

## Andrew Blake Hoegh

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- CONTACT INFORMATION      Andrew Hoegh  
Assistant Professor of Statistics  
Department of Mathematical Sciences  
Montana State University  
Bozeman, MT 59717  
andrew.hoegh@montana.edu  
<http://www.math.montana.edu/people/faculty/ahoegh.html>
- RESEARCH INTERESTS      Bayesian modeling, predictive modeling, computational statistics, spatiotemporal modeling, model selection, statistics education, sports statistics, environmental and ecological applications
- EDUCATION                  **Virginia Tech**, Blacksburg, VA  
Ph.D., Statistics (Computational Track), 2011 – 2016  
Thesis: *Predictive Model Fusion: A Modular Approach to Big, Unstructured Data*  
Committee: Scotland C. Leman (Chair), Marco A.R. Ferreira, Dave Higdon, Naren Ramakrishnan  
**Colorado School of Mines**, Golden, CO  
M.S., Mathematical and Computer Sciences, 2006 – 2008  
**Luther College**, Decorah, IA  
B.A., Mathematics , 2002 – 2006
- REFEREED PUBLICATIONS      1. Fry, J.T., **Hoegh, A.**, Leman, S. “Assessing the Cost of Postponing Cyclocross Nationals.” *Journal of Applied Statistics*, 2017, to appear.  
2. **Hoegh, A.**, Crandell, I., Klopfer, S. Fies,. M. “Model Selection with a Discrete Mixture Prior for Missing Data: Policy Considerations for Fox Survival in Enclosures.” *Journal of Applied Statistics*, 2016, to appear.  
3. Leman, S., and **Hoegh, A.** “Contributed Discussion on Efficient Metropolis-Hastings Proposal Mechanisms for Bayesian Regression Tree Models by Pratola.” *Bayesian Analysis*, Vol.11(3), 932 – 934, 2016.  
4. **Hoegh, A.**, Leman, S., Ferreira, M.A.R. “Spatiotemporal Model Fusion: Multiscale Modeling of Civil Unrest.” *The Journal of the Royal Statistical Society: Series C*, Vol. 65(4), 529 – 545, 2016.  
5. Mogollon, B., Frimpong, E., **Hoegh, A.**, Angermeier, P. “Recent changes in stream flashiness and flooding in North Carolina and Virginia.” *Journal of the American Water Resources Association*, Vol 52(3), 561 –577, 2016.  
6. Mogollon, B., Frimpong, E., **Hoegh, A.**, Angermeier, P. “An empirical assessment of which inland floods can be managed?” *Journal of Environmental Management*, Vol. 167, 38–48, 2016.  
7. Leman, S., House, L., **Hoegh, A.** “Developing a New Interdisciplinary Computational Analytics Undergraduate Program: Using a Qualitative-Quantitative-Qualitative approach.” *The American Statistician*, Vol. 59(4) 397–408, 2015.

8. **Hoegh, A.**, Leman, S., Saraf, P., Ramakrishnan, N. “Bayesian Model Fusion for Forecasting Civil Unrest”. *Technometrics*, Vol. 57(3) 332-340, 2015.  
\*Winner of the 2016 Youden Award for best expository paper in Technometrics.
9. Parks, A., **Hoegh, A.**, Kuehl, D. “Rural Primary Care Access for Semi-Urgent Medical Concerns and the Relationship of Distance to an Emergency Department.” *Western Journal of Emergency Medicine*, 16(4) 594-599, 2015.
10. **Hoegh, A.**, Carzolio, M., Crandell, I., Hu, X., Roberts, L., Song, Y., Leman, S. “Nearest-Neighbor Matchup Effects: Accounting for Team Matchups for Predicting March Madness.” *Journal of Quantitative Analysis in Sports*, 11 (1), 29-37, 2015.
11. **Hoegh, A.**, Leman, S. “Assessing Winter Damage Risk to East Coast Vineyards.” *Journal of Applied Statistics*, Vol. 42(4) 834-835, 2015.
12. Gattiker, J., Myers, K., Williams, B., Higdon, D., Carzolio, M., **Hoegh, A.** “Gaussian Process-based sensitivity analysis and Bayesian model calibration with GPMSA.” *Handbook of Uncertainty Quantification*, 1–41, 2015.
13. Contreras, R., Ruter, J., Owen, J., **Hoegh, A.** “Chlorophyll, carotenoid, and visual color rating of Japanese-cedar grown in the south-eastern United States” *HortScience*, Vol. 48(12) 1452-1456, 2013.
14. Aruguete, D., Kim, B., Hochella, M., Ma, Ya, Cheng, Y., **Hoegh, A.**, Liu, J., Pruden, A. “Antimicrobial nanotechnology: its potential for the effective management of microbial drug resistance and implications for research needs in microbial nano toxicology.” *Environmental Science: Processes & Impacts*, 15:93–102, 2013.
15. **Hoegh, A.** “Defining the Performance Coefficient in Golf: A Case Study at the 2009 Masters” *Journal of Quantitative Analysis in Sports*, 7.(2):Article 12, 2011.

CONFERENCE  
PUBLICATIONS

1. Blumberg, C.J., Anderson, M., **Hoegh, A.**, Lawhorn, J. “Using the JMP Statistical Package to Enhance the Statistical Literacy of the U.S. Energy Information Administration’s (EIA’s) Survey Staff.” *In JSM Proceedings, Section on Government Statistics*. Alexandria, VA: American Statistical Association, 1857-1868, 2012.
2. **Hoegh, A.** and Moskal, B. “Examining Science and Engineering Students’ Attitudes toward Computer Science.” *Proceedings of the 39<sup>th</sup> IEEE International Conference on Frontiers in Education Conference*. p 1306-1311, 2009.

OTHER  
PUBLICATIONS

1. **Hoegh, A.** “Where Does a Statistician Fit in the Big Data Era?” *Amstat News*. Issue 434:18–19, 2013.
2. Lauriski-Karriker, T., Forssen, A., Heersink, D., Moskal, B., **Hoegh, A.** “Developing and Validating a Computer Science Attitude Survey for Undergraduates and High School Students.” *Innovations 2011: World Innovations in Engineering and Research*. Ed. W. Aung, et. al., iNEER, Potomac, MD, USA Ch. 26: 337–350, 2011.

SUBMITTED  
MANUSCRIPTS

1. **Hoegh, A.**, Maiti, D., Leman, S. “Multiset Model Selection.
2. **Hoegh, A.** and Leman, S. “Correlated Model Fusion.”

INVITED PRESENTATIONS	Spatiotemporal Multiscale Modeling for Predicting Civil Unrest International Conference on Statistical Distributions and Applications Niagara Falls, Canada	Oct 2016
	Spatiotemporal Model Fusion: Multiscale Modeling of Civil Unrest Montana State University Statistics Seminar Bozeman, Montana	Jan 2016
	Virginia Tech Colloquium Series Blacksburg, Virginia	Sep 2015
	Nearest-Neighbor Matchup Effects: Predicting March Madness NESSIS 2015 Harvard University Cambridge, Massachusetts	Sep 2015
	Predictive Modeling of Customer Behavior Capital One Student Modeling Competition McLean, Virginia	Nov 2013
CONTRIBUTED PRESENTATIONS	Spatiotemporal Model Fusion: Multiscale Modeling of Civil Unrest JSM 2015 Seattle, Washington	Aug 2015
	Model Fusion: Principles and Applications Virginia Tech Student Outreach Seminar Blacksburg, Virginia	Mar 2015
	Predicting Civil Unrest: Venturing Through Latin America JSM 2014 Boston, Massachusetts	Aug 2014
	Patient Classification of Autism using fMRI Virginia Tech Student Outreach Seminar Blacksburg, Virginia	Dec 2013
	Natural Gas Balancing Item: Analysis of Seasonal Patterns ASA Committee on Energy Statistics Washington, DC	Apr 2010
	Popular Television to Motivate Mathematical Learning: “Numb3rs” Mathematical Association of America (MAA) Regional Meeting Pueblo, Colorado	Apr 2007
POSTER PRESENTATIONS	Multiscale Spatiotemporal Modeling Virginia Tech Corporate Partners Conference Blacksburg, Virginia	Oct 2015
	Multiscale GLMs for Spatial Temporal Model Fusion Graybill/ENVR 2014 Colorado State University Fort Collins, Colorado	Sep 2014
	StatCom at Virginia Tech: An Overview of Student-Led Pro Bono Statistical Consulting JSM 2013 Montreal, Quebec, Canada	Aug 2013

	Defining the Performance Coefficient in Golf (NCSSORS 2010) Northern California Symposium on Statistics and Operations Research in Sports Palo Alto, California	Oct 2010
PROFESSIONAL EXPERIENCE	Mathematical Statistician U.S. Energy Information Administration	May 2008 – Jul 2011
CONSULTING & COLLABORATION EXPERIENCE	Collaborator Laboratory of Interdisciplinary Statistical Analysis (LISA) Department of Statistics, Virginia Tech Lead Collaborator on 62 projects Associate Collaborator on 12 projects	Fall 2011 – Spring 2016
TEACHING EXPERIENCE	Assistant Professor STAT 408 - Statistical Computing and Graphical Analysis Department of Mathematical Sciences, Montana State University	Spring 2017
	STAT 446 - Sampling Department of Mathematical Sciences, Montana State University	Fall 2016
	STAT 532 - Bayesian Data Analysis Department of Mathematical Sciences, Montana State University	Fall 2016
	Instructor STAT 2524 - Data Science Department of Statistics, Virginia Tech	Fall 2015
	Recitation Leader STAT 2104 - Introduction to Statistics Department of Statistics, Virginia Tech	Fall 2011
	Workshop & Short Course Instructor Resampling Based Inference for Small Sample Size Data StatCom, Department of Statistics, Virginia Tech Workshop conducted online	Fall 2013
	Creating Graphics to Tell the Story of your Data LISA, Department of Statistics, Virginia Tech	Fall 2012, Spring 2013
	Programming in R LISA, Department of Statistics, Virginia Tech	Spring 2012, Summer 2012
AWARDS	Paper Awards Youden Award: Best Expositionary Paper In Technometrics.	2016
	Presentation Awards Outstanding Poster Presentation: Statistical Consulting Section, JSM. Best Poster (Research Category): Virginia Tech Corporate Partners Conference. 2015	2013

	Student Awards — Virginia Tech, Department of Statistics	
	Klaus Hinkleman Award (Service to the Department)	2012
	Jean Gibbons Award (Outstanding First Year PhD Candidate)	2011
	Travel Awards	
	ICOSDA 2016 Young Researcher Travel Award	2016
	Graybill/ENVR Student Travel Award	2014
	Virginia Tech Graduate Student Association Travel Fund Program	2013, 2014
	Other Awards	
	LISA Collaborator of the Year – <i>Honorable Mention</i> .	2012 – 2014
	Capital One Student Modeling Competition – <i>Finalist</i> .	2013
	Cleveland Golf Scholar All-American.	2005
PRESS	Featured in ESPN Magazine’s Next Level: <i>The problem with Tiger Woods</i>	Aug 2011
	Featured in InsideScience <i>How do you win a March madness bracket?</i>	Mar 2015
	Guest on <i>The Beat of Sports Radio</i>	Mar 2015
SERVICE	Montana Section of American Statistical Society, Treasurer	2016 – present
	National Network Outreach Coordinator, StatCom	2012 – 2014
	Director, StatCom at Virginia Tech	2012 – 2014
	Treasurer, Virginia Tech Chapter of Mu Sigma Rho	2013 – 2014
	Student Liaison, Virginia Tech Statistics Department Faculty Meetings	2014 – Present
	Journal Referee	
	• Applied Stochastic Models in Business and Industry	
	• Biometrical Journal	
	• Environmetrics	
	• International Statistics Review	
	• Journal of Applied Statistics	
	• Journal of Computational and Graphical Statistics	
	• Journal of Quantitative Analysis in Sport	
	• Journal of the Royal Statistical Society: Series C	
	Co-Organizer, Virginia Tech Student Outreach Seminar	2014 – 2015
	Session Chair, Spatial Analysis - JSM 2014	2014
MEMBERSHIP	American Statistical Association	
	International Society for Bayesian Analysis	
	Mu Sigma Rho	