2023 15th International Conference on Advanced Computational Intelligence (ICACI 2023)

Seoul, South Korea
6-9 May 2023

IEEE Catalog Number: CFP2320J-POD
ISBN: 979-8-3503-2146-3

Copyright © 2023 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:	CFP2320J-POD
ISBN (Print-On-Demand):	979-8-3503-2146-3
ISBN (Online):	979-8-3503-2145-6

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

TABLE OF CONTENTS

An Improved Detector for Small Targets in Aerial Images 1
Qiner Wu, Xiaoqiang Jin

INAV-DrlSLAM: An Improved Indoor Self-Driving Framework for Mobile Robots Using Deep Reinforcement Learning Integrated with SLAM 7
Seunghyeop Nam, Changseok Woo, Sinkyu Kang, Tuan Anh Nguyen, Dugki Min

Fuzzy-Adaptive Matrix-Based PSO with Group Learning 15
Mingyu Li, Peifa Sun, Zhanyang Gao, Xiaoyan Zhao, Hu Jin

Chaotic Mapping Genetic Algorithm with Multiple Strategies 22
Qianyu Zhu, Yifei Yang, Haotian Li, Haichuan Yang, Baohang Zhang, Shangce Gao

GA=PSO: Realizing Equivalent Particle Swarm Optimization by Genetic Algorithm 26
Ruoyu Zhu, Zhonglong Zheng, Hua Wang, Xiangmin Zhou, Dong Liu, Lin Sun

A Multi-Strategy Particle Swarm Optimization Framework Based on Deep Reinforcement Learning 33
Leyong Hou, Debin Fan, Junjie Cheng, Honglian Wu, Hu Peng, Changshou Deng

Matrix-Based Ant Colony Optimization for Large-Scale Balanced Multiple Traveling Salesmen Problem 41
Bing Sun, Chuan Wang, Zhong-Long Zheng, Ying Lin, Wei-Jie Yu, Mu-Xuan Li

Research on High Precision Chinese Text Sentiment Classification Based on ALBERT Optimization 47
Xuejia Gao, Gejian Ding, Chang Liu, Jiahong Xu

Improvement Whale Optimization Algorithm Based on Mixed Strategy 53
Yujia Liu, Feng Tang, Xin Chen

An Accelerated Gradient Tracking Algorithm with Projection Error for Distributed Optimization 61
Xiwang Meng, Qingshan Liu, Jiang Xiong

Investigation and Comparison of Inertia Weight Control Schemes in Particle Swarm Optimization 67
Xin-Xin Xu, Hui-Li Gong, Xiang-Qian Ding

Optimal Design of DNA Coding Based on Multi-Strategy JAYA Algorithm 75
Siwei Wang, Donglin Zhu, Xiao Wang

Multi-Step Reinforcement Learning-Based Offloading for Vehicle Edge Computing 83
Shaodong Han, Yingqun Chen, Guihong Chen, Jiao Yin, Hua Wang, Jinli Cao

An Unmanned Aerial Vehicle Swarm System for Tunnel Inspection Problems 91
Zhihong Chen, Jun Gao, Hao Wu, Xia Li

Bundle Expending with Customer Embedding: A Case Study 99
Ahmet Tugrul Bayrak, Sultan Ceren Öner

An Improved TLEA-CMA-ES for Solving Bilevel Optimization Problems 104
Yutao Lai, Hai-Lin Liu, Fangqing Gu, Jiechang Wen

Sharpness-Aware Minimization Leads to Better Robustness in Meta-Learning 111
Mengke Xu, Huiwei Wang

Research on Open Flame Recognition Algorithm in Construction Site Based on Attention Mechanism 119
Xiaojiao Yang, Zilong Wang, Yinchuan He, Yun He, Jun Yang, Pei Liang

A Hybrid Neural Network Based on Multi-Feature Fusion for Paper Recommendation 125
Mingxing Zheng, Xiaobo Li

WSN Coverage Optimization Based on Improved Sparrow Search Algorithm 130
Jianlan Wang, Donglin Zhu, Zhiguo Ding, Yongkang Gong

A General Paradigm of Knowledge-Driven and Data-Driven Fusion 138
Fei Hu, Wei Zhong, Long Ye, Danting Duan, Qin Zhang

Unsupervised Mutual Information and Superpixel Constraints in SAR Marine Aquaculture Extraction 145
Jianlin Zhou, Mengmeng Li, Xinzhe Wang, Jianchao Fan

Driving Fatigue Detection with Three Prefrontal EEG Channels and Deep Learning Model 150
Xiangman Ding, Guibin Chen, Jie Wang, Yanting Xu, Jian Zhao, Wanxiu Xu, Gang Li

Predicting Fuel Burn with Neural Network to Adjust Contingency Fuel of Airplane 155
Pimolrat Ounsrimoung, Supakit Nootyaskool, Kanokwan Atchariyachanvanich, Soemsak Yooyen

Latent Multi-View Subspace Clustering Based on Laplacian Regularized Representation 159
Wei Guo, Hangjun Che, Man-Fai Leung, Nankun Mu, Xiangguang Dai, Yuming Feng

Saliency-Aware Generation of Adversarial Point Clouds 166
Lianguang Liu, Zeping Ye, Junting Lv, Zhigang Zeng

Research on Application of Object Detection Based on Yolov5 in Construction Site 174
Xiaojiao Yang, Yuhao Xie, Siwei Yang, Pei Liang, Yun He, Jun Yang, Yan Peng, Yuechuan He

Human Internal State Estimation as Blind Source Separation Using a Dynamic Auto-Encoder 180
Clint Alex Steed, Namhun Kim

Automatic Business Location Selection Through Particle Swarm Optimization and Neural Network 186
Yinyi Luo, Jinghui Zhong, Wei-Li Liu, Wei-Neng Chen

Locating Multi-Source in Time-Varying Networks with Label Back Spread 194
Zhao-Long Hu, Yuan-Zhang Deng, Ling-Guo Zeng, Lei Sun

Orthogonal Latin Square Based Particle Swarm Optimization: A Dynamic Approach for Continues Functions Optimization 202
Zhanyang Gao, Peifa Sun, Mingyu Li, Sang-Woon Jeon, Hu Jin

Unsupervised Multi-Hashing for Image Retrieval in Non-Stationary Environments 208
Yi Yang, Qihua Li, Xing Tian, Wing W. Y. Ng, Hui Wang, Josef Kittler, Mark Gales, Rob Cooper

Triangular Regularized Diffusion Process for Visual Retrieval 214
Tingyu Bao, Danchen Zheng

A Robust Two-Part Modeling Strategy for Knowledge Graph Enhanced Recommender Systems 221
Min Gao, Ke-Jing Du, Pei-Yao Zhu, Jian-Yu Li, Hua Wang, Zhi-Hui Zhan

Discriminant Cross Modal Hash Retrieval Algorithm with Multilevel Semantics 228
Wei Qian, Hong Ying, Lang Lu, Zedong Sun

YOLOv5-GXT: A New PCB Surface Defect Detection Algorithm Based on YOLOv5 234
Zhicong Zhang, Fanglin Chen, Aoran Zhang, Gaoming Lin, Xiao Wang, Changjun Zhou

Open Set Recognition Methods for Fault Diagnosis: A Review 241
Attiq Ur Rehman, Weidong Jiao, Jianfeng Sun, Huilin Pan, Tianyu Yan

Household PV Power Scheduling Based on an Improved Sparrow Search Algorithm 249
Yong-Jun Lan, Zhao-Long Hu, Ling-Guo Zeng, Minglu Li

A Differential Diagnose Method for Dermoscopy Images 255
Sixuan Wang, Jinyuan Luo, Qian Zhou, Xiangyu Ren, Yanchun Zhang

Dual-Image Reversible Data Hiding Based on Encoding the Numeral System of Concealed Information 263
Tzu Chuen Lu, Thanh Nhan Vo, Biswapati Jana

A Comparative Study on Crossover Operators of Genetic Algorithm for Traveling Salesman Problem 270
Xin-Ai Dou, Qiang Yang, Xu-Dong Gao, Zhen-Yu Lu, Jun Zhang

Salp Swarm Algorithm for Drift Compensation in E-Nose 278
Atiq Ur Rehman, Md Alamgir Kabir, Muhammad Ijaz, Hanadi M. Al-Mohsin, Amine Bermak

Solving Multi-Objective Optimization Problem with Complex Constraints Based on Grouping of Constraints 284
Biao Xu, Yiwu Zheng, Ke Li, Wenji Li, Yuanping Su, Zhun Fan, Dunwei Gong

A PSO-Based Maximum Efficiency Optimization for Wireless Power Transfer Systems with Class-E Power Amplifier 289
Xudong Gao, Wenjie Cao, Qiang Yang, Jun Zhang

QR-GAN: Generative Adversarial Networks Meet Quantile Regression 295
Sunyeop Lee, Tuan Anh Nguyen, Dugki Min

Improvement of Long Short-Term Memory Via CEEMDAN and Logistic Maps for the Power Consumption Forecasting 303
Sarunyoo Boriratrit, Rongrit Chatthaworn

Performance Comparison of Passage Retrieval Models According to Korean Language Tokenization Methods 310
Wonjune Seo, Sakthivel V, Dugki Min, Jae-Woo Lee, Enum Choi

Auto-Provisioning of UAV Industry Cloud Platform for Intelligent Multi UAVs Simulation 315
Jueying Li, Sakthivel V, Dugki Min, Jae-Woo Lee, Enum Choi

Faster Boundary-Aware Transformer for Breast Cancer Segmentation 319
Xin Zhou, Xiaoxia Yin

Convergence Analysis of the Nontrivial Stationary Solution of the Memristor-Based Neural Networks with Reaction-Diffusion Terms 325
Helin Wang, Xinrui Jiang, Sitian Qin, Wei Zhang, Yuming Feng

Code Generation from Natural Language Using Two-Way Pre-Training 333
Jize Wang, Yunfeng Peng, Xinyi Le, Cailian Chen, Xinping Guan

Exploring Gender Differences in Emotion Recognition with Electroencephalography 339
Danting Duan, Wei Zhong, Fei Hu, Long Ye, Qin Zhang

Hyper-Heuristic Algorithm for Urban Traffic Flow Optimization 345
Xiao-Min Hu, Yu-Hui Duan, Min Li, Ying Zeng

An Evolutionary Framework with Social Benefit Based Incentive Distribution for Vehicle Energy Station Distribution 352
Zhi-Xuan Zhang, Wei-Neng Chen, Wen-Jin Qiu, Ming-Can Geng

DenseNeXt: An Efficient Backbone for Image Classification..... 359
Gaoming Lin, Fanglin Chen, Zhicong Zhang, Aoran Zhang, Xiao Wang, Changjun Zhou

Open-Switch Fault Diagnosis of Inverters in Linear Induction Machine Drives Based on Normalized Wavelet Packet Entropy 365
Keting Hu, Yougang Sun, Zhigang Liu, Junqi Xu, Guobin Lin

An Adaptive Framework of Multimodal Emotion Recognition Based on Collaborative Discriminative Learning 371
Yadi Wang, Xiaoding Guo, Yibo Zhang, Yiyuan Ren, Wendi Huang, Zunyan Liu, Yuming Feng, Xiangguang Dai, Wei Zhang, Hangjun Che

Frequent Trajectory Mining with Local Differential Privacy 379
Yaqian Huang, Huiwei Wang

An Efficient Personal Key Recovery in Self-Sovereign Identity Environments 385
Min-Hwan Kim, Tuan Anh Nguyen, Dugki Min

Multi-Objective Grasshopper Optimisation Algorithm Applied to Design DNA Sequences 393
Huaiyu Guo, Zhiyu Feng, Xiao Wang

Elastic Warping with Global Linear Constraints for Parallax Image Stitching 401
Feiyang Xue, Danchen Zheng

Research on Web Service Composition Selection Based on QoS Metrics 407
Libin Liao, Siwei Wang, Jianbin Wu

Effectiveness of Deep Image Embedding Clustering Methods on Tabular Data..... 415
Sakib Abrar, Ali Sekmen, Manar D. Samad

An Improved MoViNet Algorithm for Lightweight Video Recognition 422
Ruirui Zhou, Xin Chen

Research on Ethnic Pattern Generation Based on Generative Adversarial Networks 429
Hao Wu, Wenze He, Xiongfei Li, Yanchun Liang

Analysis of Reverse Engineering 435
Alibek Nurgaliyev, Hua Wang

A Constrained Sampling Assisted Differential Evolution for Expensive Optimization 442
Feng-Feng Wei, Tai-You Chen, Xuan-Li Shi, Wei-Neng Chen

Ant Colony Optimization for Multiple Travelling Salesmen Problem with Pivot Cities 449
Nuo Xu, Deming Wu, Qiang Yang, Hua Wang, Xiangmin Zhou, Zhonglong Zheng, Yisu Ge, Xudong Gao

Manhattan Nonnegative Matrix Factorization Using the Alternating Direction Method of Multipliers 457
Chan Cao, Shuyu Tang, Nian Zhang, Xiangguang Dai, Wei Zhang, Yuming Feng, Jiang Xiong, Jinkui Liu, Lara Thompson

Fast Adaptive Exposure Correction Algorithm Based on Optimal Niche 462
Zhi Dou, Yisha Bao, Guoqi Liu

Author Index