

2021 International Conference on Computer Information Science and Artificial Intelligence (CISAI 2021)

**Kunming, China
17 – 19 September 2021**

Pages 1-572



**IEEE Catalog Number: CFP21BK2-POD
ISBN: 978-1-6654-0693-2**

**Copyright © 2021 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP21BK2-POD
ISBN (Print-On-Demand):	978-1-6654-0693-2
ISBN (Online):	978-1-6654-0692-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2021 International Conference on Computer Information Science and Artificial Intelligence (CISAI) **CISAI 2021**

Table of Contents

Preface	xxviii
Committee Members	xxx
Reviewers	xxxi

Computer Model Application and Target Recognition and Detection

A Study On Detection Of Fake Commodity Reviews Based On ERNIE-BiLSTM Model	1
<i>Haoxing Tang (Northwest Minzu University, China), Hui Cao (Northwest Minzu University, China), and Junjie Li (Northwest Minzu University, China)</i>	
Comparison of two Target Detection Algorithms Based on Remote Sensing Images	6
<i>Yuhuan Li (Air Force Engineering University, China), Jie Wang (Air Force Engineering University, China), and Baodai Shi (Air Force Engineering University, China)</i>	
Research on the Application of Speech Recognition in Medical Clinic	10
<i>Han Jin (Chengdu University of Information and Technology, China)</i>	
Research on Object Detection Algorithm for Small Object of Pests Based on YOLOv3	14
<i>Qinxiao Liu (Chongqing University of Technology, China), Zining Yan (Chongqing University of Technology, China), Fang Wang (Sichuan University, China), and Chaoyuan Ding (Chongqing University of Technology, China)</i>	
Multi-Index Integration Evaluation Method of Automotive Spare Parts Demand Forecasting Models	19
<i>Yue Hua Yin (Automotive Data of China (Tianjin) Co., Ltd., China), Mao Ying Li (Automotive Data of China (Tianjin) Co., Ltd., China), Zheng Yu Ma (Automotive Data of China (Tianjin) Co., Ltd., China), and Chen Wang (Automotive Data of China (Tianjin) Co., Ltd., China)</i>	
Research on the Identification of Organizational Entities in Fraudulent Texts Via Bi-GRU-Flat	23
<i>Xiangwu Ding (Donghua University, China) and Cheng Xu (Donghua University, China)</i>	

Long and Short-Term Neural Network News Recommendation Model Based on Self-Attention Mechanism	30
<i>Xiujin Shi (Donghua University, China), Mintao Xu (Donghua University, China), and Jun Hu (Donghua University, China)</i>	
Multi-Objective Planning Optimization of Integrated Energy System Considering Uncertain Factors	35
<i>Junyu Liang (Electric Power Research Institute of Yunnan Power Grid Co., Ltd, China), Xingyu Yuan (Electric Power Research Institute of Yunnan Power Grid Co., Ltd, China), HanYing Zhou (Electric Power Research Institute of Yunnan Power Grid Co., Ltd, China), HanYing Zhou (Electric Power Research Institute of Yunnan Power Grid Co., Ltd, China), Siyi Tao (North China Electric Power University, China), Xin Chen (North China Electric Power University, China), FeiFei Huang (North China Electric Power University, China), and YuZe Ma (North China Electric Power University, China)</i>	
Crowd Counting and Density Estimation Method Based on Multi-Column CNN and Adaptive Projections onto Convex Sets	39
<i>Gongda Qiu (Air Force Communication NCO Academy, China), Liqiong Deng (Air Force Communication NCO Academy, China), Hui Shi (Radar NCO School, Air force early warning Academy, China), and Guixin Zhang (Air Force Communication NCO Academy, China)</i>	
Hybrid Recommendation Model Fused with Compressed Cross Network	44
<i>Fangjun Luan (Shenyang Jianzhu University, China; Liaoning Province Big Data Management and Analysis Laboratory of Urban Construction, China) and Hao Cui (Shenyang Jianzhu University, China; Liaoning Province Big Data Management and Analysis Laboratory of Urban Construction, China)</i>	
A Multi-Task Framework for Named Entity Recognition	51
<i>Heng Hu (Zhejiang A & F University, China), Tongcun Liu (Zhejiang A & F University, China), Hailin Feng (Zhejiang A & F University, China), Yaoping Ruan (Zhejiang A & F University, China), and Yan'e Li (Zhejiang A & F University, China)</i>	
Eosinophil Detection with Modified YOLOv3 Model in Large Pathology Image	57
<i>Xinyue Wang (National University of Defense Technology, China), Yonggang Che (National University of Defense Technology, China), Nan Jiang (Hunan Children's Hospital, China), Weijian Chen (Hunan Children's Hospital, China), and Long Lan (National University of Defense Technology, China)</i>	
RFNet: Toward High-Quality Object Detection in Aerial Images	62
<i>Hui Tang (Southwest University of Science and Technology, China) and Jing Wu (Southwest University of Science and Technology, China)</i>	
Denosing Deep Autoencoder Gaussian Mixture Model and Its Application for Robust Nonlinear Industrial Process Monitoring	67
<i>Yinchang Zhou (College of Mathematics and Physics Beijing University of Chemical Technology, China), Mengqian Li (Beijing University of Chemical Technology, China), and Longbin Ji (Xi'an Jiaotong-liverpool University, China)</i>	

Traffic Sign Target Detection Method Based on Deep Learning	74
<i>Jiachen Jiang (Xiangtan University, China), Jianan Yang (Beijing Forest University, China), and Jiankai Yin (Beijing Forest University, China)</i>	
A Recognition Method of Road Adhesion Coefficient Based on Recurrent Neural Network	79
<i>Jinliang Hao (WuHan University of Technology, China), Chengying Liang (WuHan University of Technology, China), Rui Yang (WuHan University of Technology, China), and Zeqin Lin (WuHan University of Technology, China)</i>	
A Deep Self-Attention Residual Convolutional Neural Network for Automatic Recognition of Aluminum Profile Surface Defects	83
<i>Zhengjin Shi (Shenyang Ligong University, China), Feng Xie (Shenyang Ligong University, China), Zheng Huang (University of Chinese Academy of Sciences, China), Bolun Wang (Shenyang Ligong University, China), Zihong Liu (Shenyang Ligong University, China), and Shiyu Bai (Shenyang Ligong University, China)</i>	
PCAmix-Based One Class Classification Ensemble Learning for Network Attack Detection	88
<i>Shaohui Mo (Xinjiang University, China), Gulanbaier Tuerhong (Xinjiang University, China), Mairidan Wushouer (Xinjiang University, China), and Tuergen Yibulayin (Xinjiang University, China)</i>	
Attention Based on Pseudo 3D Convolution Residual Network for Action Recognition of Earth-Moving Machinery	93
<i>Tao Chen (Guangxi University of science and technology, China), Xianjing Liu (Guangxi University of science and technology, China), and Guichun Li (Guangxi University of Science and Technology, China)</i>	
Small Object Detection Based on Super-Resolution Enhanced Detection Network	99
<i>Hang Zou (Wuhan Research Institute of Posts and Telecommunications, China; Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China), Yining Gao (Wuhan Research Institute of Posts and Telecommunications, China; Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China), Xiaomeng Guo (Wuhan Research Institute of Posts and Telecommunications, China; Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China), and Ming Zheng (Wuhan Research Institute of Posts and Telecommunications, China; Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China)</i>	
Cloud Detection from a Hyperspectral Infrared Atmospheric Sounder using a Machine-Learning Model	107
<i>Huaxiang Shi (National University of Defense Technology, China), Yi Yu (National University of Defense Technology, China), Weimin Zhang (National University of Defense Technology, China), Gang Ma (China Meteorological Administration (NSMC/CMA), China), Qi Zhang (National University of Defense Technology, China), Tengling Luo (National University of Defense Technology, China), and Qunbo Huang (Troops of People's Liberation Army of China (PLA), China)</i>	
Across Domains Models on Garbage Classification	117
<i>Hanpeng Li (Southwest University Chongqing, China)</i>	

International Transmission Model and Its Application in Control Mechanism of Global Epidemic Diseases	121
<i>Yang Liu (Wuhan University of Technology, China), Huihuang Jiang (Wuhan University of Technology, China), Yihua Liang (Wuhan University of Technology, China), and Buote Luo (Wuhan University of Technology, China)</i>	
Research on Business Carrying Capacity Assessment System and Model Based on Energy Internet Enterprise	126
<i>Rong Chen (State Grid Zhenjiang Power Supply Company, China), Zejun Jia (State Grid Zhenjiang Power Supply Company, China), Yongli Wang (North China Electric Power University, China), Miaomiao Xu (North China Electric Power University, China), and Siyi Tao (North China Electric Power University, China)</i>	
Forecasting Model of Shanghai Stock Index Based on ALSTM	130
<i>XiaoHong Wang (Hebei University of Science and Technology, China), ShengLan Zhu (Hebei University of Science and Technology, China), XuePei Ma (Hebei University of Science and Technology, China), Kun Zhang (Hebei University of Science and Technology, China), and XiaoMan Fan (Hebei University of Science and Technology, China)</i>	
Identification Method of Disaster-Bearing Body in Coastal Cities Under Emergency Logistics Characteristics	135
<i>Mei Yang (Mianyang Normal University, China)</i>	
Simple but Efficient Results-Fusion Method for Object Detection	143
<i>Kouquan Zheng (National University of Defense Technology, China), Shuaihui Qi (National University of Defense Technology, China), Qian Lin (National University of Defense Technology, China), Chen Jiang (National University of Defense Technology, China), and Tao Xie (National University of Defense Technology, China)</i>	
Mandarin Chinese Consonants Landmark Detection Based on Segmented Phoneme Classification	147
<i>Yanlu Xie (Beijing Language and Culture University Beijing Language and Culture University, China), Man Li (Beijing Language and Culture University Beijing Language and Culture University, China), and Ziyue Li (Beijing Language and Culture University Beijing Language and Culture University, China)</i>	
Swin-Transformer Based Classification for Rice Diseases Recognition	153
<i>Zhenghua Zhang (Yangzhou University, China), Zhangjie Gong (Yangzhou University, China), Qingqing Hong (Yangzhou University, China), and Ling Jiang (Yangzhou University, China)</i>	
Prediction of Machine Tool's Accuracy Degradation Based on Chaotic Phase Space Reconstruction and Depth GRU	157
<i>Liuqing Du (Chongqing University of Technology, China), Baochuan Li (Chongqing University of Technology, China), Jiu hao Guo (Chongqing University of Technology, China), Fuqiang Li (Chongqing University of Technology, China), and Zhixuan Cai (Chongqing University of Technology, China)</i>	

Monthly Arctic Sea Ice Concentration Prediction Based on the ConvLSTM Model	162
<i>Penglun Li (National University of Defense Technology, China), Hongze Leng (National University of Defense Technology, China), Beibei Ma (Zhengzhou University of Light Industry, China), and Mingyuan He (National University of Defense Technology, China)</i>	
Identification of Ancient Ceramics Based on Support Vector Machine	168
<i>Jingwen Xia (Jingdezhen Ceramic University, China), Bingxiang Liu (Jingdezhen Ceramic University, China), Jiwen Zou (Jingdezhen Ceramic University, China), and Zhijian Yu (Jingdezhen Ceramic University, China)</i>	
Fault Port Detection Based on Hadoop	172
<i>Yueying Huang (Fuzhou University, China; China Telecom Fuzhou branch, China), Xuefeng Yu (China Telecom Fuzhou branch, China), and Kai Lin (China Telecom Fuzhou branch, China)</i>	
Finite Element Modelling and Failure Behaviour Analysis of Carbon Fibre-Reinforced Plastic Thin-Walled Tube with Cutouts Under Quasi-Static Loading	178
<i>Hansen Zeng (University of Science and Technology Beijing, China), Xinyang Liu (China University of Mining and Technology, China), and Chenghe Bai (Jilin University, China)</i>	
Research on Safety Helmet Detection for Construction Site	186
<i>Dacong Ren (Nanjing University of Science and Technology, China), Tongsheng Sun (Nantong intelligent perception research institute, China), Cungui Yu (Nanjing University of Science and Technology, China), and Cheng Zhou (Nanjing University of Science and Technology, China)</i>	
Gait-Based Emotion Recognition using Spatial Temporal Graph Convolutional Networks	190
<i>Shiyi Yu (Southeast University, China) and Xinde Li (Guangdong Intelligent Robotics Institute, China)</i>	
Mask Wearing Detection Based on Improved YOLOv3	194
<i>Wei Zhang (Chongqing University of Technology, China), He Yan (Chongqing University of Technology, China), Yuhan Liu (Chongqing University of Technology, China), Xiaotang Wang (Chongqing University of Technology, China), and Junbing Huang (Chongqing University of Technology, China)</i>	
An Effective Anchor-Free Model with Transformer for Logo Detection: Efficient Logo Detection via Transformer	198
<i>Baoyan Cheng (Shandong Normal University, China), Huichuan Duan (Shandong Normal University, China), Sujuan Hou (Shandong Normal University, China), Awudu Karim (Beijing University of Technology, China), Weikuan Jia (Shandong Normal University, China), and Yuanjie Zheng (Shandong Normal University, China)</i>	
Student Facial Expression Recognition Based On Multi-Scale Residual Network	207
<i>Hong-Xi Feng (Guizhou MinZu University, China), Lin Wang (Guizhou MinZu University, China), Fu-Jian Feng (Guizhou MinZu University, China), Mian Tan (Guizhou MinZu University, China), Lin-Yan Peng (Guizhou MinZu University, China), Yu-Qing Zhao (Guizhou MinZu University, China), and Xue-Wen Zhang (Guizhou MinZu University, China)</i>	

Weighted Video Simplification Model Based on Content Complexity	212
<i>Bolin Zhao (Beijing University of Civil Engineering and Architecture, China), Liang Huo (Beijing University of Civil Engineering and Architecture, China), Tao Shen (Beijing University of Civil Engineering and Architecture, China), and WenJie Xu (Beijing University of Civil Engineering and Architecture, China)</i>	
The Fusion Model of Short Text Sentiment Classification Based on Attention Mechanism	216
<i>Hao Tian Li (Northwest Minzu University, China), Hui Cao (Northwest Minzu University, China), and Yun Peng Xu (Northwest Minzu University, China)</i>	
Predict Model on Air Quality and Characteristic of Shenyang	221
<i>Xiao Wang (Wenzhou Kean University, China)</i>	
CAN-FT: A Fuzz Testing Method for Automotive Controller Area Network Bus	225
<i>Haichun Zhang (Huazhong University of Science and Technology, China), Kelin Huang (Huazhong University of Science and Technology, China), Jie Wang (Shenzhen Kaiyuan Internet Security Co., Ltd, China), and Zhenglin Liu (Huazhong University of Science and Technology, China)</i>	
A Greenhouse Temperature Prediction Framework Based on Transformer Neural Network	232
<i>KunAo Zhang (Xi'an University of Science and Technology, China), ShiYue Qiang (Xi'an University of Science and Technology, China), ZhenXin Liang (Xi'an University of Science and Technology, China), and YunLei Chang (Xi'an University of Science and Technology, China)</i>	
Aircraft Remote Sensing Image Target Detection Based on Shallow Feature Enhancement and k-Means Clustering Algorithm	237
<i>HaoTong Wang (Ningxia University, China) and ZhongHua Guo (Ningxia University, China)</i>	
Improved Real Time Object Detection Method for Remote Sensing Image Based on YOLOv4	244
<i>Zhuo Chen (Naval University of Engineering, China), Jian Huang (Naval University of Engineering, China), Hao Xu (Naval University of Engineering, China), and Xiushan Zhang (Naval University of Engineering, China)</i>	
Rice Disease Identification Method Based on Improved Mask R-CNN	250
<i>Zhenghua Zhang (Yangzhou University, China), Ling Jiang (Yangzhou University, China), Qingqing Hong (Yangzhou University, China), and Zhangjie Gong (Yangzhou University, China)</i>	
Pitches Detection of Mixed Speech using Synchrosqueezing Wavelet Transform	254
<i>Dandan Chen (Guangxi Normal University, China), Ting Xiao (Guangxi Normal University, China), Weiping Hu (Guangxi Normal University, China), and Qing Wu (Guangxi Normal University, China)</i>	
Research on Person Re-Identification Based on Pose-Attention-GAN	261
<i>YuXia Zhang (Ningxia University, China), Jin Che (Ningxia University, China), and YuTing He (Ningxia University, China)</i>	
Study on Land use Change Detection Based on Landsat Data with Object-Oriented Method	268
<i>Dayong Yang (Shenyang Jianzhu University, China), Dong Wu (Shenyang Jianzhu University, China), and Hua Ding (Shenyang Jianzhu University, China)</i>	

Lightweight Real-Time Face Detection Method Based on Improved YOLOv4	273
<i>MengAn Shi (Soochow University, China) and Yang Gao (Soochow University, China)</i>	
CNN-LSTM with Fused Residual Blocks for Heating Load Prediction	278
<i>Shuijing Long (Beijing University of Technology, China), Ying Ji (Beijing University of Technology, China), Xinyu Yang (Beijing University of Technology, China), Quanli Wang (Cangzhou Economic Development Zone Science and technology entrepreneurship Service Co., Ltd, China), and Hairong Yan (Beijing University of Technology, China)</i>	
Platform Incentives and Willingness of Participant for Investment on Livestreaming E-Commerce Model: Computer-Aided Simulated Analysis Based on Evolutionary Game	282
<i>Jingwen Tan (Henan University, China), Shixi Kang (Henan University, China), and Yang Qu (Luoyang Normal University, China)</i>	

Big Data Algorithm Analysis and Deep Learning Application

Pre-Computation Based Real-Time Reference Image Selection Algorithm	286
<i>Gang Lin (Sichuan University, China)</i>	
Clothing Colour Clustering Method Based on CC_K-Means Algorithm	290
<i>Honglei Zhou (Donghua University, China), Bo Zhang (Donghua University, China), and Jipeng Zhai (Beijing Normal University, China)</i>	
Improved Sparrow Search Algorithm Applied to Path Planning of Mobile Robot	294
<i>Fan Li (Fuzhou University, China), Youxi Lin (Fuzhou University, China), Linhao Zou (Fuzhou University, China), and Liyang Zhong (Fuzhou University, China)</i>	
Understanding Users' Reaction to Blockchain Technology on the Online Fundraising Platform — — Evidence from Scenario Simulation Experiments	301
<i>Yaqi Zhou (The Business School of Central South University, China)</i>	
Image Compression Based on SVD Algorithm	306
<i>Shi Jie Li (Hebei University of Architecture, China), Hui Pang (Hebei University of Architecture, China), Pan Yin Li (Hebei University of Architecture, China), Ya Nan Li (Hebei University of Architecture, China), and Zhi Xin Liu (Hebei University of Architecture, China)</i>	
Karting Racing: A Revisit to PPO and SAC Algorithm	310
<i>Chengyuan Xu (Beijing University of Post and Telecommunication, China), Ruijie Zhu (Northwestern Polytechnical University, China), and Dongce Yang (Inner Mongolia University, China)</i>	
Recognizing Chinese Texts with Multi-Width Feature Extractor and Attention-Based Fusion	317
<i>Pu Cao (University of Science and Technology Beijing, China)</i>	
Comparison of Typical Clustering Algorithms for Patent Citation Network	322
<i>Duanwu Yan (Nanjing University of Science and Technology, China), Jingyi Bai (Nanjing University of Science and Technology, China), and Chenchen Li (Nanjing University of Science and Technology, China)</i>	
Study on Classification Algorithm of Motor Imagination EEG Signal	326
<i>Xian Xie (Shanghai Maritime University, China) and Ying Yang (Shanghai Maritime University, China)</i>	

A New Approach to Solve the Vehicle Routing Problem: The Perspective of the Genetic Algorithm Combined with Adaptive Large Neighbour Search	331
<i>Yishuon Fan (Jilin University, China), Qinfan Zhang (Jilin University, China), and Shuyu Quan (Shaanxi Normal University, China)</i>	
Sentiment Analysis of Science Fiction Movie Reviews Based on Deep Learning	338
<i>Yandan Wang (Shenyang Jianzhu University, China), Rong Wan (China Agricultural University Beijing, China), and Niu Zeng (New York University Brooklyn, New York)</i>	
Research on Plant Recognition Algorithm Based on YOLOV3 in Complex Scenes	343
<i>Guangye Li (Xi'an Jiaotong-Liverpool university School of Advanced Technology, China), Mengfan Kong (Jilin University, China), and Shihao Wang (Central South University, China)</i>	
Study of Text Classification Natural Language Processing Algorithms for four European Areas' English Dialects	348
<i>Kainan Zhang (Southwest Jiaotong University, China)</i>	
A Survey of Transformer and GNN for Aspect-Based Sentiment Analysis	353
<i>Wenqing Luo (Shanghai University), Wei Zhang (Beijing University of Chemical Technology), and Yihang Zhao (The University of Sheffield)</i>	
Deep Learning Algorithms for Automotive Spare Parts Demand Forecasting	358
<i>Zhengyu Ma (Automotive Data of China (Tianjin) Co., Ltd., China), Chen Wang (Automotive Data of China (Tianjin) Co., Ltd., China), and Zhongze Zhang (Automotive Data of China (Tianjin) Co., Ltd., China)</i>	
Multi-Focus Image Fusion Algorithm Based on Unsupervised Deep Learning	362
<i>Qinxiao Liu (Chongqing University of Technology, China), Gaojian Luan (Chongqing University of Technology, China), Fang Wang (China Academy of Engineering Physics, China), Bo Peng (Chongqing University of Technology, China), and Dongxia Hu (China Academy of Engineering Physics, China)</i>	
Research and Implementation of Database Operation Recognition Based on YOLO v5 Algorithm ..	367
<i>Liang Zhang (State Grid Anhui Electric Power Corporation Information & Telecommunication Branch, China), Yuan Fang (State Grid Anhui Electric Power Corporation Information & Telecommunication Branch, China), Jianqiao Sheng (State Grid Anhui Electric Power Corporation Information & Telecommunication Branch, China), Yicao Zhang (State Grid Anhui Electric Power Corporation Information & Telecommunication Branch, China), and Jin Shi (School of control and Computer Engineering North China Electric Power, China)</i>	
Image Caption and Medical Report Generation Based on Deep Learning: a Review and Algorithm Analysis	373
<i>Runyi Li (Sichuan University, China), Zizhou Wang (Sichuan University, China), and Lei Zhang (Sichuan University, China)</i>	
Clustering Analysis for Building Energy Benchmarking Based on Weekly Load Profile	380
<i>Yiming Ruan (Tongji University, China) and Fuqiang Liu (Tongji University, China)</i>	
A Navigation Algorithm Integrating Multiple Positioning Models in the Urban Environment	385
<i>Ying Zhang (Beihang University, China), Hongbo Zhao (Beihang University, China), Zhe Yang (Beihang University, China), and Wenquan Feng (Beihang University, China)</i>	

Localization Algorithm of R Angle of the tab on Lithium Battery Coating Based on Faster RCNN	391
<i>Xinran Ma (Beijing Institute of Graphic Communication, China), Yingjie Tang (Beijing Institute of Graphic Communication, China), Yongshuai Lu (Beijing Institute of Graphic Communication, China), and Shuang Liu (Beijing Institute of Graphic Communication, China)</i>	
Soil Pollution Prediction Based on KPCA and Improved Deep Sparse Extreme Learning Machine ..	396
<i>Wenshuai Zhang (Beijing Information Science & Technology University, China) and Zhangang Wang (Beijing Information Science & Technology University, China)</i>	
A Doppler Radar-Based Approach for Fall Detection using Clustering Algorithm	401
<i>Lin Zhang (Qilu University of Technology, China), Li Xu (Qilu University of Technology, China), Xiangdong Li (Qilu University of Technology, China), and Xingwen Zhao (Qilu University of Technology, China)</i>	
Simplified Particle Swarm Optimization Algorithm with Improved Learning Factor and Search Method	405
<i>Yang Zhou (Huazhong University of Science and Technology Wuhan, China; Foshan Public Utilities Holdings Co., Ltd., China; Foran Energy Group Co., Ltd., China), Dongxiao Luo (Foran Energy Group Co., Ltd., China), Leixing Chen (Foran Energy Group Co., Ltd., China), An Wen (Guangdong Flex Energy Technology Ltd., China; Foshan University, China), and Meijin Lin (Guangdong Flex Energy Technology Ltd., China; Foshan University, China)</i>	
The ChuanbeiMu Herb Identification Based on the EfficientDet Algorithm	409
<i>Rui Liu (Chengdu University of Information and Technology, China) and Peiyang Wei (Chengdu University of Information Technology, China; Chongqing University of Posts and Telecommunications, China)</i>	
The Effect of Derivative Product at Periodic Points on Chaotic Ergodic Properties of A Function	413
<i>BoXuan Liu (Dalian University, China) and Wanbo Yu (Dalian University, China)</i>	
Evaluating the Value of User Comments on the Platform Based on K-Means Clustering	417
<i>Xiaoyang Hong (Shenzhen MSU-BIT University/Moscow State University, China)</i>	
Degree Histogram Publishing Method of Dynamic Graph Data Based on Node Differential Privacy	422
<i>Wenfen Liu (Guilin University of Electronic Technology; Guangxi Key Laboratory of Cryptography and Information Security, China), Qiang Xu (Guilin University of Electronic Technology; Guangxi Key Laboratory of Cryptography and Information Security, China), Di Chen (Guilin University of Electronic Technology; Guangxi Key Laboratory of Cryptography and Information Security, China), and Jing Wang (Guilin University of Electronic Technology; Guangxi Key Laboratory of Cryptography and Information Security, China)</i>	

Colorectal Tumour Segmentation Based on 3D-UNet	430
<i>Wang Zhou (Huazhong Agricultural University, China), Ke Mai (College of informations FiberHome Technologies Group, China), Hui Peng (Huazhong Agricultural University, China), Qianrong Xie (Dazhou Central Hospital, China), and Rui Wang (Dazhou Central Hospital, China)</i>	
Design and Implementation of Stock Recommender System Based on Time Series Analysis	436
<i>Jinhua Sun (Xiamen University of Technology, China) and Cuihua Tian (Xiamen University of Technology, China)</i>	
Research on APT Attack Detection Technology Based on DenseNet Convolutional Neural Network.....	440
<i>Xiang Han (People's Public Security University of China, China), Chao Li (First Research Institute of the Ministry of Public Security of PRC, China), Xin Li (People's Public Security University of China, China), and Tianliang Lu (People's Public Security University of China, China)</i>	
Deep Learning Classification System Based on User Guidance	449
<i>Junfang Wen (Tiangong University, China), Qingzeng Song (Tiangong University, China), and Jian Fang (Beijing Gongmei Group, China)</i>	
APT Malware Classification Method Based on Feature Fusion	456
<i>He Liang (People's Public Security University of China, China), Chao Li (First Research Institute of the Ministry of Public Security of PRC, China), Xin Li (People's Public Security University of China, China), and Shouzhi Jiang (People's Public Security University of China, China)</i>	
Traffic Classification using Cluster Analysis	463
<i>Juguang Li (Southwest University of Science and Technology, China; Chengdu Emfuture Automation Engineering Co., Ltd., China), Hua Zhang (Southwest University of Science and Technology, China), Dongming Tang (Southwest University of Science and Technology, China), and Changle Lin (Southwest University of Science and Technology, China)</i>	
Tibetan-Chinese Cross-Lingual Sentiment Classification Based on Co-Training	468
<i>Tingting Zhang (Northwest Minzu University, China), Tao Jiang (Northwest Minzu University, China), and Ruikang Shan (Northwest Minzu University, China)</i>	
An Improved R-L Fractional Differential Image Enhancement Algorithm	474
<i>Qingli Chen (Leshan Normal University, China), Guo Huang (Leshan Normal University, China), Hongying Qin (Leshan Normal University, China), and Siliang Wang (Institute of Computer Science of Sichuan Province, China)</i>	
A Task Scheduling Algorithm for Minimizing Worst-Case Execution Time of Real-Time Embedded Systems	479
<i>Jian Lu (Tianjin University of Technology, China), Wenguang Zheng (Tianjin University of Technology, China), and Yingyuan Xiao (Tianjin University of Technology, China)</i>	

Research on Parallel Processing Method for Ultra-Large-Scale Drug Screening Data	483
<i>Xuebing Dai (Ocean University of China, China), Hao Liu (Ocean University of China, China), Liyang Shan (Ocean University of China, China), Yanbo Yang (Ocean University of China, China), and Jingjing Guo (Ocean University of China, China)</i>	
Research on Pedestrian Tracking Algorithm Based on Deep Learning	487
<i>Hongyang He (Guangdong Polytechnic Normal University, China), Ziran Yan (China Three Gorges University, China), Zichao Geng (Beijing University of Chemical Technology, China), and Xiushan Liu (Guangdong Polytechnic Normal University, China)</i>	
A Multimodal Entity Linking Approach Incorporating Topic Concepts	491
<i>PengYuan Li (Nanjing University of Science and Technology, China) and YongLi Wang (Nanjing University of Science and Technology, China)</i>	
STAGRU: Ocean Surface Current Spatio-Temporal Prediction Based on Deep Learning	495
<i>Ping Chen (Ocean University of China, China) and Meng-Ya Chi (Ocean University of China, China)</i>	
Research and Implementation of Intelligent Platform for Targeted Employment Poverty Alleviation Based On Cloud Computing and Big Data	500
<i>Chunyan Jiang (Shandong University of Political Science and Law, China)</i>	
Using DFS Search and Enumerate Method to Find All Solutions in 13 Convex Figures in Tangram Game	505
<i>Hongbo Wang (Macau University of Science and Technology, China)</i>	
NER Based on Feed-Forward Depth Neural Network	510
<i>Aiping Xu (Wuhan DongHu University, China) and Chao Wang (Wuhan University, China)</i>	
Optimize Performance Analysis on Adaptive Genetic Algorithm with Linear Adjustment of Probabilities	517
<i>Wenjuan Sun (Anhui Xinhua University, China), Hongli Yuan (Anhui Xinhua University, China), Qiaoping Su (Anhui Xinhua University, China), and Yan Chen (Anhui Xinhua University, China)</i>	
A New LWE-Based Homomorphic Encryption Algorithm over Integer	521
<i>Ailuan Zhang (Beijing Institute of Graphic Communication, China) and Zichen Li (Beijing Institute of Graphic Communication, China)</i>	
International Crude oil Spot Price Interval Forecast Driven by Data Characteristics	526
<i>Xiaozhen Liang (Shanghai University, China), Runnan Wang (Shanghai University, China), and Mingge Yang (Shanghai University, China)</i>	
Analysis and Research on Students' Learning Behavior Based on Lag Sequence Analysis	532
<i>Jiazheng Han (Ocean University of China, China) and Zhengang Wei (Ocean University of China, China)</i>	
A Many-Core Software Mapping Algorithm Based on Dynamic Programming	536
<i>Zhidong Qin (Donghua University, China), Ying Feng (Donghua University, China), and Fangxiong Xiao (Donghua University, China)</i>	
Coverage Prediction of Novel Coronavirus Vaccine Based on Deep Learning Time Series Analysis	541
<i>Fengrui Hua (BNU-HKBU United International College, China)</i>	

Research on Offline Reverse Geocoding Algorithm Based on k-d Tree	548
<i>Jing Yu (University of Science and Technology, China), Wei Zhang (University of Science and Technology, China), and Rumin Chen (University of Science and Technology, China)</i>	
Entity Resolution Algorithm for Heterogeneous Data Sources	553
<i>Keyan Cao (Shenyang Jianzhu University, China; Liaoning Province Big Data Management and Analysis Laboratory of Urban Construction, China) and Haoli Liu (Shenyang Jianzhu University, China; Liaoning Province Big Data Management and Analysis Laboratory of Urban Construction, China)</i>	
Similarity Measure for Smart Contract Bytecode Based on CFG Feature Extraction	558
<i>Di Zhu (Zhengzhou University, China), Jianmin Pang (State Key Laboratory of Mathematical Engineering and Advanced Computing, China), Xin Zhou (State Key Laboratory of Mathematical Engineering and Advanced Computing, China), and Wenjie Han (State Key Laboratory of Mathematical Engineering and Advanced Computing, China)</i>	
FF-PRec: A Feature Fusion-Based Paper Recommendation Method on Academic Big Data of Heterogeneous Network	563
<i>Yongkang Du (North China University of Technology, China), Weilong Ding (North China University of Technology, China), and Ying Liang (Institute of Computing Technology Chinese Academy of Science, China)</i>	
Representation Select Deep Neural Network for Mammographic Image Classification	569
<i>Liyun Xia (Sichuan university, China), Lei Zhang (Sichuan university, China), and Xin Shu (Sichuan university, China)</i>	
Intelligent Ships Collision Avoidance and Navigation Method Based on Deep Reinforcement Learning	573
<i>Jin Liu (Wuhan University of Technology, China) and Youan Xiao (Wuhan University of Technology, China)</i>	
Pay Attention to Histogram: Spatial Weight Histogram Encoding for LBP	579
<i>Rui Zhou (China University of Geoscience, China), Xiangyu Shao (Capital University of Economics and Business, China), and Jingxin Ding (Capital University of Economics and Business, China)</i>	
Generalized Expansion Concentrator Generation Algorithm for Improving Transmission Performance of Power Marketing Information Network	584
<i>Xiaohui Xue (State Grid Qinghai Electric Power Company), Yang Gao (Marketing service Center of State Grid Qinghai Power Company), Jianpeng Ma (Marketing service Center of State Grid Qinghai Power Company), Shengsheng Cui (Marketing service Center of State Grid Qinghai Power Company), Yihui Wang (Marketing service Center of State Grid Qinghai Power Company), and Yongmin Zhang (Marketing service Center of State Grid Qinghai Power Company)</i>	

Artificial Intelligence Technology and Computer Network Vision

Legal Examination and Regulation of Artificial Intelligence Algorithm	588
<i>Haitao Sun (Nanchang Vocational University, China)</i>	

Latent Space Conditional Adversarial Learning for Intelligent Dialogue Generation	592
<i>Zilong Zhuan (Wuhan Research Institute of Posts and Telecommunications, China), Yingjie Huang (Wuhan University of Science and Technology, China), Zheng Wang (Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China), and Yining Gao (Nanjing Fenghuo Tiandi Communication Technology Co., Ltd, China)</i>	
Research on System Construction and Application of Enterprise Intelligent Finance from the Perspective of Artificial Intelligence	597
<i>Xiaoqian Wang (Chongqing College of Architecture and Technology), Yixi Zhang (Chongqing College of Architecture and Technology), and Yiran Tao (Chongqing College of Architecture and Technology)</i>	
Joint Design of Transmitted Waveform and Mismatch Filter Against Interrupted Sampling Repeater Jamming	603
<i>Zihan Chen (Rocket Force University of Engineering, China), Fei Cao (Rocket Force University of Engineering, China), Chuan He (Rocket Force University of Engineering, China), Jianfeng Xu (Rocket Force University of Engineering, China), and Xiaowei Feng (Rocket Force University of Engineering, China)</i>	
Innovations for Data Center Network Optimization	610
<i>Ruoxiao Tang (University of Electronic Science and Technology of China, China)</i>	
Research on Cooperative Reconnaissance Strategy of the Unmanned Aerial Vehicle Group in Uncertain Environment	616
<i>Hao Li (National University of Defense Technology, China), Jun Tang (National University of Defense Technology, China), and Songyang Lao (National University of Defense Technology, China)</i>	
A Multi-Sensor Fusion Discrimination Method Based on Phase Modulation Feature	624
<i>Jun Han (Air Force Early Warning Academy PLA, China), Minghao He (Air Force Early Warning Academy PLA, China), Tang Tang (Air Force Early Warning Academy PLA, China), and Xiaohan Zhang (Air Force Early Warning Academy PLA, China)</i>	
VSCnet: A View Sematic Contextual Based Network for Multi-Label Classification of Cell	628
<i>Xingyuan He (Sichuan University, China)</i>	
Research on Distribution Path of Multi-Target Urban UAV (unmanned Aerial Vehicle) Based on Epsilon-Constraint Method	632
<i>Mengcheng Xiong (China University of Petroleum-Beijing, China), Haotong Fei (China University of Petroleum-Beijing, China), and Weixi Yan (North China Electric Power University, China)</i>	
Vehicle Distance Estimation Based on Monocular Vision and CNN	638
<i>Qinxiao Liu (Chongqing University of Technology, China), Bo Chen (Chongqing University of Technology, China), Fang Wang (China Academy of Engineering Physics, China), Gaojian Luan (Chongqing University of Technology, China), and Dongxia Hu (China Academy of Engineering Physics, China)</i>	
The AI Embedding Predicts the Legal Risks of Policing and its Prevention	642
<i>Ruicui Zhang (Nanchang Vocational University, China)</i>	
The Research on Artificial Intelligence in Computer Network Technology	647
<i>Shuiwen Liu (Nanchang Vocational University, China)</i>	

Gaze Estimation Based on Difference Residual Network	651
<i>Bei Yan (School of Automation Science and Electrical Engineering Beihang University, China) and Xiangyu Tang (School of Automation Science and Electrical Engineering Beihang University, China)</i>	
Research on the Application of Computer Graphics and Image Technology in Visual Communication	656
<i>Songru Jiang (Tianjin Academy of Fine Arts, China)</i>	
Bearing Fault Diagnosis Based on Sparse Representation and GA-SVM	661
<i>Xiaolong Wang (Anhui University, China) and Zhihong Song (Anhui University, China)</i>	
Application of Artificial Intelligence in the Inheritance and Innovation of Excellent Traditional Chinese Culture	665
<i>Zhen Chen (Nanchang Institute of Technology, China)</i>	
Analysis on the Application of Artificial Intelligence in Marketing	669
<i>Rui Sun (Jiangxi Vocational Technical College of Industry & Trade, China)</i>	
Research on Command and Control Technology in Small-UAV Defense System	673
<i>Yukai Niu (Academy of Military Science, China), Xiaoxi Jin (Academy of Military Science, China), and Zhijin Wen (Academy of Military Science, China)</i>	
Machine Learning Regressed Causal Inference for Discrete ANM	678
<i>Shuxia Lu (Shenzhen University, China) and Jie Jiang (Shenzhen University, China)</i>	
Effect of Microphase-Separated Structure on Mechanical Toughening of Autonomous Self-Healing Tough Elastomer in Sensor Applications	683
<i>Chenyao Zhao (Northwestern Polytechnical University) and Yichen Li (Northwestern Polytechnical University)</i>	
Construction of Enterprise Business Management Analysis Framework in the Development of Artificial Intelligence	689
<i>Meijing Song (Nanchang Vocational University, China) and Xinjian Chen (Nanchang Vocational University, China)</i>	
Research on the Reform Practice of Baking Course Teaching Module Based on OBE and AI	693
<i>Siyun He (Wuhan Business University, China)</i>	
MIDM: Feature Structured Interpretable XGBoost Network for Breast Cancer	698
<i>Dehua Chen (Donghua University, China), Keting Zhong (Donghua University, China), and Jianrong He (Donghua University, China)</i>	
Video Super Resolution Based on Motion Compensation	704
<i>Jiyuan Chen (Yunnan power grid materials company, China), Suping Guo (Yunnan power grid materials company, China), Jun Deng (Yunnan power grid materials company, China), Maolin Yang (Yunnan power grid materials company, China), and Feng Shen (Harbin Institute of Technology, China)</i>	
Predicting the Remaining Useful Life of Lithium Ion Batteries Based on the Support Vector Regression-Particle Filter	708
<i>Hancheng Dong (Ford Motor Company, USA)</i>	
Elevator Control Chip Design	712
<i>TianAi Yue (Tianjin Nankai High School, China)</i>	

Research on Multi-Pattern Matching Algorithm of Computer Network Intrusion Detection System	717
<i>Song Hu (Wuhan University of Science and Technology, China) and Zhiqing Xiong (Zhuo Daoquan Middle School, China)</i>	
Sentiment Analysis of Movie Reviews Based on Pretraining and Dual Branch Coding	721
<i>Feihong Wang (Hubei University of Technology), Zhiwen Wang (Hubei Radio and Television Station), and Xinyun Wu (Hubei University of Technology)</i>	
Research on Missing Data Imputation Based on Conditional Variational Autoencoder	726
<i>Yebo Xu (Information Engineering University, China) and Yingjie Ni (Jiangnan Institute of Computing Technology, China)</i>	
A Discriminative Deep Neural Network for Text Classification	731
<i>Jiaxun Gao (University of Ottawa, Canada), Xiang Li (University of Ottawa, Canada), and Zexuan Huang (Wake Forest University, United States)</i>	
Failure Analysis and Remedial Measures of Infrared Lamp for Spacecraft Thermal Test	736
<i>Xiaoning Liu (Beijing Institute of Spacecraft Environment Engineering, China), Yu Zhang (Beijing Institute of Spacecraft Environment Engineering, China), Wanqing An (Beijing Institute of Spacecraft Environment Engineering, China), Shuo Liang (Beijing Institute of Spacecraft Environment Engineering, China), and Qingyu Wang (Beijing Institute of Spacecraft Environment Engineering, China)</i>	
Design and Application of Inter-Network Security Transmission System of Self-Control	742
<i>Zhifang Yao (Beijing Institute of Tracking and Telecommunications Technology, China), Daiwei Zhang (Beijing Institute of Tracking and Telecommunications Technology, China), Hongyan Chen (Beijing Institute of Tracking and Telecommunications Technology, China), and Wensu Li (Beijing Institute of Tracking and Telecommunications Technology, China)</i>	
The Dynamic Evolution Process of the Network and Invulnerability Analysis	747
<i>Zhong Wang (Qinghai Normal University; Tibetan Information Processing and Machine Translation Key Laboratory of Qinghai Province; Key Laboratory of Tibetan information Processing, Ministry of Education)</i>	
Fault Diagnosis of High-Voltage Shunt Reactor Based on Encoding Position Machine Learning	752
<i>Ming Zhu (Huazhong University of Science and Technology, China), Zongxi Zhang (State Grid Sichuan Province Electric Power Company, China), Yongka Qi (Huazhong University of Science and Technology, China), Ming Fu (Huazhong University of Science and Technology, China), Jie Mei (Huazhong University of Science and Technology, China), and Qingqing Huang (State Grid Electric Power Research Institute Wuhan NARI Group, China)</i>	
Medical Image Fusion Algorithm Based on two -Level Multiscale Decomposition and Human Visual Characteristic	756
<i>Jiawei Ye (Zhejiang Gongshang University, China) and Chen-Jian Huang (Jiangxi University of Applied Science, China)</i>	
Text-Based Point Cloud Generation Adversarial Network	760
<i>Shasha Wu (Sichuan University, China), Ran Wei (Sichuan University, China), and Li Lu (Sichuan University, China)</i>	

Design and Implementation of High-Performance Web Vulnerability Scanner Based on Python Intelligent Crawler	765
<i>Jianxun Tang (Guilin University of Electronic Technology, Guangxi; Wuhan University of Bioengineering, Hubei) and Fang Zhou (Wuhan University of Bioengineering, Hubei)</i>	
Research on the Development of Personalized Recommendation	770
<i>Hui Gao (Shaanxi university of science and technology, China) and Yu-yu Wu (Shaanxi university of science and technology, China)</i>	
Analysis and Design of Aerospace Equipment Software Quality Construction	776
<i>Sihong Wang (Beijing Institute of Tracking and Telecommunicaitons Technology), Junwei Wan (Beijing Institute of Tracking and Telecommunicaitons Technology), Hongyan Chen (Beijing Institute of Tracking and Telecommunicaitons Technology), and Jian Xiao (Beijing Institute of Tracking and Telecommunicaitons Technology)</i>	
A Survey on Machine Learning-Based Detection and Classification Technology of Malware	783
<i>Yangyang Meng (Institute of System Engineering, China), Honglin Zhuang (National Key Laboratory of Science and Technology on Information System Security, China), Zhechao Lin (National Key Laboratory of Science and Technology on Information System Security, China), and Yetao Jia (Institute of System Engineering, China)</i>	
Research on Localization and Path Planning of Indoor Robot Based on ROS	793
<i>XiaoHong Wang (Hebei University of Science and Technology, China), XuePei Ma (Hebei University of Science and Technology, China), ShengLan Zhu (Hebei University of Science and Technology, China), Kun Zhang (Hebei University of Science and Technology, China), and YaNan Sun (Hebei University of Science and Technology, China)</i>	
Clustering Single-Cell RNA Sequencing Data by Multi-View Latent Embedding Learning	797
<i>Yilong Lin (Shenzhen University, China) and Guanhua Zou (Shenzhen University, China)</i>	
Complex Network Evolution Game Experimental Platform Based on PyQt5	802
<i>Yi Zhou (Donghua University, China)</i>	
Citrus Fruits Harvesting Sequence Planning Method Based on Visual Attention Mechanism: A Novel Cognition Framework for Citrus Picking Robots	806
<i>Shumian Chen (South China Agricultural University, China), Juntao Xiong (South China Agricultural University, China), Zhenfeng He (Guangdong Tobacco Huizhou Co., Ltd., China), Jingmian Jiao (South China Agricultural University, China), Zhiming Xie (South China Agricultural University, China), and Yonglin Han (South China Agricultural University, China)</i>	
Discussion on the Automatic Control Method of Rail Transit Signal Time Distribution Based on Artificial Intelligence	810
<i>Huimin Li (Jiangxi V&T College of Communications, China)</i>	

Research and Application of Visual Recognition Technology for Epoxy Resin Automatic Liquid Separation Process Based on Machine Learning	814
<i>Ping Li (Guangdong Institute of Intelligent Manufacturing, China), Qiyu Chen (Guangdong Institute of Intelligent Manufacturing, China), Shenkun Fan (Guangdong Institute of Intelligent Manufacturing, China), Rongbin Xian (Guangdong Institute of Intelligent Manufacturing, China), and Xiaoming Li (Guangdong Institute of Intelligent Manufacturing, China)</i>	
Adaptive SRCKF Based on m Estimation	819
<i>Yingying Zhang (Lanzhou Jiaotong University, China), Jiyong Li (Lanzhou Jiaotong University, China), Junjie Bai (Lanzhou Jiaotong University, China), and Wanjing Xu (Lanzhou Jiaotong University, China)</i>	
Research on the Application of Computer Music Production Technology in new Media Environment	824
<i>Weidong Xu (Jiangxi University Of Applied Science, China)</i>	
Cerebrospinal Fluid Cell Segmentation and Classification in a Class Imbalanced Dataset	828
<i>Qun Zhang (Shanghai Jiao Tong University, China), Shilin Wang (Shanghai Jiao Tong University, China), and Zhenhai Wang (General Hospital of Ningxia Medical University, China)</i>	
Explore the Digital Transformation Path of the Advertising Industry in the era of Artificial Intelligence	832
<i>Jichao Huai (Nanchang Vocational University, China)</i>	
Optimization of Computer Network Database Security Management Technology	837
<i>Fangfang Pan (Nanchang University, China) and Yongfu He (Nanchang University, China)</i>	
Research and Application of Online Public Opinion Early Warning Based on Emergency Epidemic Situation	841
<i>Jing Luo (Guangzhou Nanyang Polytechnic College, China)</i>	
Research on Short Text Classification Based on RoBERTa-TextRCNN	845
<i>Zixian Guo (Communication University of China, China), Ligu Zhu (Communication University of China, China), and Lu Han (Communication University of China, China)</i>	
Application of Artificial Intelligence in Clothing Intelligence Manufacturing	850
<i>Yalin Dong (Nanchang Institute of Science & Technology, China)</i>	
The Probes into the Innovation Direction of Modern Logistics Management Mode in Artificial Intelligence Era	855
<i>Xuemei Zhou (Xinjiang Vocational & Technical College of Communications, China)</i>	
Research on Control Method of DC Speed Regulation Electric Energy Vehicle Based on Neural Network	860
<i>Tianyu Yang (North China Electric Power University, China), Rumeng Fang (North China Electric Power University (Baoding), China), and Pengfei Yan (North China Electric Power University (Baoding), China)</i>	

Computer Information and Digital Image Signal Processing

Analysis on the Frame Construction and Development Model of University Budget Management System	870
<i>Jinfen Duan (Yunnan University of Business Management), Haiyan Sun (Yunnan Open University), and Jianqiu Tian (Yunnan Open University)</i>	
Comprehensive Evaluation of Power Grid Enterprise Planning Ability Under the Background of Large-Scale Integration of New Energy	874
<i>Rong Chen (State Grid Zhenjiang Power Supply Company), Zejun Jia (State Grid Zhenjiang Power Supply Company), Yongli Wang (North China Electric Power University), Xiangyi Zhou (North China Electric Power University), and Siyi Tao (North China Electric Power University)</i>	
Effect of the Grinding Parameters on Surface Topography Considering Vibration Characteristics	878
<i>Mingxia Kang (China University of Mining and Technology, China), Xinhua Liu (China University of Mining and Technology, China), and Junfeng Yuan (China University of Mining and Technology, China)</i>	
Embedding Lexicon and Direction Information in Chinese NER	886
<i>Jun Yin (Beijing University of Technology Faculty of Information Technology, China) and Cui Zhu (Beijing University of Technology Faculty of Information Technology, China)</i>	
Analysis of the Driving Role of Computer Science and Technology on the Development of the Internet of Things	892
<i>Guanxing Jiang (Science and Technology College of NCHU, China) and Hua Zhang (Science and Technology College of NCHU, China)</i>	
Intelligent Recommendation of Legal Articles Based on DPCNN with Capsule Model	896
<i>Huanhuan Huang (Sichuan University, China), Ke Yang (China National Tobacco Corporation Sichuan Province Co., China), Lijun Zhang (Chengdu Ruibei Yingte Information Technology Limited Company, China), Dawei Yin (Sichuan Zhiqian Technology Co., Ltd, China), and Dezhong Peng (Sichuan University, China)</i>	
Research on the Application of Text Generation in Medicine	902
<i>Qiongcheng Song (Chengdu University of Information Technology, China) and Ajie Pan (Jilin Agricultural University, China)</i>	
Feasibility Study of Intelligent Healthcare Based on Digital Twin and Data Mining	906
<i>Shifeng Xie (Xidian University Xi'an, China), Sama Zhu (Hefei University of Technology, China), and Jiaqi Dai (Northeastern University Qinhuangdao, China)</i>	
Fault Diagnosis Method of Motor Bearing Based on Information Entropy and Multi-Scale Wavelet Entropy	912
<i>Xiaotong Wang (North China Electric Power University Beijing, China), Huixiang Dai (North China Electric Power University, China), and Zhou Zhang (North China Electric Power University Beijing, China)</i>	
Fault Signal Analysis of Rolling Bearing Based on CEEMDAN Decomposition Method	918
<i>Huahong Xu (Shanghai University of Electric Power, China), Feng Huang (China University of Geosciences, China), and Yaming Fang (Southwest University, China)</i>	

Study on Optimal Capacity Allocation of Integrated Energy Stations Considering Energy Storage Constraints	923
<i>Ming Gao (State Grid Zhejiang Ninghai County Power Supply Company, China), Jianhua Shu (State Grid Zhejiang Ninghai County Power Supply Company, China), Hongqun Zuo (State Grid Zhejiang Ninghai County Power Supply Company, China), Zhifeng Ge (State Grid Zhejiang Ninghai County Power Supply Company, China), Fan Bai (Ninghai County Yancangshan Electric Power Construction Co., Ltd., China), Senqiang Qiu (State Grid Zhejiang Ninghai County Power Supply Company, China), and Yanan Wang (North China Electric Power University, China)</i>	
Analysis of co-Opetition Behavior of News Publishers and Aggregators Based on Evolutionary Game Theory	927
<i>Ying Chen (Communication University of China, China) and Qi Wang (Communication University of China, China)</i>	
Information Fusion Center For Uncertain Environment	931
<i>Mingbao Zhang (Nanjing University of Aeronautics and Astronautics, China)</i>	
Technology Opportunity Analysis of Lithographic Machine Based on Paper and Patent Keywords Comparison	936
<i>Duanwu Yan (Nanjing University of Science and Technology), Chenchen Li (Nanjing University of Science and Technology), and Jingyi Bai (Nanjing University of Science and Technology)</i>	
Application of Financial Information Big Data in Agricultural Machinery Information Issuing System	940
<i>Ya Wang (Suqian Xinxiu Internet Co., Ltd., China; Shanghai Urban Construction Vocational College, China) and Yanmei Yang (Suqian Xinxiu Internet Co., Ltd., China)</i>	
Real-Time Facial Expression Driving Based on 3D Facial Feature Point	944
<i>Huaibo Zhang (Sichuan University, China) and Gen Li (Sichuan University, China)</i>	
Detection Technology Based on Ultraviolet Spectrum and Non-Dispersive Infrared Optical Charged Sensing	948
<i>Shiling Zhang (State Grid Chongqing Electric Power Company Chongqing Electric Power Research Institute, China) and Ke Li (Chongqing Liangjiang power supply Co., Ltd, China)</i>	
Hyperspectral Image Classification Based on CNN with Spectral-Spatial Features	956
<i>Yangming Zhang (Yunnan Normal University, China), Lei Yuan (Yunnan Normal University, China), Kun Yang (Yunnan Normal University, China), and Panpan Liu (Shanghai Maritime University, China)</i>	
Research on roBERTa-Based Fraudulent Information Identification and Interpretable AI	960
<i>Xiangwu Ding (Donghua University, China) and Yue Ding (Donghua University, China)</i>	
The Integration of Blockchain and Enterprise Network: A Distributed Operation Solution	965
<i>Yansheng Chen (Guangdong Industry Polytechnic, China), Zhonghao Liu (Hong Kong Polytechnic University, China), Jie Li (Guangdong Industry Polytechnic, China), and Weiping Zhang (Guangdong Industry Polytechnic, China)</i>	

Simulation of Radar Detection Based on Satellite Tool Kit	977
<i>Fei Shan (Troops, China), Dapeng Li (Troops, China), Xianfeng Huang (Troops, China), Yilei Wang (Troops, China), Pengpo Wang (Troops, China), and Pei Zhang (Troops, China)</i>	
Telecom Operator Knowledge Graphs Reasoning for Question Answering	981
<i>Tianyi Lei (Nanjing University of Science and Technology, China) and Yongli Wang (Nanjing University of Science and Technology, China)</i>	
Prior Knowledge For Coarse To Fine PCB Resistor Segmentation	985
<i>He Yan (Chongqing University of Technology, China), Zaozao Chen (Chongqing University of Technology, China), Mengyuan Liu (Sun Yat-sen University, China), Lunyu Liu (Chongqing University of Technology, China), and Yuhan Liu (Chongqing University of Technology, China)</i>	
An Distributed CA System: Identity Authentication System in Transnational Railway Transportation Based on Blockchain	989
<i>Xiaofeng Zhan (Zhejiang university, China), Xuelin Cheng (Zhejiang university, China), Wei Guo (China Railway Container Transport Corp, China), Keting Yin (Zhejiang university, China), and Xiaoyu Lu (China Railway Information Technology Center, China)</i>	
Research on Aircraft Type Recognition from Remote Sensing Images in Complex Scenes	995
<i>Junwei Wang (Aerospace Engineering University), Lurui Xia (Aerospace Engineering University), and Sen Li (Aerospace Engineering University)</i>	
Single Image Super-Resolution Combined with CNN and Sparse Representation	1001
<i>Qinxiao Liu (Chongqing University of Technology, China), Yongsheng Xie (Chongqing University of Technology, China), Fang Wang (China Academy of Engineering Physics, China), Chaoyuan Ding (Chongqing University of Technology, China), and Dongxia Hu (China Academy of Engineering Physics, China)</i>	
Blockchain E-Voting Scheme Based on SM9 Partial Blind Signature	1005
<i>Dongqing Yin (Engineering University of the PAP, China), Mingshu Zhang (Engineering University of the PAP, China), and Bin Wei (Engineering University of the PAP, China)</i>	
Research on The Development of China's Public Library Service System Based on Knowledge Mapping	1012
<i>Qin Li (Leshan Normal University, China) and Li Wang (Leshan Normal University, China)</i>	
Research on the Knowledge Graph Extension of Textile and Clothing Field Based on Crowdsourcing Mechanism	1016
<i>Yuxuan Fang (Donghua University, China), Youqun Shi (Donghua University, China), Xin Luo (Donghua University, China), and Xiangyang Feng (Donghua University, China)</i>	
Design of 3D Exhibition Hall System of Art Museum Based On Virtual Reality	1021
<i>Chunlan Shen (Shanghai Lida University, China)</i>	
Linear Active Disturbance Rejection Control of Output Probability Density Function	1026
<i>Jinfang Zhang (North China Electric Power University, China), Li Zhang (North China Electric Power University, China), Guodou Huang (North China Electric Power University, China), and Junxiong Huang (North China Electric Power University, China)</i>	

Application of Computer Information Management Technology in Engineering Cost Information Management	1031
<i>JianJing Zhou (College of Modern Economics & Management JUFEE, Gong, China)</i>	
First-Order Signed Distance Field Based Soft Shadow	1035
<i>Fen Kuang (Sichuan University, China) and ZhengZe Li (Sichuan University, China)</i>	
The Classic Television Dramas Restoration Based on Super Resolution	1039
<i>Wanjun Wang (Anhui Institute of Information Technology, China), Xintao Ding (Anhui Normal University, China), Chao Liu (Anhui Normal University, China), and Jinghua Wu (Anhui Institute of Information Technology, China)</i>	
Remote Sensing Image Surface Feature Classification Based on VGG-UNet	1043
<i>Qihang Zhao (Hangzhou Normal University, China), Ben Wang (Hangzhou Normal University, China), Bin Zhou (Hangzhou Normal University, China), Jiazhi Di (Hangzhou Normal University, China), and Liangqi Chen (Hangzhou Normal University, China)</i>	
Analysis on the Influence Mechanism of Corporate Stock Price Based on Lasso-CNN Neural Network	1048
<i>Yuan Gao (Northeast Agricultural University School, China), Yiyang Yao (Nanjing Audit University, China), and Yuzhu Li (Sichuan University, China)</i>	
Progress of Image Caption: Modelling, Datasets, and Evaluation	1053
<i>Zhenyu Wan (Southwest University, China), Fan Wu (University of California, USA.), Ke Xin (Northeast University, China), and Liqiong Zhang (Swansea University, UK)</i>	
Gait Analysis Based on Azure Kinect 3D Human Skeleton	1059
<i>Yan Zeng (Sichuan University, China), Liufan Wu (Sichuan University, China), and Donglin Xie (Sichuan University, China)</i>	
An Empirical Study on Bias Reduction: Clipped Double Q vs. Multi-Step Methods	1063
<i>Yuqin Bai (New York University Shanghai, China)</i>	
WebGL-Based Network Multi-View Visualization Interactive Analysis Method	1069
<i>Ronghuan Yu (Space Engineering University, China) and Shenhao An (Space Engineering University, China)</i>	
Design and Implementation of Java-Based Family Financial Management System	1075
<i>Jinlan Kong (Zhengzhou University, China), Qinglei Zhou (Zhengzhou University, China), Hongji Kong (Zhengzhou Vocational College of Finance and Taxation, China), Yuqi He (Zhengzhou Bank, China), Yanming Li (Yusys Technologies Co., Ltds, China), and Menglei Fu (Zhongyuan Bank, China)</i>	
From the Construction of Knowledge System to the Generation of Learner Portrait Based on Knowledge Graph	1079
<i>Li-Qiong Deng (Air Force Communication NCO Academy, China), Xiang-Ning Hao (Air Force Communication NCO Academy, China), Ming Liu (Air Force Communication NCO Academy, China), and Bo Wang (Air Force Communication NCO Academy, China)</i>	

Research on the Construction Method of Knowledge Graph for Clothing Recommendation Based on Expert Knowledge	1083
<i>Honglei Zhou (Donghua University, China), Xun Liu (Donghua University, China), Yuxuan Fang (Donghua University, China), and Bo Zhang (Donghua University, China)</i>	
Application Research on Computer Database Technology in Information Management	1088
<i>Qi Yuan (Yichun Vocational Technical College, China) and Miaomiao Li (Yichun Vocational Technical College, China)</i>	
Development of Image Processing Technology for Shearography Phase Fringe Patterns	1092
<i>Wei Lin (Nanjing University of Aeronautics and Astronautics, China), Haihua Cui (Nanjing University of Aeronautics and Astronautics, China), Zhenlong Xu (Nanjing University of Aeronautics and Astronautics, China), and Qi Nie (AVIC Xi'an Aircraft Industry Group Company, China)</i>	
Block Triangular Preconditioner Based on Accelerated AOR Splitting Method for Generalized Saddle Point Problem	1097
<i>Jin-Song Xiong (Guizhou University of Commerce, China)</i>	
An Optimal Design and Implementation Method of High Speed Digital Down Conversion Based on FPGA	1104
<i>Xinxing Zhou (No.722 Research Institute of CSSC, China), Zugang Xie (No.722 Research Institute of CSSC, China), Fei Wen (No.722 Research Institute of CSSC, China), and Jia Yang (No.722 Research Institute of CSSC, China)</i>	
A Comprehensive Study of Cognitive Graphs: Techniques, Applications, and Challenges	1108
<i>Meiling Chen (East China Institute of Computing Technology, China), Ye Tian (MeiTuan, China), Zhaorui Wang (University of Shanghai for Science and Technology, China), Bo Jiang (East China Institute of Computing Technology, China), and Hong Xu (East China Institute of Computing Technology, China)</i>	
Trilateral GAN with Channel Attention Residual for Semantic Image Synthesis	1123
<i>Aihua Ke (Hubei University of Technology, China), Gang Liu (Hubei University of Technology, China), Jian Chen (Hubei University of Technology, China), and Xinyun Wu (Hubei University of Technology, China)</i>	
Research on Online Course Teaching Quality Evaluation Index System in Colleges and Universities	1130
<i>Shijin Li (Yunnan University of Finance and Economics, China), Yijia Gao (Yunnan University of Business Management, China), Ting Shi (Yunnan Business Information Engineering School, China), and Fushou Tao (Yunnan University of Finance and Economics, China)</i>	
Recognition of Unknown Radar Emitter Based on USRP and Machine Learning	1135
<i>Wenting Yu (Naval University of Engineering, China), Anni Lin (Naval University of Engineering, China), and Zhiyuan Ma (Naval University of Engineering, China)</i>	

Research on New Energy Cloud Business Model and Application Scenarios 1141
Jinsong Liu (State Grid Co., Ltd., China), Xiangying Xie (China Net E-commerce Co., Ltd., China), Yu Shan (China Net E-commerce Co., Ltd., China), Weiqi Zhang (National Network Ningxia Electric Power Co., Ltd.), Runbiao Liu (China Net E-commerce Co., Ltd., China), and Bitong Han (China Net E-commerce Co., Ltd., China)

Author Index