Faraz E. Ahangar

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EDUCATION

Ph.D. Mechanical Engineering   University of California Riverside
M.S. Mechanical Engineering   University of California Riverside
B.S. Mechanical Engineering   Sharif University of Technology (Iran)

SKILLS

Programming Languages: Python, R, MATLAB, C#, SQL, VBA, JavaScript
Modeling and Design: ArcGIS Pro, QGIS, JMP, SolidWorks, AutoCAD, ANSYS, HTML, CSS

WORK EXPERIENCE

South Coast Air Quality Management District   **Diamond Bar**
Air Quality Specialist   2019- present
Air quality monitoring and analysis for Assembly Bill 617 – Community Air Protection Program; data analysis and visualization for various projects, reports, and presentations; developing data display dashboards. Data presentation and communication for internal, public, and professional audience.

University of California, Riverside   **Riverside, CA**
Research/Teaching Assistant   2014 - 2018
Research on air quality and dispersion modeling; holding discussion sections, lectures, labs, and exams. Class instructor and assistant; classes taught: Mechanical Engineering Modeling and Analysis, Transport Phenomena, Mechanics of Materials, Dynamics, and Introduction to Engineering Computation.

Los Angeles Department of Water and Power (Energy Reconciliation Group)   **Los Angeles, CA**
Student Engineer   2017- 2018
Data mining & machine learning; website development; database design and management; regulatory reporting.

SELECTED PROJECTS

AB 617 Community Air Monitoring. South Coast Air Quality Management District (2019-present)
Air quality monitoring, data analysis, and visualization in environmental justice communities (website)
Climate Impact of Manure Management from California Dairies. Funded by UCR (2018-2019) (published paper)
Satellite-Derived PM2.5 Grids with Dispersion Model Downscaling: A Method to Generate Continuous Long-Term Fine Particulate Data for Community-Scale Air Quality Health Research. Funded by NASA Earth Sciences Division Applied Sciences Program (2017-2018) (published paper)
Time-of-Use Study. Los Angeles Department of Water and Power (2017-2018)
Historical data analysis to suggest a new time-of-use period for electricity rates of LADWP.
Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies. Funded by California Air Resource Board (2014-2017) (final report)

SELECTED HONORS AND AWARDS

Dissertation Year Program Fellowship, University of California, Riverside (2018)
Graduate Dean's Dissertation Research Grant, University of California, Riverside (2018)
Outstanding Teaching Assistant Award, University of California, Riverside (2016 and 2018)
Green Grant (G3), UCR Graduate Student Association (2017)
NCST Graduate Fellowship, National Center for Sustainable Transportation (2016)
Chancellor's Distinguished Fellowship, University of California, Riverside (2013)
National Elite Foundation Fellowship, Sharif University of Technology (2008)
Gold Medal, 12th International Astronomy Olympiad, Simeiz, Crimea (2007)

SELECTED PUBLICATIONS

Ahangar, F.E., Cobian-Iñiguez, J., Cisneros, R., 2022 *Combining Regulatory Instruments and Low-Cost Sensors to Quantify the Effects of 2020 California Wildfires on PM2. 5 in San Joaquin Valley.* Fire 5.3: 64.

Ahangar, F.E., Pakbin, P., Hasheminassab, S., Epstein, S.A., Li, X., Polidori, A., Low, J., 2021. *Long-term trends of PM2. 5 and its carbon content in the South Coast Air Basin: A focus on the impact of wildfires.* Atmospheric Environment, 255, p.118431.

Ahangar, F.E., Freedman, F.R. and Venkatram, A., 2019. *Using low-cost air quality sensor networks to improve the spatial and temporal resolution of concentration maps.* International journal of environmental research and public health, 16(7), p.1252.

Amini, S., Ahangar, F.E., Heist, D., Perry, S., Venkatram, A., 2018 *Modeling Dispersion of Emissions from Depressed Roadways.* Atmos. Environ. 186, 189-197.

Ahangar, F.E., Heist, D., Perry, S., Venkatram, A., *2017. Reduction of Air Pollution Levels Downwind of a Road With an Upwind Noise Barrier.* Atmos. Environ. 155, 1-10.

Amini, S., Ahangar, F.E., Schulte, N., Venkatram, A., 2016. *Using Models to Interpret the Impact of Roadside Barriers on Near-road Air Quality.* Atmos. Environ. 138, 55-64.

SELECTED CONFERENCES & PROCEEDINGS

Ahangar, F.E., Pakbin, P., Hasheminassab, S., M.H. Sowlat, Polidori, A. Lim, C., *Elemental Versus Black Carbon: Are They Interchangeable? Insights from Extensive Measurement Campaigns in Southern California.* In AAAR 38th Annual Conference, October 18-22, 2021

Lim, C., Hasheminassab, S., Ahangar, F.E., Sowlat, M.H., Pakbin, P., Polidori, A. *Spatial variability of traffic-related air pollution reductions in the South Coast Air Basin during the COVID-19 stay-at-home period.* In AGU Fall Meeting, 2020

Ahangar, F.E, Hasheminassab, S., Pakbin, P., Polidori, A., Katzenstein, A., Low, J. *Long-Term Trends in Chemical Composition of PM2.5 in the South Coast Air Basin: A Focus on Time-integrated and Continuous Carbon Measurements.* AAAR 37th Annual Conference, October 14-18, 2019

Ahangar, F.E., Amini, S., Venkatram, A., *Using Vegetation to Enhance the Impact of Solid Barriers on Near-road Air Pollution*, in A&WMA's 110th Annual Conference & Exhibition, June 5-8, 2017.

PROFESSIONAL ASSOCIATIONS

The American Association for Aerosol Research   Air & Waste Management Association

LEADERSHIP & VOLUNTARILY EXPERIENCE

Manuscript Reviewer for "Atmosphere Journal", MDPI (2021 - present)

Mechanical Engineering Graduate Student Association Webmaster and Sustainability and Communication officer, University of California, Riverside, CA (2016 – 2018)

Head of Observational Astronomy Committee, National Astronomy Olympiad Summer School, Young Scholars Club, Tehran, Iran (2012 – 2013)

Head of Astronomy and Physics Committee, 3rd Sharif National Student Competition, Sharif University of Technology, Tehran, Iran (February - June 2012)

References & CV

Will be provided upon request