
Daniel Watkins

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College of Earth, Ocean and Atmospheric Sciences
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Research Interests

Atmospheric boundary layer, temperature inversions, atmospheric measurement technology, scientific computing, statistics, climate change, climate modeling.

Education

- 2020 PhD Atmospheric Science, Oregon State University (*Expected*)
Advisor: Jennifer Hutchings
- 2015 MS Mathematics, Drexel University
Advisor: Gideon Simpson
- 2013 BS Applied Mathematics, Brigham Young University—Idaho (*Cum Laude*)

Experience

- Summer 2014 Graduate Student, Risk Analysis and Decision Support
Los Alamos National Laboratory
- Summer 2013 NSIP Intern, Applied Statistics and Computational Modeling
Pacific Northwest National Laboratory
- Summer 2012 DHS Visiting Student, Risk Analysis and Decision Support
Los Alamos National Laboratory

Teaching

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|-----------------------|---|
| Spring 2017 | ATS 420/520 Climate Modeling (TA) |
| Fall 2016 | OEAS 515 Oregon Coast Math Camp (TA) |
| Fall 2014 | MATH 101 Introduction to Analysis I (Instructor) |
| Spring 2013 | MATH 119 Math for Design (Recitation Instructor) |
| Winter 2013 | MATH 102 Introduction to Analysis II (Instructor) |
| Fall 2013 | MATH 201 Linear Algebra (TA) |
| Fall 2011 - Spr. 2012 | MATH 316 Linear Algebra and Differential Equations (TA) |

Awards

- 2019 Wayne V. & Louise Burt Memorial Award
- 2016-2019 National Defense Science and Engineering Graduate Fellow
- 2015-2018 ARCS Scholar, Portland Oregon Chapter
- 2015-2016 Provost's Graduate Fellowship, Oregon State University
- 2013-2014 Office of Graduate Studies Fellowship, Drexel University
- 2012 First Place Poster Presentation, Physical Sciences / Applied Mathematics
(*With M.O. Breinholt*) BYU-Idaho Research and Creative Works
Conference, Dec. 6, 2012
- 2012 Certificate of Award in Mathematics (*With C. Kozak*) Student Symposium,
Los Alamos National Laboratory, Aug. 17, 2012

Computing Skills

Python	<i>Proficient.</i>
MATLAB	<i>Intermediate</i>
LaTeX	<i>Intermediate</i>

Professional Activities

2017-19	Secretary, OSU Student Chapter of the American Meteorological Society
2016	Participant, IARCS Summer School on Arctic Climate Modeling
2016-19	Member, American Meteorological Society
2016-19	Member, American Geophysical Union
2016	Member, American Mathematical Society
2015	Participant, AMS Mathematical Research Community: <i>Probability, Differential Equations, and Sea Ice.</i> Snowbird, Utah
2014-15	Vice President, MathBytes Graduate Student Association, <i>Drexel University</i>
2013-15	Member, Society for Industrial and Applied Mathematics <i>Drexel University Student Chapter</i>

Publications

Watkins, D.M., L. Cuéllar, D. Kubicek, E. Rodriguez, P. Stroud. “Identifying Security Checkpoint Locations to Protect the Major US Urban Areas.” *Homeland Security Affairs*, Vol. 11, Sept. 2015

Watkins, D.M., L.H. Segó, A.E. Holmes et al. “Assessing Performance and Tradeoffs of Bioforensic Signature Systems.” *Proceedings of the 2013 IEEE Homeland Security Technologies Conference*. Nov. 13-14, 2013
Talk, 2013 IEEE Homeland Security Conference, Nov. 13, 2013

Presentations

Watkins, D.M., J. Hutchings. “Temperature inversions in the Arctic atmospheric boundary layer in the CESM Large Ensemble.” Talk, American Meteorological Society Annual Meeting, Jan. 10, 2018. Poster, American Geophysical Union Fall Meeting, Dec. 12, 2017 (under the title “Arctic lower tropospheric temperature inversions in the CESM Large Ensemble.”)

Watkins, D.M., G. Simpson. “Convergence of the Robbins-Monro Algorithm in Infinite-Dimensional Hilbert Spaces.” Poster, SIAM Conference on Computational Science and Engineering, March 15, 2015

Watkins, D.M., L.H. Segó, A.E. Holmes et al. “Assessing Performance and Tradeoffs of Bioforensic Signature Systems.” Talk, 2013 IEEE Homeland Security Conference, Nov. 13, 2013

Chilton, L.E., **D.M. Watkins**, R. Hafén, J. Kephart, et al. “Bayesian parameter estimation for a non-homogeneous exponential distribution.” Poster, BYU–Idaho Research and Creative Works Conference, April 4, 2013

Chilton, L.E., **D.M. Watkins**, R. Hafén, J. Kephart, et al. “Identification of short-lived isotopes using Bayesian methods.” Talk, MAA Intermountain Section Spring Meeting, March 29, 2013

Watkins, D.M., Breinholt, M.O., Brown, D.E. “Population migration: A Markov chain analysis using economic factors.” Poster, BYU–Idaho Research and Creative Works Conference, Dec. 6, 2012

Kozak, C., **D.M. Watkins**, L. Cuellar-Hengartner, F. Pan. “Road network metrics.” Poster, Student Symposium, Los Alamos National Laboratory, Aug. 17, 2012