



ISSN 1673-9418
CODEN JKYTA8

JOURNAL OF FRONTIERS OF COMPUTER SCIENCE & TECHNOLOGY

计算机科学与探索

第15卷 第7期 / Vol.15 No.7 Jul. 2021

一月刊



华北计算技术研究所 主办
科学出版社 出版

计算机科学与探索

Jisuanji Kexue yu Tansuo

(月刊)

2007年创刊

第15卷第7期 总第154期

2021年7月

主管单位

中国电子科技集团公司

主办单位

华北计算技术研究所

理事长 刘学林

总经理 谭继红

主编 周志华

执行总编辑 丁宇萍

副总编辑 袁璟

编辑

《计算机科学与探索》编辑部

地址:北京市海淀区北四环中路211号

北京619信箱26分箱

邮编:100083

电话:(010)89056056

E-mail: fcst@vip.163.com

http://www.ceaj.org

出版

北京《计算机工程与应用》期刊有限公司

科学出版社

印刷

北京宝昌彩色印刷有限公司

国内总发行

中国邮政集团公司北京市报刊发行局

订阅处

全国各地邮局(82-560)

国外总发行

中国国际图书贸易集团有限公司(M4220)

目次

综述·探索

多模态的情感分析技术综述

……………刘继明,张培翔,刘颖,张伟东,房杰 (1165)

融合语言学知识的神经机器翻译研究进展

……………郭望皓,范江威,张克亮 (1183)

人脸识别系统的活体检测综述

……………马玉琨,徐姚文,赵欣,徐涛,王泽瑞 (1195)

序列数据的数据增强方法综述

……………葛轶洲,许翔,杨锁荣,周青,申富饶 (1207)

网络与信息安全

敌手能力有限时基于生成对抗网络的保密增强

……………李西明,吴嘉润,吴少乾 (1220)

面向RFID动态帧时隙ALOHA协议的帧长优化

……………何金栋,卜艳玲,石聪聪,谢磊 (1227)

人工智能

基于多重注意力的金融事件大数据精准画像

……………陈剑南,杜军平,薛哲,寇菲菲 (1237)

注意力级联网络的金属表面缺陷检测算法

……………方钧婷,谭晓阳 (1245)

联合总变率空间和时延神经网络的说话人识别

……………瞿于荃,龙华,段荧,邵玉斌,杜庆治 (1255)

随机特征映射的四层神经网络及其增量学习

……………杨悦,王士同 (1265)

层次标签引导的属性网络嵌入

……………陈洁,陈嘉琳,赵妹,张燕平 (1279)

密度Canopy的增强聚类与深度特征的KNN算法

……………沈学利,秦鑫宇 (1289)

图形图像

无人机场景下尺度自适应的车辆跟踪算法

……………黄稼辉,彭力,谢林柏 (1302)

运动信息优化相关滤波的多目标跟踪算法

……………缪佳妮,杨金龙,程小雪,葛洪伟 (1310)

理论与算法

蕴涵的决策蕴涵表示研究

……………王亚丽,翟岩慧,张少霞,贾楠,李德玉 (1322)

分辨矩阵在逻辑优化中的应用

……………闫心怡,温馨,陈泽华 (1332)

改进混合二进制蝗虫优化特征选择算法

……………赵泽渊,代永强 (1339)

标注Petri网的最小代价计划序列估计

……………周广瑞,徐淑琳,郭乙运,鲁法明,岳昊 (1350)

编者信息

《计算机工程与应用》投稿须知

…………… (1219)

Contents

Surveys and Frontiers

- 1165 Summary of Multi-modal Sentiment Analysis Technology
.....LIU Jiming, ZHANG Peixiang, LIU Ying, et al
- 1183 Advance Research on Neural Machine Translation Integrating Linguistic Knowledge
.....GUO Wanghao, FAN Jiangwei, ZHANG Keliang
- 1195 Review of Presentation Attack Detection in Face Recognition SystemMA Yukun, XU Yaowen, ZHAO Xin, et al
- 1207 Survey on Sequence Data Augmentation
.....GE Yizhou, XU Xiang, YANG Suorong, et al

Network and Information Security

- 1220 GANs Based Privacy Amplification Against Bounded Adversaries
.....LI Ximing, WU Jiarun, WU Shaoqian
- 1227 Frame Size Optimization for Dynamic Framed Slotted ALOHA in RFID SystemsHE Jindong, BU Yanling, SHI Congcong, et al

Artificial Intelligence

- 1237 Accurate Portrait of Big Data of Financial Events Based on Multiple Attention Mechanism
.....CHEN Jiannan, DU Junping, XUE Zhe, et al
- 1245 Defect Detection of Metal Surface Based on Attention Cascade R-CNN.....FANG Junting, TAN Xiaoyang
- 1255 Speaker Verification Combining Total Variability Space and Time Delay Neural Network
.....QU Yuquan, LONG Hua, DUAN Ying, et al
- 1265 Novel Four-Layer Neural Network and Its Incremental Learning Based on Randomly Mapped Features
.....YANG Yue, WANG Shitong
- 1279 Hierarchical Labels Guided Attributed Network Embedding
.....CHEN Jie, CHEN Jialin, ZHAO Shu, et al
- 1289 KNN Algorithm of Enhanced Clustering Based on Density Canopy and Deep Feature.....SHEN Xueli, QIN Xinyu

Graphics and Image

- 1302 Scale-Adaptive Vehicle Tracking Algorithm in UAV Scene
.....HUANG Jiahui, PENG Li, XIE Linbo
- 1310 Multi-target Tracking Algorithm Based on Motion Information Optimized Correlation Filtering
.....MIAO Jiani, YANG Jinlong, CHENG Xiaoxue, et al

Theory and Algorithm

- 1322 Study of Implication Representation Based on Decision ImplicationWANG Yali, ZHAI Yanhui, ZHANG Shaoxia, et al
- 1332 Discernibility Matrix and Its Application in Logical OptimizationYAN Xinyi, WEN Xin, CHEN Zehua
- 1339 Improved Shuffled Binary Grasshopper Optimization Feature Selection AlgorithmZHAO Zeyuan, DAI Yongqiang
- 1350 Estimation of Least-Cost Planning Sequence for Labeled Petri Nets.....ZHOU Guangrui, XU Shulin, GUO Yiyun, et al

Journal of Frontiers of Computer Science and Technology

(Monthly)

Started in 2007

Vol.15 No.7 Sum No.154 Jul. 2021

Superintended by

China Electronics Technology Group Corporation

Sponsored by

North China Institute of Computing Technology

President of Council: LIU Xuelin

General Manager: TAN Jihong

Editor-in-Chief: ZHOU Zhihua

Executive Chief Editor: DING Yuping

Associate Chief Editor: YUAN Jing

Edited by

Editorial Department of *Journal of Frontiers of
Computer Science and Technology*

Mail Address: No.26, P.O.Box 619,

Beijing 100083, P.R.China

Tel: (8610) 89056056

E-mail: fcst@vip.163.com

http://www.ceaj.org

Published by

Journal of Computer Engineering and Applications

Beijing Co., Ltd.

Science Press

Printed by

Beijing Baochang Color Printing Co., Ltd.

Distributed by

Beijing Bureau for Distribution of

Newspapers and Journals

Subscribed by

All Local Post Offices in China

Foreign Distributed by

China International Book Trading Corporation