

ICCSI 2021 Conference Program

Zoom Links

Virtual Room 1	https://zoom.us/j/98988693625?pwd=V2ZYWE3OU9wQUhMcTQyb1ZENStoUT09
Virtual Room 2	https://zoom.us/j/98022495453?pwd=bGtZTDZvbWVsVXJlWkdXNjAwSC9hZz09
Virtual Room 3	https://zoom.us/j/98978665763?pwd=R2tpRDNGdm4yRXVvT3J4VlVobHhBUT09

Note: The conference schedule below is based on Beijing time (GMT + 8)

Day 1: December 18, 2021	
Opening Ceremony	18PM00 8:00 PM
	Virtual Room 1
Feiyue Wang, Chinese Academy of Science	Welcome
Ying Tang, Rowan University	Organizing Committee Report
Jiacun Wang, Monmouth University	Program Committee Report
Keynote 1	8:30PM
Chair: Ying Tang, Rowan University	Virtual Room 1
Edward Tunstel, Motiv Space Systems, Inc.	Toward Human-Collaborative Robotic Intelligence and Robot Memetics
Keynote 2	9:30PM
Chair: Houshang Darabi, Univ of Illinois at Chicago	Virtual Room 1
Derong Liu, Guangdong Univ of Technology	AI and Machine Learning for Optimal Control of Complex Nonlinear Systems
Day 2: December 19, 2021	
Authors	Paper Title
Intelligent Control I	19AM11 8:00-9:30 AM
Chairs: Jun Wang and Liang Shan Nanjing University of Sci and Tech	Virtual Room 1
Zhoujian Ma, Jun Wang and Yinya Li	Finite-time Localization and Circumnavigation by Elliptical Trajectory with Bearing-only Measurements
Zhenxing Wu, Liang Shan, Da-qing Rui, and Jia Chen	A Denoising algorithm of MEMS Gyro Based on CEEMDAN and Improved LWT
Peng Guo, Jun Li, Tianxiang Chen and Zhenxing Wu	Heave Motion Estimation Based on Cubature Kalman Filter
Huanyu Yang, Naili Han, Dan Li, Jun Wang, Yuming Bo and Haowen Zheng	Effectiveness Evaluation Of Fire Control System Based On Improved PSO Algorithm And LSSVM Algorithm
Haowen Zheng, Junqiang Yang, Manling Li, Jun Wang, Yuming Bo and Huanyu Yang	Weapon System Effectiveness Evaluation Method Based on Normal Distribution FSVM
Wei Wei Bian, Jing Wei, Kui Hua Huang, Jia Xuan Wang, Xin Lv and Wen Nan Yuan	Intelligent Decision Algorithm of Target Compound Interception Based on A2C-PPO
Complex Network Representation	19AM12 8:00-9:30 AM
Chairs: Xin Luo and MengChu Zhou New Jersey Institute of Technology	Virtual Room 2
Zeshi Lin and Hao Wu	Dynamical Representation Learning for Ethereum Transaction Network via Non-negative Adaptive Latent Factorization of Tensors
Zhenhua Huang, Yin hao Tang, Dingding Li, Shengli Sun, Chen Lin and Yong Tang	Graph Neural Network-based Node Classification with Hard Sample Strategy
Liwei Wang and Lun Hu	A deep learning algorithm for predicting protein-protein interactions with nonnegative latent factorization
Jiufang Chen, Ye Yuan and He Chunlin	Hyper-Parameter-Free Latent Factor Analysis via Adaptive Moment Estimation-Incorporated Particle Swarm Optimization
Minzhi Chen and Hao Wu	Efficient Representation to Dynamic QoS Data via Momentum-incorporated Biased Nonnegative and Adaptive Latent Factorization of Tensors
Fei Luo and Zhigang Liu	A CUDA-Parallelized Fast AutoEncoder for Highly Efficient Latent Factor Analysis on High-Dimensional and Sparse Matrices from Recommender Systems

CSI in Emerging Power Systems	19AM13 8:00-9:30 AM
Chairs: Jie Li, Rowan University Yikui Liu, Stevens Institute of Technology	Virtual Room 3
Jiahua Wang, Jiang Wu and Qiaozhu Zhai	A Data-Driven Approach to Evaluate Operating Cost of SCUC Problem
Juncong Hao, Nan Yang, Di Ye, Ye He, Cong Yang and Xietian Zhang	The Research of a Data-Driven Intelligent SCUC Decision-making Approach based on Gated Recurrent Unit and Seq2Seq Technique
Po Hu, Yunjia Wang, Ning Pang, Zeya Zhang, Yifan Huang and Haoran Guo	Research on residential load classification method based on Multi-model parallel integration algorithm
Haiyun Yuan, Song Xu, Yangfan Sun, Qian Li and Anan Zhang	Application of Least Squares Support Vector Machine Based on Particle Swarm Optimization in Tidal Current Prediction of Offshore Microgrid
Jie Li and Ning Wang	Electric Load Management with Schedule Cooperation between Smart Buildings and E-Buses
Li Xue, Tao Sheng Cheng and Emad Farrag Mohamed	Cascading Failure Analysis of Cyber-Physical Power Systems under Communication Congestion
Machine Learning I	19AM21 9:40-11:10 AM
Chairs: Jianyu Wang and Bo Li Nanjing University of Sci and Tech	Virtual Room 1
Yi Liu, Jihuan Ren, Xiang Wu and Yuming Bo	Armored Vehicle Image Classification Based on Transfer Learning
Shuliang Zhang, Xin He, Haochen Zhao and Jianyu Wang	Design of text position detection method for electrical equipment nameplate
Shiqi Liu, Jia Guo, Jianyu Wang and Xuan Ma	Recognition Algorithm for Small Packages of Traditional Chinese Medicine Based on Improved YOLOV4
Chengwenyuan Huang, Shaowei Zhang, Xin He, Jianyu Wang and Haochen Zhao	Text recognition method of electrical equipment nameplate based on improved similarity
Shuangxia Bai, Bo Li, Zhigang Gan and Daqing Chen	UAV visual flight control method based on deep reinforcement learning
Yuanyuan Yang, Yang Liu and Yu Guo	Inverse kinematics Solution based on IPSO-RBF Neural network
Intelligent Control II	19AM22 9:40-11:10 AM
Chairs: Yanyan Huang and Xiang Wu Nanjing University of Sci and Tech	Virtual Room 2
Xiao Tan, Hanyu Liu, Jun Wang, Xiangmin Wang, Huanyu Yang and Haowen Zheng	Comparative study of anti-air combat effectiveness of naval shipborne weapons based on ADC method
Jinjin Li, Xin He, Jiahui Yu, and Jianyu Wang	Moving Target Detection Based on Improved Background Global Compensation Differential Method
Ye Chen, Pengpeng Ye, Yuan Liang and Lin Meng	Distributed square-root cubature Kalman filter for underwater cyber-physical systems with multiple fading measurements
Chen Hu, Yongcheng Su, Zilong Wang and Jianyu Wang	Design of a sequential pattern mining algorithm based on effective items prefixspan
Xin Zhenfang, Qiu Xuyang, Zheng Haotian, Huang Kuihuang, Wang Jun and Bian Weiwei	Experiment Design on Low, Slow and Small Threat Target in Urban Complex Environment Coordinated Prevention and Control System
Xin Zhenfang, Wei Wei, Pang Jingzhuang, Wang Jun, Qiu Xuyang and Bian Weiwei	Design of a cooperative prevention and control platform for low, slow and small threat
Learning, Modelling, and Optimization in Human-robot Interaction	19AM23 9:40-11:10 AM
Chairs: Chunlin Chen and Huaxiong Li Nanjing University	Virtual Room 3
Bojian Tang, Yuxiang Sun and Xianzhong Zhou	Parallel intelligent command decision-making technology based on combat prior knowledge and reinforcement learning algorithm
Qiong Shi	Psychotherapy Regulation via Fuzzy Analysis and Feedback Tuning
Ran Yuan, Bo Wang and Yeqi Sun	Real-time Economic Dispatch of Thermal-Wind-Battery Hybrid Systems based on Deep Reinforcement Learning
Guang Jin and Mingcong Deng	Operator-based nonlinear forced vibration control for a vertical wing-plate

Fuzhuan Wu, Mengna Chen, Sheng Peng and Shengjun Wen	Optimal Switching Frequency for Three-phase Bipolar Inverter with Different Dead Time
Keynote 3 19PM 8:00 - 9:00 PM	
Chair: Jiacun Wang, Monmouth University	Virtual Room 1
Bin Hu, Lanzhou University	Computational Psychophysiology Based Emotion Analysis for Mental Health
Smart Manufacturing 19PM11 9:10 - 10:40 PM	
Chairs: Zhi Pei, Zhejiang University of Technology M. Ghahramani, University College Dublin	Virtual Room 1
Mohammadhossein Ghahramani, Yan Qiao, Mengchu Zhou and Naiqi Wu	An AI-based Multi-objective Optimization Approach for Monitoring Manufacturing Processes
Mohammadhossein Ghahramani and Mengchu Zhou	Data-driven Predictive Analysis for Smart Manufacturing Processes Based on a Decomposition Approach
Bowen Pang and Xiaolei Xie	Multiple-period Optimal Nurse Scheduling under Learning Effect
Peng-Hao Cui and Yang Li	Energy Saving Control in Multistage Manufacturing Systems
Chiye Ma, Zhiyang Jia, Xiaohan Wang and Zejun Ni	Transient Performance Evaluation with Finite Production Run-based Serial Lines: Bernoulli Quality Model
Tao Fang and Zhi Pei	A sample robust optimization algorithm for the single machine scheduling problem
CSI Applications 19PM12 9:10 - 10:40 PM	
Chairs: Michele Dassisti, Politecnico di Bari Mounim A. El Yacoubi, Institut Mines-Telecom	Virtual Room 2
Liangcai Ren, Chao Yang, Ruiqi Song, Shichao Chen and Yunfeng Ai	An Feature Fusion Object Detector for Autonomous Driving in Mining Area
Liangcai Ren, Jianlin Tang, Chenglin Cui, Ruiqi Song and Yunfeng Ai	An Improved Cloth Simulation Filtering Algorithm Based On Mining Point Cloud
Martina Nobili, Luca Faramondi, Roberto Setola, Monica Ghelli, Benedetta Persechino and Marco Lombardi	An OSINT platform to analyse violence against workers in public transportation
Concetta Semeraro, Mariateresa Caggiano and Michele Dassisti	Sustainability Aspects and Impacts in Cyber-Physical Social Systems
Liang Zhang	Design of a Joint Microservices-based Smart Epidemic Prevention Platform
System Modeling and Analysis 19PM13 9:10 - 10:40 PM	
Chairs: Xiwang Guo, New Jersey Institute of Tech Jun Wang, Nanjing Univ. of Sci and Tech	Virtual Room 3
Xu Yu, Jianjun Cao, Nianfeng, Weng, and Zhixian Zeng	An Adaptive Truth Discovery Model Consisting of Multiple Truth Part and Single Truth Part
Xi Zhang, Bo Wu, Youmin Hu, Xin Zhang, Fang Zhao and Chenhui Wan	Applying model-based system architecture process method for a human-robot digital twin system
Xuan Yang, Fan Sang, Tianle Wang, Xuan Pei, Hao Wang and Taogang Hou	Research on the Influence of Camera Velocity on Image Blur and a Method to Improve Object Detection Precision
Naijun Shen, Jun Wang, Jiacun Wang, Xingyun Liu, Lijun Yang and Yu Wang	Patient Flow Congestion Control Based on Stochastic Timed Petri Net Model
Yuan Shanshan	Application of Small Sample Information Processing in High Dimensional Space
Huang Fuguang, Guo Laide, Guo Xiwang, Liu Shixin, Qi Liang, Qin Shujin, Zhao Ziyang and Tang Ying	Multi-objective Discrete Bat Optimizer for Product Partial U-shaped Disassembly Line Balancing Problem
Day 3: December 20, 2021	
Best Student Paper 20AM11 8:00-10:10 AM	
Chairs: Xianzhong Zhou, Nanjing University Shxin Liu, Northeastern University	Virtual Room 1

Jihuan Ren, Yi Liu, Xiang Wu and Yuming Bo	Prediction of Ballistic trajectories based on Gaussian Mixture Model
Jinlei Lu, Yuming Bo and Jun Wang	Composite control of a piezoelectric fast steering mirror with pseudo-discrete-time Bouc-Wen model
Ryan Hare and Ying Tang	Modelling and Adaptivity Methods within Adaptive Serious Games
Izumi Furukawa and Mingcong Deng	Prescribed performance based nonlinear vibration control of a flexible arm with shape memory alloy actuator
Yuansi Hu, Jiacun Wang and Guanjun Liu	Resource-Oriented Timed Workflow Nets and Simulation Tool Design
Yuanyang Zhu, Xiao Yin, Ruyu Li and Chunlin Chen	Extracting Decision Tree from Trained Deep Reinforcement Learning in Traffic Signal Control
Xin Guo, Xianwen Fang and Gubao Mao	Online Approximate Conformance Checking
Best Papers 20AM21 10:15-11:45 AM	
Chairs: Shxin Liu, Northeastern University Xianzhong Zhou, Nanjing University	Virtual Room 1
Guanjun Liu, Jing Tang, Yue Tian and Jiacun Wang	Graph Neural Network for Credit Card Fraud Detection
Cameron Thatcher and Ning Wang	Optimizing Bike Rebalancing via Spatial Crowdsourcing: A Matching Approach
Shuqiang Yang, Huafeng Qin, Mounim A. El Yacoubi and Chongwen Liu	Cross-Modality Domain Adaptation for hand-vein recognition
Xianhe Wang, Bo Wang and Xiaoxuan Xu	Fuzzy portfolio selection based on outranking relations and three-way decisions
Rui Yang, Yutao Qi, Jun Deng, Zhiyang Liu, Mingzhang Luo and Xiaolong Yuan	A Flexible Remote Laboratory Platform for Interactive AI Experiments with Hardware and Software Facilities
Keynote 4 20PM 8:00 - 9:00 PM	
Chair: Hui Yu, University of Portsmouth	Virtual Room 1
Haibin Zhu, Nipissing University	Computational Social Simulation using E-CARGO
Distance Experiment for Engineering Education 20PM11 9:10 - 10:40 PM	
Chairs: Mingzhang Luo, Yangtze University Xuemin Chen, Texas Southern University	Virtual Room 1
Jun Deng, Wenxin Yang, Mingzhang Luo, Qisen Zuo, Xiaolong Yuan and Guodong Zhang	Discussion on the Innovative Model of Remote Experimental Teaching For Engineering Education
Zhaofeng Zhang, Daiqin Ao, Luoyu Zhou, Xiaolong Yuan and Mingzhang Luo	Laboratory Behavior Detection Method Based on Improved Yolov5 Model
Cong Xu, Zhihao Yin, Xiuquan Li and Mingzhang Luo	Remote control of eddy current damping vibration experiment system
Han Zhang, Yan Yan Huang and Ze Geng	A Comprehensive Management Mechanism for Campus Emergencies
Cyber Security and Hazard Prevention 20PM12 9:10 - 10:40 PM	
Chairs: Peiyun Zhang, Nanjing U of Info Sci and Tech Giancarlo Fortino, University of Calabria	Virtual Room 2
Peiyun Zhang, Junliang Shu and Jiale Sheng	Node Selection Model for Block Transmission in a Blockchain Network
Shu Wu, Guangyu Peng, Ya Gao and Jindou Chen	An Efficient Anonymous Authentication Scheme for Medical Services Based on Blockchain
Peiyun Zhang, Jiale Sheng, Junliang Shu and Songjian Cai	Decentralized Data trading Model Based on a Public Blockchain
Lidia Fotia, Flavia C. Delicato and Giancarlo Fortino	Integrating Blockchain and Edge Computing in Internet of Things: Brief Review and Open Issues
Giancarlo Fortino, Lidia Fotia, Fabrizio Messina, Domenico Rosaci and Giuseppe M.L. Sarnè	Grouping IoT devices by Trust and Meritocracy
Machine Learning II 20PM13 9:10 - 10:40 PM	
Chairs: Houshang Darabi, Univ of Illinois at Chicago Ling Zheng, Monmouth University	Virtual Room 3

Zhenkun Han, Qing Tao, Quanbao Lai and Lili Liu	Multi-gesture recognition method of single- channel EMG signal based on deep learning
Hajar Hammouch, Mounim El-Yacoubi, Huafeng Qin, Aissam Berrahou, Hassan Berbia and Mohamed Chikhaoui	A two-stage Deep Convolutional Generative Adversarial Network-based data augmentation scheme for agriculture image regression tasks
Julian Theis and Houshang Darabi	Masking Neural Networks Using Reachability Graphs to Predict Process Events
Ling Zheng, Jiacun Wang and Xuemin Chen	Hospital Length of Stay Prediction with Ensemble Methods in Machine Learning
Ling Zheng, Elijah Eniola and Jiacun Wang	Machine Learning for Colorectal Cancer Risk Prediction
Maryam Pishgar, Martha Razo, Julian Theis and Houshang Darabi	Process Mining Model to Predict Mortality in Paralytic Ileus Patients
Closing Ceremony	20PM 10:50-11:10 PM
Chair: Yang Tang, Rowan Univeristy	Virtual Room 1
Xianzhong Zhou, Shxin Liu	Announcement of Best Paper and Best Student Paper
Jun Wang	ICCSI-2022