

LocBigDataAI 2023 Program (version: August 3, 2023)

Changes are still possible. All times are local time in Cape Town (GMT+2).

Each presentation will have 15 minutes, Q&A included. We recommend a max. 12 minute presentation and use the rest for Q&A.

For onsite participants: Registration starts at 8:30 at The Capetonian Hotel.

Session 1 Opening (9:00-9:15) - Chair: Haosheng Huang

Session 2 (9:15-10:30) - Chair: Angela Yao

Tao Cheng, Tsun Hei Ng and Yunzhe Liu

The Impact of Scottish "Staycations" on Local Tourism: A Twitter Data Analysis

Nina Polous

Unveiling the Power of Event-Driven Mapping: Enhancement of Explainable Geo-AI

Anahid Jalali, Anita Graser and Clemens Heistracher

Towards eXplainable AI for Mobility Data Science

Yu Zhang, Weiming Huang, Yao Yao, Song Gao, Lizhen Cui and Zhongmin Yan

Urban region representation learning with human trajectories: A multi-view approach incorporating transition, spatial, and temporal perspectives

Chenglong Wang, Zhaoya Gong, Bin Liu, Pengjun Zhao and Zhenhua Chen

Uncovering the global and local structures of urban networks via Poincare Embedding

Coffee break (10:30-11:00)

Session 3 (11:00-12:30) - Chair: Xintao Liu

Zheng Ren, Stefan Seipel and Bin Jiang

Topological representation for Identifying Urban Centers Using Multi-Source Geospatial Big Data

Youngok Kang, Jiyeon Kim, Jiyoung Park and Jiyeon Lee

Assessment of Perceived and Physical Walkability Using Street View Images and Deep Learning Technology

Ying Long and Yue Ma

Exploring the relationship between the urban design quality and physical spatial disorder of streets with massive street view images

Shir Gravit, Adi Levy, Shani Zehavi, Ori Bryt, Dalit Shach-Pinsly and Pnina Plaut

The relations between urban parks' physical features and the activity patterns using deep learning

Yunya Gao, Dirk Tiede and Stefan Lang

Maps Translated from Satellite Imagery by Image-To-Image Translation May Be More Unreliable due to the Advent of Segment Anything Model

Jinhua Meng and Hua Liao

Analyzing Spatio-Temporal Pattern of Cognitive Load in Real-World Wayfinding Using Pupillary Responses

Lunch break (12:30-13:30)

Session 4 (13:30-14:45) - Chair: Jukka Krisp

Minglei Liao and Xintao Liu

Characterizing temporally fragmented mobility networks in virtual space using uniform resource locator (URL) data

Anna Brauer, Ville Mäkinen and Juha Oksanen

Time-based solutions for strengthening location privacy in GNSS-based human mobility trajectories

Timon Sachweh, Helen Kuhlmann and Thomas Liebig

Empowering Data Owners with Homomorphic Encrypted Federated Learning in Decentralized Data Spaces

Huanfa Chen and Liyuan Dong

A comparison of geographically weighted regression and machine learning methods for house price modelling: a case study of London

Pengbo Li and Haowen Yan

Interpreting deep representations of urban map features via an encoder-decoder architecture

Coffee break (14:45-15:15)

Session 5 (15:15-16:30) - Chair: Bin Jiang

Susanne Bleisch and Daria Hollenstein

Guidance on accessible routes based on path characteristics derived from high-density point clouds

Shahram Sattar, Peyman Azari, Gopika Rajan and Songnian Li

3D City Modeling of Toronto: Lessons Learned

Wenyu Wang, Zhenhua Chen and Kailai Wang

Assessing the Impact of the 2021 Texas Winterstorm Disaster on Social Group Vulnerability and Resilience: A Spatial Flow Analysis and Deep Learning Approach

Yalin Yang, Yanan Wu and May Yuan

Quantify the spatial association of places and social events

Yunlei Liang, Jiawei Zhu, Wen Ye and Song Gao

GeoAI-Enhanced Spatial Network Community Detection using Node Attributes and Spatial Interactions

Coffee break (16:30-17:00)

Session 6 (17:00-18:15) - Chair: Juha Oksanen

Farnoosh Roozkhosh and Angela Yao	Spatially Explicit Analysis of Dementia Prevalence and its Relationship with Geographic and Socioeconomic Factors						
Binbin Lin, Yimin Dai, Ning Ning and Lei Zou	Statistical Machine Learning Meets High-Dimensional Spatiotemporal Challenges - A Case Study of COVID-19 Modeling						
Nanzhou Hu, Bahar Dadashova and Zhe Zhang	Exploring Sentiment Changes About Active Transportation During COVID-19 Using Social Media Data Mining						
Kai Sun, Yingjie Hu and Kenneth Joseph	GALLOC: A GeoAnnotator for Labeling LOCation descriptions from disaster-related text messages						
Hao Yang and Xiaobai Yao	Frequent Activity Pattern Mining and Similarity Analysis of Human Mobility						
Session 7 Closing (18:15-18:20) - Chair: Haosheng Huang							