Jamis M. Bruening

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Education

Western Washington University, Bellingham, WA
MS, Environmental Science, GPA 3.96, 2016
Thesis: Fine-scale topoclimate modeling and climatic treeline predictions Great Basin bristlecone pine (*Pinus longaeva*) in the American Southwest. Thesis advisor, Dr. Andy Bunn

Colgate University, Hamilton, NY
BA, Physics, 2013
GPA 3.41, Minor Geography

Publications

Bruening, J.M., Bunn, A.G. and Salzer, M.W. *In Press*. A climate-driven treeline position model in the White Mountains of California over the past six millennia. Journal of Biogeography.

Bruening, J.M., Tran, T.J., Bunn, A.G., Weiss, S.B. and Salzer, M.W. 2017. Fine-scale modeling of bristlecone pine treeline position in the Great Basin, USA. Environmental Research Letters, 12(1), p.014008.

Tran, T.J., **Bruening, J.M.**, Bunn, A.G., Salzer, M.W. and Weiss, S.B. 2017. Cluster analysis and topoclimate modeling to examine bristlecone pine tree-ring growth signals in the Great Basin, USA. Environmental Research Letters, 12(1), p.014007.

Bruening, J.M., 2016. Fine-scale topoclimate modeling and climatic treeline prediction of Great Basin bristlecone pine (*Pinus longaeva*) in the American southwest. *Masters Thesis.* Western Washington University.

Research and Selected Work Experience

Data Specialist, August 2016 - Present
Edelman Intelligence, Rochester, NY
- Responsible for all data management, statistical analysis, and reporting of two international, survey-based, intellectual property tracking studies - The Edelman Trust Barometer and Edelman Earned Brand
- Implemented market research techniques such as segmentation, driver, and cluster analyses to mine data for narrative development; Assisted in scientific communication and presentation of study results
- Built and maintain an extensive database of historical tracking data; Streamlined internal data analysis processes

Research Associate, June - September 2016
Huxley Tree Ring Laboratory, Western Washington University, Bellingham, WA
- Analyzed climate and topographic data to improve climate-based treeline position models
- Led the writing, and preparation of scientific manuscripts for publication
- Assisted in oversight of undergraduate students in laboratory, research, and field work settings

Teaching and Research Assistant, September 2014 - June 2016
Huxley College of the Environment, Western Washington University
- Developed statistical models predicting treeline position and spatial distribution of Great Basin bristlecone pine
- Utilized machine learning regression models to forecast climate variables in complex topography in mountainous environments

Sales Associate, October 2013 - May 2014
The North Face, Boston, MA
- Consistently exceeded sales expectations and positively contributed to the store's operation
- Two-time employee of the month

Staff Trainer, August 2012 - May 2013
Colgate University Outdoor Education Program, Hamilton, NY
- Instructed 16 student trainees in leadership development, group management, and technical outdoor skills in a nine-month outdoor education staff training program

Student Researcher, August 2012 - May 2013
Colgate University, Hamilton, NY
- Utilized GIS techniques to study isotopic concentrations in Great Lake snow events in central New York State
- Analyzed and interpreted solar and planetary spectra; determined absorption features in planetary atmospheres

Conference and Seminar Presentations

Bruening, J. B., Tran, T. J., Bunn, A. G., Salzer, M. W., Weiss, S. B. 2015. *Modeling potential climatic treeline of Great Basin Bristlecone Pine in the Snake Mountain Range, Nevada, USA.* American Geophysical Union, Fall 2015 Meeting. San Francisco, CA

Tran, T. J., **Bruening, J. B.**, Bunn, A. G., Salzer, M. W., Weiss, S. B. 2015. *Cluster analyses of 20th century growth patterns in high elevation Great Basin bristlecone pine in the Snake Mountain Range, Nevada, USA.* American Geophysical Union, Fall 2015 Meeting. San Francisco, CA

Bruening, J. B., Tran, T. J., Bunn, A. G., Salzer, M. W., Weiss, S. B. 2015. *Fine-scale topoclimate modeling of surface temperatures in complex mountainous terrain on Mount Washington, Nevada.* Association of Washington Geographers. Bellingham, WA

Tran, T. J., **Bruening, J. B.**, Bunn, A. G., Salzer, M. W., Weiss, S. B. 2015. *Comparing Bristlecone pine growth response to topographically-influenced temperature models.* Association of Washington Geographers. Bellingham, WA

Software

Advanced proficiency in R (statistical and geospatial analysis) and STATA scripting languages and environments, Merlinco Market Research reporting scripting language, ArcGIS desktop, LaTeX, Microsoft Office Suite

TA and Teaching Experience

Teaching Assistant, September 2014 - June 2016
Western Washington University, Bellingham, WA

- Huxley College speaker series (40 students)
- Climate Change (20 students)
- Environmental Disturbances (25 students)
- Energy and the Environment (20 students, 25 students)
- Biostatistics (30 students)

Personal Tutor, October 2013 - September 2016

- Tutored college, high school and middle school students in physics, calculus, and other mathematics, including SAT prep

Outdoor Education Program Leader, August 2010 - May 2013

- Led week-long outdoor wilderness orientation trips for up to ten first years with a co-leader
- Instructed PE classes for students, and program staff seminars in technical outdoor sports (rock climbing, telemark skiing, mountain biking, winter camping, etc.)

Interests

- American and European politics
- Geography and clustering of American political ideologies
- Technology's influence on human psychology and society
- Responsible and effective scientific communication
- Cartography; GIS and spatial analysis techniques
- North American weather patterns and climate
- Renewable energy generation
- Astrobiology and cosmology
- Electric and acoustic guitar; Cello
- Trad (rock) climbing; telemark skiing