SPATIALEPI 2024

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FOREWORD

The 21st century has seen major epidemics and pandemics caused by infectious disease like coronaviruses, influenza, and most recently, monkey pox. Infectious disease spread within the human population can be conceptualized as a complex system composed of individuals that interact and transmit viruses via spatiotemporal processes that manifest across and between scales. The complexity of this system ultimately means that infectious disease spread is difficult to understand, predict, and effectively respond to. As spatial data becomes increasingly available at high spatial and temporal resolutions and computing resources can more efficiently handle such data, there have been opportunities for new data science and simulation-based solutions towards improved public health.

The 5th ACM SIGSPATIAL International Workshop on Spatial Computing for Epidemiology (SpatialEpi'24) focuses on all aspects of data science and simulation to better understand the spatial processes and patterns of epidemic diseases, to predict disease outcomes, and develop tools that support and guide policy interventions. It is becoming increasingly clear that interdisciplinary collaboration is needed to foster innovation and progress in these areas. Thus, this workshop is a forum to bring together researchers in the SIGSPATIAL community as well as researchers in epidemiology to discuss new methodologies and frameworks that are truly interdisciplinary. This year we received five submissions, of which we selected three papers including two full paper and one short paper for final publication. The accepted papers cover a range of topics for better understanding the spread of epidemics, including:

- Evaluating the Impact of Shape and Metric Selection on Human Perception in Geospatial Data Visualizations
- Comparing Associations of Chronic Health Outcomes with Social Determinants of Health Indices Using Machine Learning
- CyberGIS-Vis for Democratizing Access to Scalable Spatiotemporal Geovisual Analytics: A Case Study of COVID-19

SpatialEpi'24 will feature a keynote talk by Dr. Ben Lopman, Department of Epidemiology, Rollins School of Public Health, Emory University.

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We extend our gratitude to the program committee for their vital efforts in reviewing submissions, ensuring the quality of the accepted papers. Additionally, we thank our keynote speaker, Ben Lopman, for graciously accepting our invitation and for sharing their research at SpatialEpi 2024.

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