

# MARIE OZANNE

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## EDUCATION

<b>University of Iowa</b>	Iowa City, IA
Ph.D., Biostatistics	2019
Dissertation Title: Bayesian Compartmental Models for Zoonotic Visceral Leishmaniasis in the Americas	
Advisors: Dr. Jacob Oleson and Dr. Grant Brown	
<b>The Ohio State University</b>	Columbus, OH
M.S., Statistics	2014
<b>Mount Holyoke College</b>	South Hadley, MA
B.A., Chemistry, Statistics, <i>Cum Laude</i> , High Honors in Chemistry	2012

## RESEARCH INTERESTS

- Infectious disease modeling
- Spatio-temporal modeling
- Bayesian statistics
- Epidemiology

## ACADEMIC EXPERIENCE

<b>Mount Holyoke College</b>	South Hadley, MA
<i>Clare Boothe Luce Assistant Professor</i> , Dept. of Mathematics & Statistics	July 2019 - <i>present</i>
<b>University of Iowa</b>	Iowa City, IA
<i>Graduate Research Associate</i> , Dept. of Biostatistics	June 2016 - <i>May 2019</i>
<i>Graduate Research Associate</i> , Dept. of Epidemiology	January - <i>May 2018</i>
<i>Graduate Teaching Associate</i> , Dept. of Biostatistics	January 2016 - <i>May 2016</i>
<b>The Ohio State University</b>	Columbus, OH
<i>Junior Statistician</i> , Statistical Consulting Service	June 2015 - <i>December 2015</i>
<i>Graduate Teaching Associate</i> , Dept. of Statistics	August 2013 - <i>May 2015</i>
<i>Graduate Fellow</i> , Dept. of Statistics	August 2012 - <i>July 2013</i>
<b>Mount Holyoke College</b>	South Hadley, MA
<i>Undergraduate Research Assistant</i> , Dept. of Astronomy	June 2011 - <i>July 2012</i>
<i>Undergraduate Research Assistant</i> , Dept. of Chemistry	August 2010 - <i>May 2011</i>
<i>Undergraduate Teaching Assistant</i> , Dept. of Chemistry	September 2009 - <i>May 2012</i>

## TEACHING

- STAT 140: Introduction to the Ideas and Applications of Statistics (Fall 2019, Spring 2020)
- STAT 242: Intermediate Statistics (Spring 2020)

## PUBLICATIONS ([Research Gate](#))

### *Peer Reviewed Journal Publications*

- K. Mahachi, E. Kontowicz, B. Anderson, A.J. Toepf, A.L. Lima, M. Larson, G. Wilson, T. Grinnage-Pulley, C. Bennett, **M. Ozanne**, M. Anderson, H. Fowler, M. Parrish, J. Saucier, P. Tyrell, Z. Palmer, J. Buch, R. Chandrashekar, B. Scorza, G. Brown, J.J. Oleson, and C.A. Petersen. (2020). Predominant risk factors for tick-borne coinfections in US hunting dogs, To appear: *Parasites & Vectors*.

- **M.V. Ozanne**, G.D. Brown, A.J. Toepf, et al. (2019). Bayesian Compartmental Models and Associated Reproductive Numbers for an Infection with Multiple Transmission Modes. *Biometrics*, 1-11, <https://10.1111/biom.13192>.
- **M.V. Ozanne**, G.D. Brown, J.J. Oleson, et al. (2019). Bayesian Compartmental Model for an Infectious Disease with Dynamic States of Infection. *Journal of Applied Statistics*, 46(6), 1043-1065.
- A. Toepf, G.R. Monteiro, J.F. Coutinho, A.L. Lima, M. Larson, G. Wilson, T. Grinnage-Pulley, C. Bennett, K. Mahachi, B. Anderson, **M. Ozanne**, M. Anderson, H. Fowler, M. Parrish, J. Saucier, P. Tyrrell, Z. Palmer, J. Buch, R. Chandrashekar, G. Brown, J. Oleson, S.M.B. Jeronimo, and C. Petersen. (2019). Comorbid Infections Induce Progression of Visceral Leishmaniasis. *Parasites & Vectors*, 12(1):54.
- R.A. Scheperle, V. Tejani, J.K. Omtvedt, C.J. Brown, P.J. Abbas, M.R. Hansen, B.J. Gantz, J.J. Oleson, **M.V. Ozanne**. (2017). Delayed Changes in Auditory Status in Cochlear Implant Users with Preserved Acoustic Hearing. *Hearing Research*, 350, 45-57.
- T.F. Boucher, **M.V. Ozanne**, M.L. Carmosino, et al. (2015). A Study of Machine Learning Regression Methods for Major Elemental Analysis of Rocks Using Laser-Induced Breakdown Spectroscopy. *Spectrochimica Acta Part B Atomic Spectroscopy*, 107, 1-10.
- M.D. Dyar, E.A. Breves, E. Emerson, S.W. Bell, M. Nelms, **M.V. Ozanne**, S.E. Peel, M.L. Carmosino, J.M. Tucker, M.E. Gunter, J.S. Delaney, A. Lanzirotti, and A.B. Woodland (2012). Accurate determination of ferric iron in garnets by bulk Mössbauer spectroscopy and synchrotron micro-XANES. *American Mineralogist*, 97(10), 1726-1740.
- M.D. Dyar, M.L. Carmosino, E.A. Breves, **M.V. Ozanne**, S.M. Clegg, and R.C. Wiens (2012). Comparison of partial least squares and lasso regression techniques as applied to laser-induced breakdown spectroscopy of geological samples. *Spectrochimica Acta Part B*, 70, 51-67.

#### Editorials

- G.D. Brown and **M.V. Ozanne** (2019). Statistical models for infectious diseases: a useful tool for practical decision-making. *American Journal of Tropical Medicine & Hygiene*. 101, 1-2.

#### Journal Papers in Preparation

- **M.V. Ozanne**, G.D. Brown, J.J. Oleson, et al. Bayesian latent class model for canine visceral leishmaniasis using continuous and dichotomized diagnostic tests in absence of a gold standard.

#### PRESENTATIONS

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##### Invited Talks

- Bayesian Compartmental Models and Reproductive Numbers for an Infection with Multiple Infectious Sources and Transmission Modes. *Joint Mathematics Meetings, Denver, CO*. 2020

##### Contributed Talks

- Bayesian Compartmental Model for an Infectious Disease with Multiple Infectious States. *Women in Statistics and Data Science, Bellevue, WA*. 2019
- Bayesian Compartmental Model for an Infectious Disease with Multiple Infectious States. *Joint Statistical Meetings, Denver, CO*. 2019
- Whose Fault Is It Anyway? Calculating Reproductive Numbers for Multiple Infectious Sources. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA*. 2019
- Modeling Vertical Transmission of Canine Visceral Leishmaniasis in Foxhounds in the United States. *Joint Statistical Meetings, Vancouver, BC*. 2018

- A Comparison of Transition Probability Structures for a Stochastic Compartmental Model: Analyzing Visceral Leishmaniasis in Brazil. *Joint Statistical Meetings, Baltimore, MD.* 2017

#### *Contributed Posters*

- Visceral Leishmaniasis in Brazil: A Quest for a Reproductive Number. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA.* 2018
- Bayesian Epidemic Compartmental Model for an Infectious Disease with Multiple Transition Paths: Analyzing Visceral Leishmaniasis in Brazil. *Great Plains Emerging Infectious Diseases Conference, Iowa City, IA.* 2017
- Comparison of Lasso and Elastic Net Regression for Major Element Analysis of Rocks Using Laser-Induced Breakdown Spectroscopy (LIBS). *Forty-third Lunar and Planetary Science Conference, The Woodlands, TX.* 2012

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#### SERVICE

##### *Mount Holyoke College*

- Judge, HackHolyoke 2019 (24-hour hackathon)

##### *Five College Statistics*

- Webmaster, Fall 2019-present
- ASA DataFest, Mount Holyoke College coordinator, 2020

##### *R Ladies Iowa City*

- Co-organizer and founder, 2018-2019

##### *Department of Biostatistics, University of Iowa*

- Student Representative, Computation & Informatics Committee, 2017-2018

##### *Department of Statistics, The Ohio State University*

- Graduate Student Co-President, 2014-2015

##### *Professional*

- Ad-hoc Journal Reviewer: *Acta Tropica* (1), *Harvard Data Science Review* (1), *Journal of Applied Statistics* (1), *Journal of the Academy of Nutrition and Dietetics* (1), *Journal of Infection* (1), *Journal of Racial and Ethnic Health Disparities* (1), *PLOS Neglected Tropical Diseases* (1)
- Volunteer, Statistics in Education/History Booth; Joint Statistical Meetings 2019
- Organizer, Topic-contributed Session: *Modeling for the Masses - Tackling Infectious Disease for the Public Good*; Sponsor: Biometrics; Joint Statistical Meetings 2020

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#### HONORS AND AWARDS

- William R. Clarke Research Graduate Assistant Award, University of Iowa 2019
- Delta Omega Honorary Society in Public Health, Alpha Phi Chapter 2019
- University of Iowa Dare to Discover Banner Campaign, Featured Researcher 2019
- Great Plains Emerging Infectious Diseases Conference Poster Competition, First Place 2017
- Graduate Student University Fellowship, The Ohio State University 2012-2013
- Corporate Fellowship, The Ohio State University 2012
- NASA Space Grant Fellowship, Mount Holyoke College 2012
- Phi Beta Kappa, Mount Holyoke College 2012

- Mu Sigma Rho, Mount Holyoke College 2012
- Sigma Xi, Mount Holyoke College 2012
- Connecticut Valley Section Award, Chemistry 2012
- American Chemical Society Award in Analytical Chemistry 2011
- Louisa Stone Stevenson Prize for Excellence in Chemistry 2011
- Leadership Scholarship, Mount Holyoke College 2008-2012

#### PROFESSIONAL ACTIVITY

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- Member, American Statistical Association (ASA)
- Member, American Mathematical Society (AMS)
- Member, American Chemical Society (ACS)

#### COMPUTER SKILLS

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- Statistical Software: R, SAS, Python
- Application Software: L<sup>A</sup>T<sub>E</sub>X, Microsoft Word, Excel, Powerpoint

#### LANGUAGES

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- English (fluent)
- Mandarin Chinese (working)
- Spanish (working)
- Portuguese (elementary)

## REFERENCES

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### **Dr. Grant Brown**

Assistant Professor  
Department of Biostatistics  
University of Iowa  
Iowa City, IA, 52242  
Phone: (319) 384-1599  
Email: grant-brown@uiowa.edu

### **Dr. Jacob Oleson**

Professor  
Department of Biostatistics  
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Iowa City, IA, 52242  
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### **Dr. Christine Petersen**

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Department of Epidemiology  
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