Call for Papers
Symposium on Geospatial Approaches to Pressing Grand Challenges: Global Pandemic, Climate Change, and Food Security
In-Person Paper Sessions, 2025 AAG Annual Meeting
Detroit, March 24-28, 2025

Recent years have been marked by a series of global crises, ranging from the COVID-19 pandemic and escalating geopolitical conflicts to ongoing extreme weather events and natural disasters. These challenges have profound social, economic, and health repercussions for humanity. Compounding these issues are the escalating effects of climate change, which manifest in threats to food security, and increased public health burdens. These factors jeopardize livelihoods in vulnerable communities and intensify extreme weather events and natural disasters. These interconnected crises underscore the urgent need for innovative geospatial-driven solutions.

Geospatial data science, an emerging interdisciplinary field, stands at the nexus of geospatial, mathematical, and computational sciences, holds great promise in addressing these complex, interconnected challenges. Geospatial approaches have the potential to enhance our capacities in managing the social, economic, and health impacts of future pandemics and public health crises. Further, they can support the development of effective strategies for bolstering urban resilience in the face of increasingly extreme weather events and natural disasters.

This symposium aims to bring together researchers, practitioners, and policymakers to explore the critical role of geospatial science in navigating these pressing grand challenges and to catalyze collaborative efforts towards a more sustainable and resilient future. We welcome participation from geographers, geoscientists, health researchers, other scientists, and stakeholders at the 2025 AAG Annual Meeting to address the challenges of global pandemics, climate change, and food security. Papers on all aspects of health research related to infectious diseases, pandemics, pandemic readiness, climate change, food security, environmental health, and public health crises are welcome. Topics may include but are not limited to:

- Environmental, cultural, and behavioral drivers of pandemics, climate change and food security
- Vulnerable populations and inequalities in exposure to health risks related to pandemics, climate change and food security
- Environmental, socioeconomic, and health impacts of infectious disease and climate change

- Pandemic control, human mobility, and social interactions
- Building and creating pandemic-ready cities
- Impacts of pandemics and pandemic control on social inequalities
- Impacts of climate change and climate change mitigations on social inequalities
- Spatial optimization of health resource distribution (e.g., vaccination)
- Pandemic control measures and geoprivacy concerns
- Public health impacts of climate change and food insecurity
- Meeting the challenge of achieving carbon neutrality in the health sector
- Adaptations to the public health risk from climate change
- Exposure and vulnerability related to heatwaves, rising temperatures, and extreme weather events (e.g., cyclones)
- Exposure and vulnerability related to air pollution and climate-sensitive infectious diseases
- Public health impacts related to food security under climate change
- Carbon mitigation policies and other mitigation or adaptation measures
- Establishing climate-resilient policies and infrastructure (e.g., healthy cities).

To present a paper in our in-person paper sessions, please submit your abstract to the AAG annual meeting 2025, and then email your abstract and PIN to Jianwei Huang (jianweihuang@cuhk.edu.hk) or Jianying Wang (jianyingwang@cuhk.edu.hk) by November 15, 2024.

Please contact the symposium organizers if you have any questions: Jianwei Huang (jianweihuang@cuhk.edu.hk), Jianying Wang (jianyingwang@cuhk.edu.hk), and Mei-Po Kwan (mpk654@gmail.com), Institute of Space and Earth Information Science, The Chinese University of Hong Kong.