

Michael Allen

Department of Geography
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Education

- 2017 – **Ph.D. Geography**, University of California, Santa Barbara, Santa Barbara, CA USA.
Advisor: Dr. Joseph P. McFadden
- 2015 – 2017 **M.Sc. Geography**, University of Western Ontario, London, ON Canada.
Advisor: Dr. James A. Voogt
Thesis: *A method for hemispherical ground based remote sensing of urban surface temperatures.*
- 2011 – 2015 **B.A. Environmental Studies**, University of Portland, Portland, OR USA.
Advisor: Dr. Ted C. Eckmann
Thesis: *Seasonal and diurnal patterns of temperature inversion formation and breakup in a topographically complex urban environment.*

Awards and honors

- 2017 UWO Dept. of Geography E. G. Pleva Award for Teaching Excellence (*2 recipients/yr*)
- 2017 AMS Board on Urban Environment Outstanding Student Oral Presentation Award (*3 recipients/meeting*)
- 2017 ASU John F. Lounsbury Travel Fellowship, *declined*
- 2017 *finalist*, IEEE Joint Urban Remote Sensing Event Student Paper Competition
- 2017 IEEE Joint Urban Remote Sensing Event Student Travel Grant
- 2016 AGU Dr. Edmond M. Dewan Young Scientist Scholarship (*1 recipient/yr*)
- 2016 UWO Dept. of Geography E. G. Pleva Award for Teaching Excellence (*2 recipients/yr*)
- 2016 AMS Annual Meeting Student Travel Grant
- 2015 – 2017 UWO International Graduate Research Scholarship
- 2015 *1st Place* AGU Fall Meeting Virtual Poster Session Peer Judging Panel
- 2015 *2nd Place* AGU Fall Meeting Virtual Poster Session Expert Judging Panel
- 2014 University of Portland Undergraduate Research Program Stipend
- 2012 *1st Place* University of Portland School of Engineering Annual Freshman Design Competition
- 2011 – 2015 University of Portland President's Scholarship

Referred publications

in preparation

1. **Michael A. Allen**, J. A. Voogt, and A. Christen. A method for hemispherical ground based remote sensing of urban surface temperatures.
2. **Michael A. Allen**, J. A. Voogt, and A. Christen. A climatology of surface urban heat islands derived from hemispherical radiometric surface temperatures.

referred proceedings

1. **Michael A. Allen**, J. A. Voogt, and A. Christen. Towards a continuous climatological assessment of urban surface heat islands. *Joint Urban Remote Sensing Event*, pages 1 – 4, 2017.
2. **Michael A. Allen**, T. Eckmann, and B. Holmes. Seasonal and diurnal patterns of temperature inversion formation and breakup in a topographically complex urban environment. *National Council on Undergraduate Research*, 5: 430 – 438, 2015.

Conference presentations (†poster, *oral)

1. **Michael A. Allen**, J. A. Voogt, and A. Christen. A climatology of urban surface heat islands derived from hemispherical radiometric surface temperatures. *American Meteorological Society 97th Annual Meeting*, Seattle, WA, USA, 2017.*
2. **Michael A. Allen**, J. A. Voogt, and A. Christen. A Method to Assess Urban Surface Heat Islands using Hemispherical Radiometric Temperatures. *American Geophysical Union Fall Meeting*, San Francisco, CA, USA, 2016.*
3. **Michael A. Allen**, T. Eckmann, and B. Holmes. Quantifying Seasonal Variations in the Atmospheric Boundary Layer in Portland, Oregon to Characterize Local Air Pollution Events. *National Conference on Undergraduate Research*, Cheney, WA, USA, 2015.*
4. Brooke A. Holmes, **M. A. Allen**, T. Eckmann. Comparing Growth Rates of Succulent Species and Water Retention of Novel Substrates to Optimize Urban Green Roof Efficiencies in the Pacific Northwest. *National Conference on Undergraduate Research*, Cheney, WA, USA, 2015.*
5. **Michael A. Allen**, K. Hamilton, D. Suto, S. Ellett, and M. Sherif. Tracing Climate Change Feedback Loops through Washington State Aqua/Agriculture. *University of Portland Founders' Day*: Portland, OR, USA, 2015.*
6. **Michael A. Allen**, B. Holmes, and T. Eckmann. Assessing Atmospheric Stability in North Portland to Investigate Industrial Air Pollution Events. *University of Portland Founders' Day*, Portland, OR, USA, 2015.*
7. **Michael A. Allen**, B. Holmes, and T. Eckmann. Assessing Atmospheric Stability in North Portland to Investigate Industrial Air Pollution Events. *Proceedings of the Oregon Academy of Science Annual Meeting*, Portland, OR, USA, 2015.*
8. Brooke A. Holmes, **M. A. Allen**, T. Eckmann. Analysis of Substrate Water Retention and Xeric Succulent Species Growth for Optimization of Green Roofs in Portland, OR *Proceedings of the Oregon Academy of Science Annual Meeting*, Portland, OR, USA, 2015.*
9. Samantha G. Wright, **M. A. Allen**, T. Eckmann. Spatial Interpolation with GIS to Map Industrial Air Pollution in North Portland. *Proceedings of the Oregon Academy of Science Annual Meeting*, Portland, OR, USA, 2015.†
10. Brooke A. Holmes, **M. A. Allen**, T. Eckmann. Quantifying Performance of Succulents and Novel Substrates for Extensive Green Roof Applications in the US Pacific Northwest. *American Geophysical Union Fall Meeting*, San Francisco, CA, USA, 2015.*
11. **Michael A. Allen**, B. Holmes, and T. Eckmann. Measuring Urban Microclimates and Vertical Temperature Profiles in Portland, Oregon for Analyzing Energy Budgets and Air Pollution Sources. *American Geophysical Union Fall Meeting*, San Francisco, CA, USA, 2015.†
12. Brooke A. Holmes, **M. A. Allen**, T. Eckmann. Performance of New Substrates, *Sedum spp.*, and *Dudleya*

lanceolata on Green Roofs *M. J Murdock College Science Research Conference*, Vancouver, WA, USA, 2014.[†]

13. **Michael A. Allen**, B. Holmes, and T. Eckmann. Analyzing Urban Microclimates and Atmospheric Stability in Portland, OR *M. J Murdock College Science Research Conference*, Vancouver, WA, USA, 2014.[†]

Research Experience

- 2017 – **Research Assistant**, *Dept. of Geography, University of California, Santa Barbara*.
Advisor: Dr. Joseph P. McFadden
- 2015 – 2017 **Research Assistant**, *Dept. of Geography, University of Western Ontario*.
Advisor: Dr. James A. Voogt
- Developed methodologies for 3-dimensional atmospheric correction and urban surface temperature retrieval using MODTRAN and the Surface-Sensor-Sun Urban Model.
- 2014 – 2015 **Research Assistant**, *Dept. of Environmental Studies, University of Portland*.
Advisor: Dr. Ted C. Eckmann
- Installed and maintained an array of remote meteorological weather stations.

Teaching Experience (*lower division, †upper division)

- 2017 – **Teaching Assistant**, *Dept. of Geography, University of California, Santa Barbara*.
Urban Environment[†] 2018
Remote Sensing of the Environment* 2017
- 2015 – 2017 **Teaching Assistant**, *Dept. of Geography, University of Western Ontario*.
Physical Geography* 2016, 17
Weather and Climate[†] 2015, 16
- 2014 **Summer Research Mentor**, *Dept. of Environmental Studies, University of Portland*.

Vocational/Misc. Experience

- 2014 – 2015 **Environmental Analysis Intern**, *Vigor Industrial*, Portland, OR.
- Analysis of in-situ micro-meteorological and air pollution data to ameliorate health and nuisance odor concerns.
 - Coordinate data collection with EPA and other stakeholders.

Technical Skills

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|-------------|---|
| Programming | Python, Shell, L ^A T _E X, FORTRAN 77/90 (familiar), C# (familiar) |
| Utilities | Idrisi, PCI Geomatica, GIT |
| Design | HTML, Inkscape/Illustrator, Photoshop, Seaborn, matplotlib |
| Languages | English (native), Spanish (proficient) |

Service

2015 – 2017 PSAC 610 (Graduate and PostDoc Student Union) Departmental Representative
2016 Organizing Member, University of Western Ontario Orientation Committee

Reviewer

AGU Undergraduate Virtual Poster Sessions

2015 –

IEEE Journal of Selected Topics in Applied Remote Sensing (JSTARS)

2016 –

Outreach

1. Feb 2016 “Urban Climate: Feeling the heat with Michael Allen.”, University of Western Ontario Grad-cast Radio.
2. April 2015 “Why do we study environmental science?”, University of Portland College of Arts and Sciences Open House.