

The 27th International Conference on Automation and Computing (ICAC2022)

Paper list

* Only the papers having been registered and presented on the conference will be included in the ICAC2022 conference proceedings to be finalised after the conference.

Paper ID	Author Names	Paper Title
3	Shi, Qi; Cui, Dongliang*; Yu, Shengping; Yuan, Zhiming; Cheng, Lijuan; Yue, Peng	A Reinforcement Learning Framework for Train Rescheduling
4	Bhat, Akhilesh*; Kai, Natsuki; Suzuki, Takayuki; Shiroshima, Takahiro; Yoshida, Hiroshi	Safe, efficient waypoint manipulation for path planning of non-holonomic robots
5	Huang, Haiqi; Lu, Zhenyu; Wang, Ning; Yang, Chenguang*	Fixed-time Adaptive Neural Control for Robot Manipulators with Input Saturation and Disturbance
6	Nikentari, Nerfita; Wei, Hua-Liang*	Multi-Task Learning for Time Series Forecasting Using NARMAX-LSTM
7	Goli, Farzaneh*; Wang, Yongjing; Saadat, Mozafar	Perspective of self-learning robotics for disassembly automation
8	Zhen Xie*, Josh Chen Ye Seng, Lim Guo Wei	AI Enabled Soft Versatile Grasping for High-Mixed-Low-Volume Applications with Tactile Feedbacks
9	Youxi Hu, Ming Zhang, Chao Liu, Yuchun Xu*, Zezhong Wang, Yu Jia	A simulated annealing hyper-heuristic algorithm for process planning and scheduling in remanufacturing
10	Shi, Xiaoquan; Sun, Yazhou*; Li, Dekai; Liu, Haitao; Xie, Wenkun; Luo, Xichun	Energy Conversion Model and Extrusion 3D Printing of Piezoelectric Composite Energy Harvesters
11	Sun, Yiming; Wei, Hua-Liang*	Efficient Mask Attention-Based NARMAX (MAB-NARMAX) Model Identification
13	Urooj, Beenish*; Shah, Munam Ali ; Ullah, Ubaid	Risk Assessment of SCADA Cyber Attack Methods: A Technical Review on Securing Automated Real-time SCADA Systems
16	Haras, Muhammad*; Iqbal, Kamran	Model-based and Model-free Optimal Control of Biomechanical SIP Model
21	Qadeer, Bilal*; Ishaq, Ayesha	A Comprehensive Study on Security and Privacy of E-Health Cloud-Based System
22	Zhou, Beibei; Zhu, Chengzhi; Jiang, Yiming*	Adaptive Fixed-time Fuzzy Tracking Control of Uncertain Robot
25	Yin, Jie*; Xue, Tao; Zhang, Tao	Real-time Gait Trajectory Prediction Based on Convolutional Neural Network with Multi-head Attention
27	Alex Marnell, Mahmood Shafiee*, Amir Hosein Sakhaei	Designing and manufacturing an Android-controlled robotic arm using rapid prototyping
29	Zhang, Ao; Chen, Chong*; Wang, Tao; Cheng, Lianglun	Fault diagnosis of Elevator Door Machines Based on Deep Convolutional Forest
30	Chen, Bingyan*; Zhou, Zewen; Zhang, Weihua; Gu, Fengshou ; Bevan, Adam; Shackleton, Philip	Exploitation of a Multiband Weighted Envelope Spectrum for Railway Axle Bearing Fault Diagnosis
32	Zang, Yue*; Wang, Yongjing	Robotic disassembly of electric vehicle batteries: an overview
34	Xiao, Jiang; Li, Yun*	Improving Neural Network Time Series Prediction with a GA-BFGS Grown Dynamic Architecture
35	Aldahmashi, Jamal*; Ma, Xiandong	Advanced Machine Learning Approach of Power Flow Optimization in Community Microgrid
37	Isam, Sherrif; Zhang, Qichun*	Formation Drilling RoP Prediction via Deep Neural Networks with TensorFlow

38	A MAgeed, Ismail IA; Zhang, Qichun*	An Introductory Survey of Entropy Applications to Information Theory, Queueing Theory, Engineering, Computer Science and Statistical Mechanics
39	Krupenkins, Eduards ; Zhang, Qichun*	Digital Circuit Simulator Development with CNN Integration
42	Ahmad, Nasir*; Ahmad, Kashif; Khan, Talhat; Khan, Jebran; Khan, Imran	An Explainable Regression Framework for Predicting Remaining Useful Life of Machines
43	Li, Zhaobo*; Zeng, Weiliang; Xin, Haibing; Li, Xihua; Wang, Xinzui	Intelligent diagnosis of tinnitus location using electroencephalography
44	Nikentari, Nerfita; Wei, Hua-Liang*	Tide Level Prediction Using NARX-based Recurrent Neural Networks
45	Wang, Xin; Shi, Pengrou*; Li, Jiaqian; Yang, Yingxue; Yang, Fan; Yu, Hongnian	Privacy-preserving Mechanisms of Continuous Location Queries Based on LBS: A Comprehensive Survey
46	Zhi Lon Gan*, S. Nurmaya Musa, Hwa Jen Yap, Chao Liu, Yuchun Xu	A Conceptual Framework of Adaptive AR-Based Digital Guidance System for High-Mix Low-Volume Manual Assembly
47	Wang, Guoliang; Wei, Hua-Liang*	A Hybrid 1DCNN-SVM Model for Bearing Fault Recognition and Classification
48	Wang, Zuolu; Lu, Kaibo; Chen, Xun; Zhen, Dong; Gu, Fengshou*; Ball, Andrew	Rapid State of Health Estimation of Lithium-ion Batteries based on An Active Acoustic Emission Sensing Method
50	Mahmoud, Haitham Hassan M*; Wu, Wenyan; Wang, Yonghao	Proof of learning: Two Novel Consensus mechanisms for data validation using Blockchain Technology in Water Distribution System
51	Cai, Lihua; Zhou, Yujue ; Ding, Yulong; Jiang, Jie; Yang, Shuanghua*	Utilizing Lexicon-enhanced Approach to Sensitive Information Identification
52	Medak, Duje*; Milković, Fran; Posilović, Luka; Subasic, Marko; Budimir, Marko; Loncaric, Sven	Detection of Defective Bolts from Rotational Ultrasonic Scans Using Convolutional Neural Networks
53	Schrack, Manuel*; Hinkeldeyn, Johannes; Thiel, Marko	A Novel Control Architecture for Mobile Robots in Safety-Critical Applications
55	Yang, Shuanghua*; Li, Hao; Ding, Yulong; Jiang, Jie; Yuan, Diping; Deng, Peng	BERT-based Sentiment Analysis of Chinese Online Social Movements
56	Realpe, Sebastian*; Gonzalez, Felipe; Fajardo, Jose Manuel; Hernandez, Juan; Cardenas, Pedro-F	Benchmark of Sampling Based Motion Planners in Bin Picking Manipulation Task
57	Sun, Bo; Wei, Hua-Liang*	Machine Learning for Medical and Healthcare Data Analysis and Modelling: Case Studies and Performance Comparisons of Different Methods
58	SABAREESHA, SEELAM SREE SAI*; Bhattacharjee, Shrutilipi; Shetty, Ramya D	Pattern Analysis of COVID-19 Based On Geotagged Social Media Data with Sociodemographic Factors
61	Dai, Chuan*; Yajuan, Wei; Xu, Zhijie; Chen, Minsi; Liu, Ying; Fan, Jiulun	An Investigation of GCN-based Human Action Recognition Using Skeletal Features
64	Zhang, Siyu; Wei, Hua-Liang*	Zero-Shot Learning for Intelligent Fault Detection
66	A MAgeed, Ismail IA*; Zhang, Qichun	Inductive Inferences of Z-Entropy Formalism (ZEF) Stable M/G/1 Queue with Heavy Tails
67	K Madubuike*, C Mayhew*, Q Zhang*, B Gomm* and Ding-Li Yu*.	Fault tolerant control and fault diagnosis of a variable speed pitch angle hydraulic system
68	Xu, Kai*; Qin, Shengfeng	3D Printing, Limb Prosthetics and Generative Design: A Scoping Review
69	KHAN KHAISHAGI, MOHD ASIF*; V.S., Ananthanarayana	Yatch : Leaderless, Fault Tolerant Consensus Protocol

70	Wang, Zezhong*; Zhang, Ming; Xu, Yuchun	Development of a Robotic Arm Control Platform for Ultrasonic Testing Inspection in Remanufacturing
71	Zhang, Zeyu ; Duan, Yu*; Douji, Luobu; Cidan, Doujie; Hui, Jizhuang; Ye, Min	Dynamic Optimal Control Strategy of Membrane Oxygen Enrichment for Engine Performance in the Plateau Environment
72	Lv, Chunpu*; Zhang, Tao; Wang, HuanGang	Material Removal Rate Prediction with Phase Sensitive Variables Selection and Phase Partition
73	Zhao, Yantao*; Zhang, Shanshan; Yu, Hongnian	A Survey on Soft Sensor of Free Calcium Oxide Content
74	DiZhi, Wu*	Research on NARX wind speed prediction network based on Copula
75	Othman, Uqba*; Yang, Erfu	An Overview of Human-Robot Collaboration in Smart Manufacturing
76	Zhenyu Lan, Jun Dai, Xiang Hu, Bin Xing, Minghai Xing, Liangyin Chen	Wind power ramp detection algorithms based on slope point correction
78	Athar, Maham*; Shah, Munam Ali	A COMPARITIVE STUDY: SENTIMENT ANALYSIS ON TWITTER USING MACHINE LEARNING VOTING CLASSIFIER
79	Jain, Bhavya*; Singh, Abhiraj; Kumar, Amit; Yadav, Piyush; Singh, S. Pratap	Molecular Signaling under Different Transmitting Waveform for Applied Deployments
81	Farahani, Gholamreza*; Mousavi, Seyedamirhossein ; Farahani, Ameneh; Farahani, Hamidreza	Identification of Grape Leaf Diseases Using Proposed Enhanced VGG16
84	Lotfivand, Azizeh*; Yu, Dingli; Gomm, Barry	State Of Charge estimation based on Extended Kalman Filter in Electric Vehicles
87	Riechmann, Malte*; König, Matthias; Rexilius, Jan	3D-Multi-Layer-Multi-Representation-Maps for Short- and Long-term Mapping and Navigation
88	Aphirakmethawong, Janjira*; Yang, Erfu; Mehnen, Jorn	AN OVERVIEW OF ARTIFICIAL INTELLIGENCE IN PRODUCT DESIGN FOR SMART MANUFACTURING
89	Xu, Rucong*; Wang, Jianfeng; Li, Yun	Dynamic Edge-Based Graph Attention Network and Visual-Semantic Embedding for Outfits Recommendation
91	Leo Geer*, Dongbing Gu, Fuli Wang, Vishwanathan Mohan, Robin Dowling	Novel Software Architecture for an Autonomous Agricultural Robotic Fruit Harvesting System
92	Chen, Yuxi*; Yang, JiaYe; Wang, Jianfeng; Zhou, Xue; Zou, Jianxiao; Li, Yun	Attribute Guided Graph Convolutional Network with Stronger Generalization for Person Re-identification
93	Farahani, Ameneh*; Farahani, Hamidreza; Farahani, Gholamreza; Mousavi, Seyedamirhossein	Flexible personnel scheduling in large multi-product unpaced asynchronous assembly lines
94	Naguib, Anthony*; Cheng, Yongqiang; Chang, Yingxiu	AI Assistance for Home Surveillance
95	Li, Aojin*; Li, Yun; Wang, Hua-Shan	Adaptive Design of Robust PID Buck Converters
96	Lin, Ruofan*; Tiwari, Ashutosh; Oyekan, John	Counting assistant through multi-sensor fusion for inventory monitoring
97	Abdullahi, Ibrahim*	A Fog Computing Based Approach Towards Improving Asset Management and Performance of Wind Turbine Plants Using Digital Twins
99	Chen, Tao; Meng, Yanhua; Su, Jinya*; Liu, Cunjia	Deep CNN based droplet deposition segmentation for spray distribution assessment
102	Fan, Wen; Bo, Hongbo; Lin, Yijiong; Xing, Yifan; Liu, Weiru; Lepora, Nathan; Zhang, Dandan*	Graph Neural Networks for Interpretable Tactile Sensing
103	Yajuan, Wei*; Guo, Zhaoli; Dai, Chuan; Chen, Minsi; Xu, Zhijie; Liu, Ying; Fan, Jiulun	Distracted Driver Behavior Detection Based-on An Improved YOLOX Framework

104	Zhang, Ze*; Farnsworth, Michael; Tiwari, Divya; Jewell, Geraint; Tiwari, Ashutosh	Sensorformer: A Memory-efficient Transformer for Industrial Sensor Fusion
105	Zhao, Haizhou ; Chen, Yuqing*	Constrained Iterative Nonlinear Optimization for Robot Control Applications
106	Guo, Zongfu*; Luo, Xichun; Jin, Tan	A Generating Method of One-stroke Random Toolpath and Its Influence on Surface Quality of Fluid Jet Polishing
107	Liu, Zhongnan; Sun, Yongxu; Lee, Sanghyuk*	Information Flow in Networked System with Leaderless Structure
108	Wang, Hongshu; Yang, Rui*	Adversarial Based Unsupervised Domain Adaptation for Bearing Fault Diagnosis
109	You, Pengfei; Yang, Rui*	A Semi-supervised Fault Diagnosis Method Based on Deep Adaptation Autoencoder and Manifold Learning for Rolling Bearings
110	Gao, Xinyu; Yang, Rui*; Lim, Eng Gee	Rolling Bearing Fault Diagnosis Based on DeepAdversarial Networks with Convolutional Layer and Wasserstein Distance
112	Quan Zhang*, Yuhan Li, Enggee Lim, Jie Sun	Real Time Object Detection in Digital Twin with Point-Cloud Perception for a Robotic Manufacturing Station
113	Tiancheng Zhang, Quan Zhang*, Enggee Lim, Jie Sun	Deep Learning Based 3D Point Clouds Recognition for Robotic Manufacturing
116	Li, Baizhen*; Xu, Zhijie; Bian, EnKai; Yu, Chen; Gao, Feng; Cao, Yan-long	Particleboard Surface Defect Inspection Based on Data Augmentation and Attention Mechanisms
118	Zheng, Zian*; Wu, Yong; Wang, tao; Chen, Chong	Implicit Representation Of Single-view Reconstruction For Texture-less 6DoF Pose Estimation
120	Martin, Achille H*; Tang, Gilbert	Tether-Based Localisation System for Underwater Robots
122	Liuqing Yang	Deformable convolution infrared tracking algorithm based on improved SiamRPN + +
123	Zhu, Xuqi*; Boukhenoufa, Issam; Liew, Bernard; McDonald-Maier, Klaus D; ZHAI, Xiaojun Zhai	A Kalman Filter based Approach for Markerless Pose Tracking and Assessment
124	Roberts, Matthew*; Xia, Min; Kennedy, Andrew	Data-driven Process Parameter Optimisation for Laser Wire Metal Additive Manufacturing
125	Carlo Ferri*, Malarvizhi Kaniappan Chinnathai, Rohin Titmarsh and Hala Abdelaziz	Image segmentation of micro-TIG battery welds
126	XU, HAOCHEN*; WANG, TAO; Chen, Chong	Optimization Method for Collaborative Scheduling of Manufacturing Resources in Mass Customization Mode for Flow Operations
127	Hu, Bo*; Wang, Tao; Chen, Chong; Xu, Yintao	Collision-free path planning for welding manipulator via deep reinforcement learning
129	Li, Pinjie*; Xue, Tao; Zhang, Tao; Wang, HuanGang; Zhang, Ming	Hybrid Gait Recognition Method Based on Phase Trajectory
130	Zhou, Qin*; Cao, Jiajia; Yin, Ling; Zhang, Fei; Li, Yun	INAS: Incremental Neural Architecture Search
132	Žagar, Bare Luka*; Preintner, Tobias; Knoll, Alois C.; Yurtsever, Ekim	Real-Time Instance Segmentation of Pedestrians using Transfer Learning*
134	Kong, Haiyi; Li, Guang; Yang, Chenguang*	Non-Singular Fixed-Time Sliding Mode Control for Unknown-Dynamics Manipulators Interacting with Environment
136	Shakeri, Zohreh*; Benfriha, Khaked	An Overview on Smart Scheduling in MES: In the Context of Industry 4.0
137	Cao, Qiongdan*; Yu, Hui; Charisse, Paul	Is High-fidelity Important for Human-like Virtual Avatars in Human Computer Interactions?
138	AGOUNAD, Said*; IDRISSE AZAMI, Hafida; MOUFASSIH, Mustapha;	Detection and Removal of EOG Artifact from EEG Signal using Fuzzy Logic and Wavelet Transform

	TARAH, Ousama; HAMOU, Soukaina	
139	Chen, Yuxi*; Yang, JiaYe; Wang, Jianfeng; Zhou, Xue; Zou, Jianxiao; Li, Yun	An Improved YOLOv5 Real-time Detection Method for Aircraft Target Detection
140	Sun, Lichao; Huang, Yanpei; Wang, Ziwei*	Dual Quaternion Based Finite-Time Tracking Control for Mechatronic Systems with Actuation Allocation
141	Cong, Gao*; saha, sangeet; lu, yufan; McDonald-Maier, Klaus D; ZHAI, Xiaojun Zhai; saha, rappy	Deep Learning on FPGAs with Multiple Service Levels for Edge Computing
142	Hamayat, Faizan; Ullah, Muhammad Obaid; Zubair, Syed; Anwar, Syed Muhammad*	An Indoor Air Temperature Prediction Framework for Model Predictive Control in HVAC Systems
143	Farnsworth, Michael*; Gambrill, Nathan; Shaw, Rob; Tedeschi, Stefano; Tiwari, Divya; Tiwari, Ashutosh	Narrow gap TIG arc weld process monitoring
144	Radwan, Ahmed G.*; Said, Lobna; AbdelHafiz, Salwa; Saber, Wafaa; Sharobim, Bishoy	A Unified System for Encryption and Multi-Secret Image Sharing Using S-box and CRT
146	Radwan, Ahmed G.*; AbdelHafiz, Salwa; Hamdy, Sherif	PRNG Using Primitive Roots of Primes and its Utilization in Chess-based Image Encryption
147	Zili Zhang, Chao Liu, Jun Zhang*, Tao Peng, Xinrong Hu, Yuchun Xu	Machine learning applications in Cyber-Physical Production Systems: a survey
148	Yingchao You, Ze Ji, Xintong Yang, and Ying Liu	From human-human collaboration to human-robot collaboration: automated generation of assembly task knowledge model
149	Xintong Yang, Ze Ji, Jing Wu, Yu-Kun Lai	Abstract Demonstrations and Adaptive Exploration for Efficient and Stable Multi-step Sparse Reward Reinforcement Learning
150	Hongnan Ma, Kevin McAreavey, Ryan McConville, Weiru Liu	Explainable AI for Non-experts: Energy Tariff Forecasting
151	Yiwei Shi, Kevin McAreavey, Weiru Liu	Evaluating contrastive explanations for AI planning with non-experts: a smart home battery scenario
152	Hengtai Dai, Zhenyu Lu, Mengyuan He, Chenguang Yang	Novel Gripper-like Exoskeleton design for Robotic Grasping based on Learning from Demonstration