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WELCOME TO ISKE 2023

Welcome all of you to join the 18th International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2023), which will be held in Fuzhou, China during November 17-19, 2023. This conference aims to provide a platform for technical and scientific professionals from academia, research and industries in the fields of intelligent systems and knowledge engineering to exchange knowledge and distribute the emerging state-of-the-art technologies.

After several rounds of review procedure, the program committee accepted the papers to be published in conference proceedings. We wish to express our sincere appreciation to all the individuals who have contributed to the conference. Special thanks are extended to our colleagues in program committee for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, organizing and helping the conference.

This year we are honored to welcome three distinguished keynote speakers: Dr. Yu Zheng from JD.COM, China; Prof. Dongrui Wu from Huazhong University of Science and Technology, China and Prof. Nian Zhang from University of the District of Columbia (UDC), USA.

We conclude by wishing all conference participants a positive experience in the 3-day series of conference sessions. It will be a wonderful opportunity for all attendees to come together in Fuzhou.

Enjoy the conference ISKE 2023!

ISKE Organizing Committee Fuzhou, China | Nov. 17-19, 2023



CONFERENCE COMMITTEE

Steering Committee Chair

Etienne E.Kerre Ghent University, Belgium

Steering Committee

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Tianrui Li Southwest Jiaotong University, China

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Li Xu Fujian Normal University, China

Shuwei Chen Southwest Jiaotong University, China

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CONFERENCE COMMITTEE

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Registration Chairs

Liqing Huang Fujian Normal University, China

Jie Hu Southwest Jiaotong University, China

Publicity Chair

Lei Chen Shandong University, China



CONFERENCE VENUE

Qi Shan Plum Garden Hotel | 福州旗山梅园酒店

Address

No. 350, Guobin Avenue, Shangjie Town, Minhou County, Fuzhou City, China

福州市闽侯县上街镇国宾大道 350 号(地铁 2 号上街 A 出口)

Sign-in & Materials Collection

Lobby (1st Floor)



Venue Information

Nov. 18-Morning				
Banquet Hall-C (2nd Floor)				
Nov. 18-Afternoon				
Duo Gong Neng Ting (F Floor) Duo Mei Ti Ting A (F Floor) Duo Mei Ti Ting B (F Floor)				
Nov. 19-Morning				
Duo Gong Neng Ting (F Floor)	Duo Mei Ti Ting A (F Floor)	Duo Mei Ti Ting B (F Floor)		
Nov. 19-Afternoon				
Duo Gong Neng Ting (F Floor)				

Transportation

Fuzhou Railway Station (福州站)

Take Metro Line 1 to 南门兜, transfer to Metro Line 2 to 上街 station Exit A.

Fuzhou South Railway Station (福州南站)

Take Metro Line 1 to 南门兜, transfer to Metro Line 2 to 上街 station Exit A.

Fuzhou Changle International Airport (长乐国际机场)

Take Airport Line (旗山梅园线) to Qi Shan Plum Garden Hotel.

东街口 (三坊七巷)

Take Metro Line 1 to 南门兜, transfer to Metro Line 2 to 上街 station Exit A.



GUIDELINES

Oral Presentation

- The duration of a keynote speech is 45 minutes, for normal presentation slot is 15 minutes. Please target your lecture for a duration of about 12 minutes for the presentation plus about 3 minutes for questions from the audience.
- Your punctual arrival and active involvement in each session will be highly appreciated.
- Get your presentation PPT or PDF files prepared and backed up.
- Laptops, projector & screen, laser sticks will be provided by the conference organizer.

Security

Please ensure that you take your belongings with you at all times when leaving a room. Do not leave bags or laptops unattended.

Name Badge

For security purposes, delegates, speakers, exhibitors and staff are required to wear their name badge to all sessions and social functions. Entrance into sessions is restricted to registered delegates only. If you misplace your name badge, please replace at the sign-in desk.



CONFERENCE AGENDA

Nov.17, 2023 - Friday

10.00-18.00	Sign-in & Materials Collection	Lobby
10.00-10.00	Sign-in & Materials Collection	(1st Floor)

Nov. 18, 2023 - Saturday

	Opening Ceremony Chair: Tianqiang Huang, Fujian Normal University, China	
	Welcome Address-The leader of Fujian Normal University	Dan mark Hall C
08:40-09:20	History of ISKE - Jie Lu, University of Technology Sydney, Australia	Banquet Hall-C (2nd Floor)
	Program Chair Report -Tianqiang Huang, Fujian Normal University, China	
	Group Photo	
	Keynote Speech-Dr. Yu Zheng, JD. COM, China	
09:20-10:05	Urban Computing: Building intelligent Cities using AI and Big Data	Banquet Hall-C (2nd Floor)
	Chair: Jie Lu, University of Technology Sydney, Australia	
10:05-10:50	Keynote Speech-Prof. Dongrui Wu, Huazhong University of Science and Technology, China	Banquet Hall-C
10.05 10.50	Machine Learning in Brain-Computer Interfaces	(2nd Floor)
10.50.11.10	Chair: Zhong Li, FernUniversität, Germany	
10:50-11:10	Coffee Break Keynote Speech-Prof. Nian Zhang, University of the	
	District of Columbia (UDC), USA	Banquet Hall-C
11:10-11:55	Recent Advances and Trends on Hyperspectral Image Preprocessing, Optimization, and Classification Techniques	(2nd Floor)
	Chair: Luis Martínez López, University of Jaén, Spain	
11:55-13:00	Lunch	Banquet Hall-A (2nd Floor)
	S1-Artificial Intelligent Methodology and System-A	Duo Gong Neng Ting (F Floor)
13:00-15:00	S2-Knowledge Engineering and Management	Duo Mei Ti Ting A (F Floor)
	S3-Practical Applications of AI and Knowledge Engineering-A	Duo Mei Ti Ting B (F Floor)
15:00-15:15	Coffee Break	
	S4-Artificial Intelligent Methodology and System & Knowledge Engineering and Management	Duo Gong Neng Ting (F Floor)
15:15-17:30	S5-Logic, Computation and Artificial Intelligence	Duo Mei Ti Ting A (F Floor)
	S6-Practical Applications of AI and Knowledge Engineering-B	Duo Mei Ti Ting B (F Floor)
18:00-20:00	Conference Banquet	Banquet Hall-C (2nd Floor)



CONFERENCE AGENDA

Nov. 19, 2023 - Sunday

	S7-Artificial Intelligent Methodology and System-B	Duo Gong Neng Ting (F Floor)
08:30-10:00	S8-Logic, Computation and Artificial Intelligence & Deep Learning for Time Series Forecasting	Duo Mei Ti Ting A (F Floor)
	S9-Practical Applications of AI and Knowledge Engineering-C	Duo Mei Ti Ting B (F Floor)
10:00-10:15	Coffee Break	
10:15-12:00	S10-Artificial Intelligent Methodology and System-C	Duo Gong Neng Ting (F Floor)
	S11-Intelligent Manufacturing Enabled Sustainable Development	Duo Mei Ti Ting A (F Floor)
	S12-Decision Models under Uncertainty Applied for Sustainable Development	Duo Mei Ti Ting B (F Floor)
12:00-13:00	Lunch	Min Hou Ting (2nd Floor)
13:00-15:00	S13-Explainable Deep Learning Techniques and Applications	Duo Gong Neng Ting
15:00-15:30	Closing Ceremony Chair: Jianting Ning, Fujian Normal University, China	(F Floor)



KEYNOTE SPEAKERS

Time: 09:20-10:05 | Nov. 18, 2023 **Venue: Banquet Hall-C (2nd Floor)**

Chair: Jie Lu, University of Technology Sydney, Australia



Dr. Yu Zheng

IEEE Fellow

JD. COM

Dr. Yu Zheng is the Vice President of JD.COM and president JD Intelligent Cities Research. Before Joining JD.COM, he was a senior research manager at Microsoft Research. He was the Editor-in-Chief of ACM Transactions on Intelligent Systems and Technology and has served as the program co-chair of ICDE 2014 (Industrial Track), CIKM 2017 (Industrial Track) and IJCAI 2019 (industrial track). He is also a keynote speaker of AAAI 2019, KDD 2019 Plenary Keynote Panel and IJCAI 2019 Industrial Days. His monograph, entitled Urban Computing, has been used as the first text book in this field. He received the SIGKDD Test-of-Time Award in 2023 and SIGSPATIAL 10-Year-Impact Award for three times in 2019, 2020 and 2022 respectively. In 2013, he was named one of the Top Innovators under 35 by MIT Technology Review (TR35) and featured by Time Magazine for his research on urban computing. In 2016, Zheng was named an ACM Distinguished Scientist and elevated to an IEEE Fellow in 2020 for his contributions to spatio-temporal data mining and urban computing.

Speech Title: Urban Computing: Building intelligent Cities using Al and Big Data

Abstract: Urban computing connects ubiquitous sensing technologies, advanced data management and analytics models, and novel visualization methods, to create win-win-win solutions that improve urban environment, life quality, and city operation systems. This talk presents the vision and framework of urban computing, introducing the challenges and the-state-of-the-art solutions in each layer of the framework. Based on the vision of urban computing, we have built an intelligent city operation system which has been deployed in over 20 cities as a digital foundation to empower Big Data-driven applications.



KEYNOTE SPEAKERS

Time: 10:05-10:50 | Nov. 18, 2023 **Venue: Banquet Hall-C (2nd Floor)**

Chair: Zhong Li, FernUniversität, Germany



Prof. Dongrui Wu

- IEEE Fellow
- Huazhong University of Science and Technology, China

Dongrui Wu (IEEE Fellow) received a B.E in Automatic Control from the University of Science and Technology of China, Hefei, China, in 2003, an M.Eng in Electrical and Computer Engineering from the National University of Singapore in 2006, and a PhD in Electrical Engineering from the University of Southern California, Los Angeles, CA, in 2009. He is now Professor and Deputy Director of the Key Laboratory of the Ministry of Education for Image Processing and Intelligent Control, School of Artificial Intelligence and Automation, Huazhong University of Science and Technology, Wuhan, China.

Prof. Wu's research interests include brain-computer interface, machine learning, computational intelligence, and affective computing. He has more than 200 publications (11000+ Google Scholar citations; h=54). He received the IEEE Computational Intelligence Society (CIS) Outstanding PhD Dissertation Award in 2012, the IEEE Transactions on Fuzzy Systems Outstanding Paper Award in 2014, the IEEE Systems, Man and Cybernetics (SMC) Society Early Career Award in 2017, the USERN Prize in Formal Sciences in 2020, the IEEE Transactions on Neural Systems and Rehabilitation Engineering Best Paper Award in 2021, the Chinese Association of Automation Early Career Award in 2021, and the Ministry of Education Young Scientist Award in 2022. His team won the First Prize of the China Brain-Computer Interface Competition in four successive years (2019-2022). Prof. Wu is the Editor-in-Chief of IEEE Transactions on Fuzzy Systems.

Title: Machine Learning in Brain-Computer Interfaces

Abstract: A brain-computer interface (BCI) enables a user to communicate with a computer directly using brain signals. Electroencephalograms (EEGs) used in BCIs are weak, easily contaminated by interference and noise, non-stationary for the same subject, and varying across different subjects and sessions. Thus, sophisticated machine learning approaches are needed for accurate and reliable EEG-based BCIs. This talk will introduce the basic concepts of BCIs, review the latest progress, and describe several newly proposed machine learning approaches for BCIs.



KEYNOTE SPEAKERS

Time: 11:10-11:55 | Nov. 18, 2023 **Venue: Banquet Hall-C (2nd Floor)**

Chair: Luis Martínez López, University of Jaén, Spain



Prof. Nian Zhang

University of the District of Columbia (UDC), USA

Dr. Nian Zhang is a Professor in the Department of Electrical and Computer Engineering at the University of the District of Columbia (UDC), Washington, D.C., USA. She received her Ph.D. degree in Computer Engineering from Missouri University of Science & Technology, USA, and Master's degree in Automatic Control from Huazhong University of Science and Technology, China. Her research interests include machine learning, deep learning, classification, clustering, and optimization. Dr. Zhang was awarded numerous federal grants from the National Science Foundation, Department of Defense, and National Institutes of Health as the PI/Co-PI, accumulating over \$4.5 million in research grant funds. Dr. Zhang serves as an Associate Editor for the IEEE Transactions on Cybernetics, IEEE Transactions on Neural Networks and Learning Systems, Knowledge-Based Systems, and IEEE/CAA Journal of Automatica Sinica. She also serves on the Editorial Board of the Complex & Intelligent Systems. In addition, Dr. Zhang serves as the Chair of the IEEE Computational Intelligence Society (CIS) Task Force on "Interdisciplinary Emergent Technologies" and the Vice Chair of the IEEE CIS' Adaptive Dynamic Programming and Reinforcement Learning Technical Committee. She regularly serves as the Program Chair and Publications Chair of annual international conferences, including ISNN, ICACI, ICICIP, and ICIST. Dr. Zhang received the IEEE Transactions on Neural Networks and Learning Systems (TNNLS) "Outstanding Associate Editor Award" in 2020. She also received the UDC's faculty recognition awards for Excellence in Research Award, Excellence in Teaching Award, and Outstanding Undergraduate Research Mentorship Award in three consecutive years.

Title: Recent Advances and Trends on Hyperspectral Image Preprocessing, Optimization, and **Classification Techniques**

Abstract: Hyperspectral image classification is an important research topic that focuses on assigning class labels to pixels, which is very challenging because of unbounded size and imbalanced nature of data. This talk will introduce a new computational framework that integrates data preprocessing, optimization, and classification techniques to distinguish trace chemicals from the substrates on which they rest at standoff distances. This talk will first introduce a new data preprocessing method aimed at addressing the class imbalance and unlabeled data challenges commonly encountered in real-world hyperspectral images. Then, a creative approach for extracting endmembers through a global optimization algorithm will be presented. Finally, possible trends and new research directions will be discussed.



TECHNICAL SESSIONS on Nov. 18

Session 1: Artificial Intelligent Methodology and System-A

VENUE Duo Gong Neng Ting TIME 13:00-15:00

CHAIR Zhiqiang Yao, Fujian Normal University, China

Time	Paper ID	Details
13:00-13:15	6458	Title: Deep Learning Approach to Cardiovascular Disease Classification Employing Long Duration ECG Signal via Variational Mode Decomposition Author(s): Runjie Wu, Xiaoli Wang, Qi Feng Presenter: Runjie Wu Affiliation: Guangdong Polytechnic Normal University
13:15-13:30	5789	Title: Temproal Related Attention for Video-Based Pedestrian Attribute Recognition Author(s): Yuning Zhao, Heng Jin, Xiameng Shi, He Sun Presenter: He Sun Affiliation: Zhejiang Dahua Technology Co.,Ltd.
13:30-13:45	7818	Title: A Parted-based Method for Unsupervised Visible-Infrared Re-identification Author(s): Yunxiao Shi, Zeng Yu, Tianrui Li, Shengdong Du, Yeyiran Jing Presenter: Yunxiao Shi Affiliation: Southwest Jiaotong University
13:45-14:00	8769	Title: An Intelligent VB-AKF Algorithm with Fuzzy Adaptive Attenuation Parameter Author(s): Qi Feng, Ducheng Shi, Runjie Wu, Xiaoli Wang Presenter: Ducheng Shi Affiliation: Guangdong Polytechnic Normal University
14:00-14:15	737	Title: Artificial Intelligence Tools for Early Detection of Product Defects in the Pharmaceutical Industry Author(s): Makope Tshehla-Nkuna, Ndala Yves Mulongo Presenter: Ndala Yves Mulongo Affiliation: University of Johannesburg
14:15-14:30	5288	Title: Content-Based Video Clustering Using Hybrid Multi-View Spatio-Temporal Feature Learning Author(s): Muhammad Hafeez Javed, Zeng Yu, Taha M. Rajeh, Fares Alhaek, Tianrui Li Presenter: Muhammad Hafeez Javed Affiliation: Southwest Jiaotong University



14:30-14:45	6906	Title: Multi-Modal Deep Learning Architecture for Accurate Driver Behavior Recognition in Automated Driving Systems Author(s): Fares Alhaek, Weichao Liang, Taha M. Rajeh, Muhammad Hafeez Javed, Tianrui Li Presenter: Fares Alhaek Affiliation: Southwest Jiaotong University
14:45-15:00	7039	Title: Research on Service Governance Security Based on Federated Mechanism Author(s): Shuo Sheng, Kun Che Presenter: Shuo Sheng and Kun Che Affiliation: Zenitera Co. Ltd
15:00-15:15		Coffee Break

Session 4: Artificial Intelligent Methodology and System & Knowledge **Engineering and Management**

TIME	15:15-17:30	VENUE	Duo Gong Neng Ting
CHAIR	Zhiqiang Yao, Fujian N	ormal Uni	versity, China

Time Paper ID **Details Title:** A Study of Deep Fuzzy Clustering Method Based on Maximum Entropy Clustering Author(s): Haoyu Huang, Shaoyong Li 15:15-15:30 3085 Presenter: Haoyu Huang **Affiliation:** Wuyi University Title: Application of Artificial Intelligence on Water Testing Laboratory Production Processes Author(s): Ndala Yves Mulongo, Jwalane Elizabeth Bosae 15:30-15:45 4552 **Presenter:** Ndala Yves Mulongo **Affiliation:** University of Johannesburg Title: VCU-RVIL: A Multi-sensor Dataset for Benchmark of Simultaneous Localization and Mapping 15:45-16:00 5092 Author(s): Lingqiu Jin, Cang Ye **Presenter:** Cang Ye **Affiliation:** Virginia Commonwealth University Title: Fusing Directed Negative Samples into Graph Convolutional Networks for Enhancing Node Learning 16:00-16:15 3095 Author(s): Qi Wang, Yujin Lu, Wanyi Zhou, Rui Wang, Jeffrey Zheng Presenter: Qi Wang **Affiliation:** Yunnan University **Title:** Enhanced Density Clustering Based on Density Decay Structure and Spectral Clustering 16:15-16:30 9269 Author(s): Yutong Ke, Zhiguo Long, Hua Meng **Presenter:** Yutong Ke

Affiliation: Southwest Jiaotong University



16:30-16:45	2386	Title: DFEE-Net: Dual-stream Feature Exchange Enhanced Network for Image Forgery Localization Author(s): Aokun Zheng, Chao Xu, Tianqiang Huang, Feng Ye, Haifeng Luo, Liqing Huang Presenter: Aokun Zheng Affiliation: Fujian Normal University
16:45-17:00	732	Title: Extracting Events Using Spans Enhanced with Trigger-Argument Interaction Author(s): Chi Xu, Zefan Zeng, Jiashun Duan, Qi Qi, Xin Zhang Presenter: Jiashun Duan Affiliation: National University of Defense Technology
17:00-17:15	7891	Title: A Extended Rough Set Model of Graph Structure for Incomplete Information System Using Spark Author(s): Zhengjiang Wu, Tao Lian, Ruimin Li, Xuyang Wu Presenter: Zhengjiang Wu Affiliation: Henan Polytechnic University
17:15-17:30	7072	Title: Automatic Identification of Helpful Information on Social Media During Natural Disaster Based on Word2Vec and Bert Author(s): Lei Shi, Daiying Zhao Presenter: Lei Shi Affiliation: National Academy of Innovation Strategy, CAST
18:00-20:00	Conference Banquet (Banquet Hall-C 2nd Floor)	



Session 2: Knowledge Engineering and Management

TIME 13:00-15:00 **VENUE** Duo Mei Ti Ting A **CHAIR** Xingxing He, Southwest Jiaotong University, China

Time	Paper ID	Details
13:00-13:15	4153	Title: Liquefied Petroleum Gas Concentration Prediction Based on Regression Model Author(s): Siting Chen, Yi Song, Yunchuan Li, Hongjun Wang Presenter: Yi Song Affiliation: Southwest Jiaotong University
13:15-13:30	6611	Title: Feature Selection in High-dimensional Set-valued Decision System Author(s): Zhengjiang Wu, Ruimin Li, Tao Lian, Xuyang Wu Presenter: Zhengjiang Wu Affiliation: Henan Polytechnic University
13:30-13:45	5178	Title: Design Novel FCM-based Forecasting Model for Interval-valued Time Series: From Distance-metric Perspective Author(s): Fei Yang, Chenxi Ouyang, Fusheng Yu, Yuqing Tang, Yanan Jiang Presenter: Fei Yang Affiliation: Beijing Normal University
13:45-14:00	4072	Title: Knowledge-Guidance Based Multi-Relational Graph Spectral Clustering Using a Novel Structural Similarity Measure Author(s): Yingying Zheng, Fusheng Yu, Huilin Yang, Zhifang Bai, Shihu Liu Presenter: Yingying Zheng Affiliation: Beijing Normal University
14:00-14:15	5127	Title: Developing a Knowledge-requirements Engineering Framework Towards Transformative (Eco)systems/Metaverses/Ecologies Author(s): Chien-Sing Lee Presenter: Chien-Sing Lee Affiliation: Fulbright
14:15-14:30	8850	Title: Ensemble Clustering via Adaptive Weight Adjustment and Cluster Generation in Difference Similarity Author(s): Xiaoning Wang, Chun Liu, Hengshan Zhang, Yun Wang Presenter: Hengshan Zhang Affiliation: Xi'an University of Posts and Telecommunications
14:30-14:45	9985	Title: DeepNWP4Wind: A Wind Forcasting Correction Solution in view of Multi-Criteria Evaluation Author(s): Binyu Tan, Junrui Shi, Bin Wang, Yanwei Yu, Feng Hong, Tianrui Li Presenter: Bin Wang Affiliation: Ocean University of China



		Title: Little Known POI Category Estimation via Syntactical
		Knowledge Graph Generated via Tweets
14:45-15:00	2233	Author(s): Landy Rajaonarivo, Tsunenori Mine, Yutaka Arakawa
		Presenter: Landy Rajaonarivo
		Affiliation: Kyushu University
15:00-15:15	5:00-15:15 Coffee Break	

Session 5: Logic, Computation and Artificial Intelligence

TIME 15:15-17:30 **VENUE** Duo Mei Ti Ting A **CHAIR** Xingxing He, Southwest Jiaotong University, China

Time	Danar ID	Details
rime	Paper ID	
15:15-15:30	574	Title: Positional Feature Generator-based Transformer for Image Captioning Author(s): Shuai He, Xiaobao Yang, Sugang Ma, Bohui Song, Ziqing He, Wei Luo Presenter: Shuai He Affiliation: Xi'an University of Posts and Telecommunications
15:30-15:45	2461	Title: DSCJA-Captioner: Dual-branch Spatial and Channel Joint Attention for Image Captioning Author(s): Xi Tian, Xiaobao Yang, Sugang Ma, Bohui Song, Ziqing He Presenter: Xi Tian Affiliation: Xi'an University of Posts and Telecommunications
15:45-16:00	7266	Title: Dynamic Knowledge Discovery Under the Linguistic Concept Weighted Network Formal Context Based on Three-way Decision Author(s): Zheng Yang, Xi Zhang, Xianghua Du, Luis Martínez, Xin Liu, Li Zou Presenter: Li Zou Affiliation: Shandong Jianzhu University
16:00-16:15	7929	Title: (α, β)- Lock Resolution Method of Linguistic Truth-Valued Intuitionistic Fuzzy First-order Logic Author(s): Nan Li, Yanling Wang, Yujie Cao, Martinez Carracedo, Jorge, Lixian Xu, Jun Liu Presenter: Lixian Xu Affiliation: Ulster University
16:15-16:30	7386	Title: Clustering Network Based on Pre-clustering Center Codebook Author(s): Qiulong An, Jianning Wu, Tianqiang Huang, Liqing Huang, Haifeng Luo, Feng Ye Presenter: Qiulong An Affiliation: Fujian Normal University
16:30-16:45	4313	Title: Formal Modelling of the Multiple Trains Following Operation in Uncertain Environments Author(s): Xia Wang, Yang Xu, Jun Liu, Guanfeng Wu, Shuwei Chen Presenter: Shuwei Chen Affiliation: Southwest Jiaotong University



16:45-17:00	3276	Title: Learning Spatial-Temporal Context-Based Dynamic Feature Fusion Correlation Filters for Object Tracking Author(s): Bo Zhao, Zhixian Zhao, Sugang Ma, Xiaobao Yang Presenter: Bo Zhao Affiliation: Xi'an University of Posts and Telecommunications
17:00-17:15	3810	Title: Priori information Guided Memory Network for Video Object Segmentation Author(s): Zhiqiang Hou, Jiale Dong, Fucheng Li, Sugang Ma, Xiaobao Yang, Jiulun Fan Presenter: Zhiqiang Hou Affiliation: Xi'an University of Posts and Telecommunications
17:15-17:30	188	Title: Graph-based Competence Model for Concept Drift Detection Author(s): Yiping Sun, Yansen Yu, Cheng Jin, Qingyong Zhang, Weixu Liu, Hang Yu Presenter: Yiping Sun Affiliation: Shanghai University
18:00-20:00	Conference Banquet (Banquet Hall-C 2nd Floor)	



Session 3: Practical Applications of Al and Knowledge Engineering-A

VENUE Duo Mei Ti Ting B TIME 13:00-15:00

Sirui Han, The Hong Kong Polytechnic University, China **CHAIR**

Time	Paper ID	Details
13:00-13:15	9592	Title: A Decentralized Gossip Management Method for Household Microgrids Author(s): Lu Luo, Peng Wu, Li Wang, Yan Jia Presenter: Shengyu Chen Affiliation: Guangdong University of Technology
13:15-13:30	7363	Title: Coordinated Virtual Inertial Control of DFIG with BESS for Frequency Support Author(s): Shengyu Chen, Guidong Zhang, Samson Shenglong Yu, Yun Zhang, Zhong Li Presenter: Shengyu Chen Affiliation: Guangdong University of Technology
13:30-13:45	4438	Title: A Multi-scale Deep Image Completion Model Fused Capsule Network Author(s): Minglan Zhang, Chun Zhao, Weiqi Cheng, Linfu Sun, Yisheng Zou, Min Han Presenter: Minglan Zhang Affiliation: Southwest Jiaotong University
13:45-14:00	3372	Title: A Multi-population Evolutionary Algorithm for Multi-scenario Multi-objective Optimization Problems Author(s): Yuanyuan Hao, Yan Li, Zhong Li Presenter: Zhong Li Affiliation: Minnan Normal University
14:00-14:15	7006	Title: ILKA-Net: CT Metal Artifact Reduction Network Based on Large Kernel Attention Author(s): Xuanxuan Zhang, Yunfei Jia, Jiapei Cui, Chenhui Ye Presenter: Yunfei Jia Affiliation: Xi'an University of Posts and Telecommunications
14:15-14:30	5876	Title: Domain Adaptation for Image Segmentation with Category-Guide Classifier Author(s): Keqiuyin Li, Jie Lu, Hua Zuo, Guangquan Zhang Presenter: Jie Lu Affiliation: University of Technology Sydney
14:30-14:45	7688	Title: A Multi-task Bearing Fault Diagnosis Method Based on Multi-scale Residual CNN with Dual Attention Author(s): Yufei Han, Chaofan Li, Tianrui Li, Fan Zhang Presenter: Yufei Han Affiliation: Southwest Jiaotong University



14:45-15:00	3043	Title: Edge-Cloud Collaborative High-Quality Recommendation: A Meta-Learning Approach Author(s): Hao Chen, Ruiping Yin, Zhen Yang Presenter: Hao Chen Affiliation: Beijing University of Technology
15:00-15:15		Coffee Break

Session 6: Practical Applications of Al and Knowledge Engineering-B

TIME **VENUE** Duo Mei Ti Ting B 15:15-17:30 **CHAIR** Sirui Han, The Hong Kong Polytechnic University, China

Time	Paper ID	Details
15:15-15:30	8681	Title: A Smart Grid Engineering Framework Based on the Information Evolution in Power Supply Enterprises Author(s): Tiefeng Zhang, Pengfei Gao, Mingjiu Pan, Yongjie Ye Presenter: Tiefeng Zhang Affiliation: North China Electric Power University
15:30-15:45	1944	Title: Methodology for the Detection of Risk States in Emotional Disorders Author(s): Yury Jiménez Agudelo, Victoria López López, María Espinosa Ruiz, Pavel Llamocca Portella, Diego Urgelés Puértolas, César Guevara Presenter: Jimenez Agudelo Affiliation: Cunef Universidad
15:45-16:00	4780	Title: Deep Neural Network-empowered Polygenic Disease Prediction on Cardiovascular Diseases Author(s): Zelia Soo, Hua Lin, Yue Yang, Mark Grosser, Yi Zhang, Jie Lu Presenter: Zelia Soo Affiliation: University of Technology Sydney
16:00-16:15	2271	Title: Temperature Drift Compensation of Light Scattering PM Sensor Based on BP Neural Network Author(s): Zhicong Shen, Junying Niu, Zongzheng You Presenter: Junying Niu Affiliation: Shunde Polytechnic
16:15-16:30	6071	Title: HVAC System Air Filter Maintenance: A Fuzzy Machine-Learning-Based System Author(s): Rinta Kridalukmana, Mohsen Naderpour, Fahimeh Ramezani, Helen Lu, Pascal Xavier Presenter: Rinta Kridalukmana Affiliation: Diponegoro University
16:30-16:45	5653	Title: Construction Progress Prediction of Substation Infrastructure Project Based on Random Forest Author(s): Bin Han, Hui Xiao, Lei Yu, Zhiqiang Xu, Weiqing Chen, Xiaohu Sun Presenter: Xiaoyi Gou Affiliation: Nanjing NARI Information and Communication Technology



16:45-17:00	5949	Title: P2P Traffic Recognition Method Based on Support Vector Machine Author(s): Zihao Qi, Haiyan Xie, Lihao Shi Presenter: Lihao Shi Affiliation: Dalian Maritime University
17:00-17:15	5359	Title: Streaming Video Temporal Action Segmentation in Real Time Author(s): Wujun Wen, Yunheng Li, Zhuben Dong, Lin Feng, Wanxiao Yang, Shenglan Liu Presenter: Yifeng Dong Affiliation: Dalian University of Technology
17:15-17:30	2957	Title: Research on an Embedding and Mapping Approach with Domain-independent Latent for Cross-domain Recommender System Author(s): Chenxia Jin, Yongwang Duan, Lei Zhou Presenter: Yongwang Duan Affiliation: Hebei University of Science and Technology
18:00-20:00		Conference Banquet (Banquet Hall-C 2nd Floor)



TECHNICAL SESSIONS on Nov. 19

Session 7: Artificial Intelligent Methodology and System-B

TIME 08:30-10:00 **VENUE** Duo Gong Neng Ting

CHAIR Changying Wang, Fujian Agriculture and Forestry University, China

Time	Paper ID	Details
08:30-08:45	7572	Title: A Cross-chains Procurement Approach Between Enterprises Targeted at Automotive Service Providers Author(s): Yunhui Gao, Linfu Sun, Qishi Wu, Yisheng Zou Presenter: Yunhui Gao Affiliation: Southwest Jiaotong University
08:45-09:00	5451	Title: FXAI: Fusing XAI for Predicting COVID-19 Using Diverse Chest X-ray Images Author(s): Radhwan A. A. Saleh, Shawqi Mohammed Farea, Zaid Al-Huda, Metin Ertunc, Daniel Kvak, Mugahed A. Al-antari Presenter: Mugahed A. Al-antari Affiliation: Sejong University
09:00-09:15	9686	Title: MDAU-Net: A Multi-Scale U-Net with Dual Attention Module for Pavement Crack Segmentation Author(s): Zaid Al-Huda, Bo Peng, Mugahed A. Al-Antari, Riyadh Nazar Ali Algburi, Radhwan A. A. Saleh, Khaled Moghalles Presenter: Zaid Al-Huda Affiliation: Southwest Jiaotong University
09:15-09:30	6897	Title: A Survey: Navigating the Landscape of Incremental Learning Techniques and Trends Author(s): Yixin Li, Weijie Wu, Xintao Luo, Minjia Zheng, Yinning Zhang, Bo Peng Presenter: Xintao Luo Affiliation: Guangdong University of Technology
09:30-09:45	9029	Title: Contrastive Clustering with False Negatives Exclusion and Filtering Attraction Author(s): Qiyi Wu, Yan Yang, Yongquan Jiang Presenter: Yan Yang Affiliation: Southwest Jiaotong University
09:45-10:00	3611	Title: Artificial Intelligence in Maximizing Product Quality in Automotive Industry: A Case on a South African Tier Two Manufacturing Processes Author(s): Thobile Lungile Mbatha, Ndala Yves Mulongo Presenter: Ndala Yves Mulongo Affiliation: University of Johannesburg
10:00-10:15		Coffee Break



Session 10: Artificial Intelligent Methodology and System-C

TIME 10:15-12:00 **VENUE** Duo Gong Neng Ting

Changying Wang, Fujian Agriculture and Forestry University, China **CHAIR**

Time	Paper ID	Details
10:15-10:30	6288	Title: A Novel Image Encryption Based on Style Transfer Author(s): Wanyi Zhou, Yujin Lu, Rui Wang, Qi Wang, Jeffrey Zheng Presenter: Qi Wang Affiliation: Yunnan University
10:30-10:45	2156	Title: Efficient IoT Malware Detection Using Convolution Neural Network and View-invariant Block Author(s): Aneela Nasim, Hongyu Zhao, Muhammad Hafeez Javed, Aamir Mehmood Presenter: Hongyu Zhao Affiliation: Southwest Jiaotong University
10:45-11:00	5121	Title: Improved Training of GMM-based TSK Fuzzy System from Stability Perspective Author(s): Erhao Zhou, Guanjin Wang, Shitong Wang Presenter: Erhao Zhou Affiliation: Jiangnan University
11:00-11:15	8140	Title: A Graph Convolution Network and Fuzzy C-Means Based Human Skeleton Complement Method for Action Recognition Dataset Improvement Author(s): Shixuan Qian, Huanan Pu, Fusheng Yu Presenter: Shixuan Qian Affiliation: Beijing Normal University
11:15-11:30	3562	Title: Application of Artificial Intelligence to Reduce Production Shortcomings, Reworks and Returns, Logistics Errors Author(s): Mulisa Tshihwela, Ndala Yves Mulongo Presenter: Ndala Yves Mulongo Affiliation: University of Johannesburg
11:30-11:45	5221	Title: Gaussian Function Representation of 2nd-order Normal Cloud Model Author(s): Min Li, Guoyin Wang, Zeng Yu, Hongjun Wang, Jihong Wan, Tianrui Li Presenter: Min Li Affiliation: Southwest Jiaotong University
11:45-12:00 12:00-13:00	4561	Title: MAP-GAN: Generative Adversarial Network for Privacy Preserving of Multiple Facial Attributes Author(s): Meng Yue, Biao Jin, Zhiqiang Yao Presenter: Meng Yue Affiliation: Fujian Normal University Lunch (Min Hou Ting 2nd Floor)



Session 8: Logic, Computation and Artificial Intelligence & Deep Learning for Time Series Forecasting

VENUE Duo Mei Ti Ting A 08:30-10:00 TIME

Liang Wang, Fuzhou University, China CHAIR

Time	Paper ID	Details
08:30-08:45	6172	Title: Active Deduction Heuristic Algorithm of Standard Contradiction Separation Rule Based on Reinforcement Learning Author(s): Jian Zhong, Peiyao Liu, Shuwei Chen Presenter: Shuwei Chen Affiliation: Southwest Jiaotong University
08:45-09:00	2853	Title: Attribute Reduction in Double Hierarchy Fuzzy Linguistic Formal Context Author(s): Qing Guo, Jiang Wu, Meiqiao Sun, Deshan Liu, Xin Liu, Li Zou Presenter: Li Zou Affiliation: Shandong Jianzhu University
09:00-09:15	5659	Title: FBI-TAL: Foreground-Background Integration for Single-Frame Supervised Temporal Action Localization Author(s): Yifeng Dong, Guangsheng Li, Feilong Wang, Wujun Wen, Xuehai Xu, Lin Feng Presenter: Yifeng Dong Affiliation: Dalian University of Technology
09:15-09:30	9705	Title: Multi-Scale Spatio-Temporal Aggregation Network for Human Motion Prediction Author(s): Haoyu Su, Shenglan Liu, Zewen Gao, Yifeng Dong, Junshi Yang, Suhao Ding Presenter: Haoyu Su Affiliation: Dalian University of Technology
09:30-09:45	2523	Title: Urban Traffic Flow Prediction Based on Regional Spatial-Temporal Correlation with Dual Attention Author(s): Taha M. Rajeh, Weichao Liang, Muhammad Hafeez Javed, Fares Alhaek, Tianrui Li Presenter: Taha M. Rajeh Affiliation: Southwest Jiaotong University
09:45-10:00	1409	Title: Research on Multi-Target Vehicle Detection and Tracking Based on Yolo Author(s): Tchanchou Ngatouo Costel, Jiang San Xin Presenter: Tchanchou Ngatouo Costel, Jiang San Xin Affiliation: Shanghai University of Electric Power Coffee Break
10:00-10:15		Соттее вгеак



Session 11: Intelligent Manufacturing Enabled Sustainable Development

TIME 10:15-12:00 **VENUE** Duo Mei Ti Ting A

Liang Wang, Fuzhou University, China **CHAIR**

Time	Paper ID	Details
10:15-10:30	5956	Title: Neural Network-based Classification and Discrimination Modeling of Young Women's Buttocks Author(s): Sha Sha, Mengjie Liu, Cheng Chi, Xuewei Jiang Presenter: Sha Sha Affiliation: Wuhan Textile University
10:30-10:45	3416	Title: Key Technologies and Methods of Intelligent Quality Management in Electronic Product Manufacturing Process Author(s): Enkai Su, Yuhong Song Presenter: Yuhong Song Affiliation: Shunde Polytechnic
10:45-11:00	6620	Title: Research on Digital Identification of Garment Pieces Based on Contour Fitting Algorithm Author(s): Jiahe Xue, Cheng Chi, Zheng Wang, Shichen Yang, Xuewei Jiang Presenter: Jiahe Xue Affiliation: Wuhan Textile University
11:00-11:15	8832	Title: Exploration of the Influence Mechanism of Young Consumer's Purchase Intention of Upcycling Clothing Using Data-mining Technique Author(s): Zhujun Wang, Yingmei Xing, Yongping Guo Presenter: Zhujun Wang Affiliation: Anhui Polytechnic University
11:15-11:30	7409	Title: Development of a Traceability Tag Based Data Warehouse for Textile Supply Chain Author(s): Kaichen Wang, Shan Xiong, Zhiwei Huang, Qing Li, Zhebin Xue, Xianyi Zeng Presenter: Shan Xiong Affiliation: Soochow University
11:30-11:45	8242	Title: Reinforcement Learning Method for Multi-objective Optimization of Papermaking Wastewater Treatment Process Author(s): Zaohao Lu, Mengna Hong, Yi Man, Xianyi Zeng, Zhenglei He Presenter: Zaohao Lu Affiliation: South China University of Technology
11:45-12:00	3293	Title: ST-MoE: Spatio-temporal Mixture of Experts for Multivariate Time Series Forecasting Author(s): Hanwen Liu, Yibing Zhang, Ximeng Wang, Bin Wang, Yanwei Yu Presenter: Bin Wang Affiliation: Ocean University of China
12:00-13:00		Lunch (Min Hou Ting 2nd Floor)



Session 9: Practical Applications of Al and Knowledge Engineering-C

TIME 08:30-10:00 **VENUE** Duo Mei Ti Ting B **CHAIR** Shuwei Chen, Southwest Jiaotong University, China

Time	Paper ID	Details
08:30-08:45	1831	Title: A Study of Several Supervised Learning Methods for the Prediction of Pit Settlements Author(s): Lihao Shi, Haiyan Xie, Zihao Qi Presenter: Lihao Shi Affiliation: Dalian Maritime University
08:45-09:00	4601	Title: SA-STT: A Structure-Aware Spatio-Temporal Transformer for Traffic Prediction Author(s): Weijie Chen, Haifeng Luo, Feng Ye, Tianqiang Huang, Liqing Huang, Chao Xu Presenter: Weijie Chen Affiliation: Fujian Normal University
09:00-09:15	2059	Title: Discrimination of Normal Side Gait Changes in Gait Asymmetry Using a Multi-Kernel Convolution Model Author(s): Zhirui Chen, Jianning Wu Presenter: Zhirui Chen Affiliation: Fujian Normal University
09:15-09:30	6921	Title: A Revised Model for Sea-Surface Wind Inversion Data with Joint Interpolation Optimization and Residual Network Author(s): Weihong Lin, Lijun You, Tianqiang Huang, Liqing Huang, Haifeng Luo, Chao Xu Presenter: Weihong Lin Affiliation: Fujian Normal University
09:30-09:45	6065	Title: Exploring the Effects of Various Generative Adversarial Networks Techniques on Image Generation Author(s): Zian Shi, Junyi Teng, Shihao Zheng, Kaifeng Guo Presenter: Rongjian Gao Affiliation: Fuzhou University
09:45-10:00	5678	Title: Fault Diagnosis of Pumping Units Based on Extended-fusion Machine Learning Author(s): Lixian Xu, Rui Su, Ali Aftab, Jun Liu, Xinfeng Liu, Dehu Yu Presenter: Lixian Xu Affiliation: Ulster University
10:00-10:15		Coffee Break



Session 12: Decision Models under Uncertainty Applied for Sustainable **Development**

10:15-12:00 **VENUE** Duo Mei Ti Ting B TIME Shuwei Chen, Southwest Jiaotong University, China CHAIR

Time	Paper ID	Details
10:15-10:30	1847	Title: A Fuzzy Semantic Representation Model of EHFLTS: Application to Tire Supplier Selection Problem Author(s): Yaya Liu, Xiaowen Zhang, Rosa M. Rodríguez, Luis Martínez Presenter: Yaya Liu Affiliation: University of Shanghai for Science and Technology
10:30-10:45	5153	Title: A Framework for the Selection of Indicators Through Fuzzy Thresholds: A Circular Economy Application Author(s): Diego García-Zamora, Álvaro Labella Romero, Rosa M. Rodríguez, Luis Martínez Presenter: Luis Martínez Affiliation: University of Jaén
10:45-11:00	634	Title: The TOPSIS Method for Multi-attribute Group Decision Making with Picture 2-tuple Linguistic Sets Author(s): Wei Gao, Yandi Zhang, Junjun Feng, Jin Guo, Qing Guo, Li Zou Presenter: Li Zou Affiliation: Shandong Jianzhu University
11:00-11:15	6881	Title: A Dynamic Multi-criteria Sorting Method for Modern Renewable Energy Consumption Author(s): Liang Wang, Jia Yan Lai, Zi-Xin Zhang Presenter: Liang Wang Affiliation: Fuzhou University
11:15-11:30	7833	Title: An Automatic Linguistic Consensus Model for Sustainability Author(s): Álvaro Labella, Diego García-Zamora, Rosa M. Rodríguez, Luis Martínez Presenter: Luis Martínez Affiliation: University of Jaén
11:30-11:45	8418	Title: A New Formulation and Solution for Allocating Emergency Supplies to Balance the Demands in Public Safety Events Author(s): Xueqin Lu, Yan Tang, Yangguang Liu, Xiao-zhi Gao Presenter: Xueqin Lu Affiliation: Ningbo University of Finance & Economics
11:45-12:00	2791	Title: Trichotomous Votes Election with Graph Constraint Author(s): Fengbo Wang, Aizhong Zhou, Jianliang Xu Presenter: Fengbo Wang Affiliation: Ocean University of China
12:00-13:00		Lunch (Min Hou Ting 2nd Floor)



Session 13: Explainable Deep Learning Techniques and Applications

TIME 13:00-15:00 **VENUE** Duo Gong Neng Ting

CHAIR Wei Huang, Fuzhou University, China

Time	Paper ID	Details
13:00-13:15	3519	Title: Predicting Remaining Useful Life of Lithium-ion Battery Using Extended Belief Rule Base Model Author(s): Long-Hao Yang, Bei-Ya Qian, Chen-Xi Huang, Fei-Fei Ye, Haibo Hu, Hai-Dong Wu Presenter: Chen-Xi Huang Affiliation: Fuzhou University
13:15-13:30	4508	Title: A Named Entity Recognition Method for Substation Location Selection Author(s): Aigang Cao, Yongjie Ye, Zhenchang Wang, Tiefeng Zhang Presenter: Tiefeng Zhang Affiliation: North China Electric Power University
13:30-13:45	6087	Title: Lightweight Glass Insulator Self-Explosion Defect Detection Method Based on YOLOv5 Author(s): Xinlin Liu, Ning Lin, Zhiqiang Wang Presenter: Yunhe Wang Affiliation: Shenzhen Power Supply Bureau Co., Ltd
13:45-14:00	5506	Title: DeepMesh: A Comprehensive Survey of Deep Learning-Based Routing Performance in Wireless Mesh Networks Author(s): Xiaoping Qiu, Zahidul Alam, Zhongjian Yue, Yulan Wang Presenter: Md Zahidul Alam Affiliation: Southwest Jiaotong University
14:00-14:15	7033	Title: Substation Location Planning Based on Multi-strategy Improved Marine Predators Algorithm Author(s): Yongjie Ye, Aigang Cao, Zhenchang Wang, Tiefeng Zhang Presenter: Tiefeng Zhang Affiliation: North China Electric Power University
14:15-14:30	2727	Title: Extracting Scenarios from Autonomous-Vehicle-Involved Crashes Author(s): Sirui Han, Haitian Lu, Hao Wu, Feifei Ye Presenter: Sirui Han Affiliation: The Hong Kong Polytechnic University
14:30-14:45	3508	Title: Object Detection Method for Foreign Substances on High-Voltage Transmission Lines Based on Deep Learning Author(s): Xinlin Liu, Zhuyi Rao, Ning Lin Presenter: Fei Ge Affiliation: Shenzhen Power Supply Bureau Co., Ltd
14:45-15:00	6112	Title: Cumulative Belief Rule-Based Expert System for Multi-Resident Activity Recognition in Smart Home Author(s): Long-Hao Yang, Yi-Xuan Lu, Peng-Peng Huang, Fei-Fei Ye, Hai-Dong Wu, Jun Liu Presenter: Peng-Peng Huang Affiliation: Fuzhou University
15:00-15:30		Closing Ceremony (Duo Gong Neng Ting F Floor) Chair: Jianting Ning, Fujian Normal University, China



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