

# Neelakshi Hudda

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## EDUCATION

Doctor of Philosophy, **Environmental Engineering** May 2012

University of Southern California, Los Angeles, CA

*Dissertation: Ultrafine particle concentration inside vehicles: models for exposure assessment*

Master of Engineering, **Environmental Quality Control and Management** Dec 2007

University of Southern California, Los Angeles, CA

Bachelor of Technology, **Civil Engineering** May 2006

Indian Institute of Technology (IIT) – BHU, Varanasi, India

## EMPLOYMENT HISTORY

**FOUNDING PARTNER** Feb 2022 – Present

Environmental Monitoring Partners, LLC, Lexington, MA

- Review environmental impact documents and write critiques
- Run regulatory air quality dispersion models (AERMOD, AERMET)
- Prepare presentations and reports for delivery as expert opinions for diverse audience (industry, general public, town representatives, etc.)
- Design and execute air quality monitoring to support communities and municipalities
- Conduct air quality testing to verify compliance with local regulations

**RESEARCH ASSISTANT PROFESSOR** Jan 2018 – Present

Department of Civil and Environmental Engineering, Tufts University, Medford, MA

- Perform research on air quality and human health
- Write grants and reporting to funding agencies; general administration, budgeting, and hiring and supervision for grants
- Develop and foster collaborations with community organizations and other universities
- Present results and updates at scientific and community meetings
- Prepare manuscripts and reports describing research findings
- Supervise and mentor undergraduate and graduate students and postdoctoral researchers
- Design and execute air quality monitoring studies in ambient and indoor spaces; supervise mobile monitoring campaigns
- Maintain and update air quality monitoring sites across the greater Boston area and in other states (California, Maryland) that are fitted with FEM/FRM and research grade instrumentation
- Perform data analysis and interpretation ensuring compliance with QAPP

**LECTURER, INSTRUCTOR OR CO-INSTRUCTOR**

Tufts University, Medford, MA

Environmental Studies Program

Fall 2022; Spring 2023

- Instructor for ENV-120 Introduction to Environmental Fieldwork

Department of Civil and Environmental Engineering **Fall 2017; Spring 2021, 2022, 2023**

- Instructor for CEE-34 Environmental Chemistry
- Co-instructor for CEE-136 AERMOD Module in Air Pollution Control
- Guest lecturer for CEE-32 Engineering for a Sustainable and Resilient Society, EJ unit

#### **POST-DOCTORAL RESEARCH ASSOCIATE**

**Aug 2014 – Dec 2017**

Department of Civil and Environmental Engineering, Tufts University, Medford, MA

- Conducted research in support of federal grants and supported proposal development
- Designed and built a mobile monitoring lab: converted older model to state-of-art current model housed in an electric vehicle and developed standard operating procedures
- Supported community-based participatory research in Somerville and Chinatown, MA
- Performed data quality control, analysis (statistical, spatial, visualization, spatiotemporal modelling, exposure assessment) and interpretation
- Prepared manuscripts for peer-reviewed journals as well as other publication

#### **POST-DOCTORAL RESEARCH ASSOCIATE**

**May 2012 – Dec 2015**

Department of Preventive Medicine, University of Southern California, Los Angeles, CA

- Developed, maintained and ran a hybrid-vehicle mobile lab
- Monitored in the communities near Ports of Los Angeles and Long Beach, CA
- Discovered and characterized extensive air quality impacts of Los Angeles International Airport, CA
- Performed data quality control, analysis (statistical, spatial, visualization, empirical modelling) and interpretation
- Prepared manuscripts for peer-reviewed journals as well as other publication

#### **RESEARCH AND TEACHING ASSISTANT**

**May 2008 – May 2012**

Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA

Teaching assistant for:

- |  |               |
|--|---------------|
| • Environmental Pollutants: Monitoring and Risk Assessment | Spring – 2010 |
| • Applied Air Quality Management                           | Fall – 2009   |
| • Air Pollution Control                                    | Spring – 2010 |

#### **PUBLICATIONS**

[Google Scholar Profile](#)

#### **SELECTED PROJECTS**

**Community-Led Improvement of Air Quality and Health in the Lower Mystic (CLEANAIR)**  
*funded by US EPA* Role: **Co-Investigator; Tufts University's Principal Investigator**

- Led a multi-partner proposal in coordination with MyRWA, Cambridge Health Alliance, AIR Inc., City of Everett, City of Malden and Somerville Transportation Equity Partnership
- Design and install long-term air quality monitoring in environmental justice communities of Everett, Malden, Charlestown, and East Boston

- Develop a community survey and support listening-sessions to assess community air quality concerns and respond by designing and conducting short-term campaigns
- Work with and present updates to a community advisory board
- Provide actionable data to multiple stakeholders to support policy

**Sustainable Air Quality in Affordable Housing** *funded by US Department of Housing and Urban Development* Role: **Co-Investigator**

- Understand air quality issues in affordable and low-income housing in Somerville, Cambridge and Boston, MA via qualitative surveys and air quality monitoring
- Conduct a stakeholder workshop to present findings and develop mitigation ideas

**Near-Highway Air Pollution: From Research to Action** *funded by NIEHS* Role: **Analyst**

- Conducted exposure sessions with human participants in a clinical trial for understanding acute effects of exposure to traffic-related pollutants on blood pressure
- Assessed protective responses (sound walls, building-wide filtration) to locally elevated ultrafine particles at the community level

**Air quality impacts of runway shortening at Santa Monica Airport** *funded by City of Santa Monica, CA* Role: **Co-Investigator**

- Quantified the changes in air quality due to implementation of a landmark decree between the City of Santa Monica and the FAA
- Led monitoring, reporting and presenting results to the City council and stakeholders

## SELECT AWARDS AND HONORS

**Congressional Achievement Award** 2020

by Congressman Gregory W. Meeks who represents New York's 5th congressional district in the United States House of Representatives

**Certificate of Achievement New York State Senate** 2020

**City of New York City Council Citation** 2020

**Snowy Egret Award, Going Green and Healthy Environment** 2020

*"For your pioneering research on airport-generated air pollution, the development of mitigation strategies and to reduce human exposure to these harms and for your work with communities to help them understand adverse air quality impacts"*

**American Chemical Society Editor's Choice** 2018, 2014

*"new research of importance to the global scientific community. These peer-reviewed, open access articles consist of research that exemplifies the Society's commitment to improving people's lives...."*

**Air and Waste Management Association Fellowship** 2009

**Foundation for Academic Excellence and Access Fellow, Ford Foundation** 2002 – 2006

## SKILLS

- Detail oriented analyst capable of delivering novel data analysis and visualizations
- Communication (inter-personal, public presentations, outreach) and technical writing
- Microsoft Office Suite, MATLAB, ESRI ArcGIS, AERMOD, EJ SCREEN
- Conducting and designing field testing and monitoring of air quality; troubleshooting and operating numerous FEM/FRM air quality and metrological instruments
- MA Driver license