

## Health and Medical Geography Specialty Group

### 2018 Upcoming Deadlines

Date	Event
January	Preliminary Program Online
Feb. 14	Poster Abstract Deadline
Feb. 23	Abstract & Session Edits
Apr. 10-14	2018 AAG, New Orleans

### Board Members

- Chair: Michael Widener (2017-18)
- Vice-Chair: Kirsten Beyer (2017-18)
- At-Large Member: Jerry Shannon (2017-19)
- At-Large Member: Chetan Tiwari (2017-19)
- At-Large Member: Xiang Chen (2016-18)
- Graduate Student: Marynia Kolak (2016-18)
- Graduate Student: Kristin Brooks (2017-19)
- Webmaster: Michael Desjardins (continuous) and David Lamb (continuous)

### Next Issue: Spring 2018

Email updates, essays, and news to Chetan Tiwari (chetan.tiwari@unt.edu)

I want to start my letter by thanking the previous chair of the AAG's Health and Medical Geography Specialty Group, Eric Delmelle, for his dedicated service in 2016-2017. Dr. Delmelle was an energetic leader, who did a lot to move the specialty forward through organizing sessions, formalizing various processes, and hosting a well-attended reception at the 2017 Annual Meeting of the AAG. As a community, we are all thankful for your time and efforts, Eric, and wish you luck with your future pursuits in the AAG!

I will turn now to the state of the specialty group. While last year was, by all accounts, very successful, with over 70 paper, panel, and plenary sessions sponsored by the HMGSG, we plan on building on this momentum in 2017-2018. At the annual meeting in Boston, we welcomed Dr. Kirsten Beyer as the group's new Vice-Chair, Drs. Chetan Tiwari and Jerry Shannon as new Board Members, and Kristin Brooks as a new Student Board Member. Currently, I am working with these new additions, and continuing Board Member Xiang (Peter) Chen and Student Board Member Marynia Kolak to ensure that we offer a similarly deep program focused on a range of health and medical geography topics in New Orleans.

Our membership remains steady, with approximately 550 dues-paying members, and interest in our specialty group-organized "Geospatial Health Research Symposium," in collaboration with Dr. Mei-Po Kwan, remains high. As of now, sessions are planned on topics that range from infectious disease to healthy food accessibility, and many geographers have reached out to the specialty group for sponsorship of sessions on an even more diverse array of topics.

In addition to these paper sessions, we are honoured to have Dr. Mark Rosenberg of Queens University, our winner of the 2017 Melinda S. Meade Distinguished Scholarship Award in Health and Medical Geography, deliver his keynote address "Things I Think I Think" about Health Geography. I, personally, am very excited to hear Dr. Rosenberg's thoughts, and hope you will join us for what is sure to be an interesting talk and discussion.



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Finally, I would like to leave our members with a suggestion for the upcoming annual meeting: take the time to attend at least one session with papers on health and medical geography that are focused on research outside of your own area of expertise. As is the case with the discipline of geography, health research is incredibly diverse. Despite this, we often find ourselves attending talks and papers similar to our own work . . . and for good reason! It is important to keep up with the latest and greatest work that has implications for what each of us does. However, while useful, these sessions often fail to open our eyes to different perspectives, methods, and findings.

If you focus on quantitative methods, sit in on talks using mixed or qualitative methods. If you are primarily interested in disease ecology, attend a talk on the health of older adults. We have much that we can learn from one another – but there are few times where there is such a critical mass of health and medical geographers all in one place. It is a special opportunity, and I hope you will join me in seeking out something different. As always, thank you for your membership, and see you in New Orleans!

– Michael J. Widener

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## Research Brief: Mapping Rift Valley Fever Transmission Risk

Dennis E. Nicholas<sup>1</sup>, Paul L. Delamater<sup>2</sup>, Nigel M. Waters<sup>3</sup>, Kathryn H. Jacobsen<sup>4</sup>

In our research into Rift Valley fever (RVF) we have used geographically weighted discriminant analysis (GWDA) as a technique for mapping the risk of infectious disease transmission risk (Nicholas, Jacobsen, and Waters 2014; Nicholas et al. 2016). Specifically, we examined the disease ecology of two outbreaks of RVF in the Republic of South Africa in 2008-2009 and 2010-2011 and discovered that a GWDA analysis incorporating the geographic distribution of seven environmental variables (mean annual NDVI; elevation; mean spring temperature; and maximum summer, fall, winter, and spring temperature) correctly classified 96.6% of the original case locations and pseudo-absence locations versus 84.5% obtained with traditional discriminant analysis. Compared to traditional discriminant analysis, false positives decreased from 10.9% to 3.7%, and false negatives decreased from 19.9% to 3.2%. These findings allowed us to conclude that the GWDA model is able to aptly discriminate between locations that are environmentally suitable for transmission of RVF virus and those that are not environmentally suitable. In the next phase, we are using the GWDA framework to map the probability that a location is environmentally suitable for RVF virus transmission under those environmental conditions that are predicted by climate change models. This will allow the calculation of an RVF risk map for the Republic of South Africa under the changed environment. We are altering the predictor variables for RVF to reflect local changes in temperature and precipitation associated with the predicted climate change in 2050 and thus mapping future transmission risk scenarios.

Nicholas, D. E., P. L. Delamater, N. M. Waters, and K. H. Jacobsen. 2016. Geographically weighted discriminant analysis of environmental conditions associated with Rift Valley fever outbreaks in South Africa. *Spatial and Spatio-Temporal Epidemiology* 17:75–83.

Nicholas, D. E., K. H. Jacobsen, and N. M. Waters. 2014. Risk factors associated with human Rift Valley fever infection: systematic review and meta-analysis. *Tropical Medicine & International Health: TM & IH* 19 (12):1420–1429.

<sup>1</sup>Department of Geography and GeoInformation Science, George Mason University

<sup>2</sup>Department of Geography, University of North Carolina Chapel Hill

<sup>3</sup>O'Brien Institute for Public Health, Cumming School of Medicine, University of Calgary

<sup>4</sup>Department of Global and Community Health, George Mason University

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## Session & Panel Preview, 2018 AAG Meeting

- Advances in Computational Approaches for Geospatial Health Applications.** Organizer(s): Alexander Hohl (*ahohl@uncc.edu*), Michael Desjardins (*mdesjar2@uncc.edu*)
- Aging in the Developing World Part 2.** Organizer(s): Andrea Rishworth (*arishwor@uwaterloo.ca*), Kelsey Hanrahan, Sarah Speck
- Aging, Space and Place in a Global Context Part 1.** Organizer(s): Andrea Rishworth (*arishwor@uwaterloo.ca*), Susan Elliott
- Bodies, environments, subjectivities: new directions in health-environment geographies.** Organizer(s): Carly Nichols (*cnichols@email.arizona.edu*), Nari Senanayake
- Panel: Bodies, environments, subjectivities: new directions in health-environment geographies.** Organizer(s): Carly Nichols (*cnichols@email.arizona.edu*), Nari Senanayake
- Environmental indices in cancer research.** Organizer(s): Geoffrey Jacquez (*geoffrey.jacquez@biomedware.com*), Yixuan Shao (*yixuansh@buffalo.edu*)
- Environmental Racism.** Organizer(s): Sue Grady (*gradys@msu.edu*)
- Extreme Events, Hazards, and Health.** Organizer(s): Colleen Reid (*Colleen.Reid@Colorado.EDU*), Christopher Uejio
- From the Anthropocene to Postgenomics: New Configurations of Body-World.** Organizer(s): Becky Mansfield (*mansfield.32@osu.edu*), Ariel Rawson, Maurizio Meloni
- Geographic research on vector-borne diseases.** Organizer(s): Meifang Li (*Meifang.Li@dartmouth.edu*), Eric Carter, Ling Yin, Sadie Ryan
- Geographies of development and health in sub-Saharan Africa I – Agriculture and Food Security.** Organizer(s): Vincent Kuuire (*vincent.kuuire@utoronto.ca*), Elijah Bisung
- Geographies of development and health in sub-Saharan Africa II.** Organizer(s): Vincent Kuuire (*vincent.kuuire@utoronto.ca*), Elijah Bisung
- Geographies of health and health care II: Access to health care.** Organizer(s): Prince Michael Amegbor (*11pma4@queensu.ca*), Jessica Finlay, Mark Rosenberg
- Geographies of health and health care III: Creating healthy cities.** Organizer(s): Prince Michael Amegbor (*11pma4@queensu.ca*), Jessica Finlay, Kyle Plumb
- Geographies of health and health care IV.** Organizer(s): Prince Michael Amegbor (*11pma4@queensu.ca*), Jessica Finlay, Kyle Plumb
- Geographies of health and healthcare I: Ageing and place.** Organizer(s): Prince Michael Amegbor (*11pma4@queensu.ca*), Mark Rosenberg, Kyle Plumb
- Geography and Substance Use 1: Substance Use Behaviors.** Organizer(s): Jeremy Mennis (*jmennis@temple.edu*), Andreea Ambrus, Kathleen Stewart
- Geography and Substance Use 2: The Opioid Epidemic and Access to Services.** Organizer(s): Jeremy Mennis (*jmennis@temple.edu*), Andreea Ambrus, Kathleen Stewart
- Geospatial Health Research Symposium.** Organizer(s): Michael Widener (*michael.widener@utoronto.ca*), Kirsten Beyer, Mei-Po Kwan
- Geospatial Health Research Symposium: Chronic Disease.** Organizer(s): Michael Widener (*michael.widener@utoronto.ca*), Peng Jia, Mei-Po Kwan
- Geospatial Technologies for Urban Health.** Organizer(s): Eric Delmelle (*eric.delmelle@uncc.edu*)
- Health Workforce Geography.** Organizer(s): Imam Xierali (*ixierali@lsu.edu*)

## Session & Panel Preview, 2018 AAG Meeting

- ❑ **High-resolution population modeling (1).** *Organizer(s): Peng Jia (rs.jiapeng@gmail.com), Andrea Gaughan*
  - ❑ **HMGSG Peter Gould Student Paper Competition.** *Organizer(s): Kristin Brooks (Kristin.Brooks@unt.edu), Kirsten Beyer*
  - ❑ **Melinda S. Meade Distinguished Scholarship Award in Health and Medical Geography.** *Organizer(s): Michael Widener(michael.widener@utoronto.ca)*
  - ❑ **Modeling Spatial Accessibility to Health Care Facilities.** *Organizer(s): Yanjia Cao (yanjiac@umd.edu), Zhu Jin*
  - ❑ **Panel: Residential Histories and Cancer Research: Current Science and Funding Opportunities at NCI.**  
*Panelists: Geoffrey Jacquez, SUNY - Buffalo State, Kevin Henry, Temple University, David Stinchcomb, Westat, Zaria Tatalovich, National Cancer Institute, Li Zhu, National Cancer Institute. Organizer(s): David Stinchcomb (dstinchcomb11@gmail.com), Zaria Tatalovich*
  - ❑ **Spatiotemporal Symposium: Large-Scale Location-Based Social Network Computation and Visualization.**  
*Organizer(s): Wei Luo (wluo23@asu.edu), Xi Liu*
  - ❑ **The health benefits of nature in post-industrial cities: challenges, advances and new directions.** *Organizer(s): Amber Pearson (apearson@msu.edu), Kirsten Beyer*
  - ❑ **Panel: The Reformation Revisited: Robin Kearns' "Place and Health" at 25.** *Panelists: Valorie Crooks, Simon, Fraser University, Damian Collins, University of Alberta, Susan Elliott, University of Waterloo, Robert Huish, Dalhousie University, Jessica Finlay, University of Minnesota. Organizer(s): Damian Collins (damian.collins@ualberta.ca), Joshua Evans (jdevans@ualberta.ca)*
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