

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., and Ban-Weiss, G.: 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, 2016.

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

Vahmani, P. and Hogue, T. S.: 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, 2014.

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

Vahmani, P. and Hogue, T. S.: 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, 2013.

CONFERENCE PRESENTATIONS

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

- Journal of Geophysical Research – Atmospheres
- Urban 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 demand in the region.
- Sep. 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.
- Sep. 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, Atmospheric Modeling, 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 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.
- Winter 2015, Civil and Environmental Engineering, USC, California,

Guest Lecturer: Climate change and air pollution,

Gave guest lectures on land surface-atmosphere interactions aspects of climate change and air pollution.

- From Jan. 2008 to Feb. 2009, ANM Eng. Inc., Sherman Oaks, California,

Structural Engineer,

Designed residential buildings. Performed all the structural drafting and required inspections.