

**Jeffrey Shaman**  
**Curriculum Vitae (Abridged)**

Department of Environmental Health Sciences  
Mailman School of Public Health  
Columbia University  
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**AREAS OF INTEREST:** Infectious disease transmission and epidemiology, mosquito-borne disease, mosquito ecology, modeling and prediction of infectious disease, climate and health, contagion processes, large-scale climate dynamics, the hydrologic cycle,

**EDUCATION:**

University of Pennsylvania, Bachelor of Arts in Biology, *Cum Laude* with honors in the major, 1990  
Columbia University, Masters of Arts, Department of Earth and Environmental Sciences, 2000  
Columbia University, Masters of Philosophy, Department of Earth and Environmental Sciences, 2002  
Columbia University, Doctor of Philosophy, Department of Earth and Environmental Sciences, 2003, Awarded with Distinction  
Harvard University, National Oceanic and Atmospheric Administration Post-Doctoral Fellow in Climate and Global Change, 2003-2005

**APPOINTMENTS:**

Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2019-present  
Director, Climate and Health Program, Mailman School of Public Health, Columbia University, 2017-present  
Associate Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2014-2018  
Co-Director, Climate and Health Program, Mailman School of Public Health, Columbia University, 2014-2016  
Assistant Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2011-2014  
Assistant Professor, College of Oceanic and Atmospheric Sciences, Oregon State University, 2005-2011  
National Oceanic and Atmospheric Administration Post-Doctoral Fellow, Harvard University, 2003-2005  
National Aeronautics and Space Administration Earth System Science Fellow (graduate), 2000-2003  
Laboratory Technician, Children's Hospital of Philadelphia and the University of Pennsylvania. Immunological research involving molecular and cellular experimentation investigating the class II system and its genetic expression, 1992-1994  
Field Researcher, The University of Pennsylvania. Plant biology surveys, experimentation and research of forest regrowth and plant community competition, 1990-1991

**AFFILIATIONS:**

Associate Chair, Earth Institute Faculty, Columbia University, 2020-present  
Earth Institute, Columbia University, Faculty Member, 2020-present  
Data Science Institute, Columbia University, Affiliate Member, 2017-present  
American Museum of Natural History, Division of Invertebrate Zoology, Research Associate, 2016-present  
Columbia Center for Environmental Health in Northern Manhattan, Mailman School of Public Health, Columbia University, 2011-present  
International Research Institute for Climate and Society, Columbia University, 2011-present  
Earth Institute, Columbia University, Associate Faculty Member, 2016-2020  
Earth Institute, Columbia University, Junior Faculty Fellow, 2012-2016  
Institute for Social and Economic Research and Policy, Columbia University, Faculty Fellow, 2012-2018 College of Earth, Oceanic and Atmospheric Sciences, Oregon State University, Courtesy, 2011-2014  
Center for Communicable Disease Dynamics, Harvard School of Public Health, 2009-2015

## GRADUATE AND POSTDOCTORAL ADVISORS:

Mark A. Cane, Columbia University (graduate)  
Eli Tziperman, Harvard University (post-doctoral)

## HONORS:

Finalist, 2020 AAAS Newcomb Cleveland Prize (for Li et al. 2020), 2021  
Dean's Excellence in Faculty Leadership Award, Mailman School of Public Health, 2020 International Society for Disease Surveillance Outstanding Research Article in Biosurveillance in the Scientific Achievement Category, first prize (for Pei et al., 2018), 2018  
Tow Faculty Leadership Award, Mailman School of Public Health, 2015-2018  
Winner, Centers for Disease Control and Prevention 'Predict the Influenza Season Challenge', 2014  
International Society for Disease Surveillance Outstanding Research Article in Biosurveillance in the Scientific Achievement Category, first prize (for Shaman and Karspeck, 2012), 2013  
Junior Faculty Career Development Award, Columbia University Center for Environmental Health in Northern Manhattan, 2012-2014  
National Oceanic and Atmospheric Administration Post-Doctoral Fellowship in Climate and Global Change, 2003-2005  
Bruce C. Heezen Prize for graduate students making exceptional scientific contributions, 2003  
Columbia Sigma Xi, 2003  
Ph.D. Awarded with Distinction, 2003  
NASA Earth System Science Fellowship, 2000-2003

## PEER REVIEWED PUBLICATIONS:

Yang W, Shiff J, Shaman J. COVID-19 transmission dynamics and effectiveness of public health interventions in New York City during the 2020 spring pandemic wave. *Journal of the Royal Society Interface*, **18(175)**:20200822, doi:10.1098/rsif.2020.0822, 2021.

Lamb MR, Kandula S, Shaman J. Differential COVID-19 case positivity in New York City neighborhoods: socioeconomic factors and mobility. *Influenza and Other Respiratory Viruses*, **15(2)**:209-217, doi:10.1111/irv.12816, 2021.

Rader B, White LF, Burns MR, Chen J, Brilliant J, Cohen J, Shaman J, Brilliant L, Kraemer, MUG, Hawkins J, Scarpino SV, Astley CM, Brownstein JS. Mask wearing and control of SARS-CoV-2 transmission in the United States. *Lancet Digital Health*, **3(3)**:e148-e157, doi:10.1016/S2589-7500(20)30293-4, 2021.

Galanti M, Shaman J. Direct observation of multiple subsequent infections with endemic coronaviruses. *The Journal of Infectious Diseases*, **233(3)**:409-415, doi:10.1093/infdis/jiaa392, 2021..

Yang W, Kandula S, Huynh M, Greene SK, Van Wye G, Li W, Chan HT, McGibbon E, Yeung A, Olson D, Fine A, Shaman J. Estimating the infection fatality risk of COVID-19 in New York City during the spring 2020 pandemic wave: a model-based analysis. *Lancet Infectious Diseases* **21(2)**:203-212, doi:10.1016/S1473-3099(20)30769-6, 2021.

Pei S, Teng X, Lewis P, Shaman J. Optimizing influenza surveillance networks using uncertainty propagation. *Nature Communications*, **12**:222, doi:10.1038/s41467-020-20399-3, 2021.

Matienzo N, Youssef MM, Comito D, Lane B, Ligon C, Morita H, Winchester A, Decker ME, Dayan P, Shopsin B, Shaman J. Respiratory viruses in pediatric emergency department patients and their family members. *Influenza and Other Respiratory Viruses*, **15(1)**:91-98, doi:10.1111/irv.12789, 2021.

Pei S, Kandula S, Shaman J. Differential Effects of Intervention Timing on COVID-19 Spread in the United States. *Science Advances*, **6(49)**:eabd6370, doi:10.1126/sciadv.abd6370, 2020.

Pei S, Dahl K, Yamana TK, Licker R, Shaman J. Compound risks of hurricane evacuation amid the COVID-19 pandemic in the United States. *GeoHealth*, **4(12)**:e2020GH000319, doi:10.1029/2020GH000319, 2020.

Cruz AT, Shaman J, Dayan P. The challenge of clearly counting COVID-19 cases in children. *Pediatrics*, **146(6)**:e2020031682, doi:10.1542/peds.2020-027425, 2020.

Bomfim R, Pei S, Shaman J, Yamana T, Makse HA, Andrade Jr. JS, Lima Neto AS, Furtado V. Predicting dengue outbreaks at neighborhood level using human mobility in urban areas. *Journal of the Royal Society Interface*, **17(171)**:20200691, doi:10.1098/rsif.2020.0691, 2020..

Shaman J, Galanti M. Will SARS-CoV-2 become endemic? *Science*, **370(6516)**:527-529, doi:10.1126/science.abe5960, 2020.

Kramer SC, Pei S, Shaman J. Forecasting influenza in Europe using a metapopulation model incorporating cross-border commuting and air travel. *PLOS Computational Biology*, **16(10)**:e1008233, doi:10.1371/journal.pcbi.1008233, 2020.

Pei S, Shaman J. Aggregating forecasts of multiple respiratory pathogens supports more accurate forecasting of influenza-like illness. *PLOS Computational Biology*, **16(10)**:e1008301, doi:10.1371/journal.pcbi.1008301, 2020.

- Galanti M, Comito D, Ligon C, Lane B, Matienzo N, Ibrahim S, Shittu A, Tagne E, Birger R, Ud-Dean M, Filip I, Morita H, Rabadan R, Anthony S, Freyer GA, Dayan P, Shopsin B, Shaman J. Active surveillance documents rates of clinical care seeking due to respiratory illness. *Influenza and Other Respiratory Viruses*, **14(5)**:499-506, doi:10.1111/irv.12753, 2020.
- Emeruwa UN, Ona S, Shaman J, Turitz A, Wright JD, Gyamfi-Bannerman C, Melamed A. Associations between built environment, neighborhood socioeconomic status and SARS-CoV-2 infection among pregnant women in New York City. *JAMA*, **324(4)**:390-392, doi:10.1001/jama.2020.11370, 2020.
- Shea B, Knowlton K, Shaman J. The state of climate-health education at health professions schools: a baseline assessment. *JAMA Open Network*, **3(5)**:e206609, doi:10.1001/jamanetworkopen.2020.6609, 2020.
- Li R, Pei S, Chen B, Song Y, Zhang T, Yang W, Shaman J. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2). *Science*, **368(6490)**:489-493, doi:10.1126/science.abb3221, 2020.
- Gervais M, Shaman J, Kushnir Y. Impact of the North Atlantic Warming Hole on sensible weather. *Journal of Climate*, **33(10)**:4255-4271, doi:10.1175/JCLI-D-1909636.1, 2020.
- Heaney A, Alexander K, Shaman J. Ensemble forecast and parameter inference of childhood diarrhea in Chobe District, Botswana. *Epidemics*, **30**:100372, doi:10.1016/j.epidem.2019.100372, 2020.
- Yamana TK, Shaman J. A framework for evaluating the effects of observational type and quality on vector-borne disease forecast. *Epidemics*, **30**:100359, doi:10.1016/j.epidem.2019.100359, 2020.
- Krasna H, Czabanowska K, Jiang S, Khadka S, Morita H, Kornfeld J, Shaman J. The future of careers at the intersection of climate change and public health: What can job postings and an employer survey tell us? *International Journal of Environmental Research and Public Health*, **17(4)**:1310, doi:10.3390/ijerph170418310, 2020.
- Orenbuch R, Filip I, Comito D, Shaman J, Pe'er I, Rabadan R. arcasHLA: high resolution HLA typing from RNAseq. *Bioinformatics*, **36(1)**:33-40, doi:10.1093/bioinformatics/btz474, 2020.
- Heaney A, Shaman J, Alexander K. El Nino-Southern Oscillation and under-5 diarrhea in Botswana. *Nature Communications*, **10**:5798, doi:10.1038/s41467-019-13584-6, 2019.
- Reich NG, McGowan C, Yamana T, Tushar A, Ray E, Osthus D, Kandula S, Fox S, Brooks L, Crawford-Crudell W, Gibson GC, Moore E, Silva R, Biggerstaff M, Johansson MA, Rosenfeld R, Shaman J. A collaborative multi-model ensemble for real-time influenza forecasting in the U.S.: Results from the 2017/2018 season. *PLOS Computational Biology*, **15(11)**:e1007486, doi:10.1371/journal.pcbi.1007486, 2019.
- Johansson M et al. Advancing probabilistic epidemic forecasting through an open challenge: The Dengue Forecasting Project. *Proceedings of the National Academy of Sciences*, **116(48)**:24268-24274, doi:10.1073/pnas.1909865116, 2019.
- Sy KTL, Shaman J, Kandula S, Pei S, Gould M, Keyes KM. Spatiotemporal clustering of suicide deaths from 1999 to 2016: a spatial epidemiological approach. *Social Psychiatry and Psychiatric Epidemiology*, **54**:1471-1482, doi:10.1007/s00127-019001736-4, 2019.
- Lipsitch M, Shaman J. Comment on: 'Antibiotic footprint' as a communication tool to aid reduction of antibiotic consumption. *Journal of Antimicrobial Chemotherapy*, **74(11)**:3404-3406, doi:10.1093/jac/dkz320, 2019..
- Reich NG, Osthus D, Ray E, Yamana T, Biggerstaff M, Johansson MA, Rosenfeld R, Shaman J. Reply to Bracher: Scoring probabilistic forecasts to maximize public health interpretability. *Proceedings of the National Academy of Sciences*, **116(42)**:20811-20812, doi:10.1073/pnas.1912694116, 2019.
- Kandula S, Shaman J. Reappraising the utility of Google Flu Trends. *PLOS Computational Biology*, **15(8)**:e1007258, doi:10.1371/journal.pcbi.1007258, 2019.
- Kandula S, Pei S, Shaman J. Improved forecasts of influenza-associated hospitalization rates with Google search trends. *Journal of the Royal Society Interface*, **16**:20190080, doi:10.1098/rsif.2019.0080, 2019.
- Kandula S, Shaman J. Near-term forecasts of influenza-like illness: an evaluation of autoregressive time series approaches. *Epidemics*, **27**:41-51, doi:10.1016/j.epidem.2019.01.002, 2019.
- Li X, Xu B, Shaman J. The impact of environmental transmission and epidemiological features on the geographical translocation of highly pathogenic avian influenza virus. *International Journal of Environmental Research and Public Health*, **16(11)**:1890, doi:10.3390/ijerph16111890, 2019.
- Li X, Xu B, Shaman J. Pathobiological features that favor the intercontinental dissemination of highly pathogenic avian influenza virus H5N8. *Royal Society Open*, **6**:190276, doi:10.1098/rsos.190276, 2019.
- Gervais M, Shaman J, Kushnir Y. Impacts of the North Atlantic warming hole in future climate projections: mean atmospheric circulation and the North Atlantic jet. *Journal of Climate*, **32(10)**:2673-2689, doi:10.1175/JCLI-D-18-0647.1, 2019.
- DeFelice NB, Birger R, DeFelice N, Gagner A, Campbell SR, Romano C, Santoriello M, Henke J, Wittie J, Cole B, Kaiser C, Shaman J. Real time 2017 West Nile virus forecast: operational challenges. *JAMA Open Network*, **2(4)**:e193175, doi:10.1001/jamanetworkopen.2019.3175, 2019.
- Galanti M, Birger R, Ud-Dean SMM, Filip I, Morita H, Comito D, Anthony S, Freyer GA, Ibrahim S, Lane B, Ligon C, Rabadan R, Shittu A, Tagne E, Shaman J. Longitudinal active sampling for respiratory viral infections across age groups. *Influenza and Other Respiratory Viruses*, **13(3)**:226-232, doi:10.1111/irv.12629, 2019.

- Reis J, Yamana T, Kandula S, Shaman J. Superensemble forecast of respiratory syncytial virus outbreaks at regional, state and municipal levels. *Epidemics*, **26**:1-8, doi:10.1016/j.epidem.2018.07.001, 2019.
- Kramer SC, Shaman J. Development and validation of influenza forecasting for 64 temperate and tropical countries. *PLOS Computational Biology*, **15(2)**:e1006742, doi:10.1371/journal.pcbi.1006742, 2019.
- Pei S, Cane MA, Shaman J. Predictability in process-based ensemble forecast of influenza. *PLOS Computational Biology*, **15(2)**:e1006783, doi:10.1371/journal.pcbi.1006783, 2019.
- Yang W, Li J, Shaman J. Characteristics of measles epidemics in China (1951-2004) and implications for elimination. *PLOS Computational Biology*, **15(2)**:e1006806, doi:10.1371/journal.pcbi.1006806, 2019.
- McGowan C, Biggerstaff M, Johansson M, Apfeldrf KM, Ben-Nun M, Brooks L, Convertino M, Erraguntla M, Farrow DC, Freeze J, Ghosh S, Hyun S, Kandula S, Lega J, Liu Y, Michaud N, Morita H, Niemi J, Ramakrishnan N, Ray EL, Reich NG, Riley P, Shaman J, Tibshirani R, Vespignani A, Zhang Q, Reed C. Collaborative efforts to forecast seasonal influenza in the United States, 2015-2016. *Scientific Reports*, **9**:683, doi:10.1038/s41598-018-36361-9, 2019.
- Reich NG, Brooks L, Fox S, Kandula S, McGowan C, Moore E, Osthus D, Ray E, Tushar A, Yamana T, Biggerstaff M, Johansson MA, Rosenfeld R, Shaman J. Forecasting seasonal influenza in the U.S.: a collaborative multi-year, multi-model assessment of forecast performance. *Proceedings of the National Academy of Sciences*, **116(8)**:3146-3154, doi:10.1073/pnas.1812594116, 2019.
- Pei S, Morone F, Liljeros F, Makse HA, Shaman J. Inference of the nosocomial transmission dynamics of Methicillin-resistant *Staphylococcus aureus*. *eLife*, **7**:e40977, doi:10.7554/eLife.40977, 2018.
- Alexander K, Heaney A, Shaman J. Distant climate controls and dryland flood pulse dynamics influence diarrheal disease and population vulnerability to climate change. *PLOS Medicine*, **15(11)**:e1002688, doi:10.1371/journal.pmed.1002688, 2018.
- Morita H, Kramer S, Heaney A, Gil H, Shaman J. Influenza forecast optimization when using different surveillance data types and geographic scale. *Influenza and Other Respiratory Viruses*, **12(6)**:755-764, doi:10.1111/irv.12594, 2018.
- Fu C, Dong Z, Shen J, Yang Z, Liao Y, Hu W, Pei S, Wang M, Shaman J. Population impact of the Lanzhou Lamb Rotavirus (LLR) vaccine: data from 9 years of immunization in Guangzhou, China. *JAMA Network Open*, **1(4)**:e181382, doi:10.1001/jamanetworkopen.2018.1382, 2018.
- Yang W, Cummings MJ, Bakamutumaho B, Kayiwa J, Owor N, Namagambo B, Byaruhanga T, Lutwama JJ, O'Donnell, MR, Shaman J. Transmission dynamics of influenza in two major cities of Uganda. *Epidemics*, **24**:43-48, doi.org/10.1016/j.epidem.2018.03.002, 2018.
- Biggerstaff M, Johansson M, Alper D, Brooks LC, Chakraborty P, Farrow DC, Hyun S, Kandula S, McGowan C, Ramakrishnan N, Rosenfeld R, Shaman J, Tibshirani R, Tibshirani RJ, Vespignani A, Yang W, Zhang Q, Reed C. Results from the second year of a collaborative effort to forecast influenza seasons in the United States. *Epidemics*, **24**:26-33, doi.org/10.1016/j.epidem.2018.02.003, 2018.
- Doms C, Kramer SC, Shaman J. Assessing the use of influenza forecasts and epidemiological modeling in public health decision making. *Scientific Reports*, **8**:12406, doi:10.1038/s41598-018-30378-w, 2018.
- Shea B, Knowlton K, Shaman J. The need for informed climate-health governance. *International Journal of Health Governance*, **23(3)**:196-204, doi:10.1108/IJHG-01-2018-0001, 2018.
- Kandula S, Yamana T, Pei S, Yang W, Morita H, Shaman J. Evaluation of mechanistic and statistical methods in forecasting influenza-like illness. *Journal of the Royal Society Interface*, **15**:20180174, doi:10.1098/rsif.2018.0174, 2018.
- Birger R, Morita H, Comito D, Filip I, Galanti M, Lane B, Ligon C, Rosenbloom D, Shittu A, Ud-Dean M, Desalle R, Planet P, Shaman J. Asymptomatic shedding of respiratory virus among an ambulatory population across seasons. *mSphere*, **3**:e00249- 18. <https://doi.org/10.1128/mSphere.00249-18>, 2018.
- Gervais M, Shaman J, Kushnir Y. Mechanisms Governing the Development of the North Atlantic Warming Hole in the CESM-LE Future Climate Simulations. *Journal of Climate*, **31(15)**:5927-5946, doi:10.1175/JCLI-D-17-0635.1, 2018.
- Yang W, Cummings MJ, Bakamutumaho B, Kayiwa J, Owor N, Namagambo B, Byaruhanga T, Lutwama JJ, O'Donnell, MR, Shaman J. Dynamics of influenza in the tropical Africa: temperature, humidity and co-circulating (sub)types. *Influenza and Other Respiratory Viruses*, **12(4)**:446-456, doi:10.1111/irv.12556, 2018.
- Shaman J, Knowlton K. The need for climate and health education. *American Journal of Public Health*, **108(S2)**:S66-S67, 2018.
- Ukawuba I, Shaman J. Association of spring-summer hydrology and meteorology and human West Nile virus infection in West Texas, USA, 2002-2016. *Parasites & Vectors*, **11**:224, doi:10.1186/s13071-018-2781-0, 2018.
- Reis J, Shaman J. Simulation of four respiratory viruses and inference of epidemiological parameters. *Infectious Disease Modeling*, **3**:23-34, doi:10.1016/j.idm.2018.03.006, 2018.
- Chattopadhyay I, Kiciman E, Elliott JW, Shaman J, Rzhetsky A. Conjunctions of factors triggering waves of seasonal influenza. *eLife*, **7**:e30756, doi:10.7554/eLife.30756, 2018.
- DeFelice NB, Schneider ZD, Little E, Barker C, Caillouet KA, Campbell SR, Damian D, Irwin P, Jones HMP, Townsend J, Shaman J. Use of temperature to improve West Nile virus forecasts. *PLOS Computational Biology*, **14(3)**:e1006047, doi:10.1371/journal.pcbi.1006047, 2018.

- Pei S, Kandula S, Yang W, Shaman J. Forecasting the spatial transmission of influenza in the United States. *Proceedings of the National Academy of Sciences*, **115(11)**:2752-2757, doi:10.1073/pnas.1708856115, 2018.
- Shaman J, Morita H, Birger R, Boye M, Comito D, Lane B, Ligon C, Smith H, Desalle R, Planet P. Asymptomatic summertime shedding of respiratory viruses. *The Journal of Infectious Diseases*, **217(7)**:1074-1077, doi:10.1093/infdis/jix685, 2018.
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- Shaman J, Kandula S, Yang W, Karspeck A. The use of ambient humidity conditions to improve influenza forecast. *PLOS Computational Biology*, **13(11)**:e1005844, doi:10.1371/journal.pcbi.1005844, 2017.
- Yamana T, Kandula S, Shaman J. Individual versus superensemble forecasts of seasonal influenza outbreaks in the United States. *PLOS Computational Biology*, **13(11)**:e1005801, doi:10.1371/journal.pcbi.1005801, 2017.
- Kandula S, Hsu DJ, Shaman J. Sub-regional nowcasts of seasonal influenza using search trends. *Journal of Medical Internet Research*, **19(11)**:e370, doi:10.2196/jmir.7486, 2017.
- Pei S, Shaman J. Counteracting structural errors in ensemble forecast of influenza outbreaks. *Nature Communications*, **8**, Article Number 925, doi:10.1038/s41467-017-01033-1, 2017.
- Little E, Bajwa W, Shaman J. Local environmental and meteorological conditions influencing the invasive mosquito *Ae. albopictus* and arbovirus transmission risk in New York City. *PLOS Neglected Tropical Diseases*, **11(8)**:e0005828, doi:10.1371/journal.pntd.0005828, 2017.
- Quinn A, Shaman J. Health symptoms in relation to temperature, humidity, and self-reported perceptions of climate in New York City residential environments. *International Journal of Biometeorology*, **61(7)**:1209-1220, doi:10.1007/s00484-016-1299-4, 2017.
- Quinn A, Kinney PL, Shaman J. Predictors of summertime heat index levels in New York City apartments. *Indoor Air*, **27(4)**:840-851, doi:10.1111/ina.12367, 2017.
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## PUBLISHED ABSTRACTS AND CONFERENCE PROCEEDINGS

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## BOOK CHAPTERS

- Day JF, Shaman J, 2011, 'Mosquito-Borne Arboviral Surveillance and the Prediction of Disease Outbreaks', In *Flavivirus Encephalitis*, Daniel Růžek, Ed., ISBN: 978-953-307-669-0, InTech, Available from: <http://www.intechopen.com/articles/show/title/mosquito-borne-arboviral-surveillance-and-the-prediction-of-disease-outbreaks>

## EDITORIAL ACTIVITIES

Manuscripts Reviewed for: *International Journal of Climatology*, *Climatic Change*, *Global Change Biology*, *Journal of Medical Entomology*, *Ecological Modelling*, *Journal of Climate*, *International Journal of Remote Sensing*, *Hydrological Processes*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *PLoS ONE*, *Vector-Borne and Zoonotic Diseases*, *Quarterly Journal of the Royal Meteorological Society*, *Water Resources Research*, *Atmospheric Research*, *PLoS Medicine*, *PNAS*, *PLoS Neglected Tropical Diseases*, *Journal of Vector Ecology*, *Journal of the Atmospheric Sciences*, *American Journal of Epidemiology*, *Environmental Health Perspectives*, *Entomologia Experimentalis et Applicata*, *Malaria Journal*, *Acta Tropica*, *Proceedings of the Royal Society B*, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, *Environmental Health*, *Journal of the Royal Society Interface*, *International Journal for Environmental Research and Public Health*, *BioMed Central Infectious Diseases*, *American Journal of Tropical Medicine and Hygiene*, *Journal of Theoretical Biology*, *Journal of the Meteorological Society of Japan*, *Epidemiology and Infection*, *Ecology Letters*, *WIREs Climate Change*, *Climate Dynamics*, *PLOS Computational Biology*, *International Journal of Biometeorology*, *Influenza and Other Respiratory Viruses*, *PLOS Currents Influenza*, *Disaster Medicine and Public Health Preparedness*, *Scientific Reports*, *PLOS Currents Outbreaks*, *Nature Climate Change*, *BMC Infectious*

Diseases, Epidemics, eLife, PLOS Biology, Nature Communications, Nature, Science, Science Translational Medicine, Nature Human Behavior, Emerging Infectious Diseases

Proposals Reviewed for: *NSF Climate and Large-Scale Dynamics; NOAA Climate Prediction Program for the Americas; Wellcome Trust; Ministry of Earth Sciences Monsoon Mission II, India; Swiss NSF*

Review Panels: *EPA Biodiversity and Human Health, NIH Centers of Excellence for Influenza Research and Surveillance, NIAID Microbiology and Infectious Disease Research Committee K Awards, NIH IRAP Study Section, NIH NIAID U19 RFA*

Guest Editor: *PNAS, International Journal for Environmental Research and Public Health, PLOS Computational Biology, PLOS Medicine, PLOS Biology*

Academic Editor: *PLOS ONE*, 2014-present

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