Oct.31	Registration	Xiangshan Conference Center, Gaoxin District, Zhuhai
Nov.1	**Day 1**	
8:30-9:00	Opening Ceremony Chair: Hongbin Ma	Xiangshan Hall
9:00-9:40	Keynote Speech 1 Chair: Hongbin Ma Xiangshan Hall Learning and Feedback in the Control of Uncertain Systems By **Lei Guo** (Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China)	
9:40-10:20	Keynote Speech 2 Chair: Yaping Dai Xiangshan Hall A Paradigm Shift in Machine Learning: From Data to Data- Knowledge Environment By **Witold Pedrycz** (University of Alberta, Edmonton, Canada)	
10:20-10:30	Technical Exchange from YGSOFT Inc. Chair: Yaping Dai Xiangshan Hall	
10:30-10:40	Tea Break	
10:40-11:20	Keynote Speech 3 Chair: Jinhua She Xiangshan Hall Biomimetic Amphibious Spherical Father-son Underwater Robots By **Shuxiang Guo** (Southern University of Science and Technology, China)	
11:20-12:00	Keynote Speech 4 Chair: Jinhua She Xiangshan Hall Enhancing Collaborative Filtering for Advanced Recommender Systems By **Yasufumi Takama** (Tokyo Metropolitan University, Japan)	
Lunch		
13:30-15:50	8 Parallel Sessions: 20 min/each oral presentation, 20 min x 7 (max) = 140 min OS1, OS2, OS3, OS4, GS1, GS2, GS3, GS4 Meeting Room 304/101/102/103/104/106/108/201	
15:50-16:00	Break	
16:00-18:00	8 Parallel Sessions: 20 min/each oral presentation, 20 min x 6 (max) = 120 min OS5, OS6, OS7, OS8, GS5, GS6, GS7, GS8 Meeting Room 304/101/102/103/104/106/108/201	
13:30-17:30	Special Session on Wisdom in Systems and Control Meeting Room 105	
Nov.2	**Day 2**	
8:30-9:10	Keynote Speech 5 (online) Chair: Hongbin Ma Xiangshan Hall Teleoperation of Swarm Robotics By **Yang Shi** (University of Victoria, Canada)	
9:10-9:50	Keynote Speech 6 Chair: Hongbin Ma Xiangshan Hall Strategic Layout and Practice of AI Education in China By **Liqun Han** (Beijing Technology and Business University, China)	
9:50-10:00	Technical Exchange from Zhuhai Zhixin Automation Technology Co., Ltd. Xiangshan Hall Chair: Hongbin Ma	
10:00-10:10	Tea Break	
10:10-10:50	Keynote Speech 7 Chair: Bin Xin Xiangshan Hall Opportunities and Challenges for Medical Robotics in the Age of AI By **Zengguang Hou** (Institute of Automation, Chinese Academy of Sciences, China)	
10:50-11:30	Keynote Speech 8 Chair: Bin Xin Xiangshan Hall AI-Driven High-Definition Glasses-free 3D Light Field Display with Large-Viewing-Angle By **Xinzhu Sang** (Beijing University of Posts and Telecommunications, China)	
11:30-12:10	Keynote Speech 9 Chair: Bin Xin Xiangshan Hall Can LLMs Revolutionize Formal Verification: Gaps and Opportunities? By **Shing-Chi Cheung** (The Hong Kong University of Science and Technology, China)	
9:00-11:00	AI Contest Show Meeting Room 102	
Lunch		
13:30-15:30	6 Parallel Sessions: 20 min/each oral presentation, 20 min x 6 (max) = 120 min OS9, OS10, OS11, GS9, GS10, GS11 Meeting Room 304/103/104/106/108/305	
15:30-16:00	Break	
16:00-18:00	6 Parallel Sessions: 20 min/each oral presentation, 20 min x 6 (max) = 120 min OS12, OS13, GS12, GS13, GS14, GS15 Meeting Room 304/103/104/106/108/305	
14:00-18:00	Special Session on Artificial Intelligence in Education Meeting Room 101	
14:00-18:00	Inaugural Meeting of the International Association for Computational Intelligence Meeting Room 102	

18:30-20:00	**Welcome Banquet** Banquet Hall
Nov.3	**Day 3**
8:30-9:10	Keynote Speech 10 Chair: Hongbin Ma Xiangshan Hall AI for Digital Twin By **Yan Zhang** (University of Electronic Science and Technology of China)
9:10-9:50	Keynote Speech 11 (online) Chair: Hongbin Ma Xiangshan Hall Collaborative Innovation Technologies and Applications for Large and Small Models By **C. L. Philip Chen** (South China University of Technology, China)
9:50-10:00	Tea Break
10:00-10:40	Keynote Speech 12 Chair: Jinhua She Xiangshan Hall Interpretability and Transferability in Deep Learning By **Kazuhiko Kawamoto** (Chiba University, Japan)
10:40-11:20	Keynote Speech 13 Chair: Jinhua She Xiangshan Hall Network Intrusion Detection for IoT Environments with Limited Resources By **JianQing Li** (Macau University of Science and Technology, China)
11:20-12:00	Keynote Speech 14 (online) Chair: Hongbin Ma Xiangshan Hall Adaptive Intelligent Robotic Control Using Fuzzy Deep, Broad and Reinforcement Learning Techniques By **Ching-Chih Tsai** (Chung Hsing University, China)
Lunch	
13:30-15:50	6 Parallel Sessions: 20 min/each oral presentation, 20 min x 7 (max) = 140 min OS14, OS15, OS16, OS17, OS18, OS19 Meeting Room 101/102/103/104/105/106
15:50-16:00	Break
16:00-17:00	**Closing/Award Ceremony** Xiangshan Hall 16:00-17:00 Conference Summary & Award Ceremony
Nov.4	**Day 4**
9:00-9:15	Hotel -> YGSOFT Inc.
9:15-10:00	Visit YuanGuang Smart Park Exhibition Hall
10:00-10:15	YGSOFT Inc. -> Yunzhou Intelligent Technology Co., Ltd.
10:15-11:00	Visit Yunzhou Intelligence Exhibition Hall
11:00-11:15	Yunzhou Intelligent Technology Co., Ltd. -> Tangjia Ancient Town
11:00-12:00	Visit Tangjia Ancient Town / Tang Shaoyi's Former Residence
12:00-14:00	Lunch and Free Time in Tangjia Ancient Town
14:00-15:00	Tangjia Ancient Town -> Hengqin Planning Pavilion
15:00-16:00	Visit Hengqin Guangdong-Macao In-depth Cooperation Zone Planning Exhibition Hall
16:00-16:20	Hengqin Planning Pavilion -> Traditional Chinese Medicine Industry Park
16:20-17:30	Visit Hengqin Traditional Chinese Medicine Culture Experience Hall

Nov. 1 Saturday

OS1: Organized Session: Learning, Evolution and Control in Dynamical Games

13:30-15:30, Sat., Nov.1   Meeting Room 304

13:30-13:50   **Modeling Complex Systems via Game-Theoretic Learning: Dynamics and Properties of Individual Agents**

Wei Su*

13:50-14:10   **Loop Path Topology for Conflict-Free Scheduling of Multi-Robot Warehouse Systems**

Jinrui Mou, Zhaokai Liu, Ruyi Jiang, Lin Wang*, Xiaofan Wang

14:10-14:30   **Online Model-Pool Selection and Fusion for Adaptive MARL in Wargames**

Zhikai Zhou, Hongbin Ma*, Ying Jin, Yehao Fang, Haipeng Wang

14:30-14:50   **Coalition Dynamics and Its Dynamic Stability in Three-Player Zero-Sum Games**

Wen Zhang, Yifen Mu*

14:50-15:10   **Cooperation evolution in an overlapping generations game**

Kaibing Li, Renren Zhang*

15:10-15:30   **The Algebraic Relationships between DK-STP and STP**

Qi An, Changxi Li, Jun-e Feng*

OS2: Organized Session: Human-Centered Intelligent Systems A

13:30-15:10, Sat., Nov.1   101 Fenghuangshan Hall

13:30-13:50   **Vision Transformer Model for Lung Disease Classification using Chest X-ray Images**

Ryota Ueki*; Narufumi Suganuma; Yoshua Kazukuni Nomura; Zhen Zhang; Shinichi Yoshida

13:50-14:10   **Synergistic Multi-Task BERT Framework for Event Extraction and Self-Efficacy Assessment in Rehabilitation Chatbot Dialogues**

Yuqi Zhang*; Yuning Shi; Han Shi; Naoyuki Kubota

14:10-14:30   **Cascading Features of Convolutional Neural Network for Pneumoconiosis Detection**

Keisuke Shiiba*; Shinichi Yoshida; Yui Nomura; Yoshua Kazukuni Nomura; Narufumi Suganuma

14:30-14:50   **Validating a Dynamic-Load Pedaling Paradigm for Gait Rehabilitation: A Muscle Synergy Analysis**

Qiwei Wu; Jinhua She*; Shijie Guo; Daisuke Chugo

14:50-15:10   **Small-Sample Training Data Augmentation via Pix2Pix for YOLO v8-based Fruit Detection**

Zhen Zhang*; Shinichi Yoshida

OS3: Organized Session: Physically Inspired Intelligent Optimization: From Theory to Real-World Systems A

13:30-15:30, Sat., Nov.1   102 Hongshulin Hall

13:30-13:50   **A 3D Gaussian Splatting-Based Framework for Occlusion-Aware Reconstruction of Immovable Cultural Heritage from Crowd-Sourced Data**

Jianning Qin; Lan Cheng*; Zixi Qi; Zhe Zhang; Wanchen Liu

13:50-14:10   G-COA : an optimization algorithm inspired by celestial motion behavior

Kai Wang; Kuo Yang; Mifeng Ren; Wenjie Zhang; Zhile Yang*

14:10-14:30   A Study on the Force Mechanism of a Many-objective Artificial Physics Optimization Algorithm Based on Clustering and Information Entropy

Weizhe Li; Liping Xie*

14:30-14:50   Optimal regulation of green heating systems in parks considering economy and thermal comfort

*Yuanyuan Dai; Jianyan Tian**

14:50-15:10   Improved Kepler Optimization Algorithm Based on Hybrid Strategies

Hongge Guo; Pengpeng Su; Zinan Liang*

15:10-15:30   Application of Multi-Strategy Harris Hawks Optimization Algorithm in Path Planning

Yuyan Zhang; Chunmei Zhang; Fanzhu Hao; Long Ding*

OS4: Organized Session: Computational Intelligence and System Engineering A

13:30-15:30, Sat., Nov.1   **103 Jinding Hall**

13:30-13:50   ANAFD: A Lightweight Method for Rapid Plant Fertilization Deficiency Detection Using Optimized NCC Localization and Enhanced Feature Recognition

Xuebin Zhu; Ying Lin; Wei Ke; Jiaren Liu; Yuan Xu*

13:50-14:10   SDAUnet: A Satellite and Radar-Based feature fusion approach for short-term precipitation forecasting

Chongxing Ji; Yuan Xu; Wei Ke; Lili Tang; Chenyang Yan; Yizhou Zhang*

14:10-14:30   Adaptive Multi-Object Tracking with Motion Indeterminacy Diffusion and Dynamic Fusion

*Ruihan Yang; Minghao Chen; Pu Du; Yang Zhang; Yuan Xu**

14:30-14:50   Fault Diagnosis Methods Based on Spatio-Temporal Feature Fusion

Yongxin Zhou; Yuan Xu; Yi Luo; Wei Ke; Qunxiong Zhu; Yang Zhang; Mingqing Zhang*

14:50-15:10   Dual-View Contrastive Learning with Multi-Scale Label Propagation

*Yuan Xu; Haoting Liu; Junshuo Du; Shu Kong; Yi Luo; Wei Ke; Qunxiong Zhu; Yanlin He; Yang Zhang; Mingqing Zhang**

15:10-15:30   Design and Implementation of Office Automation Management System in Airfield Construction

Li Dong; Xiaofei Yang; Guoliang Zhai; Haiyang Chen; Xiao Wang; Ronglai Sun; Chao Shi*

GS1: General Session: Intelligent Decision-Making and Optimization

13:30-15:30, Sat., Nov.1   **104 Tangjia Hall**

13:30-13:50   A Multi-Operator Evolutionary Algorithm for the Multi-Objective WTA Problem

Chengxin Wen, Fuhao Liu, Ting Wang, Hongbin Ma, Yanhuan Jiang*

13:50-14:10   An adaptive multi-granularity dynamic task reallocation method based on CBBA

Binhua Guo, Bin Xin, Yixi Yang*

14:10-14:30   Complete Coverage Path Planning based on Comprehensive Improved Particle Swarm Optimization Algorithm

Jian Fu, Xinlei Yin*

14:30-14:50   Multi-UGV Task Allocation Based on Improved NSGA-II Algorithm for Forest Firefighting

Zijian Zhou, Jia Zhang*, Mingchang Chen

14:50-15:10   Research on Cooperative Application of UAV Swarm based on Cyber Network

Mingqiu Ren*

15:10-15:30   Research on Anti-Drone Task Allocation Based on Deep Reinforcement Learning

Chengliang Zhou*

15:30-15:50   A Situation Awareness Method for UAV Swarm Based on Modified Endsley Model

Bi Wu, Liang Yu, Zhiqian Zhou*

GS2: General Session: Smart Healthcare and Rehabilitation

13:30-15:10, Sat., Nov.1   **Meeting Room 106**

13:30-13:50   Deep Learning-based Quantification of Lumbar Disc Herniation on High-resolution Magnetic Resonance Imaging

Lizhong Ding, Wenxin Chen, Qina Wu, Hongdian Zhu, Changsheng Li, Jing Zhao, Xingguang Duan*

13:50-14:10   A Survey of Deep Learning Models from DCNNs to Transformers for Correcting MRI Artifacts and Assisting Smart Healthcare

Dingxi Liu, Lichuan Ning*, Yuanmin Xie

14:10-14:30   LungAide: An effective 3D Transformer V-Net for Lung Nodule Detection

Xinyuan Gao, Lei Dong, Xingwang Liu, Sijie Yin, Hao Chen*

14:30-14:50   Concordance-Assisted Learning for Estimating Optimal Individualized Treatment Regimes with Censored Data

Jianlin Zhang*, Yinglin Jiao, Lin Luo, Hui Dong, Jianuo Yang

14:50-15:10   PID control with pedal torque estimation for safety monitoring in lower-limb rehabilitation robots

Yue Jing, Jinhua She*, Seiichi Kawata, Zewen Wang

GS3: General Session: Smart Grid and Power Systems

13:30-15:50, Sat., Nov.1   **VIP Meeting Room 108**

13:30-13:50   A Quantum-Based High-Precision Current Transducer for Smart Grid Applications

Sanlei Dang, Bo Zhang, Yang Yang*, Qiang Song, Dingqu Zhang, Zhengmin Kong, Mohammad Allahbakhsh

13:50-14:10   Power Grid Equipment Supply Chain Risk Identification Method Based on a Stochastic Configuration Network with Compression Coefficients

Lingxiao Cui*, Haitao Zhang, Jinyong Zhao, Fuling Fan, Ning Xu

14:10-14:30   Enhancing Power Equipment Anomaly Detection Performance with RobustSTL and Anomaly Transformer

Zuo Lu, Yixiang Deng, Peiran Xing, Xiaoyang Wang*

14:30-14:50   A Study on Secondary Control Strategy for Islanded Microgrids Based on Twin Delayed Deep Deterministic Policy Gradient

Yuntao Shi, Haifeng Guo, Xiang Yin*, Keqing Gao, Shufeng Zhang

14:50-15:10   Research on a Joint Quantity-Price Forecasting Model Based on Virtual Power Plant Entity Revenue Optimization

Xiaodong Cheng, Baoshi Wang, Jun Qiao, Lanxu Wu, Pengdong Tian

15:10-15:30   Risk-Averse MPC-Based Secondary Voltage Centralized Compensation Strategy for Microgrids

Yuntao Shi, Keqing Gao, Xiang Yin*, Haifeng Guo, Shufeng Zhang

15:30-15:50   Research on Energy Storage Revenue and Electricity Pricing Strategy Based on Virtual Power Plant Operation

Baoshi Wang, Lanxu Wu, Pengdong Tian, Kai Xu

GS4: General Session: Advanced Control Methods-A

13:30-15:50, Sat., Nov.1   <mark>VIP Meeting Room 201</mark>

13:30-13:50   Fixed-Time Sliding-Mode Control for Quadrotor Attitude Tracking With Prescribed Performance

Mingwei Liu, Qing Wang*, Junzhe Cheng, Bin Xin,

13:50-14:10   The Third-Order Smooth Transition Strategy (TOSTS) apply to the sensor-less tightening system

Shuanxin Wang, Yanzhuang Shi, Kewei Chen, Fangyan Dong*

14:10-14:30   Enhanced Active Disturbance Rejection Attitude Control with Resonant Optimization for a Quadrotor

Yang Hao, Wei Wei*

14:30-14:50   传感器故障模式下无人机的自适应飞行控制

Xiaoyong Guo, Jianhong Wang*

14:50-15:10   Torque Distribution Strategy Based On Multi-Mode Clutch Transmission

Yang Gao*, Xueliang Shan, Huanhuan Gong, Zhidong Gao, Ruiguang Wang, Zhengxing Dai, Jiangfeng Liu, Yiqiang Liu

15:10-15:30   A Multi-Ship Intelligent Cooperative Control Framework Based on Hierarchical Reward

Yang Bai, Hao Li, Chi Zhang, Shengrong Xie*

15:30-15:50   Synergistic Re-parameterizable Attention and Context-Aware Fusion for PCB Defect Detection

Benbo Liu, Zhengyu Fu, Jinhua Wu, Kewei Chen, Fangyan Dong*

OS5: Organized Session: Model- and AI-Driven Manufacturing and Service Systems

16:00-17:40, Sat., Nov.1   <mark>Meeting Room304</mark>

16:00-16:20   Research on Intelligent Alignment Devices for GIS Disconnectors

Liang Zhao; Yujing Liu*; Xi Zhang; Jiayuan Zhang; Ruifeng Li

16:20-16:40   Vision and Servo-Based Camshaft Pulley Tightening Technology

Xi Zhang*; Jinpeng Yuan; Yujing Liu; Jin Cheng; Zhaohua Pei; Jiayuan Zhang

16:40-17:00   Research on Lightweight Fuel Cell DC/DC

Yue Kong*

17:00-17:20   Virtual Commissioning and Simulation Method for Industrial Robots Based on Digital Twin Technology

Minghao Duan; Zhenyu Xie; Xi Zhang; Xin Li; Jinpeng Yuan*

17:20-17:40   A cloud-native-based thermal processing simulation platform engineering case

Xingjian Wang; Jianchao Zhang; Bin Chen; Yijing Zhao; Shihong Yan; Fanlei Min*

OS6: Organized Session: Session: Human-Centered Intelligent Systems B

16:00-17:40, Sat., Nov.1   101 Fenghuangshan Hall

16:00-16:20   Temporal morphological analysis of NK cells
Takuho Myojin; Yukinobu Hoshino; Namal Rathnayake; Shimpei Yamamoto*

16:20-16:40   A Feasibility Study on Analyzing the Relationship Between Mental States and Music Using Physiological Signal Processing
Yunheng Li; Eri Sato-Shimokawara*

16:40-17:00   Comparison of Explainability Algorithms for Pneumoconiosis Classification Deep Learning Models
Ryo Takeda; Shinichi Yoshida; Narufumi Suganuma; Yoshua Kazukuni Nomura; Zhen Zhang*

17:00-17:20   Transfer Learning for Low-Resource Human Daily Action Recognition Using Topological Memory and Gated Attention Fusion
Yuning Shi; Yuqi Zhang; Qingwei Song; Han Shi; Naoyuki Kubota*

17:20-17:40   Fuzzy Clustering-Based Data Augmentation for Yuzu Fruit Detection
Kazuki Kagawa; Shinichi Yoshida; Zhen Zhang*

OS7: Organized Session: Physically Inspired Intelligent Optimization: From Theory to Real-World Systems B

16:00-18:00, Sat., Nov.1   102 Hongshulin Hall

16:00-16:20   Three-Dimensional Path Planning for Multiple UCAVs Based on the MP-GWO Algorithm
Chenghao Li; Chunmei Zhang; Fanzhu Hao; Zhenyang Zhao*

16:20-16:40   MRLLM: Multimodal Knowledge and Feedback Based Refinement Assist for Robotic Arm Operations using Large Language Model Reasoning
*Zhibin Yang; Zhi Zheng**

16:40-17:00   DBSCAN clustering and Angle-Correlation driven Bi-Population Constrained Multi-Objective Artificial Physical Optimization
*Kaipeng Song; Liping Xie**

17:00-17:20   Intelligent decision-making technology based on brain-inspired spiking neural networks
Song Xu; Wenjing Duan; Jie Li; Lina Wang*

17:20-17:40   Quantum-hybrid Multi-objective Artificial Physics Optimization Algorithm
*Xingyu Chen; Liping Xie**

17:40-18:00   An Angle-Penalty Distance and Polarity-Division Guided Algorithm for Many-Objective Electric Field Optimization

*Yue Zhang; Liping Xie**

OS8: Organized Session: Computational Intelligence and System Engineering B
16:00-17:40, Sat., Nov.1 <mark>**103 Jinding Hall**</mark>

16:00-16:20 An Imbalance Fault Diagnosis Method Based on Improved FixMatch Assisted Semi-Supervised CWGAN
Lili Tang; Yuan Xu; Wei Ke; Chongxing Ji*

16:20-16:40 Train delay data generation based on improved CTGAN
Qingyun Fu; Tao Zhang; Shuxin Ding; Zhiming Yuan; Yanhao Sun*

16:40-17:00 MACAE-Based Detection of Acoustic Signal Anomalies in Industrial Equipment
Yang Zhang; Taoying Chen; Pu Du; Yuan Xu; Mingqing Zhang; Qunxiong Zhu*

17:00-17:20 An Algorithm based on History Data for Multi-sensors Error Intelligent Correction
*Hao Wang**

17:20-17:40 RDPFlow: A conditional diffusion model for traffic flow prediction with point-wise missing data
*Yuan Xu; Chenyang Yan; Qunxiong Zhu; Mingqing Zhang; Wei Ke; Chongxing Ji; Yang Zhang**

GS5: General Session: Smart Education
16:00-17:40, Sat., Nov.1 <mark>**104 Tangjia Hall**</mark>

16:00-16:20 Intelligent Detection of Student Classroom Behavior Based on an Improved YOLOv8 Model
Meng Zhou, Huifang Zhang, Yuchao Peng, Jing Wang, Zhe Dong, Jie Fan*

16:20-16:40 Improving Generative Aspect-Based Sentiment Analysis via Multi-View Data Augmentation and Supervised Contrastive Learning
*Yanhong Wang, Lei Chen, Xin Wang, Lin Yao**

16:40-17:00 Dual-Path Attention-Enhanced Graph Convolutional Network for Children's Speech Emotion Recognition
Deneng Tang, Liwei Lin, Haojie Huang, Qixuan Liu*

17:00-17:20 Design and Implementation of a Locally Deployed Intelligent Composition Correction and Personalized Tutoring System for Primary Education
*Guanmou Li, Zhifeng Chen**

17:20-17:40 Evaluating Learning States in Synchronous Remote Classes via Qwen2.5-Max with RAG and ReAct Agent
Haoyuan He, Bemnet Wondimagegnehu Mersha, Yaping Dai, Kaoru Hirota, Wei Dai, Yumin Lin*

GS6: General Session: Advanced Robotics and Component Design
16:00-18:00, Sat., Nov.1 <mark>**Meeting Room 106**</mark>

16:00-16:20 Research of Mechanical Characterization of Bio-inspired Artificial Muscles

Yuntao Li, Xiaolong Zhang, Jiaming Bai*, Zuan Li, Guopeng Wang, Deen Bai

16:20-16:40 Design of Space Continuum Robot Based on Spring and Bionic Muscle Antagonistic Actuation

Guopeng Wang*, Senchun Yao, Yanmei Li, Zuan Li, Yuntao Li

16:40-17:00 Kinematic Parameter Calibration for Ophthalmic Surgical Robots with Cameras

Yanlin Li, Kaiyuan Tan, Zhaoyin Tian, Rihui Song*

17:00-17:20 Flexible Wearable Sensor Based on Molecularly Imprinted Polymers for Wound Glucose Monitoring

Jiale Gong*, Xuan Wang, Yizhuo Ma, Maria Abbasi, Runhong Lei, Shengnan Ma, Taha Siredj Mounir Herhira, Niu Zhang, Long Zhang, Jing Wei, Lina Geng

17:20-17:40 Development of an Electrochemical Chiral Sensor Based on UiO-66-NH$_2$-L-Pro Metal-Organic Framework for Enantioselective Detection of Threonine

Yizhuo Ma; Maria Abbasi*; Jiale Gong, Jia Huang, Shengnan Ma, Taha Siredj Mounir Herhira, Niu Zhang, Runhong Lei, Yongrui Li, Lina Geng

17:40-18:00 Design of a CoM Following Device for Microgravity Climbing Tests on Space Bio-Inspired Robot

Zuan Li*; Senchun Yao, Guopeng Wang, Ze Yu, Yuntao Li

GS7: General Session: Machine Learning

16:00-18:00, Sat., Nov.1   <mark>VIP Meeting Room 108</mark>

16:00-16:20 Optimization of traction transformer status prediction based on missing data imputation

Guanlin Qu, Wei Wei*, Weifan Wang

16:20-16:40 Online Fine-tuning for Robustness in Offline Reinforcement Learning: Actor-Critic vs Decision Transformer

Shingo Ayabe, Hiroshi Kera, Kazuhiko Kawamoto*

16:40-17:00 Cascade adaptive phase optimized active disturbance rejection control for ultra-supercritical units

Jiangyu Jia, Wei Wei*

17:00-17:20 Feature Expansion based Graph Transformer for Node Classification

Yun Chen, Canxin Chen, Jiaqing Tong, Xiangyuan Ma*

17:20-17:40 API Sequence Representation via Stochastic Distribution Prediction

Qiaohua Deng*, Wei Dai, Yumin Lin, Weiyan Ma, Yan Yu, Luguang Huang

17:40-18:00 Frequency-Masked Embedding Inference: A Non-Contrastive Approach for Time Series Representation Learning

En Fu, Yanyan Hu*

GS8: General Session: Advanced Control Methods-B

16:00-18:00, Sat., Nov.1   <mark>VIP Meeting Room 201</mark>

16:00-16:20 Intelligent Optimal Control of Lithium-Ion Battery Liquid Cooling Systems Based on Deep Reinforcement Learning

Jiakai He, Zhifei Xu, Yingzi Han, Xingzhu Chen, Jiaxu Zhang, Mengjie Ye*

16:20-16:40   Research on Environmental Regulation in Facility Agriculture Based on LSTM–LLM Cooperative Mechanism

Wenhui Li, Guiping Lu*, Weidong Hu, Yuan Gao, Meiran Zhu, Yuhua Jin, Xuqi Guo

16:40-17:00   Finite-Time Control for Networked Systems with Actuator Saturation under Hybrid Attacks

Menghua Chen*, Wanyuan Chen, Dechang Zou

17:00-17:20   Decoupling-Model-Based MPC Synthesis for 5-DOF Magnetic Levitation Bearings

Taizhou Yin*, Yaojian Wang, Hongze Xu

17:20-17:40   A novel adaptive control method for nonlinear systems subject to state constraints

Hanzhang Qu, Ye Cao*

17:40-18:00   Distributed Model Predictive Control for Perturbed Nonlinear Multi-Agent Systems with Proportional-Derivative-Integral Event-Triggered Mechanism

Zhan Lu, Yan Ren*, Liyun Zhao, Bowen Zhang, Yuanzhuo Hu

Nov. 2 Sunday

OS9: Organized Session: Advanced Sensing and Intelligent Signal Processing A

13:30-15:30, Sun., Nov.2   **Meeting Room 304**

13:30-13:50   Optimization Methodology for Wire-Generated Magnetic Disturbances in Magnetic Positioning System

Zhipeng Gou; Zhaohui Zhang*; Tianyao Zhang; Xiaoyan Zhao; Fan Song; Hanyuan Wang; Chunlei Li

13:50-14:10   Few-Shot Learning at extremely low signal-to-noise ratio for noise suppression

Peitong Li; Dingshan Li; Bin Yao*; Liang Liang; Yige Wang

14:10-14:30   Detection of Magnetic Anomalies in Underground Cavities Based on SQUID

Hanyuan Wang; Xiaoyan Zhao*; Zhaohui Zhang; Tianyao Zhang; Zhipeng Gou; Fan Song; Chunlei Li; Lei Han

14:30-14:50   Cardiac Magnetic Field Simulator Based on Timing Control

Hongxia Li; Zhaohui Zhang*; Tianyao Zhang; Xiaoyan Zhao; Jianmei Guo; Lei Han

14:50-15:10   Design and Application of a Wide-band Frequency High-precision Multibeam Sonar System

Yunlong Tang; Siyuan Zhang*; Dong Lu; Ke Ding

15:10-15:30   Exploration and Application of a Quality Evaluation System for Cardiac Magnetic Field Signals of Magnetocardiograph

Lei Han*; Zhaohui Zhang; Xiaoyan Zhao; Tianyao Zhang

OS10: Organized Session: Affective Computing and Human-Robot Interaction for Mental Health A

13:30-15:30, Sun., Nov.2   **103 Jinding Hall**

13:30-13:50   Conversational Multi-modal Emotion Recognition Based on Heterogeneous Dialogue Graph and Sentiment Polarity Contrastive Learning

Chengshan Jiang; Zhentao Liu*

13:50-14:10   Human-machine Consistency Verification of Text Empathy Automated Scoring in Online Peer Support Scenarios

Ruoyan Wu; Dan Chen; Chenling Liu; Zhentao Liu*

14:10-14:30   Cognitive Impairment Detection Based on Clock Drawing Test Image Classification

Jiale Wu; Zhentao Liu*; Enchao Guo; Xingru Jiang

14:30-14:50   Trust as Social Script in Human-machine Communication: Evidence from Mobile Banking Chatbots

Longxiang Luo; Fanke Chen; Zhentao Liu*

14:50-15:10   SHAP-based interpretion of machine learning prediction models for mild cognitive impairment

Zongqin Wang; Zhong Ding; Chenling Liu; Baoliang Zhong; Jin Lu*

15:10-15:30   Culturally Adapted Picture-Description Driven Mandarin Speech Approach for Cognitive Impairment Screening

Anjie Dai; Dan Chen; Zhentao Liu*; Zongqin Wang; Baoliang Zhong

OS11: Organized Session: Intelligent Perception in Robotics

13:30-15:30, Sun., Nov.2   **104 Tangjia Hall**

13:30-13:50　Application of multimodal perception in target recognition

Jiaxin Tang; Lichuan Ning; Yuanmin Xie*

13:50-14:10　Target Classification and Recognition Technology Based on Motion Parameter Feature Matching

*Xuantong Yu**

14:10-14:30　Intelligent Perception of Logistics Crane Based on OpenMV

Xiaolei Peng; Lichuan Ning; Yuanmin Xie*

14:30-14:50　Fast-LIO2 and Vision Fusion Logistics Walking System

Xiangdong Xu; Lichuan Ning; Yuanmin Xie*

14:50-15:10　Maintenance target detection algorithm based on improved YOLO v10

Pengyu An; Yingsun Li; Zhannan Guo; Xin Liu; Xue Sun; Xiaoyong Zeng*

15:10-15:30　A Survey of Multimodal Fusion and 3D Perception Techniques in Deep Multi Object Tracking

Leyuan Zhang; Lichuan Ning; Yuanmin Xie*

GS9: General Session: Object Detection, Recognition and Tracking-A

13:30-15:10, Sun., Nov.2　　　　　　　　　　　　　　　Meeting Room 106

13:30-13:50　Aircraft Detection in Remote Sensing Images using YOLOX-DCSA

Meijing Gao, Sibo Chen, Xiangrui Fan, Huanyu Sun, Xu Chen, Bingzhou Sun, Ning Guan*

13:50-14:10　A Context-Aware Cross-Modal Correction and Fusion Network for Anti-UAV Target Recognition

Rui Shen, Jiawei Niu, Zihan Li, Zuowei Zhang*

14:10-14:30　SCS-YOLO: An Occlusion-Robust Object Detection Algorithm Based on YOLO12

Dexin Liu, Chengzhi Ren, Hongyan Ma, Yuchen Zhang, Wenwen Yu*

14:30-14:50　FLSNet: Small Object Detection Algorithm Based On RT-DETR

Wenwen Yu, Yuchen Zhang, Hongyan Ma, Chengzhi Ren*

14:50-15:10　RecreTrack: Synergistic Appearance Modeling for RMOT

Haitao Xiao, Liping Yan, Yuanqing Xia*

GS10: General Session: Defect/Anomaly/Fault Detection and Processing-A

13:30-15:10, Sun., Nov.2　　　　　　　　　　　　　　　VIP Meeting Room 108

13:30-13:50　An Attention-Enhanced LSTM Method for Industrial Server Anomaly Detection Based on Prediction Error

*Zhe Wang, Xiao Huang, Zhan Shu, Guozhu Wen, Tianyu Gong**

13:50-14:10　Cyber Attack Detection Based on Clustering and Adaptive Model Selection

*Huayu Song, Zenghui Hu**

14:10-14:30　Dual-Path Ransomware Detection Framework

Yixin Sun, Hanyu Mao, Wei Dai, Yumin Lin*

14:30-14:50   SFL-YOLO: A Lightweight Real-Time Welding Seam Defect Detection Algorithm Based on YOLOv11

Ao Kang, Aidong Ge, Mingcan Sun*

14:50-15:10   Power Material Supply Chain Security Risk Early Warning Based on Self-Adaptive Convergence Factor Matrix-Iterative Extreme Learning Machine

Hongzhi Sun, Jinyong Zhao, Lingxiao Cui*, Jiamian Wang, Shengping Yao

GS11: General Session: Imaging and Image Processing Technology

13:30-15:30, Sun., Nov.2   <mark>Meeting Room 305</mark>

13:30-13:50   Digital Holographic Imaging with Self-Coding Method
Li Song*

13:50-14:10   A Transformer Model for Underwater Image Enhancement Based on Top-k Channel Sparse Self-Attention and an Improved Gated Feedforward Network

Xiuzhi Liu, Hao Liang, Zhishuo Ji, Tao Sui*

14:10-14:30   FreqMix: Low-Frequency Component Mixing for Detail-Preserving Data Augmentation in Low-Light Image Enhancement

Hengyi Zhang, Fengshan Zhao*, Yujie Wang, Wuyou Zhou, Qin Liu, Takeshi Ikenaga

14:30-14:50   SPSP Net-based Image Semantic Segmentation
Yifan Feng*

14:50-15:10   Research on Automatic Image-Based Deskewing Technology for Inspection Camera Preset Positions Using Fuzzy PID Control

Peng Min, Yuan Zhao*, Jing Zhou

15:10-15:30   Adaptive Hypergraph Convolution and Multi-scale Spatial-channel Convolution Fusion Network for Hyperspectral Image Classification

Shumeng Xu*, Qin Xu, Xing Wang, Chun Zheng, Zhihui Liu, Lijuan Tang, Huiqing Jin

OS12: Organized Session: Advanced Sensing and Intelligent Signal Processing B

16:00-17:40, Sun., Nov.2   <mark>Meeting Room 304</mark>

16:00-16:20   Immunity of SQUID second-order gradiometry to nearsurface interference in subsurface cavity

Fan Song; Zhaohui Zhang*; Tianyao Zhang; Xiaoyan Zhao; Zhipeng Gou; Hanyuan Wang; Chunlei Li

16:20-16:40   Prediction of IDH Mutation Status in Glioma Based on Terahertz Spectroscopy and Deep Learning
Yubo Wu; Wenzheng Shao; Tianyi Bi; Xiaoyan Zhao*; Zhaohui Zhang; Tianyao Zhang

16:40-17:00   Deep learning-based segmentation and recognition of temporomandibular joint disc and condyle images
Rufu Lin; Qiang Sun*; Xiaoyan Zhao; Zhaohui Zhang

17:00-17:20   FFCNN:Low-SNR Wireless Signal Detection Method Based on Fusion Feature CNN
Liang Liang*; Dingshan Li; Peitong Li; Bin Yao; Wen Wen; Peng Wang; Zhaohui Zhang

17:20-17:40   Research on Isotropy of Glioma Pathological Tissues with Terahertz Time-Domain Spectroscopy

Tianyi Bi; Xiaoyan Zhao; Yubo Wu; Zhaohui Zhang; Tianyao Zhang*

OS13: Organized Session: Affective Computing and Human-Robot Interaction for Mental Health A

16:00-17:20, Sun., Nov.2   **103 Jinding Hall**

16:00-16:20   A Chinese Multi-label Clinical Corpus Of Patients With Hematologic Malignancies

*Shuang Peng; Xinheng Li; Yuzhe Pan; Zhentao Liu; Fuling Zhou**

16:20-16:40   Cross-task acoustic parameters as predictors of mild cognitive impairment

*Zhong Ding; BaoLiang Zhong; Hui Chen**

16:40-17:00   Research on Virtual Model Control Algorithm for a Single Leg of Bionic Quadruped Robots

Hualin Pang; Weijie Tang; Zihan Huang; Weiqing Jiang*

17:00-17:20   Research on Optimizing the Dynamic Obstacle Avoidance Stability of Robots Based on MPC

Weiqing Jiang; Weijie Tang; Hualin Pang; Jian Luo; Yi Deng*

GS12: General Session: Moving Object Information Processing Technology

16:00-18:00, Sun., Nov.2   **104 Tangjia Hall**

16:00-16:20   AnchDrive: Bootstrapping Diffusion Policies with Hybrid Trajectory Anchors for End-to-End Driving

*Jinhao Chai, Anqing Jiang, Hao Jiang, Shiyi Mu, Zichong Gu, Shugong Xu**

16:20-16:40   Adaptive Attitude Estimation method Based on Minimum Bounding Sphere

*Peng Li, Zhichen Wang, Xinyu Liang, Weilong Ni, Wenan Zhang**

16:40-17:00   A Global Orientation Calibration Method Based on the Fusion of UWB Local Coordinates and Visual Data

Jun Wu, Xiaofei Yang, Yucheng Yang*

17:00-17:20   Hypersonic Vehicle State Time-Series Prediction Based on PG-DGNet

Zhe Wang, Yujing Li, Chuan Zhou, Jian Guo*

17:20-17:40   3DoF Object Pose Prediction with Temporal Guidance Using a CNN-Transformer Network

Weicheng Lu, Yuan Li, Ryuji Fuchikami, Takeshi Ikenaga*

17:40-18:00   WAFMF: Weighted Adaptive Frequency Median Filter for Salt-and-Pepper Noise Denoising

Minling Zhu, Jiahua Yuan, Jun Miao, Maodong He*

GS13: General Session: Object Detection, Recognition and Tracking-B

16:00-17:40, Sun., Nov.2   **Meeting Room 106**

16:00-16:20   Underwater Target Recognition using Cascaded Neural Network with Fusion Feature

*Fuyan Wang, Jianlei Gao, Pengyuan Qi, Zhe Wang, Xueying Zhang**

16:20-16:40   基于国产算力的双阈值优化机载遥感目标深度开集检测方法

Yikun Wang, Rui Shen, Jiawei Niu, Zuowei Zhang*

16:40-17:00 Research on Entity Recognition Based on the Interaction Information of Character Embeddings and Sentence Embeddings

Yuhang Wang, Yingshun Li, Xian Du*, Xiangan Zeng, Xue Sun, Enhui Wu

17:00-17:20 Gesture Recognition via Transient sEMG Decomposition and Residual Spiking Neural Network

Lifen Wang, Jinting Ma, Jintao Chen, Yiyun Tan, Naifu Jiang, Guo Dan*

17:20-17:40 Improved YOLOv8 for Gesture Recognition in Human-Machine Interaction Under Complex Bac kgrounds

Ruowu Wang, Yingshun Li, Xian Du*, Xin Liu, Chuanqi Han

GS14: General Session: Defect/Anomaly/Fault Detection and Processing-B

16:00-17:20, Sun., Nov.2   <mark>VIP Meeting Room 108</mark>

16:00-16:20 Deep Learning Based Real-Time Underwater Vehicle Driver Fatigue Detection

Haiying Wang, Haoliang Wang*, Mingkai Yuan, Maozhou Yang, Yixuan Dong, Saniia Karamatovna Shavinskaia

16:20-16:40 Local Feature-Enhanced LSTM for End-to-End Intelligent Bearing Fault Diagnosis

Wenxu Yang, Hui Xu*, Xue Huang, Yan Li, Changkun Han, Mingsong Bai

16:40-17:00 Uncertainty Support Vector Machine for Rolling Bearing Trustworthy Fault Diagnosis

Tingting Liu, Jing Wang*, Meng Zhou, Yanzhu Zhang, Yanyan Hu

17:00-17:20 Research on intelligent diagnosis of transformer thermal imaging fault based on RESNET and attention mechanism

Meng Liu, Ying Huang*

GS15: General Session: AI for Science and Culture

16:00-17:20, Sun., Nov.2   <mark>Meeting Room 305</mark>

16:00-16:20 Research on Decision Support for Cultural Heritage Conservation Using Agent-based AI Systems with Prompt Engineering—A Case Study of the "Heritage Echo Planet" World Heritage Large Language Model

Ximeng Wang, Yuzhe Liu, Shuai Shao, Lijie Wang*

16:20-16:40 Building an AI Knowledge Infrastructure for the World Cultural Heritage Vertical: Methodology and Challenges from Local Databases

Yuzhe Liu, Ximeng Wang, Shuai Shao, Lijie Wang*

16:40-17:00 Sustainable Tourism Water Management Research in Bali Based on Grey Correlation Analysis and Intelligent Optimization Algorithms

Yanran Wei*

17:00-17:20 Weak N-best POAFD for Second Order Initial Value Problems of Ordinary Differential Equations

Hongfang Bai*, Jianwei Dong

OS14: Organized Session: Intelligent unmanned cluster system technology

13:30-15:30, Mon., Nov.3   **101 Fenghuangshan Hall**

13:30-13:50   Adaptive Formation Control of Multi-AUVs with ETM

YuLin Luo; Jing Li; Yang Du*

13:50-14:10   Switched Observer-Based Consensus Control for Multi-ASV Systems under DoS Attacks

Ning Nan; Jing Li; Yang Du*

14:10 -14:30   Adaptive Fault-Tolerant Control of Vehicle Platoon with Sensor Faults

Jian Wu; Junren Gao*

14:30-14:50   Adaptive Deep Neural Control for Fractional-Order Nonlinear Systems

Keyun Chen; Qiong Wu; Jian Wu*

14:50-15:10   Further Results on Adaptive Tracking Control of State-Constrained High-Order Nonlinear Systems

*Chengfu Han; Yangang Yao**

15:10-15:30 Safety-Constrained Distributed Sliding Mode Control for Vehicle Platoons with Improved Prescribed Performance Functions

*Yulin Zhan; Jian Wu; Dewen Cao**

OS15: Organized Session: Embodied Intelligence, Neural Computation and Intelligent Robotics

13:30-15:50, Mon., Nov.3   **102 Hongshulin Hall**

13:30-13:50   A Hierarchical Plane-Quadric Surface Fitting Based Framework for Real-Time LiDAR Point Cloud Compression

Mingyue Cui; Jiakang Zhang; Mingjian Feng; Yuyang Zhong; Yanwei Lu; Chunjie Shu; Yehui Li; Weibing Li*

13:50-14:10   Generative Autonomous Emotionally Intelligent Robot System

Zhijun Zhang; Wentong Wang, Haomin Yu, Yongchang Chen*

14:10-14:30   A Gradient Neurodynamic Solution Enhanced by a Gated Recurrent Unit for Solving Time-Varying Linear Equations With Robotic Application

Weibing Li; Jiajun Luo; Yehui Li; Chengzhu Li*

14:30-14:50   A Novel Shape Estimation Strategy for Continuum Robots Using Multiple Hall-effect Sensors and IMUs

Yehui Li; Yujing Kuang; Mingyue Cui; Weibing Li*

14:50-15:10   An Optimized Control Scheme for Mobile Manipulators Based on Penalty Strategy and Variable-Parameter Neural Dynamics

Zhijun Zhang; Ruixu Jiao*

15:10-15:30   Comparison of Control Barrier Functions and VMEV Methods for Obstacle Avoidance of a Redundant Robot

Lihang Liang; Weibing Li*; Yehui Li

15:30-15:50   Comparative Study of Model-Free Kinematic Control Strategies for Robotic Manipulators
Guanghong Chen; Weibing Li*; Yehui Li

OS16: Organized Session: Advances in Multi-Agent Systems and Visual Perception for Complex Environments
13:30-15:50, Mon., Nov.3 <mark>**103 Jinding Hall**</mark>

13:30-13:50   AE-BiseNet: Anomaly-enhanced Bilateral Segmentation Network for Industrial Defect Detection
Xinyang Wang, Xinwei Wu, Yongjie Hou, Hongbin Ma*, Ying Jin

13:50-14:10   Multi-scale feature fusion point cloud registration for complex industrial environments
Zhentao Guo, Minglei Han, Ao Ding, Hongbin Ma*

14:10-14:30   Dynamic Diffusion-based Stochastic Trajectory Prediction with Time-frequency Analysis
Jiaqi Ma, Fuji Fu, Dechen Hao, Jinfu Yang

14:30-14:50   Design and Application of Grinding Trajectory Planning Algorithm for Casting Grinding Robot
Xin Wang, Hongbin Ma*, Jinyue Bian, Yanhuan Jiang, Yiyi Yin

14:50-15:10   Multi-Element Localization and Spatial Mapping in Hybrid Wargaming using an Integrated Hierarchical Approach
Minglei Han, Xinwei Wu, Tianhao Wang, Hui Chen, Zhentao Guo, Hongbin Ma*

15:10-15:30   Mathematical modeling of anti-drone swarm warfare based on "Spider Web Operation"
Chang Xu, Minzhe Fan, Yiran Chen, Xinwei Wu, Hongbin Ma, Bi Wu

15:30-15:50   Attention-Enhanced Hybrid Graph Neural Network for 3D Localization of Rock Fracture Events
Bingchen Li, Jianing Sun, Heyao Li, Chengzhi Zhang, Weixian Teng, Haoyuan Song, Xianrui Ji, Zhibin Yao*

OS17: Organized Session: Feedback control design for distributed parameter systems
13:30-15:10, Mon., Nov.3 <mark>**104 Tangjia Hall**</mark>

13:30-13:50   Adaptive Output Feedback Stabilization for an Unstable Wave Equation with Unknown Parameter
Haili Du; Hongyinping Feng*

13:50-14:10   Output Feedback Stabilization for Two-dimensional Nonlinear Parabolic Equation
Kai Liu; Zhongjie Han*

14:10-14:30   Disturbance rejection and stabilization for piezoelectric beam equation
Baowei Feng; Huacheng Zhou*

14:30-14:50   Backstepping Stabilization of Stochastic Hyperbolic PDE-ODE Systems
Xuejiao Sun*; Junmin Wang; Kaijing Lv

14:50-15:10   Application of Non Gradient Optimization EM Algorithm in Mixed Distribution Parameter Estimation
Jingyu Yi*; Zhiyong Chang

OS18: Organized Session: Data Analytics and Optimization for Smart Industry
13:30-15:10, Mon., Nov.3 <mark>**105 Qi'ao Hall**</mark>

13:30-13:50   Multi-objective optimization algorithm for integrated slab matching and hot rolling production scheduling with uncertainty

Yufei Lu*

13:50-14:10   A Method for Solving Topology Optimization Problems Using a Graph-based Encoded Differential Evolution Algorithm

Hongxu Pei*

14:10-14:30   Multi-objective Multi-task Optimization Research on Scheduling in Aero-engine Assembly Workshop

Huimin Du*, Haohong Xu

14:30-14:50   A Collaboration Optimization Framework for Complex Semiconductor Equipment Scheduling based on Mixed-Integer Linear Programming and Neighborhood Search

Sen Li; Xiangyan Liu; Kunlong Sang; Te Xu*

14:50-15:10   Learning Informed Search Adaptive Knowledge Transfer in Evolutionary Multi-Objective Multi-Task Optimization

Zhiming Dong*; Huimin Du; Kai Fu; Haohong Xu

OS19: Organized Session: AI for Complex Systems & Interdisciplinary Applications

13:30-15:30, Mon., Nov.3   **106 Meeting Room**

13:30-13:50   Physics-informed neural networks for two-phase flow problems in porous media
Qin Lou*

13:50-14:10   An improved physics-informed neural network for phase field equation: applications in fluid interfacial problems
Haoran Hu*

14:10-14:30   Solving Forward-Backward SDEs via Regularized Neural Networks
Xinyu Wei; Jingtao Shi*

14:30-14:50   Formal System of Rongzhi Learning: A Category Theory-Based Unified Framework for Language-Databases and Cross-Modal Human-Computer Collaboration
Shunpeng Zou; Xiaohui Zou

14:50-15:10   Dual-Feedback GAN for Antiviral Peptide Generation
Song Tao; Junjie Li; Donghua Li; Zuohang Jiang

15:10-15:30   Blockchain-Assisted CP-ABE with Revocation for Vehicular Access Control
Chunming Wu; Yi Lu; Jianhao Qin; Zongze Liu; Jiaxin Yan