

2021 International Conference on Electronic Communication, Computer Science and Technology

Journal of Physics: Conference Series Volume 2209

Online
7 – 9 January 2022

ISBN: 978-1-7138-5172-1
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. (2022)

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	
Robust Visual Place Recognition Method for Robot Facing Drastic Illumination Changes	1
<i>Zhen Li, Lin Zhou, Zequin Lin</i>	
An Ultra-Low Power off Chip Capacitor-Less LDO with High Transient Response	12
<i>Zihang Zhang, Xiaoning Xin, Rongyan Chuai, Meng Han</i>	
Ferroelectric Properties of KNbO ₃ Doped with Na : First-Principles Calculations	18
<i>Peng Wang, Haolei Shen, Kui Xia, Wenjun Zong, Rongri Tan</i>	
Research on Non-Uniform Interrupted Sampling Repeater Jamming for Phase Coded Radar	24
<i>Zhihao Luo, Jianbing Li, Xueyu Dong, Jianbang Sun</i>	
Research on Equalization Technology of Broadband Satellite Communication Channel.....	31
<i>Jie Jiang, Jian Zuo, Hao Feng</i>	
Measuring the Orbital Angular Momentum Mode of Vortex Beam Based on Phase Matching Sequence.....	37
<i>Zhaohui Li, Wenyi Xue</i>	
Study of Spacecraft Low Frequency Cable Installation Technology Oriented to CSB Bus.....	43
<i>Xiaohui Song, Wei Wang, Xianing Xing, Qian Zhang, Xu Liu, Huaqing Lian, Lei Gu</i>	
An Implantable Loop Antenna with Hilbert Curve Structures	50
<i>Jinfeng Huang, Aoran Li</i>	
Design of Intelligent Anti-Suffocation System in Vehicle	55
<i>Zheng Li, Yun Cao, Zhule Jin</i>	
Application of Information Processing System Based on DSP in Electronic Information Engineering	61
<i>Jingbo Huang</i>	
Analysis and Research on the Interference of Civil Aviation Radio Navigation Equipment	67
<i>Xianhao Zhang, Zhongmei Luo, Guo Kang</i>	
Lightweight it Operation and Maintenance Integrated Monitoring Method for APP System	73
<i>Xuyong Wang, Rui Chen</i>	
AFESSD: Object Detector for Natural Gas Pipeline Construction Scene	83
<i>Zhen Yang, Qinhao Zheng, Jie Zhou, Zhijian Yin</i>	
Research on Application of Artificial Intelligence in Communication Network.....	91
<i>Zijun Bai</i>	
Handover Scheme of LEO Satellite Network Based on Geographical Division Scenario	96
<i>Feng Liu, Yurong Zhai</i>	
The Electronic and Ferroelectric Properties in Strontium and Zirconium Doped BaTiO ₃ from First-Principles Calculations	107
<i>Haolei Shen, Peng Wang, Rongri Tan, Yousheng Yu</i>	

Dynamic Power Allocation in D2D Communications Using Deep Reinforcement Learning..... <i>Jun Zhou</i>	112
A Design of Wideband Microstrip-To-Microstrip Vertical Transition for RF Circuits <i>Shangbin Sun, Yuanxiang Chen, Jia Fu, Shangjing Lin, Hu Zhu, Xiaobo Zhao, Jianguo Yu</i>	119
Design of Multi-Band Compatible Trigeminal Monopole Array Antenna for Unmanned Aerial Vehicle <i>Zhiwei Zhang, Bin Lin, Yuting Huang, Ye He, Haoyuan Chen, Meijie Zheng, Shuyao Wen</i>	124
Spine Image Segmentation Based on U-Net and Atrous Spatial Pyramid Pooling <i>Zhen Yang, Long Chen, Ting Fu, Zhijian Yin, Fan Yang</i>	128
A Method of Multi-Channel SAR Moving Target Detection and Imaging Based on Complex CNN <i>Zhao-Rong Deng, Xiang-Yang Zhang, Wei-Min Gao, Hong-Ping Zhang, Yin-Qiang Xu</i>	137
IBM Small-Scale Superconducting Quantum Computer Not Gate Error Test..... <i>Ming He, Xiaonan Liu, Junchao Wang, Jiale An</i>	143
Object Detection Based on Yolov4-Tiny and Improved Bidirectional Feature Pyramid Network <i>Qi Liu, Xiaoyu Fan, Zhipeng Xi, Zhijian Yin, Zhen Yang</i>	155
Finding Discriminative Regions with More Subtle Granularities for Fine-Grained Image Classification..... <i>Qi Liu, Zhipeng Xi, Xiaoyu Fan, Zhijian Yin, Zhen Yang</i>	163
Dynamic Analysis of the Influence of the Rotor Centroid Offset of Gyrowheel <i>Xiaokun Liu, Guanglie Yang, Chaoming Mo, Minglang Tan, Dongqing Gu, Bin Song, Shufan Wu</i>	171
Improvement and Research of Collaborative Filtering Algorithm Based on Penalty Factor <i>Panying Li, Yuxuan Han, Xiumei Wen, Fanxing Meng</i>	177
Data Enhancement Method for Object Detection..... <i>Zhijian Yin, Lei Xu, Hanqing Yu, Zhen Yang</i>	184
Research on Face Tracking Algorithm Based on Detection and Supervision Tracking..... <i>Gang Yuan, Fengkun Lv, Zhihao Xu, Lv Luo, Yi Rong, Yanan Zhang, Zheng Tian</i>	191
Overview of Energy Consumption Optimization in Mobile Edge Computing..... <i>Bingyi Hu, Jixun Gao, Yanxin Hu, Huaichen Wang, Jialei Liu</i>	198
Operation Anomaly Monitoring of Customer Service Data Analysis Platform Based on Improved FP-Growth Algorithm <i>Jing Yang, Lihua Gong, Kunpeng Liu, Letian Xiu</i>	206
The Improved Quantum Secret Sharing Protocol Based on Grover Algorithm	216
<i>Zhuo Yu</i>	
Research on FPGA-Based High-Speed Data Optical Fiber Transmission	221
<i>Xianbo Wang</i>	
Power Grid Field Violation Recognition Algorithm Based on Enhanced YOLOv5	225
<i>Wenwen Zhu, Yuanzhong Shu, Shuo Liu</i>	

Author Index