



## City+ 2023 @ Perth

Geospatial Big Data and Artificial Intelligence for Cities

An International Conference for Early Career Researchers and PhD Students on Urban Studies

8 - 10 September 2023, Perth, Australia



Website: https://yongzesong.com/cityplus-2023/ E-mail: cityplus2023@gmail.com



## Time Zone: GMT+8, AWST, Perth, Beijing, Hong Kong, Singapore

Day 1 - Physical conference		
8 September, Friday		
Bankwest Theatre, 200A John Curtin Building, Curtin University		
7.45 and 0.10 and	(Live through MS Teams)	
7:45 am – 8:10 am 8:10 am – 8:15 am	Registration Welcome and Introduction	
8:10 diii – 8:13 diii		
0.15 and 0.40 and	Yongze Song, Conference Chair	
8:15 am – 8:40 am	Opening Speech     Lindy Fitzgerald, Professor, Deputy Vice-Chancellor, Curtin     University	
	Joseph Awange, Professor, Associate Editor of "Remote Sensing of Environment"	
	Brad Carey, Deputy Head of School, School of Design and the Built     Environment	
	Mohammad Swapan, Director of Graduate Research, School of Design and the Built Environment	
8:40 am – 8:50 am	Take Photos (Outside John Curtin Gallery)	
9:00 am – 9:20 am	Morning Tea	
9:20 am – 11:00 am  11:00 am – 11:10 am  11:10 am – 12:20 pm	Keynotes     Keynote 1 (40 min)     Melanie Johnston-Hollitt, Professor, Chair for Curtin Institute for Computation (CIC), Curtin University, Australia     Keynote 2 (40 min)     Filip Biljecki, Chair for Urban Analytics Lab, National University of Singapore, Singapore     Q&A (20 min)  Short Break Industry Workshop	
	<ul> <li>Chairs: Muhammad Bilal Shaikh (Edith Cowan University); Gang (Adam) Lin (Curtin University)</li> <li>Industry Keynote 1 (30 min)</li> <li>Lalinda Karunaratne, Main Roads Western Australia</li> <li>Industry Keynote 2 (30 min)</li> <li>Tom Bos, Rio Tinto</li> </ul>	
12:20 pm – 1:00 pm	Lunch	
1:00 pm – 4:00 pm	Session 1: Advances in geospatial research and industries Chairs: Sania Zahan (University of Western Australia), Kai Ren (Curtin University), Omri Ram (University of Western Australia)  Part 1 (1:00 pm): 5 papers, 10 min each; 10-min Discussion  Part 2 (2:00 pm): 5 papers, 10 min each; 10-min Discussion  Part 3 (3:00 pm): 5 papers, 10 min each; 10-min Discussion	
9:00 pm - 10:00 pm	Special Online Session (North America & South America Regions)	
·	Chair: Aynaz Lotfata (University of California, Davis, United States)  Poster Session	
Conference Website	Chairs: Zehua Zhang (Curtin University), Surakshya Dhakal (Independent Researcher, (University of Manchester), UK)	



## Time Zone: GMT+8, AWST, Perth, Beijing, Hong Kong, Singapore

Day 2 - Online conference		
9 September, Saturday		
8:00 am – 8:55 am	Short Course 1 (40 min) Chair: lacopo Testi (Massachusetts Institute of Technology (MIT), United States)  Qiusheng Wu, University of Tennessee, United States  Q&A (15 min)	
8:55 am – 9:00 am	Short Break	
9:00 am – 9:55 am	<ul> <li>Keynote 3 (40 min)</li> <li>Chair: Nasser Najibi (Cornell University, United States)</li> <li>Yong Ge, Professor, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, China</li> <li>Q&amp;A (15 min)</li> </ul>	
9:55 am – 10:00 am	Short Break	
10:00 am – 1:10 pm	Session 2: Geospatial big data and AI  Chairs: Iacopo Testi (Massachusetts Institute of Technology (MIT), United States), Aynaz Lotfata (University of California, Davis, United States), Arianna Salazar Miranda (Massachusetts Institute of Technology (MIT), United States)  Part 1 (10:00 am): 5 papers, 10 min each; 10-min Discussion Part 2 (11:00 am): 5 papers, 10 min each; 10-min Discussion Part 3 (12:00 pm): 6 papers, 10 min each; 10-min Discussion	
1:10 pm – 2:00 pm	Break	
2:00 pm – 2:55 pm	Keynote 4 (40 min) Chairs: Arianna Salazar Miranda (Massachusetts Institute of Technology (MIT), United States)  Katarzyna Sila-Nowicka, University of Auckland, New Zealand Q&A (15 min)	
2:55 pm – 3:00 pm	Short Break	
3:00 pm – 5:30 pm	<ul> <li>Session 3: Transport and health</li> <li>Chairs: Liang Ma (Peking University, China), Abolfazl Karimpour (State University of New York, United States), Huajie Yang (City University of Macau, Macau SAR)</li> <li>Part 1 (3:00 pm): 6 papers, 10 min each; 10-min Discussion</li> <li>Part 2 (4:10 pm): 6 papers, 10 min each; 10-min Discussion</li> </ul>	
5:30 pm – 6:00 pm	Break	
6:00 pm – 6:55 pm	<ul> <li>Short Course 2 (40 min)</li> <li>Chair: Peng Luo (Technical University of Munich, Germany)</li> <li>Fred C. Sanders, CPONH NGO Research Institute, the Netherlands;</li> <li>Freelance researcher and lecturer, Delft University of Technology, the Netherlands</li> <li>Q&amp;A (15 min)</li> </ul>	
6:55 pm – 7:10 pm	Short Break	
7:10 pm – 8:05 pm	<ul> <li>Short Course 3 (40 min)</li> <li>Chairs: Siqin (Sisi) Wang (University of Queensland, Australia; University of Tokyo, Japan)</li> <li>Fernando Benitez, University of St Andrews, UK</li> <li>Q&amp;A (15 min)</li> </ul>	



## Time Zone: GMT+8, AWST, Perth, Beijing, Hong Kong, Singapore

Day 3 - Online conference		
10 September, Sunday		
8:00 am – 8:55 am	Keynote 5 (40 min)	
	Chair: Franz-Benjamin Mocnik (University of Twente, Netherlands)	
	<ul> <li>Miguel González-Leonardo, El Colegio de México (COLMEX),</li> </ul>	
	Mexico; International Institute for Applied Systems Analysis (IIASA),	
	Austria	
	• Q&A (15 min)	
8:55 am – 9:00 am	Short Break	
9:00 am – 12:00 pm	Session 4: Sustainable cities and infrastructure	
	Chairs: Bin Chen (The University of Hong Kong, Hong Kong SAR), Motti	
	Zohar (University of Haifa, Israel), Siqin (Sisi) Wang (University of	
	Queensland, Australia; University of Tokyo, Japan)	
	Part 1 (9:00 am): 6 papers, 10 min each; 10-min Discussion	
	Part 2 (10:10 am): 5 papers, 10 min each; 10-min Discussion	
	Part 3 (11:10 pm): 5 papers, 10 min each; 10-min Discussion	
12:00 pm – 12:50 pm	Break	
12:50 pm – 3:10 pm	Session 4: Sustainable cities and infrastructure	
	Chairs: Franz-Benjamin Mocnik (University of Twente, Netherlands), René	
	Westerholt (TU Dortmund University, Germany)	
	Part 4 (12:50 pm): 6 papers, 10 min each; 10-min Discussion	
	Part 5 (2:00 pm): 6 papers, 10 min each; 10-min Discussion	
3:10 pm – 3:20 pm	Short Break	
3:20 pm – 5:30 pm	Session 5: Spatial methods	
	Chairs: Ziqi Li (University of Glasgow, UK), Fernando Benitez (University of St	
	Andrews, UK)	
	Part 1 (3:20 pm): 5 papers, 10 min each; 10-min Discussion	
	Part 2 (4:20 pm): 6 papers, 10 min each; 10-min Discussion	
5:30 pm – 6:15 pm	Short Course 4 (30 min)	
	Chairs: Ziqi Li (University of Glasgow, UK)	
	Peng Luo, Technical University of Munich (TUM), Germany	
	Zehua Zhang, Curtin University, Australia	
	• Q&A (15 min)	
6:15 pm – 7:00 pm	Closing Ceremony and Awards	



## **Keynote Speakers**



**Professor Melanie Johnston-Hollitt** 

Keynote Speaker (Physical in Perth)

Curtin Institute for Computation (CIC)

Curtin University, Australia



Dr Katarzyna Sila-Nowicka

**Keynote Speaker (Online)**University of Auckland, New Zealand



Dr Filip Biljecki

**Keynote Speaker (Physical in Perth)** 

NUS Urban Analytics Lab

National University of Singapore, Singapore



Mr. Lalinda Karunaratne

Industry Keynote Speaker (Physical in Perth)

Main Roads Western Australia, Australia



**Professor Yong Ge** 

#### Keynote Speaker (Online)

Institute of Geographical Sciences and Natural Resources Research Chinese Academy of Sciences, China



Mr. Tom Bos

Industry Keynote Speaker (Physical in Perth)

Rio Tinto, Australia



Dr Miguel González-Leonardo

#### Keynote Speaker (Online)

El Colegio de México (COLMEX), Mexico; International Institute for Applied Systems Analysis (IIASA), Austria

## **Conference Committee**



Yongze Song

Conference Chair
Senior Lecturer, Curtin University,

### **Short Courses**



Qiusheng Wu Short Course Lecturer

Assistant Professor, University of Tennessee, United States



Fred C. Sanders

#### Short Course Lecturer

CPONH NGO Research Institute, the Netherlands; Freelance researcher and lecturer, Delft University of Technology, the Netherlands



**Fernando Benitez** 

#### Short Course Lecturer

Lecturer, University of St Andrews,





## **Conference Committee**

**Online Sessions** 



Nasser Najibi **Keynote Session Chair** Postdoc Fellow, Cornell University, **United States** 



Motti Zohar **Session Chair** Senior Lecturer, University of Haifa, Israel



Arianna Salazar Miranda **Session Chair** Massachusetts Institute of Technology (MIT), United States



Assistant Professor, State University of New York, United States



**Session Chair** Research Scientist, University of California, Davis, United States



Massachusetts Institute of Technology (MIT), United States



Franz-Benjamin Mocnik **Session Chair** Assistant Professor, University of Twente, Netherlands



Honorary Research Fellow. University of Queensland, Australia; JSPS Research Fellow, University of Tokyo, Japan

Siqin (Sisi) Wang



Session Chair Juniorprofessor, TU Dortmund University, Germany



Lecturer (Assistant Professor), University of Glasgow, UK



Assistant Professor, The University of Hong Kong, Hong Kong SAR



**Liang Ma Session Chair** Associate Professor, Peking University, China



**Poster Session Chair** Lecturer, Independent Researcher (University of Manchester), UK



Peng Luo **Short Courses Chair** Technical University of Munich (TUM), Germany



#### **Physical Sessions in Perth**



**Physical Session Chair** Al Researcher, University of

Sania Zahan



Social Media Chair Curtin University, Australia



**Industry Chair** 

Muhammad Bilal Shaikh





**Technical Chair** University of Western Australia, Australia



Madelyn Cook **Technical Chair** Curtin University, Australia



Gang (Adam) Lin **Local Session Chair** Curtin University, Australia



Zehua Zhang **Poster Session Chair** Curtin University, Australia



## **Conference Committee**

#### **City+ Network Committee**

Yongping Zhang (Chair) Zhejiang University, China

Mengqiu Cao (Co-chair)University of Westminster, the UKZhifu Mi (Co-chair)University College London, the UK

**Tianren Yang (Co-chair)** University of Hong Kong, Hong Kong SAR

**Lorenzo Ceccon** Politecnico di Milano, Italy

Frank ChuangThe Alan Turing Institute, the UKMingjie DaiCity University of Macau, Macau SARYiru JiaBeijing Forestry University, ChinaYang LiangPolytechnic University of Milan, ItalyZhicheng LiuUniversity College London, the UK

Annalisa Rollandi Politecnico di Milano, Italy

Fred C. Sanders Delft University of Technology, the Netherlands

Yang Song Zhejiang University, China
Jiayu Wu Zhejiang University, China
Juan Yan Tongji University, China

**Huajie Yang** City University of Macau, Macau SAR

**Peiheng Yu** The Hong Kong Polytechnic University, Hong Kong SAR

Pengcheng Zeng Politecnico di Milano, Italy

**Tuyu Zhou** Australian National University, Australia





## **Keynote Speakers and Industry Keynote Speakers**

### **Time & Chairs**

9:40 AM - 11:15 AM, 8 Sep 2023

#### **Yongze Song**

Curtin University, Australia



#### **Prof. Melanie Johnston-Hollitt**

Curtin Institute for Computation (CIC), Curtin University, Australia

Title: Challenges and Opportunities with Geospatial Artificial Intelligence: How Big Data, Geographic Information Science, and Data Science is the Future of Urban Studies



## Dr. Filip Biljecki

NUS Urban Analytics Lab, National University of Singapore, Singapore

Advancing urban modelling with emerging geospatial datasets and AI technologies

9:00 AM - 10:00 AM, 9 Sep 2023

#### **Nasser Najibi**

Cornell University, United States

#### **Prof. Yong Ge**

Institute of Geographical Sciences and Natural Resources Research, CAS, China

Mapping with geoscience-aware deep learning

2:00 PM - 3:00 PM, 9 Sep 2023

#### **Arianna Salazar Miranda**

Massachusetts Institute of

Technology (MIT), United States

8:00 AM - 9:00 AM, 10 Sep 2023

#### Franz-Benjamin Mocnik

University of Twente, Netherlands



### Dr. Katarzyna Sila-Nowicka

University of Auckland, New Zealand

Human mobility data in urban analytics



## Dr. Miguel González-Leonardo

International Institute for Applied Systems Analysis (IIASA), Austria; University of Liverpool, UK

Human mobility in times of COVID-19

11:20 AM - 12:20 PM, 8 Sep 2023

#### **Muhammad Bilal Shaikh**

Edith Cowan University, Australia

#### Gang (Adam) Lin

Curtin University, Australia



### Mr. Lalinda Karunaratne

Main Roads Western Australia, Australia

Title: Navigating the Road to the Big Picture from Big Data



Mr. Tom Bos

Rio Tinto, Australia

Success factors impacting strategy- and governance frameworks for environmental digital twins in the mining industry





## **Short Courses**

## **Time & Chairs**

8:00 AM - 9:00 AM, 9 Sep 2023

#### **lacopo Testi**

Massachusetts Institute of Technology (MIT), United States



Dr. Qiusheng Wu

University of Tennessee, United States

Interactive Cloud Computing with Google Earth Engine and Geemap

6:00 PM - 7:00 PM, 9 Sep 2023

#### **Peng Luo**

Technical University of Munich (TUM), Germany



### **Fred Sanders**

CPONH NGO Research Institute, the Netherlands; Delft University of Technology, the Netherlands

Climate change will bring change and prosperity if we adapt to the changes and work together!

7:10 PM - 8:10 PM, 9 Sep 2023

#### Siqin (Sisi) Wang

University of Queensland, Australia; University of Tokyo, Japan



## **Dr. Fernando Benitez**

University of St Andrews, UK

The Turing way a tool for Reproducible Research and Open Science

5:30 PM - 6:00 PM, 10 Sep 2023

#### Ziqi Li

University of Glasgow, UK



#### **Peng Luo**

Technical University of Munich (TUM), Germany

Generalized Spatial Association Modelling towards Intelligent Spatial Understanding



#### **Zehua Zhang**

Curtin University, Australia

Spatial effects in daily data analytics: disparity and complexity



## Session 1. Advances in geospatial research and industries (Physical in Perth)

### **Session Chair**

#### Sania Zahan

University of Western Australia, Australia

#### Kai Ren

Curtin University, Australia

#### **Omri Ram**

University of Western Australia, Australia

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1:00 PM - 4:00 PM

8 September

#### Part 1

Aviral Marwal University of Cambridge, the UK

Simulating Built-up expansion in West Delhi with an integrated Neural Network and Agent Based-Prioritised Growth Model

Eleni Stefania Kalapoda Columbia University, United States

Timber Urbanism: Assessing the carbon footprint of mass-timber, steel, and concrete structural prototypes for peri-urban densification in the Hudson Valley's urban fringe.

Weijie Hu Swinburne University of Technology, Australia

Lessons from Chongging: Public Rental Housing and Family Lives of the New Citizens

**Weiqiang Chen** Resources and Urban Sustainability at the Institute of Urban Environment, CAS, China Achieving net-zero material consumption to build future cities

Selen Aksoy Istanbul Technical University, Turkey

Prediction of Lived Public Space

### Part 2

Emily Tianyuan Wang University of Cambridge, the UK

Using Natural Language Processing to Identify Key Planning Strategies from Government Documents - A Case Study of 117 Chinese Cities from 2011 to 2019

Chunjiang Chen Curtin University, Australia

Assessing cracks in large-scale road transport infrastructure using spatial machine learning

**Tom Bos** Rio Tinto, Australia

Success factors impacting strategy- and governance frameworks for environmental digital twins in the mining industry.

**Shilong Li** Chongqing University, China

Study on the impact of smart city construction to the green and high-quality development of cities

Alisha Shahid MM Pakistan, Pakistan

Transforming Urban Futures: Al Advancements in Master Planning for Sustainable Cities

#### Part 3

Ivy Chang University of Huddersfield, the UK

Enhancing Workplace Productivity Through Evidence-Based Design

Zaid O. Saeed Curtin University, Australia

Digital Architecture: From Static to Dynamism-The Era of BIG DATA

**Haiyun Xu** Beijing University of Civil Engineering and Architecture, China

Using social media photographs deep learning to assess cultural ecosystem services for high-density urban green space management: Case from Central Beijing

Zhiran Fan Jiangsu Provincial Planning and Design Group, China

The green system design under the definition of coastal city

Ajibola R. Oyebamiji University of Portsmouth, the UK

Hotspot Analysis of Oil Spill Events Using GIS; A Case Study of Niger Delta, Nigeria





## \*Special Session: North America & South America Regions

## **Session Chair**

#### **Aynaz Lotfata**

University of California, Davis, United States

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9:00 PM - 10:00 PM

8 September

#### Eleni Stefania Kalapoda Co

#### **Columbia University, United States**

Timber Urbanism: Assessing the carbon footprint of mass-timber, steel, and concrete structural prototypes for peri-urban densification in the Hudson Valley's urban fringe.

#### Tianjun Lu

#### **California State University, United States**

How COVID-19 Impacts Air Pollution Exposure Among Disadvantaged Communities? Leveraging Crowd-Sourced Geospatial Data to Develop Healthy Communities

#### **Augusto dos Santos Pereira**

#### Instituto Brasileiro de Geografia e Estatistica, Brazil

Block Saturation Level: a novel typology of block occupancy based on deep learning classification of satellite images

#### **Jingjing Yan**

#### **University of Arkansas, United States**

Inequality of eye-level urban greenness provision across the top ten populated cities in U.S.A

#### Reza Naghedi

#### **University of Arkansas, United States**

A smart dashboard for forecasting disaster casualties: An investigation from sustainable development dimensions

\* Due to time difference, online presenters from North America and South America regions listed here only need to attend this special online session OR your own session listed in the following pages.





## Session 2. Geospatial big data and AI (online)

### **Session Chair**

#### lacopo Testi

Massachusetts Institute of Technology (MIT), United States

#### **Aynaz Lotfata**

University of California, Davis, United States

#### **Arianna Salazar Miranda**

Massachusetts Institute of Technology (MIT), United States

>>> >>>> >>>

10:00 AM - 2:20 PM

9 September

#### Part 1

Tianjun Lu California State University, United States

How COVID-19 Impacts Air Pollution Exposure Among Disadvantaged Communities? Leveraging Crowd-Sourced Geospatial Data to Develop Healthy Communities

**Can Zhang** The University of Hong Kong, Hong Kong SAR

Opportunities and Challenges of Geospatial Artificial Intelligence Foundation Models in the Context of ChatGPT Large Model

Kavach Mishra Indian Institute of Technology Roorkee, India

Investigating Non-linearity of Spaceborne Hyperspectral Datasets through Dimensionality Reduction Approaches

Chenglong Wang Peking University Shenzhen Graduate School, China

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

**Tengyun Hu**Beijing municipal institute of city planning and design, China

Evaluating the effect of plain afforestation project and future spatial suitability in Beijing

#### Part 2

**Shuyu Zhang** Delft University of Technology, the Netherlands Exploring the measurement of place identity through social media data

Jiamin Li Chongqing University, China

The value of building a perception-based green elements database for empirical research on future vitality

Han Wang Peking University, China

GWRBoost: A geographically weighted gradient boosting method for explainable quantification of spatially-varying relationships

Wenyan Fu Zhejiang University, China

Developing X-minute city with the dockless bike-sharing service

Sanjay Somanath University of Gothenburg, Sweden

Sentiment and semantic analysis: Urban quality inference using machine learning algorithms

#### Part 3

Augusto dos Santos Pereira Instituto Brasileiro de Geografia e Estatistica, Brazil

Block Saturation Level: a novel typology of block occupancy based on deep learning classification of satellite images

Wenting Luo Central China Normal University, China

SALT: a multifeature ensemble learning framework for mapping urban functional zones from VGI data and VHR images

Qihao Wang LAY-OUT Planning Consultants Co., China

Exploring Spatiotemporal Big Data to Examine the Complementarity between Shenzhen and Hong Kong

**Xue Wang** China University of Petroleum (East China), China

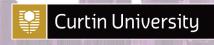
Factors of Social Network Platform Usage and Privacy Risk: A Unified Theory of Acceptance and Use of Technology2 Model

Xiao Guo Hohai University, China

Evaluating the Potential of Different Evapotranspiration Datasets for Distributed Hydrological Model Calibration.

Ezgi Şendil Bogazici University, Turkey

Natural Language Processing for the Classification of Social Media Posts in Post-Disaster Management





## Session 3. Transport and health (online)

### **Session Chair**

#### **Liang Ma**

Peking University, China

#### **Abolfazi Karimpour**

State University of New York, United States

#### **Huajie Yang**

City University of Macau, Macau SAR

>>> >>>> >>>

3:00 PM - 5:30 PM

9 September

#### Part 1

Qiyan Li University of Edinburgh, UK

Street-level physical disorders, multi-scale socioeconomic disparities and neighbourhood satisfaction in Chinese older adults: Using street view data and machine learning approach

Yuxuan Chen Tsinghua University, China

Study of Outdoor Public Space in Emergency Departments in Shanghai

JingZhu Northwest University, China

The impact of urban transportation facilities on commuter's public transit satisfaction: a case study of Xi'an, China

Yuhao Wang Kunming University of Science and Technology, China

Predicting travel time reliability with automatic fare collection data for an urban rail transit network

Cailin Qiu Tianjin University, China

Evaluate the physical activity vitality of urban greenways using trajectory entropy

Meiye Li Southeast University, China

Heterogenous Trip Distance-Based Route Choice Behavior Analysis Using Real-World Large-Scale Taxi Trajectory Data

#### Part 2

Liang Ma Peking University. China

Impact of commuting time on work productivity: A quasi-longitudinal examination

Mohamed Amin HAMMAMI Imam Abdulrahman Bin Faisal University, Saudi Arabia

A psychoacoustic approach for the diagnostic of urban soundscapes

Yixin Sun Dalian University of Technology, China

Research on the characteristics of commercial agglomeration and evolution of embedded residential rail transit stations - Comparative study based on the cases of three countries

Fengliang Tang Tianjin University, China

Geospatial Analysis of Healthcare Accessibility and Equity in the Beijing-Tianjin-Hebei Region

Ying Zhao Kunming University of Science and Technology, China

Optimization of emergency medical supplies distribution in public health emergencies

Jie Liu Kunming University of Science and Technology, China

Enhancing Urban Rail Transit Resilience through Optimization

Xinyao Li Wuhan University, China

An ensemble learning-based neural network model for predicting urban rail transit accidents

Jie Liu Northeast Forestry University, China

A coupling model for measuring the substitution of subway for bus during snow weather: a case study of Shenyang, China





## Session 4. Sustainable cities and infrastructure (online)

### **Session Chair**

#### **Bin Chen**

The University of Hong Kong, Hong Kong SAR

#### **Motti Zohar**

University of Haifa, Israel

#### Sigin (Sisi) Wang

University of Queensland, Australia; University of Tokyo, Japan

>>> >>>> >>>

9:00 AM - 3:20 PM

10 September

#### Part 1

Rui Shao Ghent University, Belgium

Metro accessibility and space-time flexibility of shopping travel: A propensity score matching analysis

Jingjing Yan University of Arkansas, United States

Inequality of eye-level urban greenness provision across the top ten populated cities in U.S.A

Peng Wang Nanjing University, China

Metro accessibility and space-time flexibility of shopping travel: A propensity score matching analysis

Yuehong Chen Hohai University, China

Spatial location optimization of fire stations with traffic status and urban functional areas

Jiahui Fan Tongji University and EPFL, China

Ruralization in Metropolitan Areas: An Explanation Based on Shanghai

Yang Chen Nanjing Normal University, China

An Automatic Approach to Extracting Large-Scale Three-Dimensional Road Networks Using Open-Source Data

#### Part 2

**Zeyu Zhao** Tsinghua University, China

Reconnecting Human Engagement with Urban Response through a Hypernetwork Model: Enhancing Urban Resilience in the Anthropocene

Reza Naghedi University of Arkansas, United States

A smart dashboard for forecasting disaster casualties: An investigation from sustainable development dimensions

Anqi Lin Central China Normal University, China

Identifying core driving factors of urban land use change from global land cover products and POI data using the random forest method

Shuning Liu Shanghai University of Finance and Economics, China

Sharing Economy, Housing, and Urban Regeneration in Shanghai

Shuyu Sun Shanghai Jiao Tong University, China

Household energy and carbon inequality considering rural-urban differences in China: Current status and future trends

#### Part 3

Ce Jiang Nankai University, China

A New Method of Extracting Built-up Area Based on Multi-source Remote Sensing Data: A Case Study of Baoding Central City, China

**Ke Sun** Shanghai Jiao Tong University, China

Developing process-based modelling to quantify urban energy service: Using two cities as cases

Jiaqing Yao, Ando Renmin University of China / KPMG Advisory (China) Limited, China

Enhancing Sustainable Value Creation: ESG Integration in Alternative Investments within the Infrastructure Sector

Lei Mu Hubei University, China

Spatial Optimization of Park Green Spaces by an Improved Two-Step Optimization Model from the Perspective of Maximizing Accessibility Equity

Xingyuan Yang Tianjin University, China

Research on Low Carbon Spatial Allocation of Courier Outlets from the Perspective of Behavior Guidance - Taking Nankai District of Tianjin as an Example





## Session 4. Sustainable cities and infrastructure (online)

### **Session Chair**

#### Franz-Benjamin Mocnik

University of Twente, Netherlands

#### René Westerholt

TU Dortmund University, Germany

>>> >>>> >>>

9:00 AM - 3:20 PM

10 September

#### Part 4

Fred Sanders CPONH NGO Research Institute, the Netherlands

Coastal city learning model; reflecting climate change adaptation measures with other cities.

Rashid Maqbool Northumbria University, UK

Significance of different phases of BIM implementation towards sustainable construction project management

Valerio della Sala Nankai University, China

Sustainable planning for the Olympic Legacy. The Turin 2006 Winter Olympic Games case study

Fatemeh Rajabi Shahid Rajaee Teacher Training University, Iran

Investigating the effect of school proximity to green space on students' satisfaction using Google POI

Ce Gao Guangzhou City Construction College, China

Study of key influential factors of culvert deterioration: A data driven approach

**Lijun Xing** Hubei University, China

Identifying the Urban spatial environmental factors affecting insomnia and their synergies based on multisource big data

#### Part 5

Huibin Mo Tsinghua University, China

Spatiotemporal evolution and driving forces of PM2.5-related mortality in Chinese cities

Guo Ru Tianjin University, China

Spatial Equality of Recreational Opportunity and Recreational Environment of Urban Park

Weifeng Su Nankai University, China

A framework of digital nomad experiences as revealed through means-end chain analysis

**Ziming Wang** Chongqing University, China

Infrastructure in Chengdu-Chongqing Economic Circle: Multi-dimensional Analysis

**Wei Dong** Southeast University, China Review of the Vitality of Urban Public Spaces

Geyang Xia Southeast University, China

Unequal traveling: how school district system and school district housing characteristics shape the duration of families commuting





## Session 5. Spatial methods (online)

### **Session Chair**

#### Ziqi Li

University of Glasgow, UK

#### **Fernando Benitez**

University of St Andrews, UK

>>> >>>>

3:20 PM - 5:30 PM

10 September

#### Part 1

Vitaly Kryukov Aston University, UK

Urban ecosystem services: assessment pathways for regulating, institutional and cultural value

Rashid Maqbool Northumbria University, UK

The impact of Lean practices in improving the construction production for a better waste management towards sustainability

**Zhenhua Bing** Shanghai Business School, China

The Research on urban/ suburban Cultural Ecosystem Service Demand and Supply Spatial Distribution: A Case study from Shanghai, China

Wenhui Wang Beijing University of Technology, China

Spatiotemporal evolution of4coordination and conflict of land use functions and influencing factors: a case study in Beijing, China

#### Part 2

Kai Ren Curtin University, Australia; Northwest A&F University, China

Identifying Climate and Environmental Determinants of Spatial Disparities in Wheat Production Using a Geospatial Machine Learning Model

Yi Cheng Nanjing University, China

Urban Renewal: Morphology-based Planning for Sustainable Development

Haipeng Wang Southeast University, China

A Study on the Spatial Succession of Urban Center System Based on Spatial Syntax

**Zhihan Zhang** Southeast University, China

The Space for the Elderly: Aging-friendly Design Strategies for Informal Public Spaces in Old Town

**Yun Ling** Tongji University, China

The matching degree of supply and demand accessibility for emergency rescue service with social media data: A case study of heavy rainstorm disaster in Zhengzhou

Yifei Yang China University of Geosciences, China

Optimizing Urban Functional Land Use through Heuristic Tuning for Dual Low Carbon Targets at Regional Land Use Structure and Local Pattern Scale Optimization





## **Poster Session**

### **Session Chair**

#### **Zehua Zhang**

Curtin University, Australia

#### **Surakshya Dhakal**

Independent Researcher

(University of Manchester), UK

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