

Day ONE: 4 Nov 2022 (Fri)
Venue A, University of Macau

Opening Ceremony [\(Link\)](#)

08:45 – 9:00 Welcome Remarks by Prof. Yonghua SONG
Rector of the University of Macau and Director of State Key Laboratory for Internet of Things for Smart City

[Keynote Session I \(Link\)](#)

9:00 – 09:45 *Keynote Speech #1: Grid Modernisation for Smart and Carbon-Neutral Cities*

Prof. Chi Yung CHUNG
CAE Fellow, IEEE Fellow, EIC Fellow IET Fellow, HKIE Fellow
Chair Professor, The Hong Kong Polytechnic University

Session Chair by Prof. Shaodan MA

09:45 – 09:55 Break

09:55 – 10:40 *Keynote Speech #2: From Information Networking to Intelligence Networking*

Prof. Fei Richard YU
Executive Officer, IEEE Fellow, CAE Fellow, EIC Fellow
Guangdong Artificial Intelligence and Digital Economy Laboratory (Shenzhen)

Session Chair by Prof. Cheng-Zhong XU

10:40 – 10:50 Break

[Industrial Session](#)

Chair: Prof. Hannah ZHOU [\(Link\)](#)

10:50 – 11:20 *Digital Technology Supports the Smart Grid Construction in Guangdong-Hong Kong-Macao Greater Bay Area*

Mr. Hugo YUAN
Huawei Senior Solution Manager

11:20 – 11:50 *CEM Advanced Metering Infrastructure (AMI) Development*

Mr. Charles LEONG
Information System Department Technical Advisor
Secretary of Innovation and Technology Committee, Companhia de Electricidade de Macau - CEM, S.A.

11:50 – 12:20	<i>A More Liveable City – The Smart City Practice as a Chinese Infrastructure Provider</i> Dr. Yang QIAO Deputy Director, Zhen Hwa Harbour Construction Co., Ltd.		
12:20 – 14:00	Break		
	<u>Urban Public Safety and Disaster Prevention</u> Session Chair: Prof. Huabin SHI and Prof. Dongxiao WANG Venue A, University of Macau (Link)	<u>Sensing and Communications</u> Session Chair: Prof. Fen HOU and Prof. Lin CAI Venue B, University of Macau (Link)	<u>Open Research Project Highlight Session</u> Session Chair: Prof. Wanhuan ZHOU Venue C, University of Macau (Link)
14:00 – 14:25	<i>Fast and Maneuverable Soft Robots Driven by Underwater Combustion</i> Prof. Zhiguo HE Zhejiang University	<i>Reconfigurable Holographic Surfaces: A New Paradigm to Holographic Communications for 6G</i> Prof. Lingyang SONG Peking University	<i>Practice of Machine Learning in Constitutive Modelling of Soils</i> Prof. Zhenyu YIN The Hong Kong Polytechnic University
14:25 – 14:50	<i>Case Study of Oceanic Response to Tropical Cyclone</i> Prof. Chunhua QIU Sun Yat-Sen University	<i>Environmental Sustainability and Intelligence as well as General Green Technologies</i> Prof. Jinsong WU University of Chile	<i>Development and Applications of Triboelectric Sensors in the Industrial Technology</i> Dr. Tinghai CHENG Beijing Institute of Nanoenergy and Nanosystem, Chinese Academy of Sciences
14:50 – 15:15	<i>Marine Observation Strategy for the Tropical Coastal Cities 'SDG 14</i> Prof. Dongxiao WANG Sun Yat-Sen University	<i>Joint Vehicular Localization and Reflective Mapping Based on Team Channel-SLAM</i> Prof. Zhaoming LU Beijing University of Post and Telecommunications	<i>Challenges of Digitizing Power Grid Operation Business and a Brief Discussion on the Bottleneck of the Digital Platform's Data Lake</i> Prof. Junbo ZHANG South China University of Technology
15:15 – 15:40	<i>Successful Implementations of a Real-time and Intelligent Early Warning System for Loess Landslides on the Heifangtai Terrace</i> Prof. Dalei PENG Chengdu University of Technology	<i>Green Federated Learning: A Wireless Power Transfer Approach</i> Prof. Yuan WU University of Macau	<i>Federated Transfer Learning for Domain-Adaptive Indoor Wireless Sensing</i> Prof. Suzhi BI Shenzhen University

15:40 – 16:05	<i>Adaptive Reservoir Management under Climate Change in the Lancang-Mekong River Basin</i> Prof. Qihong TANG Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences		<i>Joint MCS Adaptation and RB Allocation in Cellular Networks Based on Deep Reinforcement Learning with Stable Matching</i> Prof. Liqun FU Xiamen University
16:05 – 16:15	Break		
	<u>Smart Energy</u> Session Chair: Prof. Ningyi DAI and Dr. Ying HUANG Venue A, University of Macau (Link)	<u>AI and Big Data</u> Session Chair: Prof. Jiantao ZHOU and Prof. Cong WANG Venue B, University of Macau (Link)	
16:15 – 16:40	<i>Optimization of Smart Energy Communities</i> Prof. Pierluigi SIANO University of Salerno	<i>Sequential Location Recommendation and Beyond</i> Prof. Defu LIAN University of Science and Technology of China	
16:40 – 17:05	<i>Exploration and Practice of Efficient Operation of Urban Intergrated Energy System</i> Prof. Wei GU Southeast University	<i>Optimization from Structured Samples — An Effective Approach for Data-driven Optimization</i> Prof. Wei CHEN Microsoft Research Asia (MSRA)	
17:05 – 17:30	<i>Reliability and Resilience Evaluation of Integrated Energy Systems</i> Prof. Yi DING Zhejiang University	<i>Software Systems for Heterogeneous Hardware and Advanced Data Processing Platforms</i> Prof. Philippe Cudré-Mauroux University of Fribourg	
17:30 – 17:55	<i>Transition Pathway Towards Carbon Neutral Electrical Power Systems in China: Quantitative Analyses Based on High-precision Models</i> Prof. Xinyu CHEN	<i>Spatio-Temporal Urban Data: Sensing, Analytics, Ad Applications</i> Prof. Longbiao CHEN Xiamen University	

	Huazhong University of Science and Technology		
17:55 – 18:20	<i>Talk Title: Research on Emerging Threats and Protection Techniques of Energy IoT Cyber-physical System</i> Prof. Keng Weng LAO University of Macau	<i>Order Selection Prophet Inequality</i> Prof. Zhihao TANG Shanghai University of Finance and Economics	

Day TWO: 5 Nov 2022 (Sat)
Venue A, University of Macau

Keynote Session II

Chair: Prof. Zhiguo GONG

Venue: A, University of Macau

[\(Link\)](#)

9:00 – 09:45	<p><i>Keynote Speech #3: Data Science for Deep Learning</i></p> <p>Prof. Lei CHEN IEEE Fellow Chair Professor, Hong Kong University of Science and Technology</p>		
09:45 – 09:55	Tea Break		
	<p><u>Smart Energy</u> Session Chair: Prof. Hongcai ZHANG and Prof. Ying HUANG Venue A, University of Macau <u>(Link)</u></p>	<p><u>Sensing and Communications</u> Session Chair: Prof. Shaodan MA and Prof. Ying WANG Venue B, University of Macau <u>(Link)</u></p>	<p><u>Intelligent Transportation</u> Session Chair: Prof. Leong Hou U and Prof. Jingyuan WANG Venue C, University of Macau <u>(Link)</u></p>
09:55 – 10:20	<p><i>New Concept and Research Development of Power Electronics Equipment for DC System</i></p> <p>Prof. Miao ZHU Shanghai Jiao Tong University</p>	<p><i>Self-Evolving and Transformative (SET) Protocol Architecture for 6G</i></p> <p>Prof. Lin CAI University of Victoria</p>	<p><i>Real-time Traffic and Road Surveillance with Parallel Edge Intelligence</i></p> <p>Prof. Ruimin KE University of Texas at El Paso</p>
10:20 – 10:45	<p><i>Flexibility Aggregation and Dispatch of Large-Scale Distributed Energy Resources</i></p> <p>Prof. Zechun HU Tsinghua University</p>	<p><i>Reconfigurable Intelligent and Holographic Surfaces for Wireless Communications – On Modeling the Mutual Coupling</i></p> <p>Prof. Marco Di Renzo Paris-Saclay University Paris</p>	<p><i>Decoupling Causal Learning Method and Applications</i></p> <p>Prof. Baochang ZHANG Beihang University</p>
10:45 – 11:05	<p><i>Decentralized/Distributed Optimal Operation of Power System with High Penetration of Renewables</i></p> <p>Prof. Qiuwei WU Tsinghua University (Shenzhen)</p>	<p><i>Empowering Federated Learning in IoV with Fuzzy Logic-based Client Selection</i></p> <p>Prof. Celimuge WU University of Electro-Communications</p>	<p><i>LibCity: An Open-source Platform for Urban Spatio-temporal Prediction</i></p> <p>Prof. Jingyuan WANG Beihang University</p>

11:05 – 11:30	<i>Coordinated Operation and Planning of Distributed Energy Resources (DERs) in Microgrids</i> Prof. Yan XU Nanyang Technological University	<i>Wi-Fi Can Do More: Towards Ubiquitous Wireless Sensing</i> Dr. Beibei WANG Origin Wireless, Inc.	<i>Cooperative Path Planning of Large-scale Mobile Robot Groups</i> Prof. Zhe LIU Shanghai Jiao Tong University
11:30 – 11:55	<i>Resilient Operation of Urban Power Grid under New Energy Paradigm</i> Prof. Yunhe HOU The University of Hong Kong	<i>On the Fundamental Tradeoff of Integrated Sensing and Communications Under Gaussian Channels</i> Prof. Fan LIU Southern University of Science and Technology	<i>Towards Smart and Energy-efficient UAV Systems and Applications</i> Prof. Kuangyu ZHENG Associate Professor, Beihang University
12:00 – 13:00	<u>Poster Session & Award Ceremony</u> Chair: Prof. Liang GAO Venue A, University of Macau (Link)		
13:00 – 14:30	Break		
	<u>Urban Public Safety and Disaster Prevention</u> Session Chair: Prof. Wanhuan ZHOU and Prof. Xueyu GENG Venue A, University of Macau (Link)	<u>AI and Big Data</u> Session Chair: Prof. Jiantao ZHOU and Prof. Yi CAI Venue B, University of Macau (Link)	<u>Intelligent Transportation</u> Session Chair: Prof. Leong Hou U and Prof. Jingyuan WANG Venue C, University of Macau (Link)
14:30 – 14:55	<i>SMA-based Seismic-Resistant Structures: From Smart Materials to resilient structures</i> Prof. Songye ZHU The Hong Kong Polytechnic University	<i>Physical Anti-copying Semi-Robust Watermarking for QR Codes</i> Prof. Li DONG Ningbo University	<i>Effective Network Embedding Methods on Large-scale Graphs</i> Prof. Jieming SHI The Hong Kong Polytechnic University
14:55 – 15:20	<i>Accounting for Multiple Uncertainties in the Digital Twinning of Structural Dynamical Systems Based on Fast Bayesian Learning and Metamodeling</i> Prof. Wangji YAN University of Macau	<i>Self-supervised Recommender Systems</i> Prof. Chao HUANG University of Hong Kong	<i>Robust and Efficient Mobile Robot Localization Using LiDAR and Radar</i> Prof. Huan YIN The Hong Kong University of Science and Technology

<p>15:20 – 15:45</p>	<p><i>Susceptibility Analysis and Economic Vulnerability of Buildings to Glacier-related Debris Flows</i> Prof. Xueyu GENG The University of Warwick</p>	<p><i>Towards Understanding COVID-19 Vaccination Stances Based on Interaction Graph: A Novel Dataset and its Applications</i> Prof. Yupeng LI Hong Kong Baptist University</p>	<p><i>Learning Realistic and Reactive Traffic Agents</i> Prof. Meixin ZHU The Hong Kong University of Science and Technology (Guangzhou)</p>
<p>15:45 – 16:10</p>	<p><i>The Impact of the Climate Change and Sea Level Rise on the UK Coasts</i> Prof. Shunqi PAN Cardiff University</p>	<p><i>Recent Developments in Fair Allocations of Indivisible Chores</i> Prof. Xiaowei WU University of Macau</p>	<p><i>The Real Impact and the User Perception of Sandwich Attacks in the DeFi Ecosystem</i> Prof. Ye WANG University of Macau</p>
<p>16:10 – 16:35</p>	<p><i>Two-phase Modelling of Sediment Transport by Incompressible SPH</i> Prof. Yan ZHOU University of Liverpool</p>		
<p><u>Keynote Session III</u> Chair: Prof. Shaodan MA Venue A, University of Macau (Link)</p>			
<p>16:35 – 17:20</p>	<p>Keynote Speech #4: Bruce Lee Inspired Fluid Antenna Systems for 6G Prof. Kai-Kit WONG IEEE Fellow, IET Fellow Chair Professor, University College London</p>		