

EDUCATION

- **PhD, Hydrology and Water Resources Eng.**, University of California, Los Angeles, 2010 to 2014, GPA - 3.97
- **M.S., Environmental Engineering**, California State University of Los Angeles, 2008 to 2010, GPA – 4.00
- **B.S., Civil Engineering**, Shahid Bahonar University of Kerman (Iran), Feb.2002 to Feb.2006, GPA – 3.34

PUBLICATIONS

Vahmani, P., A. D., Jones (2017), Water conservation benefits of urban heat mitigation, *Nature Communications*, under review.

Vahmani, P., F., Sun, A., Hall, and G. Ban-Weiss (2016), Investigating the climate impacts of urbanization and the potential for cool roofs to counter future climate change in Los Angeles, *Environ. Res. Lett.* 11 124027, doi: 10.1088/1748-9326/11/12/124027.

Vahmani, P., and G. Ban-Weiss (2016), Climatic consequences of adopting drought-tolerant vegetation over Los Angeles as a response to California drought, *Geophys. Res. Lett.*, 43, 8240–8249, doi:10.1002/2016GL069658.

Vahmani, P., and G. Ban-Weiss (2016), Impact of Remotely Sensed Albedo and Vegetation Fraction on Simulation of Urban Climate in WRF-UCM: A Case Study of the Urban Heat Island in Los Angeles. *J. Geophys. Res. Atmos.*, 120, doi: 10.1002/2015JD023718.

Vahmani, P., and T. S., Hogue (2015), Urban irrigation effects on WRF-UCM summertime forecast skill over the Los Angeles metropolitan area, *J. Geophys. Res. Atmos.*, 120, doi:10.1002/2015JD023239.

Vahmani, P. and T. S., Hogue (2014), High-resolution land surface modeling utilizing remote sensing parameters and the Noah UCM: a case study in the Los Angeles Basin, *Hydrol. Earth Syst. Sci.*, 18, 1–16, doi:10.5194/hess-18-4791-2014.

Vahmani, P. and T. S., Hogue (2014), Incorporating an Urban Irrigation Module into the Noah Land Surface Model Coupled with an Urban Canopy Model, *J. Hydrometeor.*, 15, 1440–1456, doi:10.1175/JHM-D-13-0121.1.

Vahmani, P. and T. S., Hogue (2013), Modelling and analysis of the impact of urban irrigation on land surface fluxes in the Los Angeles metropolitan area, *Climate and Land Surface Changes in Hydrology Proceedings of H01, IAHS-IAPSO-IASPEI Assembly*, Gothenburg, Sweden, July 2013, IAHS Publ. 359.

CONFERENCE PRESENTATIONS

Satellite-Supported Modeling of the Relationships between Urban Heat Island and Land Use/Cover Changes, *poster presented at the AGU Fall Meeting*, 2015.

WRF-UCM Modeling of Urban Land-Atmosphere Interactions with a Focus on Landscape Irrigation in the Los Angeles Metropolitan Area, *poster presented at the AGU Fall Meeting*, 2014.

Integrating Remote Sensing Data in Noah-UCM Parameterization and Validation: A Case Study for the Los Angeles Metropolitan Area, *poster presented at the AGU Fall Meeting*, 2013.

Development of an Anthropogenic Soil Moisture Contribution Module in the NOAA-UCM for the Los Angeles Metropolitan Region, *Oral presentation, at AGU Fall Meeting*, 2012.

Development and Validation of the Noah-Urban Canopy Model for Two Distinct Urban Climates in the Los Angeles Basin, *poster presented at the AGU Fall Meeting, 2011.*

Microtextural analysis of weathering in CO₂ saturated soils, *poster presented at the Spring ACS National Convention, 2010.*

REVIEWER FOR

- Geophysical Research Letters
- Journal of Geophysical Research – Atmospheres
- Science of the Total Environment
- Urban Climate
- Journal of Hydrology
- Climate

PROFESSIONAL SOCIETIES

American Geophysical Union (AGU); American Meteorological Society (AMS); American Society of Civil Engineers (ASCE)

HONORS, FELLOWSHIPS, AWARDS

- *IAHS Best Early Career Scientist Paper Award*, the Gothenburg Assembly, 2013.
- *NASA Earth System Science Fellowship (NESSF)*, University of California, Los Angeles, 2012 and 2013.
- *Bridge to the Doctorate Fellowship*, the Center for Energy and Sustainability/California State University, Los Angeles, 2010.
- *Special Recognition in Graduate Studies*, CSULA 2010 Honors Convocation.
- *Outstanding Poster Presentation Award in Engineering*, 2010 CSULA Student Symposium.
- *Graduate Student Fellowship*, the Center for Energy and Sustainability/California State University, Los Angeles, 2009.
- *Graduate Student Scholarship*, Shahid Bahonar Uni. of Kerman (Iran), 2006.
- *First Ranked Graduating Student* in Civil Eng. Class, Shahid Bahonar Uni. of Kerman (Iran), 2006.

RESEARCH EXPERIENCE

- Since March 2016, Lawrence Berkeley National Lab
Postdoctoral Fellow
Conducting research on the impacts of a warming global climate, urbanization, and land cover change on the climate of the San Francisco Bay Area and consequently on the energy and water demands in the region.
- September 2014 – March 2016, University of Southern California, Los Angeles
Postdoctoral scholar and research associate
Conducted research on the interaction between urban climate and human activities, global climate change with a focus on the Los Angeles metropolitan area and practical solutions for mitigating climate change impacts on urban areas.
- September 2010 – August 2014, University of California, Los Angeles
Graduate Student Researcher
Performed research on Land surface modeling, Urban-atmosphere interactions, and Remote sensing applications in Hydrology and Water Resources with a focus on urban climate and irrigation.

- May 2009 – June 2010, The Center for Energy & Sustainability, CSULA, Los Angeles, California
Graduate Student Researcher
Performed research on Soil Weathering due to CO₂ exposure and other Environmental Engineering research projects.

SKILLS

- Strong background in *Regional Climate Modeling, Urban Climate, Land Surface Modeling, Urban Canopy Modeling, Land Surface-Atmosphere Interactions, Remote Sensing, Environmental Eng., Hydrometeorology, Hydrology, and Water Resources.*
- Expertise in *MATLAB, Fortran, Unix/Linux, HTML, and CSS.*
- Could operate effectively with *ArcGIS, MODFLOW, AutoCAD, and Microsoft Office.*

TEACHING/WORK EXPERIENCE

- Winter 2015, Civil and Environmental Engineering, USC, California,
Guest Lecturer: *Climate change and air pollution,*
Gave lectures on land surface-atmosphere interactions aspects of climate change and air pollution.
- Winter 2011, Civil and Environmental Engineering, UCLA, California,
Teacher Assistant: *Introduction to Water Resources Engineering,*
Gave lectures once a week, held office hours 4 hours a week, and designed the assignments and tests.
- From January 2008 to February 2009, ANM Eng. Inc., Sherman Oaks, California,
Structural Engineer,
Designed residential buildings. Performed all the structural drafting and required inspections.