8th International Conference on
Smart Data and Smart Cities (SDSC2024)

Tuesday, June 4th, 2024

		Room 1	Room 2	Room 3
15:00	17:00	Workshop 1 (Part 1) by Beniamino Murgante Proximity Planning Modelling: Innovations, Trends, and Future Challenges in the "15-Minute City" Model	Workshop 2 (Part 1) by Alenka Poplin Game Design: Creating Serious Games for Sustainable Futures **(The Workshop will start at 16:00)**	Workshop 3 (Part 1) by Marathon Data Systems - Anastasia Mavridaki ArcGIS: the technology for building a sustainable future
17:00	17:30	Break		
17:30	20:00	Workshop 1 (Part 2) by Beniamino Murgante Proximity Planning Modelling: Innovations, Trends, and Future Challenges in the "15-Minute City" Model	Workshop 2 (Part 2) by Alenka Poplin Game Design: Creating Serious Games for Sustainable Futures	Workshop 3 (Part 2) by Marathon Data Systems - Anastasia Mavridaki ArcGIS: the technology for building a sustainable future

Wednesday, June 5th, 2024

9:00	10:00	**Entrance Hall** Registration
10:00	10:30	**Auditorium** Opening Ceremony Welcome Speech: Dimos Pantazis, General Co-Chair Welcome Speech: Panagiotis Kaldis, Rector of Uni.W.A. Opening Greetings Opening Greetings: Anastasios Faroupos, Mayor of Antiparos Opening Speech: Ioannis Skamnakis, Civil Aviation Authority
10:30	11:30	KEYNOTE by Robert Laurini
11:30	11:50	**Break**

		Room 1 - Session 1 - Part 1 **Smart Data - SD1** **Robert Laurini**	Room 2 - Session 1 - Part 1 **Smart Constructions - SCn** **Nikitas Karanikolas**
11:50	12:50	A GeoSpatial Information System for Photovoltaic Plants Development and Monitoring Eliseo Clementini, Roberto Patrizi, Marco Santic and Carlo Villante	QUANTUM SENSING FOR THE CITIES OF THE FUTURE Boris Kantsepolsky and Itzhak Aviv
		Vibration-based water leakage detection system for public open data platforms Costantino Giaconia, Fulvio Lo Valvo, Karim Ladjery, Francesco Di Puma, Josè Falla, Ioannis T. Christou, John Soldatos, Thanasis Papadakis, Boian Popunkiov, Daniela Alexieva and Dian Raykov	Flight Planning Algorithm for Infrastructure Inspection using Drone Phillip Kim and Junhee Youn
		Towards a multi-database CityGML environment adapted to big geodata issues of urban digital twins Jean-Paul Kasprzyk and Roland Billen	Bridging past and present: cutting-edge technologies for predictive conservation of built cultural heritage Manlio Montuori

		Room 1 - Session 1 - Part 2 Smart Data - SD2 Robert Laurini	Room 2 - Session 1 - Part 2 Smart Cities - SCs1 Roland Billen
12:50	13:50	Building extraction in urban and rural areas with aerial and LiDAR DSM Emilia Hattula, Lingli Zhu and Jere Raninen	(m)App my data! Developing a Map-ability Rating and App to Rapidly Communicate Data Quality and Interoperability Potential of Open Data Claire Ellul, Paul Reynolds and Leonardo Vilardo
		Smart Cities, G.I.S. and the Phenomenon of Piracy Maria Gourgourini	Centralised monitoring and control of buildings using open standards Pavel Paulau, Johannes Hurka, Jan Middelberg and Sascha Koch
		POI GPT : Extracting POI Locations from Social Media Text Data Hyebin Kim and Sugie Lee	Towards a Conceptual Model of CityGML 3.0 Vegetation ADE Dessislava Petrova-Antonova, Simeon Malinov, Laura Mrosla and Aleksandar Petrov
13:50	14:50	Lunch	
		Room 1 - Session 2 - Part 1 Smart Urban Mobility - SUM Panagiotis Papantoniou	Room 2 - Session 2 - Part 1 Smart Cities - SCs2 Sisi Zlatanova
14:50	15:50	TRIANGLE DESCRIPTOR LOOP DETECTION METHOD BASED ON FASTER LIO Siqi Wang, He Huang, Junxing Yang, Junyang Bian and Shan Jiang	Towards an Automated Transformation of an nD Urban Data Model to a Computational Ontology Network: From UML to OWL, From CityGML 3.0 to "CityOWL" Diego Vinasco-Alvarez, Gilles Gesquiere, Sylvie Servigne and John Samuel
		RESEARCH ON HIGH-FREQUENCY ODOMETRY IN LASER SLAM USING POINT-SUBMAP MATCHING Junyang Bian, He Huang, Junxing Yang, Siqi Wang and Xin Zhang	A CONCEPT FOR 3D GEOLOGICAL AND URBAN SUBSURFACE MODELING WITH A UNIFIED VOXEL MODEL EXAMINED BY A CASE STUDY FOR THE CITY CENTER OF STUTTGART (BADEN-WÜRTTEMBERG), GERMANY Klaus Pusacker, Volker Coors, Jörg-Detlef Eckhardt and Isabel Rupf.
		Research on Deep Learning-Based Vehicle and Pedestrian Object Detection Algorithms Xin Zhang, He Huang, Junxing Yang and Shan Jiang	
15:50	16:20	Break	

		Room 1 - Session 2 - Part 2 Smart Green - SGn Michael Vassilakopoulos	Room 2 - Session 2 - Part 2 Smart Cities - SCs3 Ioannis Voyiatzis
16:20	17:50	Detecting Hull Fouling using Machine Learning Algorithms trained on Ship Propulsion Data to Improve Resource Management and Increase Environmental Benefits. Christos Petridis and Michael Vassilakopoulos	Global Structure-from-Motion Enhanced Neural Radiance Fields 3D Reconstruction Tong Ye, He Huang, Yucheng Liu and Junxing Yang
		Estimation of Photovoltaic Potential of Urban Buildings Considering a Solar Panel Arrangement Using a 3D City Model Ryuji Matsuoka, Takashi Takemoto, Genki Takahashi, Tomoaki Inazawa and Shinichiro Sogo	3D Reconstruction of buildings based on 3D Gaussian Splatting Zhenglong Cai, Junxing Yang, Tianjiao Wang, He Huang and Yue Guo
		A Novel Algorithm to Estimate Solar Irradiance of Urban Buildings for Photovoltaic Potential Estimation System Using a 3D City Model	INNOVATIVE RESEARCH ON SMALL OBJECT DETECTION AND RECOGNITION INREMOTE SENSING IMAGES USING YOLOV5 Shan Jiang, He Huang, Junxing Yang, Xin Zhang and Siqi Wang
		CHILDREN'S INTERACTION WITH URBAN GREEN INFRASTRUCTURE WITH(OUT) A DIGITAL TOOL: RESULTS FROM SPATIAL ANALYSIS AND OBSERVATIONS IN THE NETHERLANDS Shengchen Yin, Dena Kasraian, Gamze Dane and Pieter van Wesemael	360° Panorama Stitching Method with Depth Information: Enhancing Image Quality and Stitching Accuracy Tianjiao Wang, He Huang, Zhenglong Cai, Jialin Song and Junxing Yang
17:50	18:10	**General assembly of the conference's participants** **Auditorium**	
18:10	19:30	**Welcome Party** **Entrance Hall**	

Thursday, June 6th, 2024

9:00	10:00	**Entrance Hall** Registration	
10:00	11:00	**Auditorium** KEYNOTE by Beniamino Murgante	
11:00	11:20	**Break**	
		Room 1 - Session 1 - Part 1 **Smart People - SP1** **Alenka Poplin**	**Room 2 - Session 1 - Part 1** **Smart Digital Planning Tools - SDPT1** **Volker Coors**
11:20	12:20	Safety assessment of cycling routes in urban environments Weilian Li, Lukas Arzoumanidis, Jannik Matijevic, Daham Mohammed Mustafa, Peter Rottmann, Jan-Henrik Haunert and Youness Dehbi	Data Structure Design and Visualization for Creating Dynamic Thematic Maps Yonghwan Lee, Sunghwan Kim, Philip Kim, Jieun Kim and Junhee Youn
		VOLUNTARISM, INFORMALITY, AND SOCIAL CAPITAL FOR REGENERATIVE RESILIENCE: LESSONS FROM THE 2015 NEPAL EARTHQUAKE, 2023 SLOVENIA FLOOD, AND INTENTIONAL COMMUNITIES IN WALES Jiwnath Ghimire, Alenka Poplin and Andrea Wheeler	Evolutionary Computing for Multi-Objective Sustainable Urban Spatial Planning Stuart Barr
		The Conversion of an IAM into a Web based PIAM: The development of a web based Garbage Footprint Calculator 'GASMOD' Elias Grammatikogiannis and Maria Giaoutzi	Urban Tree Detection from Remote Sensing Data Based on DeepForest Model Vasil Dakov and Dessislava Petrova-Antonova

(no break)		Room 1 - Session 1 - Part 2 Smart People - SP2 Alenka Poplin	Room 2 - Session 1 - Part 2 Smart Digital Planning Tools - SDPT2 Volker Coors
12:20	13:40	Artificial Intelligence for Urban Safety: A Case Study for reducing road accident in Genoa Alessandro Marceddu, Massimo Micccoli, Alessandro Amicone, Luca Marangoni and Alessandra Risso	Semantic 3D city models as support for urban flood resilience: experiences from Rotterdam Lara Andriessen, Giorgio Agugiaro, Aloys Borgers and Pieter Pauwels
		Contemporary development directions for urban digital twins Juho-Pekka Virtanen, Jukka Alander, Heli Ponto, Ville Santala, Renske Martijnse-Hartikka, Andreas Andra and Timo Sillander	Towards a Digital Twin of Liege: The Core 3D Model based on Semantic Segmentation and Automated Modeling of LiDAR Point Clouds Zouhair Ballouch, Imane Jeddoub, Rafika Hajji, Jean-Paul Kasprzyk and Roland Billen
		IMUV : A Digital Twin for Mediation to Discover and Exchange on Territories Mathieu Livebardon, Valentin Machado, John Samuel, Didier Chanfray, Jean-Yves Toussaint and Gilles Gesquiere	The Role of Computational Fluid Dynamics within City Digital Twins: Opportunities and Challenges Radostin Mitkov, Mariya Pantusheva, Dessislava Petrova Antonova, Vasilis Naserentin and Anders Logg
		Volunteered Citizen Engagement to Smart Cities Gabriela Simeonova, Ivan Marinov and Christina Mickrenska	SPATIOTEMPORAL INTERPOLATION METHOD FOR POPULATION FLOW DATA IN URBAN AREAS Toshihiro Osaragi, Xianshu Nan and Maki Kishimoto
13:40	14:40	Lunch	

		Room 1 - Session 2 - Part 1 Smart Governance - SGe1 Beniamino Murgante	Room 2 - Session 2 - Part 1 Smart Digital Planning Tools - SDPT3 Giorgio Agugiaro
14:40	15:40	Smart Cities: From Theory to Reality - The Athens Case Dimos Pantazis, Vassilios Moussas, Anna Christina Daverona and Maria Gourgourini	Machine learning based mobile capacity estimation for roadside parking Aruscha Kramm, Eric Peukert, Andrι Ludwig and Bogdan Franczyk
		EXPLORING THE EFFECTIVENESS OF IMMERSIVE VIRTUAL REALITY FOR CO-DESIGN OF URBAN PUBLIC SPACE Sem Akkers, Aloys Borgers, Gamze Dane	A MULTI-FLOW VISUAL ANALYTICS WEB PLATFORM FOR DETECTING HIGH WIND ENERGY POTENTIAL IN URBAN ENVIRONMENTS Athanasios Koukofikis and Volker Coors
		Community Engagement with AI-enhanced Serious Digital Geogames Alenka Poplin	Evaluating the Reliability of Online Restaurant Review POI Data for Urban Restaurant Analysis: A Case Study of Chiba City, Japan Hozumi Kikuchi, Takuo Inoue, Chie Koga, Ichiro Watanabe, Yerim Yang, Yuta Shin, Hiroki Nakajima and Hideki Koizumi
15:40	16:10	Break	

		Room 1 - Session 2 - Part 2 Smart Governance - SGe2 Philip Kim	Room 2 - Session 2 - Part 2 Smart Digital Planning Tools - SDPT4 Claire Ellul
16:10	17:30	Urban Digital Twins Empowering Energy Transition: Citizen-Driven Sustainable Urban Transformation towards Positive Energy Districts Volker Coors and Rushikesh Padsala	Local Climate Zoning Interaction on Land Surface Temperature Determination - City of Split Case Study Tea Duplancic Leder, Nenad Leder and Karlo Leder
		Critical Comparative Analysis of UAS Legislative Developments Anastasia Tsotra	Modelling multi-density urban expansion using Cellular Automata for Brussels Metropolitan Development Area Anasua Chakraborty, Ahmed Mustafa and Jacques Teller
		Data-driven policy development of Municipalities: Preparation steps for Integrating AI tools in the policymaking process Vagia Kalliontzi, Vassilis Voulgarakis and Giacomo Delinavelli	Integration of GIS and CAD data to perform interactive preliminary environmental analyses at district scale Bing-Shiuan Tsai, Lars Huizer, Michele Giampaolo, Sιrιnic Montι, Sicong Gong, Francisco Gabriel Garcνa Gonzαlez and Giorgio Agugiaro
		POSSIBILITY OF CROWDSOURCING-BASED METHOD FOR ANALYZING THE FLATNESS OF WALKING SPACES Jung Il Shin and Jung Ok Kim	Conceptualising an Urban Digital Twin Framework for Simulating the Impact of Household Consumption Choices on the Carbon Footprint of Urban Neighborhoods Rushikesh Padsala, Thunyathep Santhanavanich, Ursula Eicker and Volker Coors
17:30	17:50	**General assembly of the conference's participants**	
21:00	0:30	**Gala & Best Papers Awards Green Park 22 Mavrommateon Str, 104 34, Athens greenparkathens.gr**	

Friday, June 7th, 2024

		Room 1 - Session 1 - Part 1	Room 2 - Session 1 - Part 1
9:00	10:00	**Entrance Hall** Registration	
10:00	11:00	**Auditorium** KEYNOTE by Alenka Poplin	
		Room 1 - Session 1 - Part 1 **Smart Cities - SCs4** **Dimos Pantazis**	**Room 2 - Session 1 - Part 1** **Smart Digital Planning Tools - SDPT5** **Athanasios Koukofikis**
11:00	12:00	Introducing a novel Decision Support Platform for Efficient Urban Planning towards Smart Policy-Making Christos Kontopoulos, Efthymios Magkoufis, Eirini Baltzi and Vasiliki Charalampopoulou	Institutional and spatial constraints on locating VoloPorts in Greek metropolitan areas Dionysia Georgia Perperidou and Eleni Balta
		Bridging the Gap: Matching Data from Low-Cost Mobile Sensors and Satellite for Urban Heat Island Research. A case study in Padua, Italy. Carlo Zanetti, Lisa Rubert, Massimo De Marchi and Salvatore Eugenio Pappalardo	MapGPT: An AI approach for democratising Geospatial Analysis Chris Pettit and Balamurugan Soundararaj
		Developing digital twins of citizens in urban public spaces: An agentbased modeling framework Senqi Yang, Gamze Dane and Theo Arentze	Dynamic Geospatial Data Integration: A Case Study of Moving Objects in Munakata City, Japan Using OGC API Moving Features and SensorThings API Thunyathep Santhanavanich, Rushikesh Padsala, Matthias Betz and Volker Coors
12:00	12:20	**Break**	

		Room 1 - Session 1 - Part 2 Smart Cities - SCs5 Chris Pettit	Room 2 - Session 1 - Part 2 Smart Digital Planning Tools - SDPT6 Panagiotis Papantoniou
12:20	13:40	Airborne Cross-Source Point Clouds Fusion by Slice-to-Slice Adjustment Shahoriar Parvaz, Felicia Norma Rebecca Teferle and Abdul Awal Md Nurunnabi	Forest/rural road network detection and condition monitoring based on satellite imagery and deep semantic segmentation Dimitrios Kelesakis, Konstantinos Marthoglou, Eleni Tokmaktsi, Emmanouel Tsiros, Apostolos Karteris, Anastasia Stergiadou, Georgios Kolkos, Petros Daras and Nikos Grammalidis
		Integrating SAM and LoRA for DSM-Based Planar Region Extraction in Building Footprints Oktay Eker, Murat Avcı, Selen Çiğdem, Oğuzhan Özdemir, Fatih Nar and Dmitry Kudinov	Simulation of Urban Density Scenario according to the Cadastral Map using K-Means unsupervised classification Mojtaba Eslahi, Mateo Baira and Rani El Meouche
		Portable laser scanning solutions for modelling of large buildings Gergana Antova	Enhancing Roadway Safety: LiDAR-based Tree-Clearance Analysis Miriam Louise Carnot, Eric Peukert and Bogdan Franczyk
		AUTOMATING BUILT HERITAGE MODELLING FOR THE INTEGRATION INTO 3D CITY MODELS Ali Aboohamzeh, Marco Avena and Antonia Spanò	Study on the effect of color space in deep multitask learning neural networks for road segmentation Jere Raninen, Lingli Zhu and Emilia Hattula
13:40	14:40	Lunch	

		Room 1 - Session 2 Smart Cities - SCs6 Dionysia-Georgia Perperidou	Room 2 - Session 2 Smart Digital Planning Tools - SDPT7 Christina Mickrenska
14:40	16:00	Towards a Holistic Urban Space Evaluation and Monitoring Framework: Leveraging Digital Twins and Urban AI for Smart Cities Xuan Li and Sugie Lee	Orchestrating Urban Footfall Prediction: Leveraging AI and batchoriented workflow for Smart City Application Tom Komar and Philip James
		Land cover data in CityGML Per-Ola Olsson, Karolina Pantazatou and Lars Harrie	HeatWatch: Identification of Parameters Influencing the Urban Heat Island Effect through Deep Learning Techniques Murat Kılınç, Can Aydın, Gizem Erdoğan Aydın and Damla Balcı
		Insights from the development of an innovative air quality monitoring system Kyriaki Maria Fameli, Aggelos Kladakis, Chrysanthi Efthymiou, Chrysa Charalampidou, Maria Sotiropoulou, IroMaria Antoniou, Dimitra Papadaki, Margarita-Niki Assimakopoulos and Vasiliki Assimakopoulos	DEEP LEARNING-BASED ASSESSMENT OF URBAN AND VEGETATION CHANGES USING HIGH-RESOLUTION KHALIFASAT SATELLITE IMAGERY OVER DUBAI Maitha A A Nuaimi, Eman H Salem, Hala F S Ibrahim, Asma Abdulla A Al Ali, Hussein M Abdulmuttalib, Raja Biswas, Le Haiha, Sandip Banerjee and Abhay S Mittal
		GeoAI for Topographic Data Accuracy Enhancement: the AI4TDB project Lingli Zhu, Jere Raninen and Emilia Hattula	Smarter Together: An integrated Digital Platform for Smart Cities in Saudi Arabia Mohammed Alotaibi and Muhammad Tauhidur Rahman
16:00	17:00	General assembly of the conference's participants, Closing Ceremony & Best Presentations Awards	
17:30	18:30	Farewell Party Entrance Hall	

Saturday, June 8th, 2024

8:30	18:00	Smart excursion in Poros island

The SDSC2024 Program Committee co-Chairs:

Nikitas N. Karanikolas, University of West Attica
Claire Ellul, University College London
Michael Vassilakopoulos, University of Thessaly