichia coli*, Transcatheter Therapeutics (TCT), October 2007, Washington, D.C.
1. J.D. West, M. Rosvall, **B.M. Althouse**, C.T. Bergstrom, *Ranking and Mapping Scholarly Literature*, Gordon Research Conference (Microbial Population Biology), July 22-27, 2007, Proctor Academy, NH

PROFESSIONAL
ACTIVITIES &
SERVICE

Participant, *Integrating Forecasting Models for Decision-making: A National Strategy*, White House Office of Science and Technology Policy and the federal Pandemic Prediction and Forecasting Science and Technology Working Group, August 2015

Participant, WHO Technical Expert Consultation: Alternate Dosing Schedules of Pneumococcal Conjugate Vaccines 9-10 February 2016, Geneva, Switzerland

Topic Editor: Frontiers in Public Health, Infectious Disease Section, *Advances in Information Science for Disease Surveillance*

Associate Editor:

– PLoS Neglected Tropical Diseases

Guest editor:

– PLoS Computational Biology

– PLoS One

Invited Program Committee:

– NetSci 2018, Paris, France, 11-15 June 2018

Statistical Reviewer for:

– BMJ Open

Reviewer for:

1. American Journal of Epidemiology,
2. American Journal of Preventive Medicine,
3. American Journal of Public Health,
4. BMC Infectious Diseases,
5. BMC Medicine,
6. BMC Ophthalmology,
7. BMC Public Health,
8. BMJ Open,
9. BMJ Global Health,
10. Bulletin of Mathematical Biology,
11. Bulletin of the World Health Organization,
12. Clinical Infectious Diseases,
13. Computers in Biology and Medicine,
14. Computational and Mathematical Methods in Medicine,
15. EcoHealth,
16. Emerging Infectious Diseases,
17. Environmental and Ecological Statistics,
18. Environmental Health Insights,
19. Environmental Health Perspectives,
20. Epidemiology and Infection,
21. Frontiers in Public Health,
22. Harvard Review of Psychiatry,
23. IEEE Journal of Biomedical and Health Informatics,

24. Infection, Genetics and Evolution,
25. Influenza and Other Respiratory Viruses,
26. Insects,
27. International Health,
28. International Journal of Environmental Research and Public Health,
29. International Journal of Infectious Diseases,
30. Journal of Infection in Developing Countries,
31. Journal of Infectious Diseases,
32. Journal of Medical Internet Research,
33. Journal of the Royal Society Interface,
34. Journal of Studies on Alcohol and Drugs,
35. Journal of Theoretical Biology,
36. The Lancet,
37. The Lancet Global Health,
38. The Lancet Infectious Diseases,
39. Theoretical Biology and Medical Modelling,
40. Tropical Medicine and Infectious Disease,
41. Medical Decision Making Policy & Practice,
42. Nature Scientific Reports,
43. PLoS Computational Biology,
44. PLoS Medicine,
45. PLoS Neglected Tropical Diseases,
46. PLoS One,
47. Population Health Metrics,
48. Proceedings of the Royal Society B,
49. Science of the Total Environment,
50. Scientometrics,
51. Social Sciences,
52. Social Science & Medicine,
53. Vaccine.

Ad hoc Grant Reviewer: National Science Foundation, Decision, Risk, and Management Sciences Program

Active member:

- American Society of Tropical Medicine and Hygiene (2014 –).
- American Committee on Arthropod-Borne Viruses (2015 –)

Chair, Colloquium Committee, Santa Fe Institute (2013-2015)

Johns Hopkins Bloomberg School of Public Health Student Assembly:

- Epidemiology Departmental Student Representative Student Assembly JHSPH (2012-2013);
- Elected Treasurer Student Assembly JHSPH, 2011-2012 (managed a team of 5 people and a budget

of \$120,000);

– Elected Member-at-large Student Assembly JHSPH (2010-2011).

Student Leader, JHSPH Modeling of Spatial and Temporal Disease Epidemiology Forum (MOST-DEF) Speaker Series, (2011-2012, 2012-2013).

Co-developer, Eigenfactor (eigenfactor.org): a free online tool for researchers, librarians, editors and administrators to assess the quality of scientific literature.

Founder: Boundless Analytics L.L.C.: We provide statistical consulting services to increase knowledge about healthcare and health delivery.

Founder: Directing Medicine L.L.C.: Our group of computer scientists, statisticians, and epidemiologists advise health advocacy organizations on modern approaches for population health promotion using technologies we have exclusively developed in the private sector. As a group we focus on high risk, high reward projects that would not be considered by conservative public health funding organizations.

TEACHING & MENTORING

University of Washington, INFX 573: *Data Science I: Theoretical Foundations*, Winter 2018

University of Washington, INFX 573: *Data Science I: Theoretical Foundations*, Winter 2017

Lecturer, University of Washington, INFX 572: *Introduction to Data Science*, Autumn 2015

– Developed a full curriculum for a new course.

Post-doctoral mentoring:

– Laurent Hébert-Dufresne; currently Assistant Professor at University of Vermont. Published 2 PNAS articles and one PLoS Pathogens under my mentoring.

Undergraduate Mentoring:

– Haedi DeAngelis, Trinity College, Deerfield, IL

– Cody O’Ferrall, St. John’s College, Santa Fe, MN

Post-graduate Mentoring:

– Dan Smith, UW Dept. of Epidemiology (2018)

– Prithvi Shetty, UW Information School (2018)

– Paritosh Bapat, UW Information School (2018)

– Bhumika Khandelwal, UW Information School (2018)

– Divya Krishnan, UW Information School (2017)

– Akashdeep Jaswal, UW Information School (2017)

– Chana Greene, US Air Force (2015)

Teaching Assistant:

– Spring 2010, 2011: 340.677, *Infectious Disease Dynamics: Theoretical And Computational Approaches*;

– Summer 2011: 140.611-2, *Graduate Summer Institute of Epidemiology and Biostatistics: Statistical Reasoning in Public Health I & II*;

– Winter 2012: 340.609, *Concepts and Methods in Infectious Disease Epidemiology*;

– Spring (3rd term) 2013: 140.655, *Analysis Of Longitudinal Data*;

– Spring (4th term) 2013: 140.656, *Multilevel Statistical Models In Public Health*.

Instructor, Complex Systems Summer School, Santa Fe Institute, Santa Fe, NM, 2014

Short course in Search Query Surveillance, UNC Chapel Hill, Jan. 2012; University of Illinois, Chicago, Oct. 2012.

Invited workshop: *Introduction to Disease Modeling*, UNIMAS, Kuching, Sarawak, Malasia, Aug.

2016.

REFERENCES

Derek A.T. Cummings
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