

## Michael A. Allen

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CONTACT INFORMATION	Dept. of Geography, UC Santa Barbara Santa Barbara, CA 93106	<a href="http://mallenlab.com">mallenlab.com</a> <a href="mailto:michael.allen@geog.ucsb.edu">michael.allen@geog.ucsb.edu</a>
RESEARCH INTERESTS	Topics: Urban climate, urban vegetation, drought, climate change, thermal anisotropy Methods: Remote sensing, image processing, micrometeorological models	
EDUCATION	<b>University of California</b> , Santa Barbara, CA USA Ph.D., Geography, <i>Expected: 2021</i> <ul style="list-style-type: none"><li>- Thesis Topic: <i>Drought, urban vegetation, and urban heat</i></li><li>- Advisor: Dr. Joseph McFadden</li></ul> <b>University of Western Ontario</b> , London, ON Canada M.Sc., Geography, 2017 <ul style="list-style-type: none"><li>- Thesis: <i>A method for hemispherical ground based remote sensing of urban surface temperatures</i></li><li>- Advisor: Dr. James Voogt</li></ul> <b>University of Portland</b> , Portland, OR USA B.A., Environmental Studies, 2015	
AWARDS	NSF/ICUC10 Working Group Travel Grant, Int. Conference on Urban Climate 2018 Jack and Laura Dangermond Travel Fellowship, UC Santa Barbara  Outstanding Student Oral Presentation Award, American Meteorological Society 2017 E.G. Pleva Award for Teaching Excellence, UWO Dept. of Geography <i>finalist</i> , Student Paper Competition, IEEE Joint Urban Remote Sensing Event Travel Grant, IEEE Joint Urban Remote Sensing Event  E.G. Pleva Award for Teaching Excellence, UWO Dept. of Geography 2016 Dr. Edmond M. Dewan Young Scientist Scholarship, American Geophysical Union Travel Grant, American Meteorological Society  International Graduate Research Scholarship, University of Western Ontario 2015 <i>1<sup>st</sup> place</i> , Undergraduate poster session peer judging, AGU Fall Meeting <i>2<sup>nd</sup> place</i> , Undergraduate poster session expert judging, AGU Fall Meeting	
REFEREED WORK	Publications <ol style="list-style-type: none"><li>1. J. Lai, W. Zhan, F. Huang, J. Voogt, B. Bechtel, <b>Michael A. Allen</b>, S. Peng, F. Honga, Y. Liug, and P. Dug. <i>Identification of typical diurnal patterns for clear-sky climatology of surface urban heat islands</i>. Remote Sensing of Environment, 2018, 217, 203-220. <a href="https://doi.org/10.1016/j.rse.2018.08.021">https://doi.org/10.1016/j.rse.2018.08.021</a></li><li>2. <b>Michael A. Allen</b>, J. A. Voogt, and A. Christen. <i>Time-Continuous Hemispherical Urban Surface Temperatures</i>. Remote Sensing, 2018, 10(1), 3. <a href="https://doi.org/10.3390/rs10010003">https://doi.org/10.3390/rs10010003</a></li></ol> Conference Proceedings <ol style="list-style-type: none"><li>1. Michael A. Allen, J. A. Voogt, and A. Christen. <i>Towards a continuous climatological assessment of urban surface heat islands</i>. Joint Urban Remote Sensing Event: 1 - 4, 2017.</li></ol>	

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.

#### PAPERS IN PREPARATION

1. Michael A. Allen, J. A. Voogt, and A. Christen. *Analysis of two time-continuous, multi-season climatologies of hemispherical sUHI*.
2. E. S. Krayenhoff, Michael A. Allen, J. A. Voogt. *Modeling radiative divergences in an urban canyon using broadband water vapor mass extinction coefficients*.

#### PRESENTATIONS

1. Michael A. Allen, J. A. Voogt, and A. Christen. *A climatology of surface urban heat islands derived from hemispherical radiometric surface temperatures*. International Conference on Urban Climate, New York City, USA, 2018.
2. Michael A. Allen, J. A. Voogt, and A. Christen. *Towards a Continuous Climatological Assessment of Urban Surface Heat Islands*. IEEE Joint Urban Remote Sensing Event, Dubai, UAE, 2017.
3. Michael A. Allen, J. A. Voogt, and A. Christen. *A climatology of urban surface heat islands derived from hemispherical radiometric surface temperatures*. AMS 97th Annual Meeting, Seattle, WA, USA, 2017.
4. Michael A. Allen, J. A. Voogt, and A. Christen. *A Method to Assess Urban Surface Heat Islands using Hemispherical Radiometric Temperatures*. AGU Fall Meeting, San Francisco, CA, USA, 2016.
5. Brooke Homes, Allen, M. A., 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.
6. 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.
7. 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.
8. Michael A. Allen, T. Eckmann, and B. Holmes. *Assessing Atmospheric Stability in North Portland to Investigate Industrial Air Pollution Events*. University of Portland Founders Day, Portland, OR, USA, 2015.
9. Samantha G. Wright, Allen, M. A., 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 Homes, Allen, M. A., T. Eckmann. *Quantifying Performance of Succulents and Novel Substrates for Extensive Green Roof Applications in the US Pacific Northwest*. AGU Fall Meeting, San Francisco, CA, USA, 2015.
11. Michael A. Allen, T. Eckmann, and B. Holmes. *Measuring Urban Microclimates and Vertical Temperature Profiles in Portland, Oregon for Analyzing Energy Budgets and Air Pollution Sources*. AGU Fall Meeting, San Francisco, CA, USA, 2015.
12. Michael A. Allen, T. Eckmann, and B. Holmes. *Analyzing Urban Microclimates and Atmospheric Stability in Portland, OR*. M. J Murdock College Science Research Conference, Vancouver, WA, USA, 2014.

RESEARCH EXPERIENCE	Research Assistant	
	- Dept. of Geography, University of California, Santa Barbara	May 2017 -
	Supervisor: Dr. Joe McFadden	
	Activities: Image processing, data cataloging, data fusion	
	- Dept. of Geography, University of Western Ontario	April 2015 - June 2017
	Supervisor: Dr. James Voogt	
	Activities: Model + GUI development, data processing	
	- Dept. of Environmental Studies, University of Portland	May 2014 - Dec 2015
	Supervisor: Dr. Ted Eckmann	
	Activities: ASOS siting and maintenance, data processing	
	Field Campaigns	
	- Aerial- and ground-based assessment of summertime	July 2018
	thermal anisotropy	Salt Lake City, UT, USA
	- Pan-Am games ground-based heat risk assessment	July - August 2015
		Toronto, ON, Canada
PRIVATE-SECTOR EXPERIENCE	- Environmental Analyst, Vigor Industrial LLC	Dec 2014 - June 2015
		Portland, OR, USA
	- Shipper, 1800radiator	May 2012 - Sept 2014
		Portland, OR, USA
TEACHING EXPERIENCE	Teaching Assistant	
	- Geog W12: Spatial Reasoning, UC Santa Barbara	Spring '18
	- Geog 130: Urban Environment, UC Santa Barbara	Winter '17
	- Geog 115a: Remote Sensing, UC Santa Barbara	Fall '17
	- Geog 1300: Physical Geography, University of Western Ontario	Winter '16, '17
	- Geog 2310: Weather and Climate, University of Western Ontario	Fall '15, '16
SERVICE	Reviewer	
	- ISPRS International Journal of Geo-Information	2018 -
	- IEEE Journal of Selected Topics in Applied Remote Sensing (JSTARS)	2016 -
	- AGU Undergraduate Virtual Poster Sessions	2015 - 2017
	Working Groups	
	- Urban Climate and Resiliency, NSF/ICUC10 Working Group	2018
	Committees	
	- PSAC 610 representative (graduate student/postdoc union)	2015 - 2017
	- UWO Dept. of Geography Orientation Committee	2016
SKILLS	Models	
	- MODTRAN, DART, SUM, TUF 2d, TUF 3d	
	Programming	
	- Python, MATLAB, FORTRAN 77	
	Utilities	
	- Image processing: ENVI, IDRISI, PCI Geomatica	
	- Design: HTML, Illustrator/Inkscape, Photoshop, L <sup>A</sup> T <sub>E</sub> X	