

THE 7th SMART DATA SMART CITIES: PREFACE ARCHIVES

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Commission IV, WG IV/9

KEY WORDS: Preface, Smart Data, Smart Cities, SDSC 2022

The Smart Data and Smart Cities (SDSC) Conference is an annual international conference that brings together international experts in city analytics, GIS, digital twins, smart cities and data science from leading research institutes to discuss advances in methods and applications. It provides a forum to discuss the use data and technology to plan and shape our future cities. SDSC is the annual conference of the Urban Data Management Society, a society over 40 years old.

In 2022, the 7th annual SDSC Conference is held jointly with the 17th 3D GeoInfo Conference in Sydney, Australia 18-21 October, 2022. This is the first time SDSC conference has come to Australia, and in fact the Southern Hemisphere. It is the second time 3D GeoInfo has been organised in Australia. This joint event will be organised by City Futures Research Centre, Smart Cities and Infrastructure Research Cluster and Geospatial Research Innovation Development (GRID) at the University of New South Wales (UNSW), Sydney.

This joint event invited cutting edge research, experience, and implementation relevant to city and infrastructure data, analytics, collaborative environments, and platforms for smarter decision making at local, national, and international levels. The event was held physically at the campus of UNSW, Sydney, with the option of online registration and participation. Scholars and practitioners were able to share their research and experience relevant to the themes of these two conferences. We hope this joint conference will facilitate fruitful collaborations in the future.

This joint conference covers the following themes:

- GIS, urban informatics, and smart cities
- Smart homes
- Sensing technologies, laser scanning and smart cities
- Realtime/web based/interactive data visualisation
- BIM and infrastructure
- Cities' dashboards
- Data science, visualisation and City Analytics
- Smart Energy efficiency solutions
- Mobility data and visualisation
- Data and analytics for circular economy in cities
- 3D/4D modelling of cities
- Participation and empowerment
- BIM/GIS integration and digital twins
- Privacy, data security challenges in digital twins and smart cities
- Deriving insights from digital twins
- Blockchain technology for municipal management
- Digital twins levels of maturity
- Open data and open urban platforms
- Spatio-temporal patterns
- Crowdsourcing data collection and analytics

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- Smart cities during and after Covid-19
- Monitoring systems
- Big data/big spatial data analysis and management
- Disaster management/warning systems
- ICT and smart cities
- Application of Artificial Intelligence (AI) and machine learning in smart cities
- Smart transportation
- Drones for monitoring/inspecting cities and construction sites
- Net zero emission cities

While the topics of many papers are relevant to both conferences and very often can be included in either proceedings, the papers included in this SDSC archives are based on authors' own preferences, or discretions of the organising committee that they are more relevant to smart data and smart cities.

The papers within these proceedings have been selected on the basis of double-blind review of extended abstracts. Each extended abstract has been reviewed by two reviewers. We acknowledge the following reviewers' contribution:

Alias Abdul-Rahman, Mitko Aleksandrov, Ken Arroyo Ogori, Apostolos Arvanitis, Behnam Atazadeh, Jack Barton, Filip Biljecki, Roland Billen, Maria Antonia Brovelli, Michael Cholette, Volker Coors, Jose-Paulo de Almeida, Mahmoud Reza Delavar, Lucía Díaz Vilariño, Efi Dimopoulou, Claire Ellul, Cidália Costa Fonte, Andreas Georgopoulos, Tarun Ghawana, Eric Guilbert, Lena Halounova, Hoon Han, Lars Harrie, Petra Helmholtz, David Heslop, Ümit Işıkdağ, Jie Jiang, Mohsen Kalantari, Mila Koeva, Shawn Laffan, Robert Laurini, Brian Lee, Binghao Li, Marguerite Madden, Marco Minghini, SJ Oude Elberink, Claudio Persello, Christopher Pettit, Massimo Rumor, Soheil Sabri, Sara Shirowzhan, Jantien Stoter, Mohammad Taleai, Cynthia Changxin Wang, Parag Wate, Stephan Winter, Hao Wu, Jinjin Yan, Yang Yue, XiaoGuang Zhou.

We hope to meet most of the authors in person after the pandemic.