

2022 International Conference on Computer Engineering and Artificial Intelligence

ICCEAI 2022

# Conference Program

July 22-24, 2022

Shijiazhuang, Hebei, China

## Co-Sponsored by

Shijiazhuang Tiedao University, China

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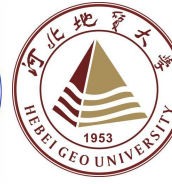
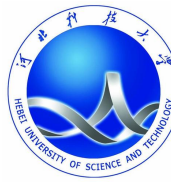
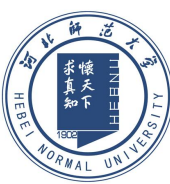
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## **Message from the ICCEAI 2022 General Chairs**

2022 International Conference on Computer Engineering and Artificial Intelligence (ICCEAI 2022) aims at providing a high-level platform for experts, scholars, innovators and practitioners to share novel research and ideas in the fields of Computer Engineering and Artificial Intelligence. The conference plans to be held in Shijiazhuang, Hebei, China, from July 22 to 24, 2022. ICCEAI 2022 features Keynote Speeches from eminent professors all over the world and technical presentation from participants in different parts of world. All the program will cover a wide range of topics to cater to the needs of specific subject areas for researchers as well as faculty members.

ICCEAI 2022 is Co-Sponsored by Shijiazhuang Tiedao University, Hebei Normal University, Hebei University of Economics and Business, Hebei University of Science & Technology, Hebei GEO University, China Jiliang University, Shanghai University of Engineering Science, Hunan University of Humanities, Science and Technology.

We would like to express our sincere thanks to the Program Chairs: Prof. Dongmei Zhao (Hebei Normal University, China), Prof. Lihui Sun (Hebei University of Economics and Business, China), Prof. Bin Xue (National University of Defense Technology, China), Dr. Hui Wang (Shijiazhuang Tiedao University, China), all program committee members and all the additional reviewers for their valuable efforts in the review process, which helped us to guarantee the highest quality of the selected papers for the conference.

We cordially thank all the authors for their valuable contributions and the other participants of this conference. The conference would not have been possible without their support. Thanks are also due to the many experts who contributed to making the event a success.

Prof. Chunhui Piao, Shijiazhuang Tiedao University, China  
Prof. Yongchae Jeong, Jeonbuk National University, Korea  
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**ICCEAI 2022 General Conference Chairs**

## **Message from the ICCEAI 2022 Program Chairs**

Welcome to the 2022 International Conference on Computer Engineering and Artificial Intelligence (ICCEAI 2022), will be held from July 22-24, 2022, in Shijiazhuang, Hebei, China. ICCEAI 2022 will be the most comprehensive conference focused on the Computer Engineering and Artificial Intelligence. ICCEAI 2022 will provide an opportunity for academic and industry professionals to discuss recent progress in the area of Computer Engineering and Artificial Intelligence. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications on Computer Engineering and Artificial Intelligence. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in these important subjects.

For ICCEAI 2022, we received many paper submissions, after a rigorous peer review process, only very outstanding paper can be accepted for the ICCEAI 2022 proceedings, published by the Conference Publishing Services (CPS). All submitted papers have undergone blind reviews by at least two reviewers from the technical program committee, which consists of leading researchers around the globe. Without their hard work, achieving such a high-quality proceeding would not have been possible. We take this opportunity to thank them for their great support and cooperation. We also would like to thank all of you for your participation in our conference, and also thank all the authors, reviewers, and organizing committee members.

Thank you and enjoy the conference!

Prof. Dongmei Zhao, Hebei Normal University, China

Prof. Lihui Sun, Hebei University of Economics and Business, China

Prof. Bin Xue, National University of Defense Technology, China

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## Emerging artificial intelligence technologies in healthcare

Prof. Huiyu Zhou

School of Computing and Mathematical Sciences, University of Leicester, UK



### Abstract of the talk:

Artificial intelligence has significantly influenced the health sector for years by delivering novel assistive technologies from robotic surgery to versatile biosensors that enable remote diagnosis and efficient treatment. While the COVID-19 pandemic is devastating, the uses of AI in the healthcare sector are dramatically increasing and it is a critical time to look at its impact in different aspects. In this talk, I will introduce the application of new deep learning models in medical image understanding. Then, I will discuss Parkinson's disease (PD) whilst investigating the behaviour analysis of PD mice. I also present the use of machine learning technologies in sentiment analysis, followed by the discussion on several challenges.

Keywords: Artificial intelligence; healthcare; image segmentation; behaviour analysis; challenges.

### Bio of the presenter:

Prof. Huiyu Zhou received a Bachelor of Engineering degree in Radio Technology from Huazhong University of Science and Technology of China, and a Master of Science degree in Biomedical Engineering from University of Dundee of United Kingdom, respectively. He was awarded a Doctor of Philosophy degree in Computer Vision from Heriot-Watt University, Edinburgh, United Kingdom. Dr. Zhou currently is a full Professor at School of Computing and Mathematical Sciences, University of Leicester, United Kingdom. He has published over 400 peer-reviewed papers in the field. He was the recipient of "CVIU 2012 Most Cited Paper Award", "MIUA 2020 Best Paper Award", "ICPRAM 2016 Best Paper Award" and was nominated for "ICPRAM 2017 Best Student Paper Award" and "MBEC 2006 Nightingale Prize". His research work has been or is being supported by UK EPSRC, ESRC, AHRC, MRC, EU, Royal Society, Leverhulme Trust, Puffin Trust, Alzheimer's Research UK, Invest NI and industry. Homepage: <https://www2.le.ac.uk/departments/informatics/people/huiyu-zhou>.

## **Cybersecurity - A Game Theory Approach: Issues, modelling and computer science applications**

Prof. Sardar M. N. Islam (Naz)  
Professor, ISILC, Victoria University, Melbourne, Australia.  
Distinguished Visiting Professor of Artificial Intelligence, UnSri.

### **Abstract:**

Cybersecurity is a multiagent system where intelligent agents interact, formulate strategies, fight, cooperate, coordinate, design systems, and plan actions to achieve their goals of cybersecurity or hacking and malicious damages. Game theory analyses and formulates strategies and designs rules or mechanisms for this cybersecurity multiagent system on the basis of artificial intelligence. For specifying, characterising and modelling and designing this intelligent multiagent system, mathematical game theory models of different forms can be developed, such as static, dynamic, evolutionary, differential and stochastic game theory models. Different algorithms such as Nash equilibrium, joint optimisation, evolutionary algorithms, neural networks, genetic algorithms, and other machine learning algorithms can be applied to different game theory models for analysing, solving, and computing these cybersecurity models. Findings from these models are used to formulate strategies, cooperate, coordinate, design systems, and plan actions by different intelligent agents and authorities in cybersecurity. Game theory application in cybersecurity is an important area in computer science for doing highly useful academic and practical cybersecurity activities and for academics and practitioners to build their careers. Therefore, it is necessary to prioritise this area of game theory in cybersecurity in computer science for research and development.

### **Short Bio:**



Professor Dr. Sardar M. N. Islam (Naz) is Professor from Victoria University, Australia. As he has lived, studied, and worked in different countries and visited (extensively) different regions of the world for a long period, he adopts a global and humanistic approach in his research and academic works and he has undertaken rigorous scientific studies of emerging issues of different disciplines of artificial intelligence, business analytics, digitalisation, management science, etc. His academic work has gained international acclaim, resulting in many (1) Honours and Awards, (1) distinguished visiting or adjunct professorial appointments in different countries, (2) appointments in editorial roles of journals and (3) keynote speeches at international conferences in several countries. He has published 31 scholarly academic books in different disciplines. Each of these books makes significant scientific contributions to the literature. These books are published by prestigious publishers and the majority of books are published in highly regarded book series. He has also published about 250 articles, including some top leading international journal articles in his specialised research areas.

## Improving Biometric Iris Recognition System Technology with Optimum Feature Extraction

Prof. A Taha  
Auckland, New Zealand  
Chengdu University, China



### Abstract:

Iris-based biometric recognition systems have become an area of great research interest and been well studied for authentication purposes and has been proven accurate in large scale applications in several airports and border crossings around the world. Consequently, researchers are focused on finding suitable features can extract from iris images that can be used as indexes the stored templates in a manner that enables access to and retrieval of those data by efficient search processes. We propose a method that extracts the most relevant features of iris images to facilitate minimization of the indexing time and the search area of the biometric database, the expected results will be showing a significant performance improvement in terms of bin miss rate and penetration rate compared with conventional methods.

### Short Bio:

Dr A Taha is an Honorary Professor and External Advisor from New Zealand and High-end Foreign Expert at Widad University College & CDU. His research interests include improving biometric system technology with optimum feature extraction and various topics related to IT and medical research. His research results have been published in more than 50 papers in international journals and conferences, including various SCI/SCIE/IEEE indexing. He received various awards such as Chosen for Who's Who in Medicine and Healthcare 2010. He is currently an editor board member for several international journals.

## Corporate Knowledge Management Research: An Integrated Perspective

Lin Wang PhD, Associate Dean, Distinguished Professor  
Chinese Academy of Science and Education Research, Hangzhou Dianzi University, China



**Abstract:** Knowledge management is the explicit and systematic management of vital knowledge - and its associated processes of creation, organization, diffusion, use, and exploitation. It is a process to help organizations identify, select, organize, disseminate, transfer knowledge. In this speech, I illustrate that how an understanding of knowledge and the knowing process differ from information and information management. Based on the taxonomy of explicit and tacit knowledge, I put forward a corporate knowledge management model. I also discuss the management strategies dealing with different kinds of knowledge. Nonaka's SECI model of knowledge creation and knowledge spiral process of knowledge theory are analyzed in detail. The innovation cycle and knowledge management cycle are compared. Three knowledge management models and traditions, documentalist, technologist, and learner & communicator models are introduced in the speech. I also discuss the success factors of corporate knowledge management. The difference in knowledge management in eastern and western countries is elaborated. Some main issues of knowledge management systems are briefly reviewed.

**Biography:** Lin Wang is a distinguished professor of information science at Hangzhou Dianzi University. He was a visiting professor in University of California Berkeley, Nanyang Technological University. Lin is a guest research fellow in the National Information Resource Management Institute at Beijing. He was awarded Young Information Scientist by China Society for Scientific and Technical Information. He is a trustee of Tianjin Society for Chinese Information Research and Tianjin Association of Public Administration. He is also a member of editorial board of American Journal of Information Management. He has been elected as an expert of Xinhua News Agency Outlook Think Tank. He is a reviewer of program committee for many international conferences, such as iConference and ASIS&T. Recently Lin became the Session Chair (Long Paper) ACM/IEEE Joint Conference of Digital Libraries 2020. He got his PhD degree of information science from Peking University. His research interest includes foundation of information science and information philosophy. He has hosted more than 20 academic projects. He has published more than eighty academic papers in the international LIS journals like Journal of Documentation and Information Research, and leading peer-reviewed information science journals in China. His several papers were awarded as the best paper in the national academic organizations such as Chinese National S&T Information Society, Chinese S&T Communication Society.

## Conference Schedule

Date	Time	Standard Room
2022-07-22	09:00-09:10	Opening Remarks Prof. Chunhui Piao
	09:10-09:50	Keynote by Prof. Huiyu Zhou
	09:50-10:30	Keynote by Prof. Sardar M. N. Islam (Naz)
	10:30-11:10	Keynote by Prof. A Taha
	11:10-11:50	Keynote by PhD, Lin Wang
	12:00-13:30	Noon Break
	13:30-17:30	Oral Session A
2022-07-23	09:00-12:00	Oral Session B
	12:00-13:30	Noon Break
	13:30-17:30	Oral Session C
2022-07-24	09:00-12:00	Oral Session D
	12:00-13:30	Noon Break
	13:30-17:30	Oral Session E

### Instructions for Presentations

#### Oral Presentation

##### Devices Provided by the Conference:

Laptops (with MS-Office & Adobe Reader)

Projectors & Screen

##### Materials Provided by the Presenters:

PowerPoint or PDF files

Duration of each Presentation (Tentatively): 20 minutes

Regular Oral Session: about 20 Minutes of Presentation

Keynote Speech: 40 Minutes of Presentation

#### Poster Session

Poster Session at Standard Room. The time at July 22-24, 2022

##### Devices Provided by the Conference:

Space and nails

##### Materials Provided by the Presenters:

90cm(h) × 60cm(b) poster

**July 22, 2022**

**09:00—09:10 Opening Remarks**

Prof. Chunhui Piao, Shijiazhuang Tiedao University, China

**09:10-09:50 Keynote 1**

Title: Emerging artificial intelligence technologies in healthcare

Prof. Huiyu Zhou

**09:50-10:30 Keynote 2**

Title: Cybersecurity - A Game Theory Approach: Issues, modelling and computer science applications

Prof. Sardar M. N. Islam (Naz)

**10:30-11:10 Keynote 3**

Title: Improving Biometric Iris Recognition System Technology with Optimum Feature Extraction

Prof. A Taha

**11:10-11:50 Keynote 4**

Title: Corporate Knowledge Management Research: An Integrated Perspective

PhD, Associate Dean, Distinguished Professor, Lin Wang

**12:00-13:30 Noon Break**

**13:30-17:30 Oral Session A**

1286	Research on TCAS Warning Risk of Transport and Training Aircraft in Related Parallel Approaches	Wei Jun Pan, Ya Xing Xu*, Jing Kai Wang
1299	Flight delay prediction based on ARIMA	PAN Weijun, WANG Jingkai
1317	Energy Consumption Prediction and Diagnosis of Heating Ventilation and Air Conditioning System Based on Bidirectional LSTM Method	YiLin Cong, LiTong Hou, YiCheng Wu, YongZhi Ma
1318	Research on the application of online teaching method in theory teaching	Jianguo Hu*, Xianlan Lan, Hongxia Guo
1322	Examining Users' Continuous Use Intention of AI-Enabled Online Education Applications	Hong Sheng, Hong Xiao
1326	A note on equivalent implementation complexity, computational and memory efficiencies of the standard and nearly perfectly matched layers for the second-order wave equation	Zhinan Xie <sup>1, 2</sup> , Yuan Yangtao <sup>1</sup> , Liang Fuyuan <sup>1</sup> , Zhang WenYue <sup>1</sup>
1328	Factors Influencing Users' Intention to Adopt Intelligent Customer Service: A Task-Technology Fit Perspective	Hong Sheng, Jinrui Wang, Zijing Xu
1329	A BERT-based Text Sentiment Classification Algorithm through Web Data	Ganhua Li <sup>1, 2</sup> , Bo Kong <sup>1, 2</sup> , Jiancheng Li <sup>1, 2</sup> , Henghai Fan <sup>1, 2</sup> , Jian Zhang <sup>1, 2</sup> , Yuan An <sup>1, 2</sup> , Zhenglei Yang <sup>1, 2</sup> , Shengrong Dang <sup>3</sup> , Jiancun Fan <sup>3</sup>
1330	A Random Forest-based Operating System Recognition Algorithm for Network Security	Henghai Fan <sup>1, 2</sup> , Bo Kong <sup>1, 2</sup> , Ganhua Li <sup>1, 2</sup> , Jiancheng Li <sup>1, 2</sup> , Jian Zhang <sup>1, 2</sup> , Yuan An <sup>1, 2</sup> , Jianping Wan <sup>1, 2</sup> , Zihao Zhang <sup>3</sup> , and Jiancun Fan <sup>3</sup>
1331	Image Enhancement Method Based on Dark Channel Prior	Dan LI, Weiwei Liu, Hanqin Shi*, Likai Wang, Hongdong Wang



1340	A Study on the Parameters of Barrier-free Elevator Control Panel and the Optimization Strategy for the Visually Impaired	Xiaoning Jiang, Shuchen Wang
1428	An Overview of Time Sensitive Communication Technology	Jincan Xin, Sen Xu, Hua Zhang, Shangkun Xiong

**July 23, 2022**

**09:00-12:00 Oral Session B**

1355	Research on the Spatial Association Characteristics of Financial Agglomeration in Beijing-Tianjin-Hebei City Cluster Based on Social Network Analysis Method	Caina Jiang, Jie Hu*, Jianming Chen, Xiangyu Ge
1356	The dynamical analysis of the electroencephalogram rhythm oscillation for the epileptic predictionseizure prediction and rhythm oscillation	Jiajia Li, Chong Liu, Zhao Feng, Ying Wu*
1368	Under-Gravity Surface Optimization of Antenna Mesh Reflector	Guanlong Su, Yang Li, Yesen Fan, Pengfei Huang, Xiaofei Ma*
1373	Application of a New VAE-MF Generative Model in TCD Dataset	ZHANG Xueying*, CHEN Xiaoyu, GUO Yuling, WANG Suzhe, JIA Wenhui
1374	DP-BEGAN: A Generative Model of Differential Privacy Algorithm	Er-Mei Shi, Jia-Xi Liu, Yuan-Ming Ji, Liang Chang*
1376	A Big Data Encryption Method based on Lorenz and Feistel Structures	Yang-Hao Wu, Xiao-Han Huang, Jia-Xi Liu, Liang Chang*
1380	An optimized wood knots recognition scheme based on double detection	Xiao Wang
1381	Workload Prediction based on GRU-CNN in Cloud Environment	Zhihao Gan, Peng Chen*, Chun Yu, Juan Chen, Kang Feng

**12:00-13:30 Noon Break**

**13:30-17:30 Oral Session C**

1383	Trolley Remote Control System Using Eye Motion Tracking	Shuying Rao, Zichen Kong, Wenli Lan, Hui Yang, Yue Leng, Sheng Ge*, Ruimin Wang, Keiji Iramina
1396	Energy saving potential analysis on water pump frequency conversion technology in indirect sewage source heat pump system	Mingzhu Li, Yanan Li
1397	Extending the Control System by Integrating AI Models	Jun Luo, Zhigao Ni, Xingquan Xie, Xiaowei Zhou, Li Li, Zhiyu Tian
1403	Research and application of electric power inspection technology based on intelligent wearable	NIU Jian, HE Jianan, LIU Haitao, LI Lei, YIN Liang, WANG Fang
1433	Modular Analysis on Increasing Chinese Economy Based on Complex Network	Peihua Feng, Ke Xie, Yongchen Fan, Ying Wu

1435	Ultra High SNR 3D Imaging Clustered LiDAR Technique for Underwater Targets	Yang Xingyu*; Liu Alang; Zhang Yuan;Zhao Yanduo;Zhao Yuechao; Piao Chunhui, Zhao Yakun;Dong Xianglan
1436	Research on high-voltage discharge arc detection method based on binocular stereo vision	Zhang Yuan;Yang Xingyu*;Zhao Yuechao;Zhao Yanduo; Liu Alang; Piao Chunhui, Dong Xianglan
1437	Research on 3D visualization technology of electromagnetic source arc based on machine vision	Zhao Yuechao; Yang Xingyu*; Zhang Yuan; Liu Alang;Zhao Yanduo;Piao Chunhui, Zhao Yakun;Dong Xianglan
1439	Implementation of aerodynamic identification technology based on the fastest descent method	Wang Yunhai, Li Chenxi, Cong Wei, Chen Feng, Mu Xu, Wang Biao
1341	Construction of Chinese Character Semantic Knowledge Graph for Overseas Chinese Learners	Jing Xiong, Guoying Liu, Tao Guo, Yining Chen

**July 24, 2022**

**09:00-12:00 Oral Session D**

1450	Research on multi baseline large depth 3D imaging	Yang Xingyu*; Zhao Yanduo; Zhao Yuechao;Zhang Yuan; Liu Alang; Chen Xiao;Piao Chunhui, Zhang Jianchao;Zhao Yakun;Dong Xianglan
1453	PAPR Reduction in OFDM-IM Using Dither Signal Sets	Si-Yu Zhang, Hui Zheng
1468	Geological Disaster Emergency Decision Support System based on Location-Based Service	Zhenlin Fan, Yang Cao, Baofeng Zheng, Bin Wu, Fengzhe Li
1476	Prediction of rolling bearing performance degradation degree based on SE_LSTM	Xinna Ma, Haonan Luan, Shangjun Zhao, Tianyun Niu, Xinru Liu
1491	ACAU-Net: Atrous Convolution and Attention U-Net Model for Pavement Crack Segmentation	Feng Jun*, Li Jiakuan, Shi Yichen, Zhao Ying, Zhang Chenyang
1493	Neighborhood Focused Critic Policy Gradients for Multi-agent Reinforcement Learning	Nanxun Duo, Qinzhao Wang, Qiang Lv, Pei Zhang
1495	Application of Cointegration Theory on Degradation Feature Extraction of Rolling Bearing	Xinna Ma, Xinru Liu, Shangjun Zhao, Haonan Luan, Tianyun Niu
1499	Scheduling Strategy of Virtual Device Based on Wake-up and Semi-sleep Mode	Bing Qin, Hui Shen

**12:00-13:30 Noon Break**

**13:30-17:30 Oral Session E**

1505	Text-to-Image Person Search Based on SSAN Model and Re-rank Post-Processing	Zhang Chenyang, Feng Jun*, Wang Jiaqing
1508	Vehicle Detection in Traffic Monitoring Scenes Based on Improved YOLOV5s	Liu Xiaomeng, Feng Jun*, Chen Peng
1511	Asphalt Pavement Crack Image Screening by Transformer-Based Model	Wang Ziwei, Feng Jun*, Zhang Tian

1515	Bearing fault diagnosis Based on 1-D DenseNet-LSTM	Zhihong Zhao 1, 2, Kejian Liu 1, 2, Jingjiao Zhao 1, 2
1524	Differential Privacy High-dimensional Data Publishing Method Based on Bayesian Network	Xiaotian Lu, Chunhui Piao
1530	Design and Implementation of A Universal Process Parameter Display Instrument Based on ARM and FPGA	Kunming Zhao, Nanhang Luo, Jiannan Liu, Wei Ding, Wei Jiang, Liang Li
1536	Remaining useful lifetime prediction of rolling bearing based on ConvNext and multi-feature fusion	Xinna Ma, Tianyun Niu, Xinru Liu, Haonan Luan, Shangjun Zhao
1548	Research on evaluation of coupling coordination degree between tourism industry and cultural industry	Feng-ke Wang, Chenchen Jiang
1556	RESEARCH AND PRACTICE OF REMOTE SENSING CROP WATER CONSUMPTION MONITORING PLATFORM IN CHINA	He Chen*, Di Zhang, Zheng Wei, Dingxing Xie
1563	The Implementation of Movies and TV Plays Analysis System Combined with Knowledge Graph and Data Visualization	Fan Yang, Yong Yue, Gangmin Li

## Poster Session

1281	A deep reinforcement learning method based on attentional memories	Libin Sun, Gao Biao, Haobin Shi
1282	A novel design for a gated recurrent network with attentional memories	Libin Sun, Gao Biao, Haobin Shi
1283	Exploring Hierarchical Language Knowledge in Graph Neural Networks for Fake News Detection	Fan Xu, Minghao Li, Qi Huang, Keyu Yan, Mingwen Wang
1284	Research on SAR Image Processing Performance Based on OpenMP and CUDA Parallel Model	Yanbin Zhao, Yang LIU
1285	Research and Application of Face Recognition with Feature Fusion of Global and Local Structure	Wang zheng-you
1287	A readout circuit for CNTFET-based infrared image sensor	Qi Lin, Shikai Zuo, Chen Wang, Chengying Chen*
1289	5G network slicing technology and its implementation in industrial Internet	Liu Ya, Xiao Juan
1292	Research on the Development and Governance of China's Public Health Service System during the "14th Five-Year Plan"	Min Dan, Luo Minchao, Xiong Feng
1293	Research on improving social service ability of local university libraries based on Wuhan City Circle	Tang Li

1295	The Mathematical Estimation Model of Parallel Minimum-Computing-Time Node Size	Yue Hu, Zhen Yan
1300	Research on the Applicability of the Calculation Methods for Short-Circuit Current DC Component	Jian Li, Xiaopeng Zhang, Wei Yao, Jiangong Xu, Xiaoliang Shi, Fei Ren
1301	Promoting Digital Campus to Smart Campus Based on Artificial Intelligence	Ruixia Cao
1303	Semi-supervised Medical Image Classification Combining Metric Pseudo-Label and Classification Pseudo-Label	Boya Ke, Huijuan Lu*, Wanli Huo, Yanbin Wang
1307	Relationship value in the Digital Era: New Ideas for the Communication of National Trendy Brands— Taking China Li Ning as an Example	Tao Shuoyu, Xi Yang
1308	Research on characteristics and simplified function of pedestrian head injury criterion (HIC) based on mathematical analysis	Yuanjin Pei, Song Wang
1309	Electricity Consumption Forecasting Based on PC-CNN-BiLSTM Combined with Layered Transfer Learning Strategy	Fulian Ouyang, Jun Wang, Hangxia Zhou*
1311	Research on architecture and technology application of smart Park Based on 5G cloud network	Huibin Duan, Yuying Xue, Peng Ding, Yun Shen, Dan Liu, Qihong Zheng
1312	Collaborative Filtering Hybrid Recommendation Algorithm based on Optimal Weight*	Qiaochu YU, Mingqing ZHAO*, Yuting LUO
1313	CDBSCAN: Density clustering based on silhouette coefficient constraints	GUO Jin-heng <sup>1, 2</sup> , LIN Jia-xiang <sup>1, 2*</sup> , ZHANG Zhen-chang <sup>1</sup> , LING Han-yu <sup>1, 2</sup>
1314	Calibration of the initial position angle by back EMF zero crossing method based on DA chip	LIN Qiang-qiang, ZHANG Dong-ge, LONG Hai-feng, HE Yu-ang
1315	Topic Detection of Multi-feature Fusion in the Financial Field	Jiakun zhao*, Ji Hang, Sun Kun
1316	PLC-based control system design of integrated bagging and staking and grading snapping sorter for pears	Hao Zhang <sup>1</sup> , Yue Xu <sup>4</sup> , Yuhang Zhang <sup>5</sup> , Xuesong Suo <sup>*.</sup> , Xiaoyun Peng <sup>2.</sup> , Yongliang He <sup>3.</sup>
1320	Human motion prediction based on bidirectional feature sequence learning	DuWei, YuYa-nan *, PanQi
1323	Super resolution image visual quality assessment based on feature optimization	Shu Lei, Huang Zijian, Yan Jiebin, Wang Ruonan, Fan Jiacong
1324	Research on Fast Beam Alignment Technology at Target Area Based on Swarm Collaboration Control Model	Xingquan XIE, Jun LUO, Zhike CAO, Xiaowei ZHOU, Tianyou YUN, Li LI
1327	Computer Simulation of Freeze-thaw Cycle in Long'en Hall of Zhaoling Mausoleum in Shenyang City, China	Xiaoyu Wang, Jing Wang

1332	Optimization of Vehicle Suspension Parameters Based on SIMPACK/Isight Simulation of Wheel Eccentric Out-of-roundness	1st Zhihui Huang*, 2nd Jianjun Zou, 3rd Zhikang Liang,
1334	Research on Intelligent Interpretation Algorithm of Launch Vehicle Telemetry Data	Pengcheng Li, Haidong Chen*, Shipeng Li, Junqing Qi, Yanze Lian
1335	A Mechanism and Control Design of Flexible Spine driven by Pneumatic Artificial Muscles	Liyun Fang <sup>1</sup> , Enyi Xu <sup>2</sup> , Weiyi Zhou <sup>1</sup> , Kun Zhou <sup>2*</sup>
1336	Bearing Fault Diagnosis Based on Pooling Weight Multi-scale Convolutional Neural Networks	Chunhua Chen, Lei Huang, Yinghua Yang
1338	Industrial Part Image Retrieval Combining Convolution and Attention Features	Qijun Shao, Yuanyuan Qi*, Li Yang, Bin Wu
1342	Advance Algorithms of Secchi depth Remote Sensing	WANG Yi, ZHOU Shudao, ZHAO Shijun
1343	A new multiple targets tracking algorithm based on improved MHT algorithm	Sun Wei <sup>1, 2</sup> , Han Yu <sup>1, 2</sup>
1344	Extended State Observer Based Nonsingular Terminal Sliding Mode Control for a Class of Dynamic Systems	Min-Yi Wang, Jiaqianhao Yang and Jing-Jing Xiong
1345	Extended State Observer Based Sliding Mode Control for a Class of Dynamic Systems with Input Constraint	Jiaqianhao Yang, Min-Yi Wang and Jing-Jing Xiong
1347	Flight test Methods of SINS Borderline Performance Based on Quasi-level Uniform Design	Zhenyuan Wan*, Hai-tao Liu, Xue-ni Huang
1348	Intelligent Ship Decision System Based on DDPG Algorithm	Zhewen Cui*, Wei Guan, Wenzhe Luo
1349	Research on Face Recognition Algorithm Based on Numerical value of Facial Feature Points	Wanzhen Zhou, Xintian Miao, Jianxia Wang
1350	User Clustering Based on the Topic-Sentiment Analysis	Li Dun, Ma Liyuan, Li Lun
1351	A Object Detection Algorithm Incorporates Lightweight Network and Dual Attention Mechanism	Kuihe Yang, Meiling Sun, Yi Liu
1352	Application research of logisticMF Recommendation Algorithm based on experts and data characteristics	Haitao ZHANG, Pengcheng LI
1353	Improving Long-lead ENSO Prediction with Joint ENSO Transformer	Jiakun Zhao, Hailun Luo, Weiguang Sang, Kun Sun
1354	Surface Defect Detection Method for Steel Bar Based on Correction Attention YOLOF	Chaolin Yang, Jie Shi*, Kunpeng Wu
1358	A prediction model for slope stability based on the support vector machine	Yong-shun Zhang, Feng Ming, Ming-jun Chang

1359	Applications of AI to Age-Related Macular Degeneration: a case study and a brief review	Han Wang, Zefeng Li1*
1360	Design and Application of Instrument Remote Operation and Maintenance and Intelligent Analysis Platform Based on Edge Computing Technology	Huaifeng Wen1, Guihua Zhang1, Haodong Zhang
1362	Short term wind power prediction based on improved quantum particle swarm optimization algorithm and kernel extreme learning machine	Ning Ma, Zhenyong Yang, Lei Liu, Aiguo Gao, Yong Shang, Jingqiu Kang, Tianmu Qin
1363	Eye-tracking-based robotic arm control system	Zichen Kong, Shuying Rao, Hui Yang, Wenli Lan, Yue Leng, Sheng Ge, Ruimin Wang, Ruimin Wang
1367	A CNN-Transformer Hybrid Network for Joint Optic Cup and Optic Disc Segmentation in Fundus Images	Xue Xia, Zhuxiang Huang, Zijian Huang, Lei Shu*, Lin Li
1370	Power System Fault Diagnosis Based on Multi-Sensor Data Fusion for Large-Scale Railway Maintenance Equipment	Hairui Wang, Junming Li, Junjie Zhang, Guifu Zhu*
1372	Image-Based Automatic Crack Detection Method of Gantry Crane Track	Jiaqi Li1, Yitong Zhang1, Zhaojie Lu1, Xu Zheng1, Zhiyuan Wang1, Cheng Li2
1377	A Unilateral Compensation Network With Any Constant Current Output in WPT System	Feng Fan, Qingbin Chen
1379	Discussion on the Planning and Design of Urban landscape Based on GIS, Taking Dongcheng District of Beijing as an example	Wen Zhang, Kai Huang
1384	Research and implementation of resource recovery supply chain financial platform based on blockchain technology	Song Tang, Zhiqiang Wang *, Suli Ge, Yandong Ma, GaiFang Tan
1386	A value meta-model for crossover services modeling	Zhengli Liu
1387	Terrain Classification of Polarimetric SAR Images Based on Optimal Polarization Features	Yangyang Wang, Xuwen Mao, Weidong Chen, Wuhu Lei
1388	Data poisoning attacks on federated learning by using adversarial samples	Lei Shi* , Zhen Chen* , Yucheng Shi†, Guangtao Zhao§, Lin Wei* , Yongcai Tao‡and Yufei Gao*
1389	Unified Framework for NER and RE Tasks with Strong Interpretability on Chinese Medicine Instruction Parsing	Ya Zhang* †, Shuai Yang†, Hao Wen†, Pei Xie† Yuanqing Wu†
1391	SA-EfficientNet: Quality grading model of Stropharia rugoso-annulate	Yinhua Zuo, Mingyan Zhao
1393	Improved Graph Convolutional Neural Networks based on Granger Causality Analysis for EEG Emotion Recognition	ZHANG Jing, ZHANG, Xueying(* ), ZHAO Qing
1395	Prognostic analysis of patients with non-small cell lung cancer based on Bayesian network model	CUI Yu-rong, SUN Fang- bin, YIN Meng-fan, FU Jia-ning, WANG Su-zhen, KONG Yu-jia

1398	Research on Torque Control Algorithm for Path Planning of Free Floating Space Robots Capturing Target	Huazhong Li
1399	A Review of the types of disturbances and suppression methods for SiC MOSFET driver	Zhi ZHENG, Feng WANG, Fang ZHUO
1401	Improved differential privacy K-means clustering algorithm for privacy budget allocation	Liquan Han, Yushan Xie*, Di Fan, Jinyuan Liu
1402	Garbage Detection on The Water Surface Based on Deep Learning	Xinyan Yin†, Jiatang Lu, Ying Liu
1407	Underwater positioning method based on polarization characteristics	Fengping Kan, Huibin Wang*, Jie Shen, Zhe Chen
1408	Preparation of Low-active MgO from Microcrystalline Magnesite and Its Application in the Production of Acetate Fiber	TIAN Xiaoli1, 2, 3 LI Zhixun1, 2, 3 FENG Runtang1, 2, 3 LIU Guichang2 XIN Yu2, WANG Yonghui2 DU Yongbin3 WANG Zhenshuang1
1422	Distribution grid fault diagnosis based on SR-GRU and fault indicator	Fan LI, Xing HE*, Ran CHEN, Yi WU, Yingjie TIAN
1423	An improved YOLOv5-based bird detection algorithm for transmission line	Tianyu Wang1, 2, Yongkang Zheng1, Haijie Ma2, Chao Wang3, Yong Liu4, Xuxu Li3
1427	ON THE ONLINE SOCIAL INTERACTIONS IN KNOWLEDGE BUILDING COMMUNITY	Shuhong Gong1 Yaping Li2 Xue Zhang1
1430	Research on the Construction and Application of Smart Classroom Teaching Service Platform Based on Big Data	JianHua Xie, Xi Zhao, Yongjun He, Zhe Chen
1431	Mitigation of Non-stationary Jammings with Missing Samples for GNSS Using Sparse Representation	Yuetao Ren, Yongfeng Zhi* , and Jun Zhang
1432	A lightweight convolutional neural network model optimization method for ARM platform	Xuqiang Wang, Jian Zheng, Yao Jin, Yifan Yang, Yang Zheng
1434	A Novel End-to-End Visual Odometry Framework Based on Deep Neural Network	Yinan Wang, Rongchuan Cao, Yingzhou Guan, Xiaoli Zhang*
1438	Research on Short Video Production of Taijiquan Teaching under Information Technology	Guo ying
1440	Analysis and Research About Different Cooling Structures of Piezoelectric Fans	Qing Lin, Kun Wang, Juyan Ni, Xiaoyu Chen, Yanyong Wang, Lidan Li
1442	Safety evaluation of naval ship wire rope based on safety factor	G.X.Hu, W.Lin*, L.J.Liu, F.G.Shen
1443	Oil Spill Detection in SAR Images based on Improved YOLOX-S	Fang-Yuan Xu, Xiang-Ze An, Wen-Qi Liu
1445	Predicting severity of software vulnerability based on BERT-CNN	Xuming Ni, Jianxin Zheng, Yu Guo, Xu Jin, Ling Li

1452	Spectral Unmixing Model Based on Non-negative Matrix Factorization with Spatial and Spectral Correlation Constraints	Bo Yuan
1454	Underwater Sound Source Localization Based on Time-Reversal Mirror and Virtual Array	TONG Haoyang, Liu Yucai, Yi Wensheng, Chen Yi
1455	Coverage Detecting of Sweeping Robot Based on Binocular Vision	Zhiwei Chu, Yigang Wang, Jiaqi Lian, Mingwei Zhang, Shi Li*
1456	An improved Multi-objective Grey Wolf Optimization Algorithm Based on Multiple Strategies	Xiaohuan Tian, Qiqi Hu, Chun-an Liu
1460	Research on student academic precaution model based on IWPA-BP neural network algorithm	Xin Jing/ Hao Gao
1461	Research and application of improved k-means algorithm based on educational big data	Ruonan Gu/ Xin Jing / Di Zhao/ Lei Cai / Hao Gao
1463	Underwater Object Tracking By Image Enhancement And Feature Fusion	Huibin Wang <sup>1</sup> *, Ying Lu <sup>1</sup> , Zhe Chen <sup>1</sup> , Jie Shen <sup>1</sup> , Min Zhang <sup>1</sup>
1469	Analysis on Data Simulation of Spatial Resolution of Resistivity Based on Audio Magnetotelluric Method	Fengzhe Li, Qingjun Zhu, Le Zhou, Hui Long, Zhenlin Fan*
1471	Application Research of Improved Canny Operator in Mine Foreign Body Edge Detection	QIN Yu-xin <sup>1</sup> , a, XIONG Xin-meng <sup>1</sup> , b *, ZHANG Wen-li <sup>1</sup> , c
1472	Research on the Value Derivation Mechanism of Urban Comprehensive Energy Data and the Construction of Energy Consumption Prediction Model	Chen Ying
1473	Implementation of GraphFrames-Based Parallelized Label Propagation Algorithm in Clusters	Jianxia Wang, Yu Shi, Yunfeng Xu
1475	Anomaly detection based on memory-augmented in computer room laboratory	Jianxia Wang, Wenying Liu, Yunfeng Xu
1478	Feature Fusion Method based on Discriminant Correlation Analysis for Land Use Classification with Few-Shot	Song Yang, Huibin Wang, Hongmin Gao, lili Zhang
1480	ESR Calculation Model of Metalized Film Capacitor in WPT System	Xu Zhang, Qingbin Chen
1481	A Joint Extraction Strategy for Chinese Medical Text Based on Sequence Tagging	JIAJIA LI, DONGRU RUAN
1482	An ensemble learning-based two-level network intrusion detection method	Jianxin Zheng, Xuming Ni, Lifeng Li, Kan Yu, Jun Zhang
1485	Research on Infrared Image Super-Resolution Based on Enhanced Generative Adversarial Network	Lihui Sun, Yiyao Zhao
1486	Analysis of key nodes in airline network based on complex network--Tibet Airlines route network as an example	Qing Cheng, Sizhen Wang, Xiaohong Shi, Dechao Wang
1487	An Interpretable Question Answering Method Based on Heterogeneous Graph Neural Networks	Yongliang Wu*, Qianqian Zhou*, Hu Yin*, Dongbo Liu*



1488	Text Semantic Representation Based on Knowledge Graph Correction	Yongliang Wu*, Hu Yin*, Dongbo Liu*, Qianqian Zhou*
1489	An Answer Recommendation Algorithm Based on Semantic Fusion Heterogeneous Information Network	Yongliang Wu, Dongbo Liu, Qianqian Zhou, Hu Yin
1492	A New Case Teaching Method for Python Course in Software Engineering based on PBL Model	Wenqiang Zhu, Bizhou Xiong, Sirui Tang, Ziqi Yi, Yaqing Deng
1500	Research on dual mode control of micro-grid based on switching system theory	Jinming Luo*, Lei Yao, Jing Gao, Huijie Liu, Xinming Hou
1502	Intelligent Question Answering System for Impeller CNC Machining Based on Knowledge Graph	Hongshen Wang, Jialiang Zhu, Boling Li, Jiayu Zhu
1503	A New Method to Extract Impedance between Input and Output Cables in Radiated Frequency Band of Power Converter	Jianxin Shi, Qingbin Chen
1507	Research on the Technology of Power Adapter Without Input Electrolytic Capacitor Based on One-Cycle Control	Jinshuai Wang, Qingbin Chen, Yaodong Chen, Wei Chen
1510	Studies on Human Recognition Activities Based on Federated Learning	Shuzhen Xu, Yanhong Liu*, Xin He
1512	A combinatorial optimization method based on machine learning for electricity price forecasting	Dingsheng ZHANG, Chen TIAN, Weiwei QIN
1513	Joint Spatio-spectral Patterns for Motor Imagery-based Brain-Computer Interfaces	Shoulin Huang <sup>1, 2</sup> , Xiaojin Ye <sup>1, 2</sup> , Weiping Hu <sup>1, 2</sup> , Jinjie Bi <sup>1, 2, *</sup> , Junhua Zhu
1516	A new hybrid model for short-term volatility forecasting	Wengjing, Huzhengfa
1527	Railway Foreign Object Intrusion Detection based on Deep Learning	Xuwen Ding*, Xinnan Cai, Ziyi Zhang, Wenyan Liu
1528	Character Recognition and Printing Quality Inspection of Chips Under Packaging Film	Hu Tao, Chen Mingyang
1531	AMNet: Attention-based multi-scale network for image SR reconstruction	Shuying Huang, Mingyang Ren, Yong Yang
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