Medha Uppala

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CURRENT POSITION

Postdoctoral Scholar

August 2019 – July 2022

Center for Social Data Analytics, Pennsylvania State University

EDUCATION

Ph.D. in Statistics

December 2018

University of California, Los Angeles

Dissertation: Separable Temporal Modeling of Point Processes on Linear Networks & Balancing Data

Sufficiency and Privacy Advisor: Mark S. Handcock

B.A. Cum Laude in Economics with Minor in Statistics

May 2012

Boston University

WORKS IN PROGRESS

• Uppala, M., Desmarais, B.A., Hughes, D.P. Estimating Causal Spillover Effects in Smallholder Farmer Networks in Western Kenya.

PEER REVIEWED PUBLICATIONS

- Uppala, M. and Desmarais, B.A. Contagion, Confounding, and Causality: Confronting the Three C's of Observational Political Networks Research. (Forthcoming, Political Analysis)
- Uppala, M. and Handcock, M.S. "Modeling Wildfire Ignition Origins in Southern California Using Linear Network Point Processes." Ann. Appl. Stat. 14 (1) 339-356, March 2020. https://doi.org/10.1214/19-AOAS1309

RESEARCH EXPERIENCE

Research Assistant

February – April 2017

UCLA Luskin School of Public Affairs

- As a research assistant, I fit spatial, random slope, multi-level models to understand spatial allocation of government funds to nonprofit human services in low-income neighborhoods.
- The random slope multilevel modeling is combined with multivariate conditional autoregressive models to incorporate spatial dependency at census tract level.

Graduate Consultant

January 2015 – June 2017

UCLA Statistical Consulting Center

- Consulted with numerous academic and private clients to understand their project needs and provide statistical services.
- Designed experiments, oversaw sampling and survey methods, and managed post data collection tasks like modeling, power analysis, and interpreting results.
- Clients included the Western University College of Veterinary Medicine and SELVA International (local conservation group).

Academic Mentor June – August 2016

Institute for Pure & Applied Mathematics Research in Industrial Projects for Students

- Mentored a team of four undergraduate students working full-time on a Google-sponsored project.
- Directed the team's project organization and goals, choice of machine learning models, and drafting of project reports and presentations.

Statistics Research Assistant

August 2014 – June 2015

UCLA School of Law Statistics

- Coauthored a report that analyzes and models college admissions data to understand the magnitude of influential factors.
- Built robust socio-economic indicators to study the trend of low-income student applications to colleges over the past two decades.

WORKSHOPS

Writing Workshop for Junior Researchers

August 6 & 13, 2021

National Institute of Statistical Sciences (at JSM)

PRESENTATIONS

"Estimating Causal Spillover Effects in Smallholder Farmer Networks in Western Kenya"
Upcoming Joint Statistical Meetings, Washington DC

August 10, 2022

TEACHING EXPERIENCE

Teaching Assistant Coordinator

September 2016 – June 2017

UCLA Department of Statistics

- Taught a quarter-long seminar on Statistics pedagogy and student learning techniques for incoming graduate students.
- Conducted active-learning and micro-teaching workshops with a faculty advisor. The seminar is mandatory for aspiring teaching assistants in the Statistics department.

Teaching Fellow

January 2014 – 2018

UCLA Department of Statistics

Graduate Courses:

- Theoretical Statistics Special reader
- Tools in Data Sciences

Upper division Undergraduate courses:

- Introduction to Probability
- Introduction to Mathematical Statistics
- Linear Models
- Introduction to Data Analysis and Regression
- Statistics for Engineers
- Practice of Statistical Consulting

Lower division Undergraduate courses:

- Introduction to Statistical Reasoning
- Introduction to Statistical Methods for Life and Health Sciences

SERVICE

DataFest Organizing Committee

April – May 2016, 2017

UCLA Department of Statistics

• Organized the two-day data-analysis competition for 400 undergraduates from Southern California.

Math & Physical Sciences Council (MPSC)

September 2016 – January 2018

Treasurer & Statistics Representative

- Represented Statistics department graduate students in governing decisions and organized community activities.
- Managed the \$10,000 annual budget.

Exploring Your Universe (Science Fair)

November 2017

Statistical Consultant

Provided guidance for estimating the number of attendees for the public outreach day organized by the Department of Physics and Astronomy.

FELLOWSHIPS

University Graduate Fellowship

January 2015 – June 2017

Awarded \$24,000 over eight quarters as the graduate consultant at the Statistics Department Consulting Center.

SKILLS

Software: R, SPSS, and Matlab

Languages: Basic familiarity with C, C++, and SQL Documentation: R Markdown, LaTeX, Mendeley Languages: Fluent in English, Hindi, and Telugu

REFERENCES

Mark S. Handcock David P. Hughes

Professor Associate Professor of Entomology and Biology

Department of Statistics Department of Entomology University of California, Los Angeles Pennsylvania State University

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Bruce A. Desmarais DeGrandis-McCourtney Early Career Professor Department of Political Science Associate Director, Center for Social Data Analytics

Pennsylvania State University

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