# Supraja Gurajala

# Assistant Professor Department of Computer Science

# Scholarly Work

# Conference/Research Presentations:

# Dinushani Senarathna, Vijay Kumar, Shantanu Sur, Suresh Dhaniyala, Supraja Gurajala, Sumona Mondal, Performance of Correction Models for Accurate PM2.5 Estimation from Low-Cost Air Quality Sensor Data. American Association for Aerosol Research (AAAR) conference, October 2021.

# Vijay Kumar, Dinushani Senarathna, Suresh Dhaniyala, Shantanu Sur, Supraja Gurajala, Sumona Mondal, Spatiotemporal Analysis of PM2.5 in Chicago Using Data from EPA and Low-Cost Sensor Network. American Association for Aerosol Research (AAAR) conference, Octber 2021.

# Vijay Kumar, Bridget Wangler, Chaya Chaipitakporn, Shantanu Sur, Supraja Gurajala, Suresh Dhaniyala, Sumona Mondal: Infection vs Fatality of COVID-19 in New York State: Effects of Demographics and Poor Air Quality, American Association for Aerosol Research (AAAR) conference, October 2020.

# Dinushani Senarathna, Vijay Kumar, Bridget Wangler, Shantanu Sur, Supraja Gurajala, Suresh Dhaniyala, Sumona Mondal: Towards Building an Optimal LUR Model for Air Quality Prediction Using Machine Learning Approach., E-RAPS (Research and Projects Showcase) Conference, Clarkson University, Potsdam NY July 2020.

1. Kumar V., Mondal S., Gurajala S., Sur S., Dhaniyala S., Evaluating spatio-temporal accuracy of LUR models using low-cost sensor network data, 2020 Air Sensors International Conference, Pasadena, California, May 12-15, 2020. [Cancelled due to COVID]

# Gurajala S., Dhaniyala S., Big Data and Air Quality: Using Twitter Data for Air Quality Monitoring, American Association for Aerosol Research 37th Annual Conference, Portland, Oregon, Oct 14 – Oct 18, 2019.

1. Gurajala S., Data Visualization, Computer Science ACM seminar, SUNY Potsdam, Potsdam, NY, Nov 2019.
2. Workshop co-organizer/instructor: Sensors and Data Analytics, Aug 5 to 9 (5-day workshop), Clarkson University, Potsdam, NY, 2019.
3. Kumar V., Patel V., Sur S., Dhaniyala S., Gurajala S., Mondal S., Air quality prediction using LUR model: Parameter reduction and optimization, 3rd Annual Spring Research And project Showcase conference, Clarkson University, Potsdam, NY, April 2019.
4. Kumar V., Patel V., Sur S., Dhaniyala S., Gurajala S., Mondal S., LUR model for air quality: Optimization of parameter space, 13th Annual Probability & Statistics Day At UMBC, Baltimore, MD, April 2019
5. Gurajala S., Challenges in monitoring air quality using social media data, AIR Lab, Clarkson University, Potsdam NY, 2018, December.
6. Gurajala S., BigData: Towards accurate prediction of events, Computer Science ACM seminar, SUNY Potsdam, Potsdam, NY, 2018, October.
7. Gurajala S., Can we build accurate spatio-temporal event models with social media data?, David A. Walsh‘67 Arts & Sciences Conference , Potsdam NY, 2018, August.
8. Gurajala S., Twitter data analysis to understand societal response to air quality. 2018 International Conference on Social Media & Society, Copenhagen Denmark 2018, July.
9. Gurajala, S. "Big Data and its Applications", Computer Science ACM seminar, SUNY Potsdam, Potsdam, NY, 2017, October.

# Peer-Reviewed Publications:

# Mondal M., Chaipitakporn C., Kumar V., Wangler B., Gurajala S., Dhaniyala S., Sur S., COVID-19 in New York state: Effects of demographics and air quality ofninfection and fatality. Published in Science of the Total Environment Volume 807, Part 1. <https://doi.org/10.1016/j.scitotenv.2021.150536>., Oct 2021.

# Gurajala S., Dhaniyala S., Matthews J. N., Understanding Public Response to Air Quality Using Tweet Analysis. Social Media + Society. <https://doi.org/10.1177/2056305119867656>, May 2019.

# Gurajala S. and Matthews J.N., Twitter Data Analysis to Understand Societal Response to Air Quality. In Proceedings of the 2018 International Conference on Social Media & Society. ACM, July 2018.

# Conferences/Workshops Attended:

1. E- RAPS (Research and Projects Showcase) Conference, Clarkson University Potsdam, NY.
2. Completed Online Pedagogy (Session 5) course to facilitate development of the knowledge, skills, and attitudes for effective online teaching and learning
3. CCI Winter Workshop, SUNY Potsdam, Potsdam, NY, January 22 2020.
4. Sensors and Data Analytics Workshop, Aug 5 to 9 (5-day workshop), Clarkson University, 2019.
5. Statistical Decision-Making using Bayesian Inference, Workshop, 9th and 10th May, Clarkson University, 2019.
6. ACM New York Celebration of Women in Computing, April 12-13, 2019, Lake George, NY.
7. David A. Walsh‘67 Arts & Sciences Conference, Clarkson University, Potsdam, NY, August 2018
8. 2018 International Conference on Social Media & Society, Copenhagen Denmark 2018, July.
9. ACM New York Celebration of Women in Computing, April 21-22 2017, Rochester, NY. Escorted eight SUNY Potsdam Computer Science students.

# Research Proposals:

1. Assisted medical researchers in St. Lawrence Health System in submitting a proposal to PCORI Patient-Centered Outcomes Research Institute to study CTD-ILD connective tissue disease-associated interstitial lung disease, Jan 2021 (unfunded).
2. Air quality sensor network for exposure assessment in Environmental Justice area, Prof. Suresh Dhaniyala (PI), Dr. Brian Frank, Prof. Supraja Gurajala, Prof. Sumona Mondal, NYSERDA, May 2020, Amount Requested: $500000, (unfunded).

# Applying Novel Approaches to Improve Long-Term Exposure Assessment of Outdoor Air Pollution for Health Studies, Suresh Dhaniyala (PI), David Rich, Philip K. Hopke, Supraja Gurajala, Health Effects Institute (HEI), RFA 19-1: $800,000, March 2019 (unfunded).

# A low-cost air quality sensor network for accurate exposure assessment, Suresh Dhaniyala (PI), David Rich, Philip K. Hopke, Supraja Gurajala, NYSEDA, $575,325, 03/01/2019 to 02/28/2022 (unfunded).

# SUNY Potsdam Computer Science (SPOCS) Scholarship Program, National Science Foundation, Spring 2017 (unfunded).

# SUNY Potsdam Computer Science (SPOCS) Scholarship Program, National Science Foundation, Spring 2018 (unfunded).

# Papers Reviewed:

# Reviewed a paper for Big Data & Society Journal.

**Courses Developed:**

* Introduction to Cryptography
* Theory of computation
* Data Analysis & Visualization
* Database Systems
* Machine Learning
* Computer Networks