

Appointments

- **2016-** Assistant Professor of Global Health, Institute of Health Metrics and Evaluation, Schools of Medicine and Public Health, University of Washington, Seattle, WA.
- **2014-2016** Assistant Professor of Epidemiology and Biostatistics, School of Public Health, Indiana University, Bloomington, IN.
- **2014-2015** Research and Policy in Disease Dynamics (RAPIDD) research associate
- **2012-2014** RAPIDD Postdoctoral Research Fellow, University of California, Davis.
- **2011-2012** University of California, Davis. Research consultant for RAPIDD program, National Institutes of Health Fogarty International Center.
- **2010-2011** University of Michigan. Postdoctoral researcher with Mercedes Pascual and Aaron King.

Education

- **2005-2010** University of Michigan. MS in Statistics awarded in 2009. PhD in Statistics awarded in 2010.
- **2002-2005** California State University, Northridge. MS in Applied Mathematics awarded in 2005
- **1997-2002** University of California, Berkeley. BA in Applied Mathematics awarded 2002

Publications

Research papers

- David M Pigott, Aniruddha Deshpande, Ian Letourneau, Chloe Morozoff, **Reiner, Jr., R.C.**, Moritz UG Kraemer, Shannon E Brent, Isaac Bogoch, Kamran Khan, Molly H Biehl, Roy Burstein, Lucas Earl, Nancy Fullman, Jane P Messina, Adrian QN Mylne, Catherine L Moyes, Freya Shearer, Samir Bhatt, Oliver J Brady, Peter W Gething, Daniel J Weiss, Andrew Tatem, Luke Caley, Tom De Groeve, Luca Vernaccini, Nick Golding, Peter Horby, Jens H Kuhn, Sandra J Laney, Edmond Ng, Peter Piot, Osman Sankoh, Christopher JL Murray, Simon I Hay. Local, national, and regional viral haemorrhagic fever pandemic potential in Africa. *Lancet* [In Review]
- Katzelnick, L.C., Baric, R., Collier, B., Coloma, J., Crowe, Jr., J.E., Cummings, D.A.T., Dean, H., de Silva, A., Diamond, M.S., Durbin, A., Ferguson, N., Gilbert, P.B., Gordon, A., Gubler, D.J., Guy, B., Halloran, E., Halstead, S., Jackson, N., Jarman, R., Lok, S., Michael, N.L., Ooi, E.E., Papadopoulos, A., Plotkin, S., Precioso, A.R., **Reiner, Jr., R.C.**, Rey, F.A., Rodriguez-Barraquer, L., Rothman, A., Schmidt, A.C., Srean, G., Sette, A., Simmons, C., St. John, A., Sun, W., Thomas, S., Torresi, J., Tsang, J.S., Vannice, K., Whitehead, S., Yoon, I.K., Wilder-Smith, A., Harris, E. Correlates of immunity for dengue: State of the art and research agenda. *Vaccine* [In Review]
- Shearer, F., Moyes, C.L., Pigott, D.M., Brady, O.J., Marinho, F., Deshpande, A., Longbottom, J., Browne, A.J., Kraemer, M.U., Hombach, J., Yactayo, S., de Araújo, V.E., da Nóbrega, A.A., O'Reilly, K.M., Mosser, J.F., Stanaway, J.D., Lim, S.S., Hay, S.I., **Reiner, Jr., R.C.**. Estimating global yellow fever vaccination coverage from 1970 to 2016. *Lancet ID* [In Review]
- Golding, N., Burstein, R., Longbottom, J., Browne, A., Fullman, N., Osgood-Zimmerman, A., Earl, L., Bhatt, S., Blazes, D.L., Cameron, E., Casey, D.C., Dowell, S.F., Dwyer-Lindgren, L., Farag, T.H., Flaxman, A.D., Gething, P.W., Gibson, H.S., Graetz, N., Krause, K., Lim, S.S., Mappin, B., Morozoff, C., MPH; **Reiner, Jr., R.C.**, Smith, D.L., Wang, H., Weiss, D.J., Murray, C., Moyes, C.L., Hay, S.I. Mapping under-5 and neonatal mortality in Africa, 2000-2015: a baseline analysis for the Sustainable Development Goals. *The Lancet* [In review]
- Scott, T.W., **Reiner, Jr., R.C.**, Lindsay, S.W., The need for evidence-based vector control in the fight against Zika virus. *Bulletin of the World Health Organization* [In review]
- Kraemer, M.U.G., Golding, N., Bisanzio, D., Bhatt, S., Pigott, D.M., Brady, O.J., Faria, N.R., Pybus, O.G., Smith, D.L., Tatem, A.J., Hay, S.I., **Reiner, Jr., R.C.**. Predicting the geographic spread of the 2014-2016 West Africa Ebola virus disease outbreak. *Nature Communication* [In revision]
- Perkins, T.A.* , **Reiner, Jr., R.C.*** , Espana, G.* , ten Bosch, A. A., Verma, A., Liebman, K.A., Paz-Soldan, V. A., Elder, J. P., Morrison, A. C., Stoddard, S. T., Kitron, U., Vazquez-Prokopec, G. M., Scott, T. W., Smith, D. L. Statistical and biological uncertainties associated with vaccine efficacy estimates and their implications for dengue vaccine impact projections (*Contributed Equally) *PLoS Comp Bio* [In revision].

33. Nathan D Grubaugh, Jason T Ladner, Moritz UG Kraemer, Gytis Dudas, Amanda L Tan, Karthik Gangavarapu, Michael R Wiley, Stephen White, Julien Thz, Diogo M Magnani, Karla Prieto, Daniel Reyes, Andrea Bingham, Lauren M Paul, Refugio Robles-Sikisaka, Glenn Oliveira, Darryl Pronty, Hayden C Metsky, Mary Lynn Baniecki, Kayla G Barnes, Bridget Chak, Catherine A Freije, Adrianne Gladden-Young, Andreas Gnirke, Cynthia Luo, Bronwyn MacInnis, Christian B Matranga, Daniel J Park, James Qu, Stephen F Schaffner, Christopher Tomkins-Tinch, Kendra L West, Sarah M Winnicki, Shirlee Wohl, Nathan L Yozwiak, Joshua Quick, Joseph R Fauver, Kamran Khan, Shannon E Brent, **Reiner, Jr., R.C.**, Paola N Lichtenberger, Michael Ricciardi, Varian K Bailey, David I Watkins, Marshall R Cone, Edgar W Kopp, Kelly N Hogan, Andrew C Cannons, Reynald Jean, Robert F Garry, Nicholas J Loman, Nuno R Faria, Mario C Porcelli, Chalmers Vasquez, Elyse R Nagle, Derek AT Cummings, Danielle Stanek, Andrew Rambaut, Mariano Sanchez-Lockhart, Pardis C Sabeti, Leah D Gillis, Scott F Michael, Trevor Bedford, Oliver G Pybus, Sharon Isern, Gustavo Palacios, Kristian G Andersen Multiple introductions of Zika virus into the United States revealed through genomic epidemiology. *Nature* [In Press]
32. Martinez, P.P, **Reiner, Jr., R.C.**, Roy, M., Cash, B.A., Yunus, M., Faruque, A.S.G., Huq, S., King, A.A., Pascual, M. Cholera forecast for Dhaka, Bangladesh, with the 2016 El Nino. *PLoS One* 12 (3) 2017; e0172355
31. Kraemer, M.U.G., Fariq, N.R., **Reiner, Jr., R.C.**, Golding, N., Nikolay, B., Stasse, S., Johansson, M.A., Sajle, H., Faye, O., Wint, G.R.W., Niedrig, M., Shearer, F.M., Hill, S.C., Thompson, R.N., Bisanzio, D., Taveira, N., Nax, H.H., Pradelski, B.S.R., Nsoesie, E.O., Murphy, N.R., Bogoch, I.I., Khan, K., Bownstein, J.S., Tatem, A.J., de Oliveira, T., Smith, D.L., Sall, A., Pybus, O.G., Hay, S.I., Cauchemez, S. Spread of Yellow Fever Virus outbreak in Angola and the Democratic Republic Congo 2015-2016. *Lancet ID* 2016.
30. Flasche, S., Jit, M., Rodriguez-Barraquer, I., Coudeville, L., Recker, M., Koelle, K., Molne, G., Hladish, T., Perkins, T.A., Cummings, D.A.C., Dorigatti, I., Espana, G., Kelso, J., Longini, I., Lorencio, J., Pearson, C.A.B., **Reiner, Jr., R.C.**, Mier-y-Teran-Romero, L., Vannice, K., Ferguson, N. The long term safety, public health impact, and cost effectiveness of routine vaccination with Dengvaxia(r): a model comparison study. *PLoS Medicine* 13 (11) 2016: e1002181,
29. **Reiner, Jr., R.C.**, Achee, N., Barrera, R., Burkot, T.R., Chadee, D.D., Devine, G., Endy, T., Gubler, D., Homback, J., Kleinschmidt, I., Lenhart, A., Lindsay, S., Longini, I., Mondy, M., Morrison, A., Perkins, T.A., Vazquez-Prokopec, G.M., Reiter, P., Ritchie, S., Smith, D.L., Strickman, D., Scott, T.W. Quantifying the epidemiological impact of vector control on dengue. *PLoS NTD* 10 (2016) no. 5, p e0004588.
28. Forshey, B.M., **Reiner, Jr., R.C.**, Olkowski, S., Morrison, A.C., Espinoza, A., Long, K.C., Vilcarromero, S., Casanova, W., Wearing, H.J., Halsey, E.S., Kochel, T.J., Scott, T.W., Stoddard, S.T. Incomplete protection against dengue virus type 2 re-infection in Peru. *PLoS NTD* 10 (2016) no. 2, p e0004398.
27. Vazquez-Prokopec, G.M., Perkins, T.A., Waller, L.A., Lloyd, A.L., **Reiner, Jr., R.C.**, Scott, T.W., Kitron, U. Coupled heterogeneities and their impact on parasite transmission and control. *Trends in Parasitology* 32 (2016); 4, p. 356-367
26. Brady, O.J., Godfray, H.C.J., Tatem, A.J., Gething, P.W., Cohen, J.M., McKenzie, F.E., Perkins, T.A., **Reiner, Jr., R.C.**, Tusting, L.S., Sinka, M.E., Moyes, C.L., Eckoff, P.A., Scott, T.W., Lindsay, S.W., Hay, S.I., Smith, D.L. Vectorial capacity and vector control: reconsidering sensitivity to parameters for malaria elimination. *TRSTMH* (2016) 110 (2); 107-117.
25. **Reiner, Jr., R.C.**, Le Menach, A., Kunene, S., Ntshalintshali, N., Hsiang, M., Perkins, T.A., Greenhouse, B., Tatem, A.J., Cohen, J.M., Smith, D.L. Mapping residual transmission for malaria elimination. *eLife* (2015); 4:e0950.
24. Howes, R.E., **Reiner, Jr., R.C.**, Battle, K.E., Longbotton, J., Mappin, B., Ordanovich, D., Tatem, A.J., Drakeley, C., Gething, P.W., Zimmerman, P.A., Smith, D.L., Hay, S.I. *Plasmodium vivax* transmission in Africa. *PLoS NTD* 9 (2015) no. 11, p e0004222.
23. Kraemer, M.U.G., Perkins, T.A., Cummings, D.A.T., Zakar, R., Hay, S.I., Smith, D.L., **Reiner, Jr., R.C.** Big city, small world: Density, contact rates, and transmission of dengue across Pakistan. *Journal of the Royal Society Interface.* 12 (2015), no. 111.
22. **Reiner, R. C., Jr.**, Guerra, C.A., Donnelly, M., Bousema, T., Drakeley, C., Smith, D.L. Measuring malaria transmission from humans to mosquitoes. *Journal of the Royal Society Interface.* 12 (2015), no. 111.
21. **Reiner, R. C., Jr.***, Geary, M.*, Aitkinson, P.M., Smith, D.L., Gething, P.W. Seasonality of *Plasmodium falciparum* transmission: a systematic review (* Contributed Equally) *Malaria Journal.* 14 (2015) no.1, p.343.
20. Achee, N.L., Gould, F., Perkins, T.A., **Reiner, R. C., Jr.**, Morrison, A.C., Ritchie, S.A., Gubler, D.J., Teyssou, R., Scott, T.W. A critical assessment of vector control for dengue prevention *PLoS NTD.* 9 (2015) no. 5, p e0003655
19. Battle, K.E., Cameron, E., Guerra, C.A., Golding, N., Duda, K.A., Howes, R.E., Elyazar, I.R.F., Price, R.N., Baird, J.K., **Reiner, Jr., R.C.**, Smith, D.L., Gething, P.W., Hay, S.I. Defining the relationship between *Plasmodium vivax* parasite rate and clinical disease. *Malaria Journal.* 14 (2015) no. 1, p.191.

18. Brady, O.J., Godfray, H.C.J., Tatem, A.J., Gething, P.W., Cohen, J.M., McKenzie, F.E., Perkins, T.A., **Reiner, R. C., Jr.**, Tusting, L.S., Scott, T.W., Lindsay, S.W., Hay, S.I., Smith, D.L., Adult vector control, mosquito ecology and malaria transmission. *International Health* - 2015, 7 (2): 121-129.
17. **Reiner, R. C., Jr.**, Smith, D.L., Gething, P.W. Climate Change, Urbanization, & Disease: Summer in the city... *Transactions of the Royal Society of Tropical Medicine & Hygiene* - Dec. 8 (2014) p. tru194.
16. Perkins, T.A., Garcia, A.J., Paz Soldan, V.A., Stoddard, S.T., **Reiner, R. C., Jr.**, Vazquez-Prokopec, G.M., Bisanzo, D., Halsey, E.S., Kochel, T.J., Morrison, A.C., Smith, D.L., Scott, T.W., Tatem, A.J. Theory and data for simulating fine-scale human movement in an urban environment. *JRS Interface* - 11 (2014), no. 99.
15. Brady, O. J., Golding, N., Pigott, D. M., Kraemer, M. U. G., Messina, J. P., **Reiner, R. C., Jr.**, Scott, T. W., Smith, D. L., Gething, P. W., Hay, S. I. Global temperature constraints on *Aedes aegypti* and *Ae. albopictus* persistence and competence for dengue virus transmission. *Parasites and vectors* 2014, 7(338): 1187-1338.
14. Stoddard, S. T., Wearing, H. J., **Reiner, R. C., Jr.**, Forshey, B. M., Morrison, A. C., Vilcarromero, S., Alvarez, C., Ramal-Asayag, C., Sihuincha, M., Rocha, C., Laguna-Torres, V. A., Halsey, E. S., Scott, T. W., Kochel, T. J. Long-Term and Seasonal Dynamics of Dengue in Iquitos, Peru. *PLoS NTD* - 8.7 (2014): e3003.
13. Guerra, C.A., **Reiner, R. C., Jr.**, Perkins, T.A., Lindsay, S.T., Midega, J., Brady, O.J., Barker, C.M., Reisen, W.K., Harrington, L.C., Takken, W., Kitron, U., Smith, D.L., Scott, T.W. An assembly of mosquito mark-release-recapture data to inform pathogen transmission models. *Parasites and vectors* 2014 7.1: 1-15.
12. Paz-Soldan, V. A., **Reiner, R. C., Jr.**, Morrison, A. C., Stoddard, S. T., Kitron, U., Halsey, E., Kochel, T. J., Scott, T. W., Elder, J. P., Vazquez-Prokopec, G. M. Strengths and weaknesses of Global Positioning System (GPS) data-loggers and semi-structured interviews for capturing fine-scale human mobility within a resource-poor urban environment. *PLoS NTD* 8.6 (2014): e2888.
11. **Reiner, R. C., Jr.**, Stoddard, S.T., Forshey, B.M., King, A.A., Ellis, A.M., Lloyd, A.L., Long, K.C., Rocha, C., Vilcarromero, S., Astete, H., Bazan, I., Lenhart, A., Vazquez-Prokopec, G.M., Pas-Soldan, V.A., McCall, P.J., Kitron, U., Elder, J.P., Halsey, E., Morrison, A., Kochel, T.J., Scott, T.W. Time-varying, serotype-specific force of infection of dengue virus. *Proceedings of the National Academy of Sciences* (2014): 201314933.
10. Caro, T., Izzo, A.S., **Reiner, R. C., Jr.**, Walker, H., Stankowich, T. The function of zebra stripes. *Nature Communications*. 5 (2014).
9. Smith, D.L., Perkins, T.A., **Reiner, R. C., Jr.**, Barker, C.M., Niu, T., Chaves, L.F., Ellis, A.M., George, D.B., Le Menach, A., Pulliam, J., Bisanzio, D., Buckee, C., Chiyaka, C., Cummings, D.A.T., Garcia, A.J., Gattton, M.L., Gething, P.W., Hartley, D.M., Johnston, G., Klein, E.Y., Michael, E., Lindsay, S.W., Lloyd, A.L., Pigott, D.M., Reisen, W.K., Ruktanonchai, N., Singh, B., Stoller, J., Tatem, A.J., Kitron, U., Godfray, H.C.J., Hay, S.I., Scott, T.W. Recasting the Transmission Dynamics and Measurement of Mosquito-Borne Pathogens. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 108 (2014), 185-197.
8. Liebman, K.A., Stoddard, S.T., **Reiner, R. C., Jr.**, Perkins, T.A., Astete, H., Sihuincha, M., Halsey, E.S., Kochel, T.J., Morrison, A.C., Scott, T.W. Determinants of heterogeneous blood feeding patterns of *Aedes aegypti* in Iquitos, Peru. *PLoS NTD*. 8 (2014), no. 2, e2702.
7. **Reiner, R. C., Jr.**, Stoddard, S. T., Scott, T. W. Socially-structured human movement shapes dengue transmission despite the diffusive effect of mosquito dispersal. *Epidemics*. 6 (2014), 30-36.
6. **Reiner, R. C., Jr.***, Perkins, T.A.*, Barker, C.M., Niu, T., Chaves, L.F., Ellis, A.M., George, D.B., Le Menach, A., Pulliam, J., Bisanzio, D., Buckee, C., Chiyaka, C., Cummings, D.A.T., Garcia, A.J., Gattton, M.L., Gething, P.W., Hartley, D.M., Johnston, G., Klein, E.Y., Michael, E., Lindsay, S.W., Lloyd, A.L., Pigott, D.M., Reisen, W.K., Ruktanonchai, N., Singh, B., Tatem, A.J., Kitron, U., Hay, S.I., Scott, T.W., Smith, D.L. (2013) A systematic review of mathematical models of mosquito-borne pathogen transmission: 1970-2010. *Journal of the Royal Society Interface*. 10 (2013), no. 81 (*Contributed Equally).
5. Stoddard, S. T., Forshey, B. M., Morrison, A. C., Paz-Soldan, V. A., Vazquez-Prokopec, G. M., Astete, H., **Reiner, R. C., Jr.**, Vilcarromero, S., Elder, J. P., Halsey, E. S., Kochel, T. J., Kitron, U., Scott, T. W. House-to-house human movement drives dengue virus transmission. *Proceedings of the National Academy of Sciences*. 110 (2013), no. 3, 994-999.
4. **Reiner, R. C., Jr.**, King, A. A., Emch, M., Yunus, M., Faruque, A. S. G., Pascual, M. Highly localized sensitivity to climate forcing drives endemic cholera in a megacity. *Proceedings of the National Academy of Sciences* 109 (2012), no. 6, 2033–2036.
3. **Reiner, R. C., Jr.**, Djellouli, R., Harari, I. Analytical and numerical investigation of the performance of the BGT2 condition for low-frequency acoustic scattering problems. *J. Comput. Appl. Math.* 204 (2007), no. 2, 526–536.
2. **Reiner, R. C., Jr.**, Djellouli, R. Improvement of the performance of the BGT2 condition for low frequency acoustic scattering problems. *Wave Motion* 43 (2006), no. 5, 406–424.

1. **Reiner, R. C., Jr.**, Djellouli, R., Harari, I. The performance of local absorbing boundary conditions for acoustic scattering from elliptical shapes. *Comput. Methods Appl. Mech. Engrg.* 195 (2006), no. 29-32, 3622–3665.

Book Chapters

- Perkins, T.A.* , **Reiner, R. C., Jr.***, Rodriguez-Barraquer, I., Smith, D.L., Scott, T.W., Cummings, D.A.T. (2014) A review of transmission models of dengue: a quantitative and qualitative analysis of model features. In: *Dengue and Dengue Hemorrhagic Fever*, eds. D.J. Gubler, E.E. Ooi, and J. Farrar. In press at CABI Publishing (* Contributed Equally).

Recent Research Presentations

- *Estimating serotype interaction and temporal variation in dengue transmission using longitudinal serological data* September, 29, 2016, XXV International Congress of Entomology, September 25-30, Orlando, Florida
- *Parsing extrinsic and intrinsic drivers of temporal variation in dengue virus transmission using serological longitudinal data* April 22, 2016, Department of Biostatistics, IUPUI, Indianapolis, IN
- *The curious case of the 2010-2011 DENV-2 outbreak in Iquitos, Peru: Incomplete homologous protection?* 4th Annual Institute for Disease Modeling Modeling Symposium, April 18-20, 2016, Bellevue, WA
- *Parsing extrinsic and intrinsic drivers of temporal variation in dengue virus transmission using serological longitudinal data* February 12, IHME, University of Washington, Seattle, WA
- *Estimating serotype-specific dengue virus force of infection and temporary cross immunity using longitudinal serological data* 7th Workshop DSABNS, February 2-5, Evora, Portugal
- *Assessing the dynamics of within-host interactions between dengue serotypes using individual-level longitudinal serological data* Epidemics⁵, December 1-4, 2015, Clearwater, FL
- *Estimating within-host dynamics of dengue virus serotypes using 12 years of individual-level longitudinal serological data* 64th Annual conference of the American Society of Tropical Medicine and Hygiene, October 25-29, 2015, Philadelphia, PA
- *Estimating mosquito abundance and suitability in a changing landscape* LeXeM Scientific Workshop, July 23-24, Riva Del Garda, Italy
- *Malaria importation and elimination in Swaziland* 63rd Annual conference of the American Society of Tropical Medicine and Hygiene, November 2-6, 2014, New Orleans, LA
- Poster : *Inferring the effect of vector control in the face of spatio-temporal heterogeneity: Aedes aegypti in Iquitos, Peru* 12th Annual conference Ecology and evolution of infection disease, June 1-4, 2014, Fort Collins, CO
- *Time-varying, serotype-specific force of infection estimates for dengue virus using longitudinal serological data* 62nd Annual conference of the American Society of Tropical Medicine and Hygiene, November 13-17, 2013, Washington, DC
- Poster : *Disentangling the impacts of seasonality, temperature, and land cover on the abundance of arboviral mosquito vectors in California using Generalized Additive Models* 61st Annual conference of the American Society of Tropical Medicine and Hygiene, November 13-17, 2013, Washington, DC
- *A Quantitative Method for Estimating Spatio-Temporal Mosquito Abundance* UC Davis Entomology Seminar Series, October 30, 2013, Davis, CA
- *Estimating time-varying epidemiological parameters of dengue virus using longitudinal serological data* 3rd International conference on dengue and dengue haemorrhagic fever, October 21-23, 2013, Bangkok, Thailand
- *From collection to conclusion: Several examples of inference using real world (i.e. messy) epidemiological data* Invited Talk, Epidemiology Seminars (EPI 290 : Rewards and challenges of doing research in a highly interconnected world, June 6, 2013)
- Poster : *Estimating long-term Aedes aegypti abundance in Iquitos, Peru using a novel, spatially-explicit smoothing method* 61st Annual conference of the American Society of Tropical Medicine and Hygiene, November 11-15, 2012, Atlanta, GA
- *Investigating temporal patterns in the force of infection of dengue virus transmission using longitudinal serologic data* 97th Annual meeting of the Ecological Society of America, August 5-10, 2012, Portland, OR

Service

- *Guest editor for:* PLoS Neglected Tropical Diseases
- *Reviewer for:* American Journal of Epidemiology, American Journal of Tropical Medicine and Hygiene, Biosystems, BMC Public Health, Ecological Complexity, Ecosphere, eLife, Epidemiology, Geophysical Research Letters, International Journal of Environmental Research and Public Health, Journal of Mathematical Biology, Journal of the Royal Society Interface, Lancet, Lancet Global Health, Lancet Planetary Health, Methods and Applications of Analysis, Methods in Ecology and Evolution, Nature, Nature Communications, Parasites & Vectors, PLoS Computational Biology, PLoS Neglected Tropical Diseases, PLoS ONE, Proceedings of the Royal Society B, Scientific Reports, Transactions of the Royal Society of Tropical Medicine & Hygiene.
- University Service (at UW)
 - Department of Global Health, IHME, Metrics PhD Admissions ommittee, 2017
- University Service (at IU)
 - Department of EBIO, Biostatistics MPH Coordinator, 2015-2016
 - Department of EBIO, Tenure-track/tenure faculty search committee, 2014-2015, 2015-2016
 - Department of EBIO, Visiting faculty search committee, 2015-2016
 - School of Public Health, Academic Council, 2015-2016
 - School of Public Health, Leadership Committee, 2015-2016
 - School of Public Health, Committee on teaching and learning, 2015-2016
 - Professional Programs Curricular Advisory Committee, 2015-2016
- **February 23-25, 2015** Lead organizer (with Chris Barker and David Smith) of a workshop on linking mosquito abundance with models of mosquito-borne pathogen transmission vis-a-vis maps. MoMaMo II (Mosquitoes, Maps and Models) discussed optimal sampling methods and robustness of abundance estimates in the face of non-uniform sampling (in space, time or both).
- **April 28-30, 2014** Lead organizer (with Chris Barker and David Smith) of a workshop on linking mosquito abundance with models of mosquito-borne pathogen transmission vis-a-vis maps. MoMaMo I discussed statistical and mathematical methods of summarizing spatio-temporally explicit mosquito-abundance surveys.
- **September 16-19, 2012** Lead organizer (with Thomas Scott and David Smith) of workshop on Mark-Release-Capture (MRR) studies concerning mosquitoes. We brought together 15 experts from entomology, disease ecology and mathematical modeling to address how to adequately summarize all previously conducted studies on MRR, how to best use this data to answer questions on mosquito movement and ecology, as well as how to synthesize the various MRR approaches to give recommendations on optimizing future MRR studies.
- **Fall 2008-Winter 2010** Graduate Student Mentor. Assisted new graduate student assistants transition from the roll of student to the roll of teacher in statistics labs, namely Introduction to Statistics (Stat 350).
- **2008-2009** GSIS (Graduate Students In Statistics) founder and first president. Act as liaison between faculty, administration and graduate students. Assist in developing programs in which graduate students can serve in meaningful ways to influence the department's direction as well as increasing communication between faculty and graduate students.

Teaching Experience

Indiana University

- Multilevel and Longitudinal Data** (SPH-Q650) Spring 2016
- Doctoral Seminar in Epidemiology** (SPH-E 794) Spring 2016
- Advanced Epidemiological Methods II** (SPH-E 650) Fall 2015
- Doctoral Seminar in Epidemiology** (SPH-E 794) Fall 2015
- Experimental Analysis & Design** (SPH-Q 601) Spring 2015

University of Michigan

- Applied Statistical Methods II** (Statistics 401) Graduate Student Instructor. Winter 2010
- Design of and Analysis of Experiments** (Statistics 470) Graduate Student Instructor. Fall 2007, Fall 2008, Fall 2009

Statistical Principles (Statistics 408) Graduate Student Instructor. Winter 2008

Introduction to Statistics and Data Analysis (Statistics 350) Graduate Student Instructor. Fall 2005, Winter 2006, Fall 2006

Washtenaw Community College

Business Statistics (BMG 265) Course Instructor. Summer 2008

California State University, Northridge:

Transition to upper level mathematics (PUMP) Course Designer and Instructor. Summer 2005

Introductory Statistics (Mathematics 140) Course Instructor. Spring 2005.

Developmental Mathematics II (Mathematics 094) Course Instructor. Spring 2004.

Developmental Mathematics I (Mathematics 094A) Course Instructor for two sections. Fall 2003.

Foundations of Geometry (Mathematics 411). Graduate Assistant for the course. Responsible for teaching the students how to use computer geometry packages Cinderella and Geometer's Sketchpad. Fall 2003.

Research Support

Pending

R01AI000000 Reiner (PI), Perkins/Reiner (Multi PI) 7/1/2017-6/20/22 [Submitted: 10/5/2016]

1.5 calendar years

NIH Total Direct and Indirect Costs: \$3,674,482

Predictive metrics of fine-scale dengue virus force of infection Improving the capacity to predict infections is a pressing issue for dengue epidemiology and prevention, because a large proportion of dengue infections are asymptomatic and currently available laboratory diagnostics are often inconclusive about whether a person was exposed, particularly following vaccination. The development and validation of metrics that clarify how local factors contribute to force of infection will formalize the study of fine-scale DENV transmission heterogeneity, inform population stratification in intervention trials, and provide a basis for optimizing the delivery of interventions.

R01AI130099 Reiner (Co-I), Smith (PI) 4/1/2017-3/31/2022 [Submitted: 6/3/2016]

1 calendar year

NIH Total Direct and Indirect Costs: \$3,181,353

Adaptive Sampling to Resolve Uncertainty in Malaria Transmission across Spatial Scales Transmission of infectious diseases is subject to a wide range of factors originating from the pathogen, host, vectors and environment, all of which are frequently heterogeneous, both spatially and temporally, and complicate accurate estimation of disease outcomes and frustrate control. The proposed study aims to develop geostatistical and modeling methodologies to develop a first-of-its-kind adaptive modeling framework that will integrate multiple data streams, will improve accuracy and specificity of disease transmission covariates, will apply a modular simulation framework to identify relevant missing information, and will use mobility data and a micro-epidemiological simulation model to evaluate the spatial scales of transmission on real landscapes. Methods will be tested and validated using malaria surveillance data, and will seek to produce maps with defined uncertainty that support effective planning of malaria control at subnational, national, and international levels.

Ongoing Research Support

1641130 Reiner (Co-PI), Perkins (PI) 5/1/2016-4/30/2017

.1 calendar years

National Science Foundation Total Direct and Indirect Costs:\$200,000

Overcoming uncertainty to enable estimation and forecasting of Zika virus transmission

This RAPID award will develop new modeling tools and data on mosquito locations that will be use to improve Zika transmission forecasting.

OPP1081737 Reiner (Co-I), Scott (PI) 9/1/2015-8/30/2019

.4 calendar years

Bill and Melinda Gates Foundation Total Direct and Indirect Costs: \$14,708,953

Spatial Repellent Products for Control of Vector-borne Diseases

The primary objective of the study is to quantify the protective efficacy (PE) of a spatial repellent product in reducing the incidence of dengue infection in a large-scale randomized cluster trial (RCT) in the city of Iquitos, Peru.

OPP1110495 Reiner (Co-I), Smith (PI) 9/1/2014-8/30/2019

.2 calendar years

Bill and Melinda Gates Foundation Total Direct and Indirect Costs: \$2,628,356

Strategic Planning Tools for Staging Malaria Elimination

The purpose of this project is to develop models and theory to support large-scale regional planning and for staging sustainable malaria elimination.

P01 AI098670 Reiner (Co-I), Scott (PI) 4/1/2014 - 3/31/2020

0 calendar years

NIH Total Direct and Indirect Costs: \$7,319,879

Quantifying Heterogeneities in Dengue Virus Transmission Dynamics

201403116-02 Reiner (Co-I), Barker (PI) 9/1/2014-8/30/2017

.3 calendar years

National Aeronautics and Space Administration Total Direct and Indirect Costs: \$1,189,733

Enhanced data-driven decision support for highly invasive vectors

The proposed research addresses the USGEO SBA on Health with links to Ecological Forecasting and Climate and will enhance the existing DSS for mosquito-borne viruses.

Failed Research Support

R25HL131505 Reiner (PI) 5/10/2016 - 6/22/2018

.9 calendar years

NIH Total Direct and Indirect Costs: \$745701

Summer Institute for Research Education in Biostatistics

K25AI125727-01 Reiner (PI) 9/1/2016 - 8/30/2021

3.75 calendar years

NIH Total Direct and Indirect Costs: \$708,740

Incorporating Memory into Models of Plasmodium vivax: Leveraging Individual-level Data to Understand Within-host and Life-history Patterns

R21AI128633-01 Reiner (PI), Perkins/Reiner (Multi PI) 9/1/2016-8/31/2018

.4 calendar years

NIH Total Direct and Indirect Costs: \$477,442

Methodological innovations to enhance estimation and forecasting of Zika virus transmission