

## 2026 International Conference on Big Data and Smart Computing

Guangzhou Baiyun International Convention Center LN Dongfang Hotel, Guangzhou, China  
February 2 (Mon) - February 5 (Thu), 2026.

# Conference Program



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## Welcome to BigComp2026

Big data and smart computing are emerging research fields that have been drawing much attention from diverse disciplines including computer science, information technology, and social sciences. The goal of the International Conference on Big Data and Smart Computing (BigComp), initiated by KIISE (Korean Institute of Information Scientists and Engineers), is to provide an international forum for exchanging ideas and information on current studies, challenges, research results, system developments, and practical experiences in these emerging fields among researchers, developers, and users from academia, business and industry. Following the successes of the previous BigComp conferences in Bangkok, Thailand (2014), Jeju, Korea (2015), Hong Kong, China (2016), Jeju, Korea (2017), Shanghai, China (2018), Kyoto, Japan (2019), Busan, Korea (2020), Jeju, Korea (2021), Daegu, Korea (2022), Jeju, Korea (2023), Bangkok, Thailand (2024), Kota Kinabalu, Malaysia (2025). The 2026 IEEE International Conference on Big Data and Smart Computing (IEEE BigComp 2026) will be held in Guangzhou, China. The conference is co-sponsored by IEEE and KIISE. IEEE BigComp 2026 invites authors to submit original research papers and as well original work-in-progress reports on big data and smart computing.

## Steering & Organizing Committees

### Steering Committee

#### Steering Committee

- Ho-Jin Choi, KAIST, Korea (Chair)
- X. Sean Wang, Fudan University, China (Vice-Chair)
- Jaideep Srivastava, University of Minnesota, USA (Secretary)
- Wookey Lee, Inha University, Korea (Treasurer)
- Chong-Kwon Kim, KENTECH, Korea (Advisor)
- Jinho Kim, Kangwon National University, Korea
- Masatoshi Yoshikawa, Osaka Seikei University, Japan
- Xiaofang Zhou, HKUST, China
- Kyuseok Shim, Seoul National University (ex-officio)
- Wonjun Lee, Korea University (ex-officio)
- Junping Du, Beijing University of Posts and Telecommunication, China
- Young-Kuk Kim, Chungnam National University, Korea
- JooYeoun Lee, Ajou University, Korea
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- Herwig Unger, FernUniversität in Hagen, Germany

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- Chong-Kwon Kim, KENTECH, Korea

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- Jian Weng (Jinan University, China)
- Junping Du (BUPT, China)
- Joonho Kwon (Pusan National University, Korea)

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- Anjia Yang (Jinan University, China)

#### Program Co-Chairs

- Yunjun Gao (Zhejiang University, China (Lead))
- Jiwon Seo (Seoul National University, Korea)

#### Publication Co-Chairs

- Jilian Zhang (Jinan University, China)
- Hyuk-Yoon Kwon (Seoul National University of Science and Technology, Korea)

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- Kai Wang (Shanghai Jiao Tong University, China)
- Kijung Shin (KAIST, Korea)

#### Publicity Co-Chairs

- Zhenying He (Fudan University, China)
- Jeongyun Han (University of Seoul, Korea)
- Kien Nguyen (Chiba University, Japan)

#### Finance Co-Chairs

- Shuyuan Lin (Jinan University, China)
- Young-Kyoong Suh (Kyungpook National University, Korea)

#### Local Arrangement Chair

- Guanggang Geng (Jinan University, China)

## Organizing Committees / Technical Program Committee

#### Poster Session Co-Chairs

- Ziqiang Yu (Yantai University, China)
- Sangheon Pack (Korea University, Korea)

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- Jianqiu Xu (Nanjing University of Aeronautics and Astronautics, China)
- Sungyong Ahn (Pusan National University, Korea)

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- Jangho Lee (Incheon National University, Korea)

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- X. Sean Wang (Fudan University, China)

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- Athman Bouguettaya, The University of Sydney
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- Jaeyoung Do, Seoul National University
- Wolfgang Halang, Fernuniversität in Hagen
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- Hyeonseung Im, Kangwon National University
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- Hyungsoo Jung, Hanyang University
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- Deok-Hwan Kim, Inha University
- Kang-Min Kim, The Catholic University of Korea
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- Iljoo Kim, Myongji University
- Min Su Kim, Korea Advanced Institute of Science and Technology (KAIST)
- Soyeon Kim, Korea Advanced Institute of Science and Technology (KAIST)
- Shad Kirmani, LinkedIn Corporation
- In-Young Ko, School of Computing, Korea Advanced Institute of Science and Technology
- Sunyoung Kwon, Pusan National University
- Minhae Kwon, Soongsil University
- Jongwuk Lee, Sungkyunkwan University
- Yeon-Chang Lee, Ulsan National Institute of Science & Technology (UNIST)
- Ki Yong Lee, Sookmyung Women's University
- Kyong-Ha Lee, Korea Institute of Science and Technology Information (KISTI)
- Ki-Hoon Lee, Kwangwoon University
- Sanghwan Lee, Kookmin University
- Won Hee Lee, Kyung Hee University
- Jae-Gil Lee, Korea Advanced Institute of Science and Technology
- Dongha Lee, Yonsei University
- Chun-Hee Lee, Kyungpook National University

- Jae-woong Lee, Kangwon National University
- Kyungyong Lee, Kookmin University
- Mingxing Li, Beihang University
- Qingdang Li, Qingdao University of Science & Technology
- Haisheng Li, Beijing Technology and Business University
- Ang Li, Beijing University of Posts and Telecommunications
- Yujin Lim, Sookmyung Women's University
- Sungsu Lim, Chungnam National University
- Guanfeng Liu, Macquarie University
- Mengchi Liu, Carleton University
- Woong-Kee Loh, Gachon University
- Qiang Ma, Kyoto Institute of Technology
- Jun-Ki Min, Korea University of Technology and Education
- Hisashi Miyamori, Kyoto Sangyo University
- Jun Miyazaki, Tokyo Institute of Technology
- Yang-Sae Moon, Kangwon National University
- Akiyo Nadamoto, Konan University
- Miyuki Nakano, TSUDA UNIVERSITY
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- Chihyun Park, Kangwon National University
- Sangkeun Park, Kyung Hee University
- Donghyeon Park, Sejong University
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- Jehyeok Rew, Duksung Women's University
- Keun Ho Ryu, Chubuk National Univ., Ton Duc Thang Univ., and Chiang Mai Univ.
- Lee Sael, Ajou University
- Jiwon Seo, Seoul National University
- Junseok Seo, Korea Advanced Institute of Science and Technology (KAIST)
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- Chaokun Wang, Tsinghua University
- Juneho Yi, Sungkyunkwan University
- Jaemin Yoo, Korea Advanced Institute of Science and Technology (KAIST)
- Jaesoo Yoo, Chubuk National University
- Yong Ik Yoon, Dept. of Multimedia Science, Sookmyung Women's University

## Greetings

### Chair' s Message

On behalf of the conference organizing committee and the program committee, it is our great pleasure to welcome you to the 2026 IEEE International Conference on Big Data and Smart Computing. The conference is co-sponsored by IEEE and KIISE (Korean Institute of Information Scientists and Engineers).

Big data and smart computing are emerging research fields that have been drawing much attention from diverse disciplines including computer science, information technology, and social sciences. The goal of the International Conference on Big Data and Smart Computing (BigComp), initiated by KIISE (Korean Institute of Information Scientists and Engineers), is to provide an international forum for exchanging ideas and information on current studies, challenges, research results, system developments, and practical experiences in these emerging fields among researchers, developers, and users from academia, business and industry.

Following the successes of the previous BigComp conferences in Bangkok, Thailand (2014), Jeju, Korea (2015), Hong Kong, China (2016), Jeju, Korea (2017), Shanghai, China (2018), Kyoto, Japan (2019), Busan, Korea (2020), Jeju, Korea (2021), Daegu, Korea (2022), Jeju, Korea (2023), Bangkok, Thailand (2024), Kota Kinabalu, Malaysia (2025), the 2026 IEEE International Conference on Big Data and Smart Computing (IEEE BigComp 2026) will be held in Guangzhou, China.

BigComp 2026 attracted 142 paper submissions, from which the Program Committee selected 46 regular papers, and 10 poster papers to be included in these proceedings.

The conference also attracted 4 workshops. They are

- (1) IEEE BigComp 2026 Workshop on Intelligent Multi-Modal Data Processing (IMMDP 2026)
- (2) IEEE BigComp 2026 Workshop on Data Fusion and Privacy Techniques for Novel Applications (DFPTNA 2026)
- (3) The 6th International Workshop on Conceptual Model (Concept 2026)
- (4) IEEE BigComp 2026 Workshop on Efficient Data Representation and Learning (EDRL 2026)

We are honored to present three distinguished keynote speakers: Dr. Sue Bok Moon from Korea, Dr. Gao Cong from Singapore, and Dr. Wencho Zhou from China.

## Greetings

The conference is the result of the precious time of many individual volunteers. The Program Committee has 119 members, who provided more than 300 separate reviews. Also, we would like to thank to all members of organizing committee for their efforts to make this conference happen.

### General Co-Chairs



**Jian Weng**

*Jinan University, China*



**Junping Du**

*Beijing University of Posts and Telecommunications, China*



**Joonho Kwon**

*Pusan National University, Korea*

### Organization Chair



**Anjia Yang**

*Jinan University, China*

### Program Co-Chairs



**Yunjun Gao**

*Zhejiang University, China*



**Jiwon Seo**

*Seoul National University, Korea*

## Conference Program (At a Glance)

### Workshop Day: Feb 2 (Monday), 2026

Time	Content & Location		
08:30-18:00	Registration (Lobby, Block 1)		
09:00-12:00	Workshop 1 (3306+3307, Block 3) IMMDP 2026	Workshop 2 (3308+3309, Block 3) DFPTNA 2026	Tutorial 1 (3301+3302, Block 3) Advances in Real-Time Processing of Longitudinal Data: From Statistical and Deep Learning Methods to Applications (Ying-Ren Chien/National Taipei University of Technology, Pavel Loskot/ZJU-UIUC Institute, Yu Gao/Midea Group)
10:30-10:45	Coffee Break		
12:00-14:00	Lunch (Liuhe Hall, 2nd Floor, Block 1)		
14:00-18:00	Workshop 3 (3306+3307, Block 3) Concept 2026	Workshop 4 (3308+3309, Block 3) EDRL 2026	
15:00-15:30	Coffee Break		
18:00-20:00	Dinner (Liuhe Hall, 2nd Floor, Block 1)		

### Main Conference Day 1: Feb 3 (Tuesday), 2026

Time	Content & Location		
08:30-18:00	Lobby, Block 1		
09:00-10:30	Tutorial 2 (3306+3307, Block 3) Time Series Analytics: Challenges, Foundation Models, and Benchmarking (Jilin Hu & Yang Shu, East China Normal University)	Tutorial 3 (3308+3309, Block 3) AI-Enhanced ESG Data Management: Lifecycle, Challenges, and Large Language Model Frameworks (Zhengyi Yang/UNSW Sydney, Xiwei (Sherry) Xu /CSIRO's Data61, Youqing Fan/Western Sydney University)	
10:30-10:45	Coffee Break		
10:45-11:00	Opening (Qinghe Hall , Block 1) Ceremony Speech (Prof. Jian Weng/Jinan University) Program Chair's Report (Prof. Yunjun Gao/Zhejiang University) Chair: Prof. Junping Du (Beijing University of Posts and Telecommunication)		
11:00-12:00	Keynote Speech 1 (Qinghe Hall , Block 1) Evolution of Networking Stacks into the Cloud (Prof. Sue Bok Moon/Korea Advanced Institute of Science and Technology, KAIST)		
12:00-14:00	Lunch (Liuhe Hall, 2nd Floor, Block 1)		
14:00-15:45	Session 1A (3306+3307, Block 3) Time Series & Spatial Data	Session 1B (3308+3309, Block 3) LLM-based Data Analysis	
15:45-16:15	Coffee Break		
16:15-18:00	Session 2A (3306+3307, Block 3) Graphs	Session 2B (3308+3309, Block 3) LLM	
18:00-20:00	Reception (Liuhe Hall, 2nd Floor, Block 1)		

## Conference Program (At a Glance)

Main Conference Day 2: Feb 4 (Wednesday), 2026

Time	Content & Location	
09:00-17:00	Registration (Lobby, Block 1)	
09:00-10:45	Tutorial 4 (Qinghe Hall , Block 1) Efficient Compression and Queries of Large Graphs ( Fan Zhang/Guangzhou University, Qingshuai Feng/Great Bay University)	
10:45-11:00	Coffee Break	
11:00-12:00	Keynote Speech 2 (Qinghe Hall , Block 1) Geospatial entity representation and city foundation models (Prof. Gao Cong/Nanyang Technological University)	
12:00-14:00	Lunch (Liuhe Hall, 2nd Floor, Block 1)	
14:00-15:45	Session 3A (3306+3307, Block 3) IR & Recommendation	Session 3B (3308+3309, Block 3) AI in Industrial Applications
15:45-16:15	Coffee Break	
16:15-18:00	Poster & Demo Sessions (Lobby area of meeting rooms 3301-3309, Block 3)	
18:00-20:00	Banquet (Qinghe Hall, 1st Floor, Block 1)	

Main Conference Day 3: Feb 5 (Thursday), 2026

Time	Content & Location	
09:00-11:00	Registration (Lobby, Block 1)	
11:00-12:00	Keynote Speech 3 (Qinghe Hall , Block 1) Innovation and Practice of AI Infrastructure for Multi-modal Data Processing Needs (Prof. Wenchao Zhou/ Alibaba Cloud Intelligence)	
12:00-14:00	Lunch (Liuhe Hall, 2nd Floor, Block 1)	
14:00-15:45	Session 4A (3306+3307, Block 3) NLP & LLM Applications	Session 4B (3308+3309, Block 3) Security & Privacy
15:45-16:15	Coffee Break	
16:15-18:00	Session 5A (3306+3307, Block 3) Image Analysis	Session 5B (3308+3309, Block 3) AI for Complex Data
18:00-18:15	Closing (3306+3307, Block 3)	
18:15-20:00	Dinner (Liuhe Hall, 2nd Floor, Block 1)	

## Keynote Speeches

February 3 (Tuesday), 2026

11:00-12:00, (Qinghe Hall, Block 1)

Chair: Junping Du (Beijing University of Posts and Telecommunications)

### Keynote Speech 1: Evolution of Networking Stacks into the Cloud

Speaker: Prof. Sue Bok Moon (Korea Advanced Institute of Science and Technology, KAIST)

#### Abstract:

For most of the 20th century networking platforms have remained mostly dedicated hardware with proprietary software stacks. As the number of networking applications such as QoS controllers, VPN gateways, WAN optimizers, and firewalls, has increased, demand for flexible network configuration has never been stronger. Furthermore, the exponential growth of the datacenter networking market has pushed technological breakthroughs in high performance networking. In this talk we cover past history of networking stacks based on commodity hardware with a focus on projects in our Advanced Networking Lab, namely PacketShader, NBA, S6, Dilos and Adios. From Packet Shader to NBA, we have put batching as the first principle in high-performance networking platform design and exploited not just for IO but also for computing. In S6 we have expanded our research on high-speed networking platforms to elastic scaling of NFVs in datacenters. Also we are looking at RDMA as an alternative high-speed interconnect for disaggregated datacenters. We conclude with remaining technical challenges and emerging relevant trends.

#### Bio:



Sue Bok Moon received her B.S. and M.S. from Seoul National University, Seoul, Korea, in 1988 and 1990, respectively, all in computer engineering. She received Ph.D. in computer science from the University of Massachusetts at Amherst in 2000. From 1999 to 2003, she worked in the IPMON project at Sprint ATL in Burlingame, California. In August of 2003, she joined KAIST and now teaches in Daejeon, Korea. Her research interests lie in datacenter networking. She has served in numerous technical committees of prestigious conferences and served as chairs for WWW 2013 and ACM CoNEXT 2017, just to name a few. She was named a N2Women Star in Computer Networking and Communications by IEEE ComSoc in 2021. Her Best Paper of ACM IMC 2007 won the Test of Time Award in 2022. In 2021 she served as a deliberative member in the Presidential Advisory Council on Science and Technology in 2021. In 2026 she serves as president of KIISE (Korea Institute of Information Science and Engineering).

## Keynote Speeches

February 4 (Wednesday), 2026

11:00-12:00, (Qinghe Hall, Block 1)

Chair: Jiwon Seo (Seoul National University)

### Keynote Speech 2: Geospatial entity representation and city foundation models

Speaker: Prof. Gao Cong (Nanyang Technological University)

#### Abstract:

The talk will cover the following research problems on geospatial AI: 1) Geospatial entity representation for point objects, trajectory, and regions and their applications, e.g., spatial keyword search, POI recommendation, speed inference, region population estimations, etc. 2) foundation models for geospatial applications and efforts toward city foundation models. The first part primarily concentrates on learning representations to facilitate geospatial entity querying and analysis. The second part focuses on self-supervised learning approaches applied to geospatial entities, and several research attempts towards city foundation models.

#### Bio:



Gao Cong is currently a Professor in the College of Computing and Data Science (CCDS) at Nanyang Technological University (NTU). He previously worked at Aalborg University, Denmark, Microsoft Research Asia, and the University of Edinburgh. His current research interests include Data+AI, spatial data management, spatial-temporal data mining, and recommendation systems. His citation in Google Scholar was over 23,000 with H-index 78. He received SIGIR'25 test of time award honorable mention award, and the best paper runner-up awards at the WSDM'20 and WSDM'22 conferences for two of his research papers. He served as a PC co-chair for ICDE'2022, the associate general chair of KDD'21, a PC co-chair for E&A track of VLDB 2014, and a PC vice-Chair for ICDE'18. He serves as an associate editor for ACM TODS and IEEE TKDE.

## Keynote Speeches

February 5 (Thursday), 2026

11:00-12:00, (Qinghe Hall, Block 1)

Chair: Yunjun Gao (Zhejiang University)

### Keynote Speech 3: Innovation and Practice of AI Infrastructure for Multi-modal Data Processing Needs

Speaker: Prof. Wenchao Zhou (Alibaba Cloud Intelligence)

#### Abstract:

In the Data+AI era, the real-time processing capability of multi-modal data is the core driving force for building Agentic AI. The new-generation intelligent cloud-native database, with its extreme elasticity, outstanding performance, and inherent intelligent capabilities, provides a solid and efficient data infrastructure for the development of upper-layer intelligent applications and Agentic AI. It provides foundational support for unlocking the value of multi-modal data in complex business scenarios.

#### Bio:



Wenchao ZHOU is the Director of OLAP and Data Products at the Database Business Unit of Alibaba Cloud Intelligence. Prior to joining Alibaba Cloud Intelligence, he was a tenured Professor at the Computer Science Department of Georgetown University. Wenchao is an expert and a veteran in Databases and Distributed Systems with over 10 years academic and industrial experience. He has published over 70 papers at leading conferences. He has been recognized by multiple prestigious awards, including NSF CAREER award, SIGMOD Jim Gray Dissertation award, and several best paper awards. Wenchao receives his PhD and Masters from University of Pennsylvania, and his Bachelor from Tsinghua University, all in Computer Science.

## Workshops

### Workshop 1: Intelligent Multi-Modal Data Processing (IMMDP2026)

Date: February 2, 2026 Location: 3306+3307, Block 3

#### Organizers

- Wenling Li (Beihang University, China)

#### Program

9:00 – 12:00, February 2 (Monday), 2026

Chair: Wenling Li (Beihang University)

- Natural Language to SQL Translation through Understanding Data Systems  
Zhenying He (Fudan University)
- Resilience Analysis of Multilayer Complex Networks via High-Order Failure Structures  
Jianfeng Guan (Beijing University of Posts and Telecommunications)
- BAG: A Bound-Aware Graph Partitioned Index for Spatial Queries over Moving Objects on Road Networks  
Ziqiang Yu (Yantai University)
- Efficient and Robust Deep Semantic Fusion and Representation Learning for Cross-modal Retrieval and Mining  
Meiyu Liang (Beijing University of Posts and Telecommunications)
- Phase-Harmonized Transformer for Robust Synthetic Image Detection  
Wenqi Ren (Sun Yat-sen University)

### Workshop 2: Data Fusion and Privacy Techniques for Novel Applications (DFPTNA 2026)

Date: February 2, 2026 Location: 3308+3309, Block 3

#### Organizers

- Jianqiu Xu (Nanjing University of Aeronautics and Astronautics, China)

#### Program

9:00 – 12:00, February 2 (Monday), 2026

Chair: Jianqiu Xu (Nanjing University of Aeronautics and Astronautics)

- Simulation Intelligent Fusion for Industrial Applications  
Haisheng Li (Beijing University of Business and Technology)
- Efficient Distributed Mini-batch GNN Training with Decentralized Batch Processing  
Yingxia Shao (Beijing University of Posts and Telecommunications)
- High-Performance General-Purpose Data Processing with Ray Tracing Cores  
Kai Zhang (Fudan University)
- Towards Trustworthy Graph Analytics with Cohesive Structures  
Kai Wang (Shanghai Jiao Tong University)
- Multimodal Data Fusion in Urban Computing: From Deep Learning to Large Models  
Yuxuan Liang (Hong Kong University of Science and Technology (Guangzhou))

### Workshop 3: Conceptual Model (Concept 2026)

February 2 (Monday), 2026  
Location: 3306+3307, Block 3

#### Organizers

- Wookey Lee (Inha University, Korea)
- Carson Leung (University of Manitoba, Canada)

- Suan Lee (Semyung Univ., Korea)

#### Program committee

- James Geller (NJIT, USA)
- Carson Leung (University of Manitoba, Canada)
- Suan Lee (Semyung Univ., Korea)
- Jooyeon Lee (Ajou University, Korea)
- Mukesh Mohania (IIIT Delhi, India)
- Joo-Seok Park (Kyung-Hee University, Korea)
- Mye Son (Sungkyunkwan University, Korea)
- Chaokun Wang (Tsinghua University, China)
- Robert Wrembel (Poznan University of Technology, Poland)

#### Program

14:00 – 18:00, February 2 (Monday), 2026

#### Session 1: Keynote Speech I

Chair: HoJin Choi (KAIST)

- Accurate Model Compression for LLM  
U Kang, (Seoul National Univ.)

#### Session 2: Issues on Language-based Conceptual Model

Chair: Wookey Lee (Inha Univ.)

- AssurAI: Experience with Constructing Korean Socio-cultural Datasets to Discover Potential Risks of Generative AI  
Chae-Gyun Lim & HoJin Choi (KAIST)
- Motion Cues for Robust Continuous Sign Language Recognition: Baselines and Diagnostics  
Nirmal Adhikari, Chingiz Tursunbaev & Wookey Lee (Inha Univ.)
- Uncertainty-Aware Self-Training for CTC-Based Automatic Speech Recognition  
Eungbeom Kim & Kyogu Lee (Seoul National Univ.)
- A Data-Oriented Conceptual Model and Hybrid TDNN-BiLSTM Framework for Context-Aware Speaker Verification in Smart Environments Toward Audio-Visual Multilingual Translation Beyond Linguistic Content  
Sundareswari Thiagarajan & Deok-Hwan Kim (Inha Univ.)
- Toward Audio-Visual Multilingual Translation Beyond Linguistic Content  
Sungwoo Cho & Se-Young Yun (KAIST)
- Enhancing Sign Language Recognition: A Computationally Efficient and Interpretable Multi-Modal Approach  
Chingiz Tursunbaev, Mukhiddin Toshpulatov, Nirmal Adhikari & Wookey Lee (Inha Univ.)

#### Workshop 4: Efficient Data Representation and Learning (EDRL 2026)

Date: February 2, 2026 Location: 3308+3309, Block 3

#### Organizers

- Zhe Xue (Beijing University of Posts and Telecommunications, China)

#### Program committee

- Hongzhi Yin (The University of Queensland, Australia)
- Yuankai Qi (Macquarie University, Australia)
- Yongxin Tong (Beihang University, China)
- Zhonghong Ou (Beijing University of Posts and Telecommunications, China)
- Zhongying Zhao (Shandong University of Science and Technology, China)
- Wanqi Yang (Nanjing Normal University, China)
- Hao Wang (University of Science and Technology of China, China)
- Wenbin Li (Nanjing University, China)
- Lingling Zi (Chongqing Normal University, China)
- Suguo Zhu (Hangzhou Dianzi University, China)

#### Program

14:00 – 18:00, February 2 (Monday), 2026

Chair: Zhe Xue (Beijing University of Posts and Telecommunications)

- TTParser: Leveraging LLM for Enhanced Mapping of ATT&CK Tactics, Techniques, and Procedures in Unstructured Cyber Threat Intelligence

*Yongxin Cai (Guangzhou University), Huacong Zhou (Guangzhou University), Zeyan Wang (Guangzhou University), Jingchao Chen (Guangzhou University), Zhenqi Cai (Guangzhou University), Jing Qiu (Guangzhou University), Zhe Li (Hebei Utilization and Planning Institute of Natural Resources)*

- Pairwise Judgment Formulation for Semantic Embedding Model in Web Search

*Mengze Hong (Hong Kong Polytechnic University), Di Jiang (Hong Kong Polytechnic University), Zichang Guo (Hong Kong Polytechnic University), Chen Jason Zhang (Hong Kong Polytechnic University)*

- Trust-free Personalized Decentralized Learning

*Yawen Li (Beijing University of Posts and Telecommunications), Yan Li (Beijing University of Posts and Telecommunications), Junping Du (Beijing University of Posts and Telecommunications), Yingxia Shao (Beijing University of Posts and Telecommunications), Meiyu Liang (Beijing University of Posts and Telecommunications), Guanhua Ye (Beijing University of Posts and Telecommunications)*

- Enhancing GNN Learning on Relational Databases using Semantic Clustering-based Graph Enrichment

*Hwiseung Son (Sungkyunkwan University), Kunyoung Kim (Sungkyunkwan University), Donggyu Kim (Sungkyunkwan University), Mye Sohn (Sungkyunkwan University)*

- MiENet: A Mixture Expert Network for Dynamic Computing Resource Prediction

*Mingdong He (Guangdong Power Grid Corporation), Zhaoyi Yang (Guangdong Power Grid Corporation), Chuangye Zhao (Guangdong Power Grid Corporation), Lei Xu (Guangdong Power Grid Corporation), Hao Wei (Guangdong Power Grid Corporation), Bo Li (Guangdong Power Grid Corporation), Xiaobo Huang (Guangdong Power Grid Corporation), Liquan Luo (Guangdong Power Grid Corporation)*

## Tutorials

February 2 (Monday), 2026

09:00-12:00, (3301+3302, Block 3)

Chair: Zhengyi Yang (University of New South Wales)

#### Tutorial 1: Advances in Real-Time Processing of Longitudinal Data: From Statistical and Deep Learning Methods to Applications

Speakers: Ying-Ren Chien (National Taipei University of Technology), Pavel Loskot (ZJU-UIUC Institute), Yu Gao (Midea Group)

##### Abstract:

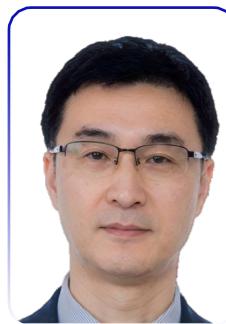
Longitudinal data are generated by many sensors that are being massively deployed across wide range of systems. This yields very large amounts of multi-dimensional and possibly heterogeneous time series data that must be processed to identify changes in the system behavior, to detect events, and to predict the future values in order to control the system states. The temporal dimension of longitudinal data prohibits processing all samples at once. It necessitates using statistical filtering techniques, especially when the processing needs to be performed in real-time, and when the outputs values need to be generated at the same rate as the input samples are arriving. The filtering must capture the important temporal patterns across many time-scales. Another challenge is how to effectively process multiple time-series to capture their spatial dependencies without excessively increasing the computational complexity. The traditional model-based approaches often rely on Gaussianity of samples, and their well-defined correlation patterns. However, in many scenarios, the samples are non-Gaussian, which requires adopting non-linear modeling techniques. When even non-linear models fail to achieve an acceptable accuracy, the sample-based universal model-free methods can be considered. These methods usually combine various signal decompositions with deep learning filtering. They are effective for whole classes of input signals rather than being tailored to one specific type of the signal unlike statistical filtering methods. The drawback of the model-free methods is that they often require time consuming and expensive training. They are also numerically much more complex, which can be prohibitive in some practical implementations. The objectives of this tutorial are as follows. (1) Describe the goals, challenges and opportunities in processing the real-world longitudinal data; (2) Explain the pros and cons of using traditional adaptive filtering techniques vs. using modern deep learning architectures; (3) Explore implementation constraints in developing practical applications assuming the speech applications as an example; and, (4) Summarize the recent literature, and outline the open research problems.



**Bio:** Ying-Ren Chien (Senior Member, IEEE) is a Full Professor in the Department of Electronic Engineering, National Taipei University of Technology, Taipei. His research interests include consumer electronics, multimedia denoising algorithms, adaptive signal processing theory, active noise control, machine learning, the Internet of Things, and interference cancellation. Dr. Chien was the recipient of the best paper awards, including ICCCAS 2007, ROCKLING 2017, IEEE ISPACS 2021, IEEE CESoc/CTSoc Service Awards in 2019, NSC/MOST Special Outstanding Talent Award in 2021, 2023, and 2024, Excellent Research Teacher Award in 2018 and 2022, and Excellent Teaching Award in 2021. From 2023 to 2024, he was Vice Chair of the IEEE Consumer Technology Society Virtual Reality, Augmented Reality, and Metaverse (VAM) Technical Committee (TC). Since 2025, he has been the Secretary of IEEE CTSoc Audio/Video Systems and Signal Processing TC. He is currently an Associate Editor for IEEE Transactions on Consumer Electronics.



**Bio:**Pavel Loskot (Senior Member, IEEE) joined the ZJU-UIUC Institute in January 2021 as Associate Professor after 14 years with College of Engineering, Swansea University, UK. In the past 30 years, he was involved in numerous collaborative research and development projects, and also held a number of paid consultancy contracts with industry mainly, but not only in wireless communications. His research interests focus on mathematical and probabilistic modeling, statistical and digital signal processing, and machine learning for multi-sensor, tabular, and longitudinal data. He received 8 best paper awards, and delivered 18 tutorials in international conferences including BigComp 2024, APSIPA ASC 2017/2021/2022/2024, and IEEE MILCOM 2018/2019. He is the Fellow of the HEA, UK, Recognized Research Supervisor of the UKCGE, and the IARIA Fellow. He is the Editor in ICT Express.



**Bio:**Yu Gao obtained BSc and MSc degrees in EE from the USTC. He is currently the Head of Human-Computer Interaction Algorithms at Midea Group's AI Innovation Center, and the Director of the National New Generation AI Innovation Platform for Home Robots. He holds over 50 domestic and international patents in speech processing and NLP concerning intelligent speech & language algorithms, and the AI industrialization. He has led the development of 10+ IEEE and national standards. He is also an Executive Member of the CCF Speech & Dialogue Special Committee, and a Member of the National Standardization Committee (TC46/TC28).

February 3 (Tuesday), 2026

09:00-10:30, (3306+3307, Block 3)

Chair: Ying-Ren Chien (National Taipei University of Technology)

## Tutorial 2: Time Series Analytics: Challenges, Foundation Models, and Benchmarking

Speakers: Jilin Hu (East China Normal University), Yang Shu (East China Normal University)

### Abstract:

Time series data is widely applied in various fields such as transportation, healthcare, and energy. This report focuses on the time series foundation models for forecasting, anomaly detection, and classification tasks, systematically introducing several key elements of their construction, such as the selection and construction of pre-training data, the design of generalizable model architectures and training strategies, and presents the current mainstream methods and models from these aspects. Through this report, the audience will gain a comprehensive understanding of the technical system and development trends of time series foundation models, providing references for subsequent research and practical applications. As a result, research on time series methods has become crucial. To advance progress in this area, we propose OpenTS, an automated benchmarking framework for time series forecasting and anomaly detection methods. OpenTS addresses current research challenges, including insufficient coverage of data domains, bias toward traditional methods, and inconsistent and inflexible processes. We improve data domain coverage by incorporating datasets from 10 different fields and provide time series characterization to ensure the comprehensiveness of these datasets. Additionally, OpenTS supports the integration of various methods, including statistical learning, machine learning, and deep learning approaches, and offers multiple evaluation strategies and metrics to ensure comprehensive assessment of different methods. Moreover, with the recent rising of time series foundation models, OpenTS also includes the recently proposed methods in different forecasting strategies, including zero-shot, few-shot, and full-shot, thereby facilitating more thorough evaluations.



**Bio:**Dr. Jilin Hu is a professor at East China Normal University, selected for the National Youth Talent Program in 2022. He has held positions as a tenured associate professor and tenure-track assistant professor in the Department of Computer Science at Aalborg University and has been a visiting scholar at the University of California, Berkeley. His research focuses on spatiotemporal data management and analysis, transportation analysis and prediction, and graph neural networks. He has published over 50 papers in CCF-recommended top-tier international journals and conferences and has received the Best Paper Award at ICDE 2022 and a Best Paper Nomination at PVLDB 2024.



**Bio:**Yang Shu is a lecturer and Chenhui Scholar at the School of Data Science and Engineering, East China Normal University. He received his Ph.D. from the School of Software, Tsinghua University. His main research interests lie in time series analysis and transfer learning. He has published over twenty papers in top conferences and journals such as ICML, NeurIPS, ICLR, TPAMI, and VLDB. He serves as an executive committee member of the CCF Technical Committee on Database and is a reviewer for top conferences and journals including ICML, NeurIPS, ICLR, TPAMI, AIJ, and IJCV.

February 3 (Tuesday), 2026

09:00-10:30, (3308+3309, Block 3)

Chair: Fan Zhang (Guangzhou University)

February 3 (Tuesday), 2026

09:00-10:30, (3308+3309, Block 3)

Chair: Fan Zhang (Guangzhou University)

## Tutorial 3: AI-Enhanced ESG Data Management: Lifecycle, Challenges, and Large Language Model Frameworks

Speakers: Zhengyi Yang (University of New South Wales), Xiwei (Sherry) Xu (CSIRO's Data61), Youqing Fan (Western Sydney University)

### Abstract:

Environmental, Social, and Governance (ESG) data has become a critical foundation for sustainable finance, corporate accountability, and responsible AI, yet remains fragmented, unstructured, and difficult to manage. This tutorial presents a unified perspective on AI-enhanced ESG data management, introducing a lifecycle framework that integrates large language models (LLMs) and modern data systems to support transparency, automation, and trust in ESG analytics. Building on recent advances in responsible data management and human-centric AI, we demonstrate how LLMs can extract, validate, and standardize ESG information across diverse sources and global regulatory frameworks (e.g., GRI, SASB, CSRD, ISSB), enabling efficient compliance checking, continuous monitoring, and real-time stakeholder engagement. Through theoretical foundations, system architecture, and industry case studies, the tutorial bridges AI, data management, and sustainability governance, offering participants practical insights into designing next-generation ESG intelligence platforms for trustworthy and socially beneficial AI applications.



**Bio:**Dr Zhengyi Yang is an ARC Early Career Industry Fellow in the School of Computer Science and Engineering at the University of New South Wales (UNSW Sydney). He is also the Founder of Euler AI, a Sydney-based startup advancing AI-driven data analytics across diverse domain applications. His research focuses on efficient and scalable algorithms and systems for responsible data management. Dr Yang has published extensively in premier venues such as SIGMOD, VLDB, ICDE, WWW, and VLDBJ, and serves on program committees for ICDE, WWW, KDD, CIKM, and other major conferences. He has received three Best Student Paper Awards, including at ADMA 2025, ADC 2022, and KSEM 2020.



**Bio:**Dr Sherry Xu is a Principal Research Scientist in the Applied AI Systems Research Team at CSIRO's Data61, an Adjunct Professor at the University of Tasmania, and an Adjunct Associate Professor at UNSW Sydney. Her work spans blockchain-based systems, software engineering for AI, and responsible AI architecture, advancing the principles and practices that bridge trustworthy AI and complex software systems. Dr Xu has published widely in top venues such as ICSE, ICSA, and BPM, authored *Architecting Blockchain-Based Applications* (2019), and contributed to the Responsible AI Pattern Catalogue and *Operationalizing Responsible AI* (2023).



**Bio:**Dr Youqing Fan is an Associate Professor at Western Sydney University. His research explores AI and algorithmic human-resource management, sustainable workforce development, and the ethical and social implications of AI in organizations, bridging management science and ESG research. He has published more than 40 papers in leading journals such as Human Resource Management Review, Journal of Business Research, and Business Strategy and the Environment. Dr Fan serves as Associate Editor for Journal of Business Research, Australian Journal of Management, and Employee Relations, and his research has been featured in ABC News, The Conversation, and the Sydney Morning Herald.

February 4 (Wednesday), 2026

09:00-10:45, (Qinghe Hall, Block 1)

Chair: Guanhua Ye (Beijing University of Posts and Telecommunications)

#### Tutorial 4: Efficient Compression and Queries of Large Graphs

Speakers: Fan Zhang (Guangzhou University), Qingshuai Feng (Great Bay University)



**Bio:**Fan Zhang is a professor at Guangzhou University. He is also the co-director of the Big Data Computing and Intelligence Institute and the executive deputy director of the Intelligent Transportation Joint Lab. His research interests focus on the topics of largescale graph data, including cohesive subgraphs, graph summarization, network stability, and influence study. He has published over 30 papers in top-tier venues such as SIGMOD, KDD, VLDB, ICDE, AAAI, IJCAI, VLDB Journal, and TKDE, mostly as the first author or corresponding author. He received the CCF Technology Achievement Award in Natural Science in 2022 and the ACM SIGMOD China Rising Star Award in 2023. In recent years, he serve as (S)PC member or reviewer for VLDB, KDD, TheWebConf, ICDE, AAAI, TKDE, etc. His research is supported by the National Natural Science Foundation of China and the key enterprises such as Alibaba and South China Road & Bridge. More information can be found on his academic homepage ([fanzhangcs.github.io](http://fanzhangcs.github.io)).



**Bio:**Qingshuai Feng is an Assistant Researcher and Postdoctoral Fellow at Great Bay University (GBU). His research interests lie in large-scale graph data management and efficient path query processing, with a particular focus on shortest path analysis, dynamic graph indexing, and transportation network optimization. He has published papers in top-tier venues such as VLDB, ICDE, KDD, and EDBT. Dr. Feng also serves as a reviewer for leading international journals, including ACM TODS. Further information is available on his LinkedIn profile: [www.linkedin.com/in/qingshuai-feng](http://www.linkedin.com/in/qingshuai-feng).

## Paper Sessions

### Main Conference Day 1: February 3 (Tuesday), 2026

#### Session 1A (3306+3307, Block 3) : Time Series & Spatial Data 14:00-15:45, February 3 (Tuesday), 2026

Chair: Jianqiu Xu (Nanjing University of Aeronautics and Astronautics)

Bridging Trend and Periodic Feature for Long-Term Time Series Forecasting

Xingzhi Jing, Yingxia Shao, Yawen Li, Siyu Lou, Zhe Xue and Guanhua Ye (Beijing University of Posts and Telecommunications)

Advancing CNNs for Time Series Anomaly Detection: A Multi-Scale Contrastive Learning Framework

Hailong Gu, Haoran Xiong, Yuheng Dai, Zhipeng Xie, Zhenying He, X. Sean Wang (Fudan University) and Jinbao Li (Qilu University of Technology)

A Graph-based Framework for Online Time Series Anomaly Detection Using Model Ensemble

Zewei Yu, Jianqiu Xu (Nanjing University of Aeronautics and Astronautics) and Caimin Li (Nanjing Normal University)

A Survey on Deep Learning Models for Anomaly Trajectory Detection

Chenxi Liu, Bohan Zhang and Yanwei Yu (Ocean University of China)

GGTP: Generative Game-Theoretic Prediction for Adversarial Autonomous Driving Validation

Peiyan Song (Brown University) and Hao Zhang (Carnegie Mellon University)

#### Session 1B (3308+3309, Block 3) : LLM-based Data Analysis 14:00-15:45, February 3 (Tuesday), 2026

Chair: Kai Wang (Shanghai Jiao Tong University)

Schedroid: LLM-Based Interactive Scheduling for Smart Manufacturing

Lilin Xu, Jingyan Zhu, Ziyang Xiao, Jingrong Xie, Shisi Guan (Zhejiang University), Han Wu, Xiaojin Fu, Wingyin Yu, Xiongwei Han, Tao Zhong, Mingxuan Yuan (Huawei Noah's Ark Lab), Gang Chen and Dongxiang Zhang (Zhejiang University)

Mitigating Understanding Bias: Explicit Meta Enhancement in LLM-based Table Reasoning

Jiaying Lin, Qingyang Mao, Mingyue Cheng and Qi Liu (The University of Science and Technology of China)

ForexAgent: Identifying Trading Strategies in Forex Markets with Large Language Models

Xin Shu, Mingchen Ju, Zebin Chen, Yi Ding, Wangtong Zhang, Dong Wen and Zhengyi Yang (University of New South Wales)

Beyond Translation: Exploring LLM-based Multilingual Cognitive Behavioral Therapy

Hyeonbeen Lee and Jangho Lee (Incheon National University)

Better Together: Hybridizing Encoders and LLMs for Unseen Biomedical Texts

Goun Pyeon, Hyeonseok Kang, Inhum Heo and Sangkeun Jung (Chungnam National University)

#### Session 2A (3306+3307, Block 3) : Graphs 16:15-18:00, February 3 (Tuesday), 2026

Chair: Yingxia Shao (Beijing University of Posts and Telecommunications)

Contrastive Learning-based Self-Supervised Community Search in Attributed Heterogeneous Information Networks

Yuan Li (North China University of Technology), Jianpeng Sun (North China University of Technology), Guoli Yang (Advanced Institute of Big Data) and Yuhai Zhao (Northeastern University)

H-MGC: Multi-Scale Graph Clustering through Adaptive Motif Resolution Fusion Paper Sessions

Ao Shen and Jianfeng Guan (Beijing University of Posts and Telecommunications)

A Fusion Model to Cognize the Structure of Heterogeneous Graph for Public Safety Scenarios

Jin Yu, Junping Du and Meiyu Liang (Beijing University of Posts and Telecommunications)

Knowledge Graph Enhanced Large Language Models for Traditional Chinese Medicine Question-Answering

Qiran Yang, Jingxuan Han, Huazhe Wang (Yanshan University), Shujie Xia (Fujian University of Traditional Chinese Medicine), Jinyi Long, Jia Zhang (Jinan University) and Guodong Du (Yanshan University)

Session 2B (3308+3309, Block 3) : LLM  
16:15-18:00, February 3 (Tuesday), 2026

Chair: Zhe Xue (Beijing University of Posts and Telecommunications)

Making Low-Saliency Context Exert Its Effect: Multi-prompt Context-aware Contrastive Decoding  
Mingzhao Li, Zhe Xue, Jinyuan Li, Meiyu Liang (Beijing University of Posts and Telecommunications) and Ziqiang Yu (Yantai University)

Investigating Evolutionary Characteristics of Deep Learning Framework Bugs in the Large Language Model Era

Kaishen Xie, Jiale Shen, Hao Zhou and Fuyang Li (Wuhan University of Technology)

Linear Separability and Feature Importance Analysis in Large Language Model Representation Spaces  
Jea Sung Kim and Suan Lee (Semyung University)

Calibrated Query Augmentation and Dual Preference Alignment for Retrieval-Augmented Generation  
Junjiang Wu, Zhe Xue, Shilong Ou (Beijing University of Posts and Telecommunications), Liang Yu (Inspur Computer Technology Co., Ltd), Yingxia Shao and Guanhua Ye (Beijing University of Posts and Telecommunications)

## Main Conference Day 2: February 4 (Wednesday), 2026

Session 3A (3306+3307, Block 3) : IR & Recommendation 14:00-15:45, February 4 (Wednesday), 2026

Chair: Anjia Yang (Jinan University)

MLEgo: Fast and Scalable Analytic Queries through Model Materialization and Reuse  
Fei Ye (Fudan University), Lu Jia, Bin Huang (CDF Sunrise Internet Technology Co., Ltd.), Zhenying He, Yinan Jing, Kai Zhang and X. Sean Wang (Fudan University)

Tool-Augmented Multi-Turn Academic Paper Recommendation via Reinforcement Learning  
Jiarong Zhang, Jun-Ping Du, Zhe Xue, Guanhua Ye and Yingxia Shao (Beijing University of Posts and Telecommunications)

MGMMMD: Multi-Grained Multi-Modal Diffusion Model for Text-Video Cross-Modal Retrieval  
Ruoyu Fan, Meiyu Liang, Yuxuan Li (Beijing University of Posts and Telecommunications) and Xueying Liu (Shandong University)

Enhancing the Efficiency of Answering High-dimensional Why-not kNN Questions  
Qi Cao, Fei Ye (Fudan University), Lu Jia, Bin Huang (CDF Sunrise Internet Technology Co., Ltd.), Zhenying He, Yinan Jing, Kai Zhang and X. Sean Wang (Fudan University)

Distributed Processing of kNN Queries over Moving Objects on Dynamic Road Networks  
Mingjin Tao, Kailin Jiao (Yantai University), Yawen Li (Beijing University of Posts and Telecommunications), Wei Liu and Ziqiang Yu (Yantai University)

Session 3B (3308+3309, Block 3) : AI in Industrial Applications 14:00-15:45, February 4 (Wednesday), 2026

Chair: Shuyuan Lin (Jinan University)

Dynamic Pod Configuration for FPS-Compliant Split Computing in AI-RAN  
Daeyoung Jung (Korea University), Haneul Ko (Kyung Hee University), Daesik Kim, Minji Bang and Sangheon Pack (Korea University)

Exploring Cost-Efficient and Resource-Optimized Kubernetes Deployments in Multi-Region Settings  
Richard Sinnott and Lixinqian Yu (University of Melbourne)

Intelligent Stuck Pipe Risk Prediction Based on Dynamic Condition Recognition and Multi-Source Data Fusion  
Jiangyue Liu (Xidian University), Yingfeng Li, Wentao Guan, Chuanyang Li, Chen Zhang (Sinopec Zhongyuan Oil-field Service Corporation) and Xiubin Zhu (Xidian University)

Physics-Consistent Hybrid AI for Quantum Device Manufacturing  
Hyeyoung Lee (Korea University) and Muhammad Nadeem (SPILab Corporation)

A Framework for Hallucination-Mitigating Manufacturing Anomaly Detection  
Seongmin Han, Jonghwa Shim and Eunjun Hwang (Korea University)

## Poster & Demo Sessions (Lobby area of meeting rooms 3301-3309, Block 3) 16:15-18:00, February 4 (Wednesday), 2026

### Poster Papers

Poster Papers Chair: Ziqiang Yu (Yantai University)  
Evaluating Robustness and Generalization in LLMs under Adversarial and Real-World Conditions  
Yigit Demirsan and Olcay Taner Yildiz (Ozyegin University)

Chaos-Aided Image Encryption in the Complex-Valued Domain  
Ying Wang, Ying Xu, Hao Cheng, Jihang Luo (Jinan University), Danxian Jiang (Affiliated Hospital of Guangdong Medical University), Guoxia Jia, Weixiang Chen, Shuwen Zeng, Meng Xu and Yin Li (Jinan University)

CTLKE: Keyphrase Extraction Agent for Chinese Technical Literature  
Taorui Chen (South China University of Technology), Jianqiang Xiao (Harbin Institute of Technology) and Huan Wang (Guangdong Institute of Scientific & Technical Information)

Edge-Gated Graph Attention Network for Graph Classification  
Chi Chen, Shiyu Hou, Ye Yuan (Beijing Institute of Technology), Guangqing Zhong (Fabarta Co., Ltd.) and Lianpeng Qiao (Beijing Institute of Technology)

Multi-Modal Semantics Enhanced Graph Convolutional Network for Session-Based Recommendation  
Chuanxu Jia, Jinyu Zhang (Shandong University of Science and Technology), Yunhang Li (Qingdao Huanghai University), Hui Zhou (Shandong University of Science and Technology), Xiaoyue Yang (Qingdao Huanghai University), and Zhongying Zhao (Shandong University of Science and Technology)

ESG-LLM: An Instruction-Finetuned Large Language Model for Corporate ESG Scoring  
Yawen Li, Weitao Wang, Mengyu Zhuang and Taikang Tian (Beijing University of Posts and Telecommunications)

Quantum Machine Learning-aided Personalized Federated Learning for Big Data  
Hieu Nguyen Doan, Xuan-Tung Nguyen, Joon-Ho Kwon and Won-Joo Hwang (Pusan National University)

A Novel Large-Small Model Collaboration Framework for Code Generation: Balancing Cost and Accuracy  
Chengming Liu, Shiran Tao, Chenxuan Hu and Fuyang Li (Wuhan University of Technology)

Optimizing Random Forest Hyperparameters: A Theoretical and Empirical Analysis of Variance Scaling  
Imani Beckett (University of California San Diego)

EmoSSM: An Emotionally-Driven State Space Model for Mental Health Detection on Social Media  
Limiao Zhang (Anhui University), Xinyu Liu (Anhui University), Xinyang Qi (Anhui University), and Haiping Ma (Anhui University)

### Demo Posters

Demo Papers Chair: Bolong Zheng (Wuhan University of Technology)

Building Futures: LLM-Guided Career Pathways for Australia's Construction Graduates

Yi Ding, Diya Yan, Xushuo Tang, Ziyao Lu, Wenqian Zhang, Riza Y. Sunindijo, Cynthia C. Wang and Zhengyi Yang (University of New South Wales)

SDMC: a System for Analyzing Supply-Demand Matching in Community Life Circles

Zhangjun Wang, Kaikai Guo, Hongmei Chen and Lobsang Tashi (Yunnan University)

VARTS: a Tool for the Visualization and Analysis of Representative Time Series Data

Duosi Jin, Jianqiu Xu (Nanjing University of Aeronautics and Astronautics) and Guidong Zhang (Guangdong University of Technology)

A Tool for Semantic-Aware Spatial Corpus Construction

Wei Huang, Xieyang Wang, Jianqiu Xu (Nanjing University of Aeronautics and Astronautics) and Guidong Zhang (Guangdong University of Technology)

## Main Conference Day 3: February 5 (Thursday), 2026

Session 4A (3306+3307, Block 3) : NLP & LLM Applications 14:00-15:45, February 5 (Thursday), 2026

Chair: Jilian Zhang (Jinan University)

A Linguistic Analysis of Human and LLM Annotations on English Sentence Difficulty  
Yerim Han, Inhum Heo, and Sangkeun Jung (Chungnam National University)

High-Quality Portrait Generation with Facial Semantic Prior Guidance

Yilu Chen, Haijie Yang, Yi Pan and Jianjun Qian (Nanjing University of Science and Technology)

HybPashto-POS: A Hybrid Framework for Improved Part of Speech Tagging in the Low-Resourced Pashto Language

Yar Muhammad, Richong Zhang and Asmat Ullah (Beihang University)

Improving Relational Deep Learning via Language Model-based Graph Augmentation

Kunyoung Kim, Hwiseung Son and Mye Sohn (Sungkyunkwan University)

PLITS-Net: A PLM-Conditioned Liquid Thread Network for Social Media Sentiment Analysis  
Wanfeng Ding (Monash University) and Hanif Bhuiyan (City of Gold Coast)

Session 4B (3308+3309, Block 3) : Security & Privacy 14:00-15:45, February 5 (Thursday), 2026

Chair: Guanhua Ye (Beijing University of Posts and Telecommunications)

Scalable and Efficient Unbalanced PSI from FHE with Client Friendly Overhead  
*Jinmao Song, Jia-Nan Liu, Minhua Su, Jinlong Zheng, Kai He (Dongguan University of Technology) and Xueqiao Liu (University of Wollongong)*

Constant-Round Outsourcing Private Decision Tree Evaluation  
*Dingcheng Li, Kai He (Dongguan University of Technology), Xueqiao Liu (University of Wollongong) and Jia-Nan Liu (Dongguan University of Technology)*

Analyzing LLM Safety Circumvention via Multilingual Euphemistic Coating  
*Sanghyeon Gil, Jaeseong Kim and Suan Lee (Semyung University)*

RFLASS: Reinforced Federated Learning with Latent-Space Data Augmentation and Adaptive Sample Selection  
*Zhenhui Pan, Junping Du, Zhe Xue, Meiyu Liang, Zeli Guan and Jia Wang (Beijing University of Posts and Telecommunications)*

An Adversarial Attack Framework for end-to-end Lipreading Systems  
*Hira Tabassum, Jian Weng and Yongdong Wu (Jinan University)*

Session 5A (3306+3307, Block 3) : Image Analysis 16:15-18:00, February 5 (Thursday), 2026

Chair: Wenling Li (Beihang University)

AEONet: An Attention-Enhanced Network for Robust Image Matching  
*Yang Zhao, Yijun Peng and Shuyuan Lin (Jinan University)*

RelightDiffNet: A Dual-Branch Diffusion Model for Background-Conditioned Foreground Relighting  
*Zhirui Liu, Xin Huang, Chunlin Luan, Yinda Chen, Guanchen Yao, Jialing Yang (Sun Yat-sen University), Heidi Ottevaere, Yunfeng Nie (Vrije Universiteit Brussel) and Wenqi Ren (Sun Yat-sen University)*

Improving Multi-Object Tracking performance via Graph-Augmented Detection under Computational Constraints  
*Peiqi Liu and Wenling Li (Beihang University)*

A Big Data-Oriented Robust Local-Region Image Watermarking Framework with Adaptive Geometric Correction  
 Paper Sessions  
*Yantao Li, Ziqiao Liu and Bingwen Feng (Jinan University)*

Session 5B (3308+3309, Block 3) : AI for Complex Data 16:15-18:00, February 5 (Thursday), 2026

Chair: Meiyu Liang (Beijing University of Posts and Telecommunications)

Multi-Dimensional Neural Mesh Compression via Joint 2D-3D Optimization  
*Yuteng Liu and Haisheng Li (Beijing Technology and Business University)*

LED: A Benchmark for Evaluating Layout Error Detection in Document Analysis  
*Inbum Heo, Taewook Hwang, Jeesu Jung and Sangkeun Jung (Chungnam National University)*

Hierarchical Group-Based Shapley Explanation for Interpretable Financial Fraud Detection  
*Seungho Choi (Seoul National University), Seonkyu Lim (Korea Financial Telecommunications and Clearings Institute), Kwanggeun Kim (Sogang University) and Jinwook Seo (Seoul National University)*

MEDKGC: A Mixture-of-Experts Enhanced Diffusion Model for Multimodal Knowledge Graph Completion  
*Xu Hou, Meiyu Liang, Wei Huang (Beijing University of Posts and Telecommunications)*

## Conference Venue

### Baiyun International Convention Center



The Guangzhou Baiyun International Convention Center (Lingnan Oriental Hotel) is a premier integrated venue nestled at the foothills of the scenic Baiyun Mountain. It seamlessly combines expansive convention facilities with luxurious hospitality, making it an ideal choice for high-profile conferences, exhibitions, and events.

The complex features modern, flexible meeting spaces, including grand auditoriums and numerous multi-function halls, all equipped with advanced technology. The affiliated Lingnan Oriental Hotel offers elegant accommodations, a variety of dining options serving authentic Cantonese and international cuisine, and comprehensive leisure facilities. Renowned for its professional service and serene environment, it provides a perfect blend of business efficiency and relaxing comfort for both event organizers and guests.

- No.1039-1045 of Baiyun South Avenue, Guangzhou, Guangdong Province, China
- Make Reservation: <https://v.wjx.cn/vm/YEJWnMV.aspx>



## Transportation to and from Hotel



### Guangzhou Baiyun International Airport

Guangzhou Baiyun International Airport is an international airport serving Guangzhou, Guangdong, China. Baiyun Airport is one of the important international aviation hubs under the national Belt and Road Initiative and the Air Silk Road as well as a core hub airport in the Guangdong-Hong Kong-Macao Greater Bay Area. It has formed a 4-hour aviation transportation circle with domestic and Southeast Asian major cities and a 12-hour aviation transportation circle with major cities around the world.

### Airport Taxi

The convention center is about 25 km away from the airport. The drive typically takes around 40 to 50 minutes, depending on traffic. You can book a taxi directly at the airport's designated pick-up zone or use a ride-hailing app like DiDi (DiDi Chuxing). The taxi fare will likely be around CNY 40 to CNY 60 (approx. USD 6-9).

## Travel Information

### Canton Tower

As Guangzhou's iconic landmark, the Canton Tower stands 600 meters tall at the city's new central axis. It is one of the world's tallest self-supporting structures, offering panoramic city views from its observation decks. Visitors can experience the world's highest horizontal Ferris wheel (Bubble Tram) or the thrilling Sky Drop. The tower's unique "slim waist" design is particularly stunning when illuminated at night.



### Chen Clan Ancestral Hall

Built in 1894, this is the largest and best-preserved traditional lineage architecture in Guangdong. Now housing the Guangdong Folk Art Museum, it is world-renowned for its "Seven Wonders"—exquisite carvings in wood, brick, stone, lime, pottery, iron casting, and color painting. It serves as a magnificent encyclopedia of Lingnan architectural style and traditional folk arts.



### Yuexiu Park & Five Rams Sculpture

Yuexiu Park is Guangzhou's largest park, blending cultural relics with natural scenery. It home to the "Five Rams Sculpture," the historic symbol of Guangzhou (the "City of Rams"). Other key sites include the Zhenhai Tower and the Ming Dynasty City Wall. It is an ideal spot for a morning walk to experience local heritage and the city's 2,000-year history.



### Pearl River Night Cruise

The Pearl River is the mother river of Guangzhou. A night cruise is the best way to enjoy the city's dazzling night skyline. The route takes you past iconic sites like the Canton Tower, the Xinghai Concert Hall, and various historic bridges. The contrast between the illuminated modern skyscrapers of Zhujiang New Town and the serene river creates a magical atmosphere that captures the essence of modern Guangzhou.



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## Baiyun Mountain

Located adjacent to the Baiyun International Convention Center (the conference venue), Baiyun Mountain is known as the "Lungs of the City." It has been a famous scenic spot since ancient times. The mountain offers various peaks with stunning views, lush forests, and cultural sites like the Moxing Ridge. It provides a peaceful escape from the urban hustle and is highly recommended for attendees due to its extreme proximity to the conference hotel.



## Shamian Island

A historic sandbank that served as a foreign concession in the 19th century, Shamian Island is now a peaceful pedestrian district. It features over 150 European-style buildings in neo-classical, Gothic, and Baroque styles. Its tree-lined avenues, vintage sculptures, and unique architecture make it one of the most romantic and photogenic areas in Guangzhou.



## Beijing Road Pedestrian Street

Beijing Road is the historical heart of Guangzhou's commerce. Beneath the modern shopping street, ancient road surfaces dating back to the Song and Yuan dynasties are preserved under glass panels for public view. It is a vibrant destination for shopping, traditional Cantonese snacks (Dim Sum), and modern entertainment, featuring the nearby spectacular Dafo Temple.



## Sun Yat-sen Memorial Hall

This magnificent octagonal building was built in memory of Dr. Sun Yat-sen, the great pioneer of China's democratic revolution. Completed in 1931, the hall is an architectural masterpiece that combines Chinese traditional style with Western structural engineering, featuring a vast span without a single internal pillar. The surrounding gardens house some of the oldest silk cotton trees in the city, symbolizing the spirit of the historic city.

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