International Symposium on Location-Based Big Data and GeoAI 2023 (LocBigDataAI 2023)

A pre-conference Symposium of ICC 2023, Cape Town, South Africa

https://lbs.icaci.org/locbigdata2023/

12 August 2023, Co-organized by

The ICA Commissions on Location-Based Services, Geospatial Analysis and Modelling, and Working Group on Digital Transformation of National Mapping Agencies

Background

The increasing use of location-based services, as well as the growing ubiquity of location/activity sensing technologies have led to a huge amount of location-based big data (LocBigData), such as tracking or sensing data (e.g., massive GPS trajectories of people and vehicles, and georeferenced mobile phone data), social media data (e.g., twitter), and crowdsourced geographic information. The growing availability of such data has created unprecedented opportunities for researchers from various disciplines. One of the emerging research fields that are significantly benefiting from LocBigData is GeoAI, which aims to seamlessly integrate geographic knowledge or concepts into AI to address geographical problems or beyond. The unprecedented research opportunities brought by LocBigData and GeoAI also come with new theoretical, technical, ethical, and social questions. This symposium will offer a common ground for researchers from various fields and perspectives to share ideas and research findings, and to discuss the open challenges and future research direction on location-based big data and GeoAI.

This is a pre-conference symposium associated with ICC 2023, and a follow-up of the successful previous conferences of ICLSM 2015, LSMTD 2017 and LocBigData 2019. It will be held in a hybrid mode.

Topics of Interest (but not limited to)

Acquisition, management, and analytics of location-based big data
- Crowdsourcing and Internet of Things
- Data management, cleaning, and integration
- Geovisual analytics
- Computational mobility and activity analysis
- Descriptive, diagnostic, predictive and prescriptive analytics

Geospatial artificial intelligence (GeoAI)
- Big data analytics and machine/deep learning
- Spatially explicit AI techniques
- Geography/GIScience-guided AI
- Explainable GeoAI
- Integration of data- and theory-driven approaches

Applications of location-based big data and GeoAI
- Human spatial behavior, activity, and mobility
- Place modelling and understanding
- Transportation and traffic
- Social network analysis
- Public health
- Smart and sustainable cities

Social and ethical issues of location-based big data and GeoAI
- Data quality and representativeness
- Bias of LocBigData and GeoAI
- Social inequality in cyber and physical space
- (Geo)privacy and ethical issues
- Governance of LocBigData and GeoAI

Submissions

Please submit work-in-progress or position papers with a length of 400-1200 words according to the guideline at the symposium. If accepted, at least one of the authors must attend (online or in-person) the symposium to present the work. A post-conference special issue is planned.

Important Dates

Short papers Due: April 15, 2023
Acceptance notification: May 15, 2023