

# SPATIALEPI 2023

Proceedings of the 4<sup>th</sup> ACM SIGSPATIAL International Workshop on  
Spatial Computing for Epidemiology  
(SpatialEpi'23)

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## FOREWORD

The 21st century has seen major epidemics and pandemics caused by infectious diseases 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 4th ACM SIGSPATIAL International Workshop on Spatial Computing for Epidemiology (SpatialEpi'23) focuses on all aspects of data science and simulation to better understand the spatial processes and patterns of infectious diseases, to predict disease outcomes, and to 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 two submissions, of which we selected two quality papers including one 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:

- Optimal Risk-aware POI Recommendations during Epidemics
- An Epidemiological Patterns of Life Simulation

SpatialEpi'23 will feature a keynote talk by Dr. Max Lau, Assistant Professor of Biostatistics in the Rollins School of Public Health, Emory University.

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## ACKNOWLEDGEMENTS

We would like to thank the program committee whose reviewing efforts are important for ensuring the quality of the accepted papers. In addition, many thanks to our keynote speaker Max Lau who kindly accepted our invitations and will be sharing their research at SpatialEpi'23.

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