

4th International Conference on Artificial Intelligence and Computer Science (AICS 2022)

Journal of Physics: Conference Series Volume 2363

Beijing, China
30-31 July 2022

ISBN: 978-1-7138-6471-4
ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2023)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

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
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Preface	
Peer Review Statement	
APIInf: Adaptive Policy Inference Based on Hierarchical Framework	1
<i>Hongjie Zhang, Shuo Wang, Jing Li</i>	
Pipe Thread Parameter Detection System Based on Machine Vision.....	11
<i>Yingying Li, Yuxiu Wu, Donghong Zhang</i>	
Session Recommendation Based on Edge Information Clustering	19
<i>Manfu Ma, Dongliang Yang, Yong Li</i>	
Flow Field Measurement and Display Technology Based on Hand-Held Probe.....	31
<i>Jin Song, Sheng Xu, Weiguo Zhang, Yi Gu, Jun Ma</i>	
Noise Suppression of Towed Line Array Sonar Platform Based on Spatial Filtering Technique	39
<i>Meijiao Yang, Dong Han, Ning Li</i>	
Weighted Centroid Localization Algorithm Based on MEA-BP Neural Network and DBSCAN Clustering	47
<i>Yi Li</i>	
Global Mean Square Error Separation Loss	56
<i>Yun Hou</i>	
Accuracy Controllable SpMV Optimization on GPU	65
<i>Jie Liu</i>	
Design of Unmanned Ship System with Two Engines and Two Propellers	74
<i>Yongliang Zhang, Juanhui Yu, Cheng Dai, Tianshuang Fu</i>	
Improvement of Vulnerable Code Dataset Based on Program Equivalence Transformation	80
<i>Dejiang Jing</i>	
A Deep Facial BRDF Estimation Method Based on Image Translation.....	89
<i>Lulu Feng, Dongdong Weng, Bin Liang</i>	
Target Detection Network for Underwater Image Based on Adaptive Anchor Frame and Re- Parameterization	99
<i>Huipu Xu, Yiteng Wang</i>	
Detection of Defects in Power Grid Inspection Images Based on Multi-Scale Fusion	106
<i>Jia Wu, Zhenbo Liu, Qi Ren</i>	
Pose Measurement Technology of Roadheader Body Based on Fusion of Visual and SINS*	114
<i>Lixin Wang, Chengjun Hu, Gege Pan, Chao Zhang, Bin Liu, Jicheng Wan, Hongqiang Yang, Shuo Shi, Zhen Dong, Yuyang Du, Wenjuan Yang, Xuhui Zhang</i>	
Text Independent Writer Identification Based on Pre-Training Model and Feature Fusion	127
<i>Zhenjiang Li, Qianxue Zhang, Yiqun Wang</i>	
An Expression Recognition Model Based on Channel and Spatial Attention Fusion	134
<i>Yunyun Cao</i>	

Singular Value Decomposition (SVD) Co-Training: A Semi-Supervised Method for Object Detection	140
<i>Siyang Fan, Rui Wang, Jingwen Xu, James Zhiqing Wen</i>	
Construction of Entity and Entity Relationship Annotation Corpus for Test Identification	147
<i>Bo Wang, Zixi Xu, Jianmei Huang, Teng Sun, Xiaofeng Mu</i>	
Domain-Adaptive Pre-Training BERT Model for Test and Identification Domain NER Task.....	155
<i>Bo Wang, Jianmei Huang, Ruicheng Yan, Yaofeng Su, Xiaofeng Mu</i>	
Material Decomposition of Dual-Energy CT Based on CBAM Attention U-Net	161
<i>Xinrui Zhang, Lei Li, Bin Yan</i>	
Pyramid Attention Based Early Forest Fire Detection Using UAV Imagery.....	171
<i>Yongtuo Zhang, Sheng Chen, Weiyi Wang, Wei Zhang, Li Zhang</i>	
UAV Formation Transformation Based on Two-Stage Path Planning Method.....	178
<i>Bingyu Song, Yahui Zuo, Shan Huang, Xiaolu Liu, Yingguo Chen</i>	
Analysis and Optimization of Planar Excitation Coil for EPS Torque Senor Based on GWO.....	190
<i>Zhengyu Xie, Xiliang Chen, Yiwen Sun</i>	
Recognition of Power Quality Disturbance Based on RCNN	198
<i>Rui Fan, Huipeng Li, Heju Xiao, Hong Wang, Linhai Qi</i>	
Calculation Method of Ship's External Magnetic Field Based on Neural Network	208
<i>Chao Zuo, Mingyu Ma, Maobin Li, Yang Pan, Hui Yan, Jianxun Wang, Pan Geng, Jun Ouyang</i>	
Research on Intelligent Decision Method of Optimal Production Planning and AGV In-Time Delivery in Mixed-Model Assembly Line.....	216
<i>Li Jia, Lei Shi, Jianfeng Yao, Xiang Dai, Gang Guo</i>	
A Novel Privacy-Preserving Computing System Based on VAE Federated Meta-Learning.....	230
<i>Wei Zheng, Shaojie Yang, Xueyang Zhang</i>	
Toward Efficient Geolocation in SAGIN: A Single-Satellite Geolocation Method Combined with Bandlimited Signal Extrapolation	236
<i>Yusi Zhang, Xuejun Sha, Yong Li, Xu Lin</i>	
A Deep Learning-Based Cascade Automatic Classification System for Malignant Thyroid Nodule Recognition in Ultrasound Image.....	246
<i>Haoyuan Zhou, Rui Wang, Meng Zhou, Peng Fu, Yang Bai</i>	
3D CNN Hardware Circuit for Motion Recognition Based on FPGA	254
<i>Shidong Lv, Tao Long, Zhixian Hou, Liang Yan, Zhenzhong Li</i>	
Spatial Relationship Extraction of Geographic Entities Based on BERT Model	268
<i>Jiannan Yang, Hong Jia, Hanbing Liu</i>	

Author Index