Anamika Shreevastava

NASA Earth and Space Science Fellow, Purdue University, West Lafayette, IN - 47906
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EDUCATION

Purdue University, West Lafayette, IN, USA **Aug '16 – onwards**
PhD, Civil Engineering; Specialization: Urban Climate GPA: 3.91/4.00
Interdisciplinary Graduate Program of Ecological Sciences and Engineering
Advisor: Prof. Suresh Rao

Purdue University, West Lafayette, IN, USA **May '16**
MS, Civil Engineering; Specialization: Building Energy Modelling GPA: 3.65/4.00

Indian Institute of Technology, Roorkee, India **May '14**
Bachelor of Technology, Civil Engineering GPA: 7.86/10.00

AWARDS AND RECOGNITIONS

NASA Earth and Space Science Fellowship (NESSF) **Sept '17 – Sept '20**
- Member of NASA's future investigator's team on Land Cover Land Use Change (LCLUC).
- Currently working on characterizing the intra-urban high heat stress zones using a combined approach of satellite observations and modelling.

US Green Building Council's LEED Accredited Professional (AP) **April '16 – onwards**
- Specialized in the design and construction phases of green buildings, serving the commercial, residential, education and healthcare sectors.

JOURNAL PUBLICATIONS

1. **Shreevastava, A.,** Rao, P. S. C., & McGrath, G. S. (2019). Emergent scaling of intra-urban heat islets across global cities *(in review with Physical Reviews E).*
2. **Shreevastava, A.,** Bhalachandran, S., McGrath, G.S., Huber, M., & Rao, P.S.C. (2019). Spatial organization of intra-urban extreme heat in global cities *(in review with Nature Scientific Reports).*
3. Bhalachandran, S., Chavas, D. R., Marks, F. D., Dubey, S., **Shreevastava, A.,** & Krishnamurti, T. N. (2019). Characterizing the energetics of multiscale asymmetries during tropical cyclone rapid intensity changes *(in review with Journal of Atmospheric Sciences).*
4. **Shreevastava, A.,** Rao, P. S. C., & McGrath, G. S. (2018, October). Spatial analysis of the Surface Urban Heat Island. *Land Surface and Cryosphere Remote Sensing IV* (Vol. 10777, p. 107770C). International Society for Optics and Photonics.
5. Ching, J., et al (2018). WUDAPT: An urban weather, climate, and environmental modeling infrastructure for the Anthropocene. *Bulletin of the American Meteorological Society*, 99(9).

INVITED SEMINARS AND TALKS

1. NASA Land Cover Land Use Change (LCLUC) Science Team meeting, Rockville, MD (2019).
2. NASA Ames, Mountainview, CA. (June 2019).

PRESENTATIONS IN CONFERENCES

1. **Shreevastava, A.,** Rao, P. S., & McGrath, G. S. (2018, December). Fractal topography of the intra-urban thermal landscape. *AGU Fall Meeting Abstracts, Washington, DC.*

2. **Shreevastava, A.,** McGrath, G., Rao, P.S.C. (2017) Characterizing the intra-urban spatial structure of High Heat Stress Zones. *AGU Fall meetings, New Orleans, LA.*
3. **Shreevastava, A.,** Bhalachandran, S., Garcia-Dorado, I., Aliaga, D., and Niyogi, D. (2017) Incorporation of urban form and function for improved correlation between Land Use Types and Land Surface Temperatures. *97th AMS Annual Meeting, Seattle, WA.* 13th Symposium of the Urban Environment. **(Won the AMS Best Presentation Award)**
4. **Shreevastava, A.,** Bhalachandran, S., Krueger, E., Rao, P.S.C., Modak, P., and Niyogi, D. (2017) A Resilience Analysis of 100 Climate Proofing Strategies of the C-40 Cities. *97th AMS Annual Meeting, Seattle, WA.*

INTERNATIONAL COLLABORATIONS

Synthesis of Complex Networks Applications - Technological, Human & Ecological Dimensions

- Participated as a core member of the international research collaboration between Helmholtz Centre for Environmental Research (UFZ), Magdeburg; Technical University (TU), Dresden; University of Florida, Gainesville; Korea University, Seoul; University of Western Australia, Perth; and Purdue University, West Lafayette.
- Pursued parts of my doctoral research on Fractal intra-Urban Heat Islets in collaboration with the team through series of international workshops and meetings over the last 3 years.

UFZ, Magdeburg and TU Dresden, Germany **Aug '16 & Aug '17**
Purdue University, IN, USA **Feb '17**
University of Florida, Gainesville, FL, USA **Feb '18**
Colorado State University, Fort Collins, CO, USA **Aug '18**

World Urban Database and Portal Access Tool (WUDAPT) team **June '15 – June '16**

- Worked with Prof. Jason Ching and Prof. Gerald Mills who head the international community of WUDAPT to develop Local Climate Zone maps for Indian cities during my master's research.
- Studied the role of spatial heterogeneity in the correlation of remotely sensed Land Surface Temperature and Local Climate Zone (LCZ) that was presented at AMS 2017.
- Research findings were presented by Prof. Jason Ching at the 3rd WUDAPT workshop in Hong Kong (Dec '15) and published in *Bulletin of the American Meteorological Society*.

RELEVANT GRADUATE COURSES

Introduction to Complex Networks, Smart Cities analytics, Complex Systems Engineering, Resilient Hybrid Infrastructure Networks, GIS, Geospatial Modeling and Analysis, Land Surface Modeling, and Environmental Informatics, Boundary Layer Meteorology, Urban Ecosystem Services.

TEACHING EXPERIENCE

Graduate Instructor, Purdue University **Jan '16 – May '16**
Worked as a mentor for an interdisciplinary graduate class on designing cities resilient to climate change.

Graduate Teaching Assistant, Purdue University **Aug '14 – May '15**
Courses taught: Principles and Practices of Geomatics, and Applied Statics
Responsibilities include: Demonstrations, field work, designing lab experiments, holding tutorial sessions and grading.

SKILLS

Programming: MATLAB, Python, R, JavaScript, Latex.
Remote Sensing & Geospatial Analysis: ArcGIS, SAGA GIS, R, Google Earth Engine.
Modelling: Weather Research Forecast (WRF) model.