17th International Conference on Advanced Computational Intelligence (ICACI 2025)

July 7 - 13, 2025 London, Bath, and Cambridge, United Kingdom

Final Program



Sponsor/organizer:



University of Bath





University



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Technical co-sponsor:



IEEE Systems, Man and Cybernetics Society

Welcome Messages

On behalf of the Organizing Committee of the 17th International Conference on Advanced Computational Intelligence (ICACI 2025), we are pleased to welcome you to this event, which will take place in Bath, UK, from July 7-13, 2025. Building on the success of previous events, ICACI has established itself as a well-regarded series of high-quality conferences in the field of advanced computational intelligence. ICACI 2025 aims to provide a high-level international forum for scientists, engineers, and educators to present the latest advancements in computational intelligence and related fields. The conference will feature plenary speeches by world-renowned scholars, regular sessions with broad coverage, and special sessions focusing on trending topics.

This year, the conference received 61 submissions from 11 countries worldwide. Each submission was reviewed by at least two and, on average, three program committee members. After rigorous peer reviews, the committee accepted 45 papers for presentation and publication in the proceedings. These papers cover a wide range of topics, including theory, methodology, and applications. In addition to the contributed papers, the conference's technical program features plenary speeches by world-renowned scholars. The two keynote speakers will be Professor Qiang Shen (Pro Vice-Chancellor at Aberystwyth University, a Fellow of the Royal Academy of Engineering, and an IEEE Fuzzy Systems Pioneer Awardee) and Professor Xin Yao (Vice-President at Lingnan University, IEEE Fellow, IEEE Frank Rosenblatt Awardee, IEEE Evolutionary Computation Pioneer Awardee, Past President of the IEEE Computational Intelligence Society, and Past Editor-in-Chief of the IEEE Transactions on Evolutionary *Computation*). The program also includes an IEEE distinguished lecture by Professor Danwei Wang, IEEE Fellow and Fellow of Academy of Engineering Singapore from Nanyang Technological University, Singapore. In addition, the program also includes two pre-conference tutorials by Professor Yali Du at King's College London and Professor Zhihui Zhan (IEEE Fellow) at Nankai University.

Many organizations and volunteers contributed greatly to the success of this conference. We would like to express our sincere gratitude to the University of Bath for their sponsorship and organization, to Anglia Ruskin University, Brunel University London, and City University of Hong Kong for their co-sponsorship, and to the IEEE Systems, Man, and Cybernetics Society for its technical co-sponsorship. We also extend our heartfelt thanks to all the committee members for their efforts in organizing the conference. Special thanks go to the program committee members and reviewers, whose insightful reviews and timely feedback ensured the high quality of the accepted papers and the smooth flow of the conference. Finally, we would like to thank all the speakers, authors, and participants for their support.

Hanxiong Li, Honghai Liu, and Qingfu Zhang, *General Chairs* Jun Wang, and Dingguo Zhang, *Organizing Chairs* Longzhi Yang, Yingjie Yang, Zhigang Zeng, and Jinghui Zhong, *Program Chairs*

Organizing Committee

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Special Sessions Chairs

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Publications Chairs

Zhongying Chen, Southeast University, Nanjing, China Hongzong Li, City University of Hong Kong, Hong Kong Mei Liu, City University of Hong Kong, Hong Kong Xiaofang Liu, Nankai University, Tianjin, China Yixuan Sheng, Harbin Institute of Technology - Shenzhen, Shenzhen, China Dan Su, Central South University, Changsha, China

Publicity Chairs

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Local Arrangements Chair Gang Li, University of Bath, Bath, UK Ke Chen Tai-You Chen Yongliang Chen Shi Cheng Yuanping Ding Guobing Dong Junxi Gao Yue-Jiao Gong Xiaoyi Gou Xiaoxu Han Jun Hong Agin Hu Jenat James Huang Jun Arjab Singh Khuman Ahmad Lawal Hao Lei Hongzong Li Shuo Li Jun Lin Fei Liu Wei-Li Liu Kejian Pang Rahim Pasbanigoloojeh Wen-Jin Qiu Muni Moorthy Ragamsetti Yu Tian Si-Cheng Wang Feng-Feng Wei Honghua Wu Liancheng Wu Baohua Yang Peng Yang Qi-Te Yang Ziyi Yang Caitong Yue Min-Yi Zheng Yu Zhou

Program Committee

Zhengzhou University South China University of Technology City University of Hong Kong Shaanxi Normal University Nanjing University of Aeronautics and Astronautics South China Agricultural University South China Agricultural University South China University of Technology Nanjing University of Aeronautics and Astronautics South China University of Technology South China University of Technology Linyi University De Montfort University Leicester South China Agricultural University De Montfort University Leicester De Montfort University Leicester South China Agricultural University City University of Hong Kong De Montfort University Leicester South China Agricultural University City University of Hong Kong Guangdong Polytechnic Normal University South China Agricultural University De Montfort University Leicester South China University of Technology De Montfort University Leicester City University of Hong Kong South China University of Technology South China University of Technology University of Jinan South China University of Technology Jiangsu Normal university Southern University of Science and Technology South China University of Technology South China University of Technology Zhengzhou University South China University of Technology Shenzhen University

Program at a Glance

oury 0, 2025		
Tutorial Session: Room 1.02, Bush House (Southeast Wing), King's College London		
9:00 - 9:05	Introduction: Jun Wang	
9:05 - 9:50	Tutorial I: Yali Du	
10:00 - 11:00	Tutorial II: Zhihui Zhan	
11:00 - 13:00	Campus tour and networking	

July 8, 2025

July 9, 2025

Transit to Bath and on-site registration

July 10, 2025		
Plenary and Parallel Sessions: Room EB0.5, East Building, University of Bath		
8:30 - 9:00	Registration	
8:30 - 8:40	Opening Ceremony	
8:40 - 9:40	Plenary Speech I: Qiang Shen	
9:40 - 10:40	Plenary Speech II: Xin Yao	
10:40 - 11:00	Coffee break	
11:00 - 12:00	IEEE Distinguished Lecture: Danwei Wang	
12:00 - 13:00	Lunch break	
13:00 - 15:20	Parallel Sessions S1 and S2 @ EB0.5 and EB0.11	
15:00 - 15:20	Coffee break	
15:20 - 17:20	Parallel Sessions S3 and S4 @ EB0.5 and EB0.11	
19:00 - 20:30	Social time @ Abbey Hotel	

July 10, 2025

July 11, 2025		
Online Sessions via Zoom		
8:00 - 12:00	Sessions S5 and S6 via Zoom	
12:00 - 13:00	Lunch break	
13:00 - 16:20	Sessions S7 and S8 via Zoom	

July 12-13, 2025

Post-conference Workshop @ Anglia Ruskin University in Cambridge

Plenary Speech I

Harnessing AI with Limited Data: Approximate Knowledge Interpolation and Practical Applications

Professor Qiang Shen Aberystwyth University, Aberystwyth, Wales, UK

Abstract

AI stands to transform nearly every aspect of contemporary life. Much of its success is driven by deep learning techniques that rely on vast quantities of data. Yet, a pivotal question emerges when faced with limited data for a new problem, especially if such data is ambiguously characterised. Can AI maintain its efficacy under these constraints? This talk delves into contributions addressing this query, highlighting how fuzzy rule interpolation (FRI) enables approximate reasoning in situations marked by sparse or incomplete knowledge. This is particularly relevant when traditional rule-based inference mechanisms falter because observations do not align with existing rules.

The talk will centre on a prominent subset of FRI techniques, Transformation-based FRI (T-FRI). Kicking off with an exploration of the foundational T-FRI approach, it will segue into a concise overview of its expanded repertoire, each addressing certain shortcomings inherent to the original method. Subsequently, real-world applications of these methodologies will be showcased, exemplifying their potency in tackling formidable challenges in domains like network security and medical diagnosis. These cases will underscore AI's capability to function effectively even with incomplete knowledge and ambiguous data. The talk will conclude with a brief look at promising future directions in this vital area of research.



Qiang Shen received a PhD in Computing and Electrical Engineering (1990) and an Honorary DSc in Computational Intelligence (2013). He holds the Established Chair of Computer Science and serves as Pro Vice-Chancellor: Faculty of Business and Physical Sciences at Aberystwyth University. He is a Fellow of the Royal Academy of Engineering and a Fellow and Council Member of the Learned Society of Wales. He had the honour of being selected as a 2012 London Olympic Torchbearer in celebration of Alan Turing's centenary. Qiang is currently Chair of the UK Research Excellence

Framework (REF) 2029 Subpanel for Computer Science and Informatics and a member of the People, Culture and Environment Pilot Panel, having previously served on the panels for REF 2014 and REF 2021. He is the 25th recipient of the IEEE Fuzzy Systems Pioneer Award. He has authored three research monographs and over 500 peer-reviewed papers, many of which have received outstanding journal or best conference paper awards, including several directly related to this conference talk.

Plenary Speech II

Online Learning of Data Streams with Concept Drift

Professor Xin Yao Lingnan University, Hong Kong, China

Abstract

Data stream mining is a challenging task because the data come only one or a chunk at a time. An online learner has to learn while operating continuously. Such a scenario occurs in numerous real-world scenarios, e.g., condition monitoring, fault diagnosis, energy consumption, medical tests, financial information, etc. To make the situation more challenging, the underlying distribution of a data stream may change over time (i.e., a concept drift). This talk first introduces the learning-in-the-model-space framework, which can be used effectively to learn noisy and complex data streams. Online fault diagnosis will be used as an example to illustrate how learning-in-the-model-space could facilitate detecting and classifying unknown faults. Then this talk will present an ensemble approach to tackling concept drifts, i.e., adapting the ensemble diversity after a drift is detected in order to learn new concepts quickly and accurately. Finally, this talk will describe a new method for detecting both real and virtual drifts more accurately.



Xin Yao is the Vice President (Research and Innovation) and the Tong Tin Sun Chair Professor of Machine Learning at Lingnan University, Hong Kong SAR. He is an IEEE Fellow and was a Distinguished Lecturer of the IEEE Computational Intelligence Society (CIS). He served as the President (2014-15) of IEEE CIS and the Editor-in-Chief (2003-08) of IEEE Transactions on Evolutionary Computation. His major research interests include

evolutionary computation, neural network ensembles, and multi-objective learning. His recent interests include online learning, class imbalance learning, and trustworthy artificial intelligence. His work won the 2001 IEEE Donald G. Fink Prize Paper Award; 2010, 2016 and 2017 IEEE Transactions on Evolutionary Computation Outstanding Paper Awards; 2011 IEEE Transactions on Neural Networks Outstanding Paper Award; 2010 BT Gordon Radley Award for Best Author of Innovation (Finalist); and many other best paper awards at conferences. He received the 2012 Royal Society Wolfson Research Merit Award, the 2013 IEEE CIS Evolutionary Computation Pioneer Award, and the 2020 IEEE Frank Rosenblatt Award.

IEEE Distinguished Lecture

Robust Spatial Perception and Intelligent Systems

Abstract

Outdoor environments are mostly unstructured and subject to nature's diverse conditions. The deployment of autonomous systems in such challenging scenarios requires robust and non-interrupted perception. Multi-modal sensor suites are necessary to achieve spatial data with visual and geometric information. AI-enabled fusion of multi-domain sensing can generate the required perception, which in turn ensures the correct inputs for decision-making. In this talk, we present our work on multi-modal sensing and its robust spatial intelligence. The developed capability works in adverse environments where commonly used sensors fail. Furthermore, various multi-modal sensing-based autonomy capabilities are illustrated for path-planning and navigation of autonomous robots. Finally, an industry application of robust spatial intelligence is shown to be successful in quay crane automation.



Danwei Wang (Life Fellow, IEEE) received the B.E. degree from the South China University of Technology, China, in 1982, and the M.S.E. and Ph.D. degrees from the University of Michigan, Ann Arbor, in 1984 and 1989, respectively. He is a Professor with the School of Electrical and Electronic Engineering, Nanyang Technological University (NTU), Singapore. He was the Head of the Division of Control and Instrumentation, NTU, from 2005 to 2011; the Director

of the Centre for System Intelligence and Efficiency, NTU, from 2013 to 2016; and the Director of the ST Engineering-NTU Corporate Laboratory, NTU, from 2015 to 2021. His research interests include robotics, control engineering, and fault diagnosis. Dr. Wang is a fellow of Academy of Engineering Singapore. He was a recipient of the Alexander von Humboldt Fellowship, Germany. He served as the general chair, the technical chair, and in various positions in several international conferences, and as an invited guest editor for various international journals. He is a Distinguished Lecturer of the IEEE Robotics and Automation Society.

Tutorial I

Human-Centric Cooperative Multi-Agent RL with LLM Reasoning

Abstract

From collaborative industrial robots to personal AI assistants, the integration of AI into daily life underscores the critical need for effective and reliable coordination, both among autonomous agents and between agents and humans. Achieving multi-agent cooperation goes beyond individual interactions to encompass broader societal considerations, including aligning with human values and intentions. In this talk, I will explore two paradigms for leveraging large language models (LLMs) to transfer human knowledge into cooperative decision making. I will discuss how human feedback can address the sparse reward problem in reinforcement learning, and how learning from tutorial books, without real-world interaction, can enhance agents' capabilities.



Yali Du is a Senior Lecturer in AI at <u>King's College London</u> and a Turing Fellow at <u>The Alan Turing Institute</u>. She leads the <u>Cooperative AI Lab</u>. Her research aims to enable machines to demonstrate cooperative and safe behaviour in intelligent decision-making tasks, encompassing areas of multi-agent cooperation, Human-AI coordination, and value alignment. She received the AAAI New Faculty Highlights award in

2023 and was named a Rising Star in AI for the same year. She has also conducted tutorials on cooperative multi-agent learning at ACML 2022 and AAAI 2023. She serves as an associate editor for the *Journal of AAMAS* and *IEEE Transactions on Artificial Intelligence*, Area Chair for NeurIPS 2024, Senior PC for AAAI 2022, and ECAI 2024. She also serves on the organising committee for NeurIPS 2024 and AAMAS 2023. Her research receives support from the EPSRC and the UK AI Safety Institute.

Tutorial II

Data-Driven Evolutionary Computation: What to Drive and How to Drive?

Abstract

Evolutionary computation (EC) is a kind of powerful artificial intelligence (AI) method for optimization. The EC simulates the evolutionary phenomenon and swarm intelligent behaviours in nature, being promising in knowledge creation and problem solving. As the EC algorithms follow the Darwin's "survival of the fittest" principle to select better solutions and to reproduce new solutions, they may face difficulties when deal with expensive optimization problem if the fitness evaluation is very time/cost consuming or even the fitness function cannot be formulated. The complex optimization problems also challenge the EC algorithms to make them easy to be trapped into local optima or to take too long time to converge to the promising region. Therefore, data-driven EC (DDEC) has become popular in helping EC algorithms solve these challenging optimization problems. This talk will focus on what to drive in DDEC and how to drive the DDEC. For what to drive, we focus on building a surrogate for fitness evaluation to drive selection and focus on learning successful patterns to help generate solutions to drive evolution. Then, in data-driven selection, we talk about Boosting Data-Driven Evolutionary Algorithm and Hierarchical and Ensemble Surrogate-assisted Evolutionary Algorithm; in data-driven evolution, we talk about Learning-aided Evolution for Optimization and Knowledge Learning for Evolutionary Computation. We hope such new EC paradigms can provide new ways for solving modern ultra-complex optimization problems and promote the new developments of EC and AI.



Zhi-Hui Zhan is currently a Changjiang Scholar Young Professor and Gifted Professor at Nankai University, Tianjin, China. Prof. Zhan is an IEEE Fellow. He was a recipient of the IEEE Computational Intelligence Society Outstanding Early Career Award in 2021, the Outstanding Youth Science Foundation from the National Natural Science Foundation of China in 2018, and the Wu Wen-Jun Artificial Intelligence Excellent Youth from the Chinese Association for Artificial Intelligence in 2017. He is listed as a Highly Cited Researcher by Clarivate Analytics, as the World's Top 2% Scientist for both

Career-Long Impact and Year Impact in AI, and as the Elsevier Highly Cited Chinese Researcher in Computer Science from 2014 to 2024. He is currently an Associate Editor of the *IEEE Trans. on Artificial Intelligence, IEEE Trans. on Evolutionary Computation, IEEE Trans. on Emerging Topics in Computational Intelligence, and IEEE Trans. on Systems, Man and Cybernetics: Systems.*

Main Event

July 9, 2025 On-site registration

July 10, 2025

Room EB0.5, East Building, University of Bath

8:30 - 9:00	Registration
8:30 - 8:40	Opening Ceremony
8:40 - 9:40	Plenary Speech by Professor Qiang Shen
	Harnessing AI with Limited Data: Approximate Knowledge Interpolation and Practical Applications
9:40 - 10:40	Plenary Speech by Professor Xin Yao
	Online Learning of Data Streams with Concept Drift
10:40 - 11:00	Coffee break
11:00 - 12:00	IEEE Distinguished Lecture: Professor Danwei Wang
	Robust Spatial Perception and Intelligent Systems
12:00 - 13:00	Lunch break

S1: Robotics and Control

Chairs: Qiang Xiao and Yue Long

Room: <u>EB0.5</u>

13:00 - 13:20	Autonomous Mobile Robot Navigation for Hospital Disinfection using
	SLAM and Coverage Path Planning
	Oscar Antill, Zeyad Al-Shibaany
13:20 - 13:40	Advanced Signal Processing and Deep Learning for Multi-Sensor
	Detection, Localization, and Classification of Miniature UAVs
	Mustapha Benssalah, Dhiya Eddine Rabia Oulahcine, Karim Drouiche
13:40 - 14:00	Top-two ListMLE Reinforcement Learning Based UGVs Formation
	Control with Changeable Pattern
	Chengzhi Lei, Qiang Xiao, Zhigang Zeng
14:00 - 14:20	Human-in-the-Loop Prescribed Performance Optimal Control for
	Multiagent Systems under DoS Attacks: An Error Reconstruction
	Mechanism
	Zongsheng Huang, Tieshan Li, Yue Long, Jinliang Shao
14:20 - 14:40	Reinforcement Learning-Based Voltage Regulation of DC Boost
	Converter in a PEM Fuel Cell Electric Vehicle

Seyed Mehdi Rakhtala Rostami, Zeyad Al-Shibaany

S2: AI Applications

Chairs: Man-Fai Leung and Yoshikazu Fukuyama

Room: <u>EB0.11</u>

13:00 - 13:20	Comprehensive Optimization of the Entire Smart City by Parallel
	Improved Spider Monkey Optimization with a Variable Parameter and a
	New Grouping Method
	Chihiro Ohara, Yoshikazu Fukuyama, Takuya Watanabe, Tatsuya Iizaka
13:20 - 13:40	Bilevel Optimal Production Scheduling of Heating Furnaces with a
	Practical Production Simulator Using Integer Form of Population-Based
	Incremental Learning with an Initial Probability Matrix Setting Method
	and Local Search with a Surrogate Model
	Sei Tomi, Yoshikazu Fukuyama, Kenjiro Takahashi, Shuhei Kawaguchi,
	Takaomi Sato
13:40 - 14:00	Joint Scheduling Optimization of Machines and Automatic Guided
	Vehicles in Assembly Job Shop with Hybrid Artificial Bee Colony
	Algorithm
	Yue Zhang, Hao Zhang, Zhigang Xu
14:00 - 14:20	Real-time Implementation of Data Acquisition System using MicroBlaze
	and Zynq Processors in FPGA
	Ezilarasan M R, Man-Fai Leung, Hangjun Che, Xiangguang Dai
14:20 - 14:40	A Hesitant Fuzzy MCDM Approach for Evaluating the Digital Marketing
	Channels.
	Merve Güler, Esin Mukul
14:40 - 15:00	Skyline SIR Method for University Ranking: Case Studies based on QS,
	THE, and ARWU Rankings
	Junyi Chai, Junjie Zhou

15:00 – 15:20 **Coffee break**

S3: Machine Learning

Chairs: Wei-Neng Chen and Ping Guo

Room: <u>EB0.5</u>

15:20 - 15:40	Synergetic Lear Physics	rning Systems: Inte	erpretation of	^c Deep Le	earning Using
	Ping Guo, Yupi	ing Wang, Hailin	Liu		
15:40 - 16:00	A General RNN	Model for Recons	structing Arb	itrary W	ave Functions
	Shuang Cong, I	Limin Lin			
16:00 - 16:20	Evolutionary	Reinforcement	Learning	with	LLM-Based
	Hyperparamete	er Adaptation			

16:20 - 16:40	Beining Chen, Feng-Feng Wei, Wei-Neng Chen Optimizing Graph Neural Network Architecture through Grammar-
	Based Genetic Programming
	Yueheng Wang, Weijian Ye, Xinyu Yuan, Min-Yi Zheng, Jie Yan,
	Jinghui Zhong
16:50 - 17:00	Bayesian Graph Neural Networks for Interpretable Link Prediction
	Jia-Ran Gao, Xiao-Tian Chen, Jia-Xuan Shen, Feng-Feng Wei, Wei-
	Neng Chen
17:00 - 17:20	FPGA-Based ANN-Hyperchaotic PRNG for Secure Audio Applications
	Mohamed Salah Azzaz, Youcef Alloun, Abdenour Kifouche, Amina Kadir, Bachir Madani, Redouane Kaibou

S4: Biomedical Applications

Chairs: Jinghui Zhong and Hangjun Che

Room: <u>EB0.11</u>

15:20 - 15:40	 PiezoTac: Fingerprint-Inspired Piezoelectric Tactile Sensing for Enhanced Texture Discrimination Xiaoxin Wang, Chenbin Lin, Chen Yang, Ziyong Liu, Yixuan Sheng, Kairu Li, Liping Huang, Honghai Liu
15:40 - 16:00	Infusion Monitoring and Real-Time Prediction Based on YOLOv8 with P2 Enhancement Ziyang Fang, Yusheng Wu, Yueheng Wang, Jinghui Zhong
16:00 - 16:20	Tensor-based Incomplete Multi-view Subspace Clustering Applied to Cancer Subtyping Weiyu Li, Wei Guo, Hangjun Che, Xinqi Li, Hanshuo Lu, Man-Fai Leung
16:20 - 16:40	A Compact Convolutional Neural Network with Pyramid Squeeze Attention for RSVP-EEG Classification Ran Jia, Wenbin Guo, Zeyu Ren, Banghua Yang
16:40 - 17:00	SSVEP-BCI Fatigue Evaluation Algorithm Based on Multi-Scale Feature Fusion and Attention Mechanism Zevu Ren, Banghua Yang, Ran Jia, Yonghuai Zhang, Jie Zhang
17:00 - 17:20	AI-Powered Diagnosis of Biermer's Disease: Handling Uncertainty in Clinical Decision-Making Nora Boumela, Guillaume Cadiot, Farid Chaoui

19:00-20:30Social time @ Abbey Hotel (ground floor)

July 11, 2025

S5: Optimization & Modeling

Chairs: Sitian Qin and Hongzong Li

Zoom at https://cityu.zoom.us/j/83207389602?pwd=atSnfX4YavYztShLG4nbC2y3dbPg1T.1

8:00 - 8:20	A Collaborative Neurodynamic Optimization Algorithm Based on
	Boltzmann Machines and 2-Opt Heuristic for Solving the Traveling
	Salesman Problem
	Hongzong Li, Jun Wang
8:20 - 8:40	Coevolutionary Multi-objective Discrete Particle Swarm Optimization
	for Gateway Placement Optimization Problem
	Kejing Du, Jun Zhang, Zhou Qingrui, Zhi-Hui Zhan, Jian-Yu Li, Zhi-Da
	He, Limin Wang
8:40 - 9:00	Unit Commitment via Collaborative Neurodynamic Optimization
	Chengshuo Zhang, Meng Xu, Shaofu Yang, Wenying Xu, Zhongying
	Chen
9:00 - 9:20	RootSolver: A Cognitive-Inspired Approach to Polynomial Root-Finding
	with Multiplicity Detection
	Muhammad Umair Danish, Ali Arslan Yousaf, Memoona Aziz, Katarina
	Grolinger, Umair Rehman
9:20 - 9:40	Grey Relational Analysis Model Based on Vector-Valued Function and
	Its Application
	Xue Han, Honghua Wu, Yafang Li
9:40 - 10:00	Zeroing Neural Network for Solving the Multiquadrotor Hose
	Transportation Problem
	Peining Jia, Haojin Li, Sitian Qin

S6: Intelligent Control

Chairs: Jie Lian and Bing Sun

Zoom at https://cityu.zoom.us/j/83207389602?pwd=atSnfX4YavYztShLG4nbC2y3dbPg1T.1

10:00 - 10:20	Robust Data-Driven Model Predictive Control with Time-Varying Stage
	Cost Penalty for Discrete Linear Time-Invariant Systems
	Jie Lian, Chong Zhang, Feiyue Wu
10:20 - 10:40	A Conflict Resolution Method for Multi-Robot Path Planning Based on the Improved Variable-Weight Dynamic Window Approach Dong Wang, Jinyuan Zhang, Wei Wang
10:40 - 11:00	
	LANet: A Lane Boundaries-Aware Approach for Robust Trajectory
	Prediction

	Muhammad Atta ur Rahman, Dooseop Choi, KyoungWook Min
11:00 - 11:20	Lateral Walking Gait Completion Prediction Based on EMG and
	Machine Learning Method
	Shuai Wang, Mingxiang Luo, Tianyu Wu, Junhang Liu, Xinyu Wu,
	Wujing Cao
	Dynamic Reconfiguration of Wearable Exoskeletons for Real-Time
11:20 - 11:40	Outdoor Mobility Assistance
	Zhi Zhang, Chunjie Chen, Zhuo Wang, Yizhe Zhou, Tian Wang, Xinyu
	Wu
11:40 - 12:00	Revand Single-Text Analysis: A Halistic Approach to Chinese Financial
	Deyona Single-Text Analysis. A Housile Approach to Chinese Financial
	Sentiment
	Mingfei Zhang, Chengze Du

Lunch break

S7: Segmentation and Classification I

Chairs: Longzhi Yang and Yuan Shan

Zoom at

https://cityu.zoom.us/j/83207389602?pwd=atSnfX4YavYztShLG4nbC2y3dbPg1T.1

13:00 - 13:20	CompareAD: Few-shot Anomaly Detection by Acquiring Contrastive
	Sense
	Jingyuan Zhuo, Ruidong Li, Meizhou Gao, Genke Yang, Yuan Shan,
	Xinyi Le
13:20 - 13:40	From Nearest-neighbour Classification to Attention
	Chun Ma, Yanpeng Qu, Longzhi Yang
13:40 - 14:00	Beyond-Labels: Advancing Open-Vocabulary Segmentation With Vision-
	Language Models
	Muhammad Atta ur Rahman, Dooseop Choi, Seung-Ik Lee,
	KyoungWook Min
14:00 - 14:20	TranRF: 3D Reconstruction Approach with Effective Transferability in
	Context-dependent Scenes
	Danting Duan, Yanqi Wang, Bing Sun, Ziyi Li, Hu Jin, Qin Zhang
14:20 - 14:40	EEG Emotion Recognition Method Based on Time-Frequency Domain
	Feature Cross-Fusion and Local-Global Feature Extraction
	Yongxuan Wen, Wanzhong Chen

S8: Classification & Segmentation II

Chairs: Nian Zhang and Wagdy H. Mahmoud

Zoom at https://cityu.zoom.us/j/83207389602?pwd=atSnfX4YavYztShLG4nbC2y3dbPg1T.1

14:40 - 15:00	Semiconductor Wafer Map Defect Classification Using Convolutional
	Neural Networks on Imbalanced Classes
	Nian Zhang, Wagdy H. Mahmoud
15:00 - 15:20	SLCRA: Symmetric Local Coregistration Adjustment Algorithm for
	Hyperspectral Image Change Detection
	Nian Zhang, Wagdy H. Mahmoud
15:20 - 15:40	Lidar Point Cloud Semantic Segmentation Using SqueezeSegV2 Deep
	Learning Network
	Nian Zhang, Wagdy H. Mahmoud
15:40 - 16:00	Urban Scene Semantic Segmentation with DeepLab v3+ and ResNet-18
	Transfer Learning
	Nian Zhang, Wagdy H. Mahmoud
16:00 - 16:20	Predicting Sugar Content in Grape Berries Using Machine Learning
	Algorithms on Hyperspectral Data
	Sougre-Nonma (Stephanie) Rouamba, Nian Zhang, Wagdy H. Mahmoud

- Adjournment -

Map of the Conference Venue



Floor Plan of the Conference Venue

EAST BUILDING Level 0 and level 1 floor plan

