



智能系统学报

CAAI TRANSACTIONS ON INTELLIGENT SYSTEMS



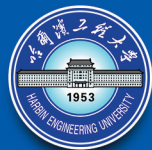
ISSN 1673-4785



9 771673 478212

万方数据

Vol.16 No.1



智能系统学报

CAAI TRANSACTIONS ON INTELLIGENT SYSTEMS

第 16 卷

— 第 1 期 —

(总第 87 期)

2021 年 1 月

编辑部人员

主 任: 李雪莲

责任编辑: 张晓彤 孟 玮

英文编辑: 朱玉珍(兼)

编 务: 王 娜

版权说明

作者所投稿件应没有侵犯他人著作权或其他权利的内容,自发表之日起,其专有出版权和网络传播权即授予本刊。未经许可不得转载。

目 次

卷首语

人工智能赋能无人系统

王耀南

综述

1 仿信鸽归巢行为的导航技术研究进展

段海滨, 辛龙, 邓亦敏

学术论文

• 机器学习

11 改进 MobileNet 的图像分类方法研究

高淑萍, 赵清源, 齐小刚, 程孟菲

21 基于改进的YOLOv3 算法的乳腺超声肿瘤识别

徐立芳, 傅智杰, 莫宏伟

30 对抗样本三元组约束的度量学习算法

王鑫, 郭鑫垚, 魏巍, 梁吉业

38 基于多源异构数据融合的网络安全态势评估体系

常利伟, 田晓雄, 张宇青, 钱宇华, 胡治国

• 机器感知与模式识别

48 基于风格转换的无监督聚类行人重识别

张智, 毕晓君

57 多视角数据融合的特征平衡YOLOv3 行人检测研究

陈丽, 马楠, 逢桂林, 高跃, 李佳洪, 张国平, 吴祉璇,
姚永强

• 智能系统

66 PI 型自抗扰广义预测控制的性能分析

任佳, 陈增强, 孙明玮, 孙青林

75 一种非视距环境下的目标定位算法
齐小刚,张海洋,魏倩

81 基于迁移学习的移动机器人单帧图像坡度检测算法
辛菁,杜柯楠,王媛媛,刘丁

92 系统故障因果关系分析的智能驱动方式研究
崔铁军,李莎莎

• 知识工程

98 半监督类保持局部线性嵌入方法
邓廷权,王强

108 隔级融合特征金字塔与CornerNet 相结合的小目标检测
赵文清,孔子旭,赵振兵

117 基于Agent 的综合信任评价的情感劝说模型
伍京华,王凯欣

• 人工智能基础

125 群智能新研究:角色-匹配的狼群劳动分工
吴虎胜,肖人彬

134 基于语义分割的简洁线条肖像画生成方法
吴涛,董肖莉,孟伟,徐健,覃鸿,李卫军

吴文俊人工智能科学技术奖论坛

142 基于双特征嵌套注意力的方面词情感分析算法
肖宇晗,林慧苹,汪权彬,谭营

152 室外未知环境下的AGV 地貌主动探索感知
张威,葛泉波,刘华平,孙富春

162 基于时空周期模式挖掘的活动语义识别方法
郭茂祖,邵首飞,赵玲玲,李阳

170 面向数据增强的多种语音情感分类算法研究
李茜茜,沈晓燕,任福继,康鑫

178 联邦推荐系统的协同过滤冷启动解决方法
王健宗,肖京,朱星华,李泽远

洞见与碰撞

186 柳下解答李德毅院士通用人工智能十疑问
柳下弈

学会动态

- 10 第七届 IEEE 云计算与智能系统国际会议
- 37 CAAI 第六届全国大数据与社会计算学术会议
- 124 2021 中国粒计算与知识发现学术会议
- 141 首届国际人工智能会议
- 151 陈小平主编《人工智能伦理导引》出版
- 161 全国第 17 届可拓学年会
- 177 第四届模式识别与计算机视觉大会

Foreword

- Artificial intelligence enabled unmanned system
WANG Yaonan

Reviews

- 1 Technology research review on homing pigeon-inspired navigation
DUAN Haibin, XIN Long, DENG Yimin

Research Articles

Machine Learning

- 11 Research on the improved image classification method of MobileNet
GAO Shuping, ZHAO Qingyuan, QI Xiaogang, CHENG Mengfei
- 21 Tumor recognition in breast ultrasound images based on an improved YOLOv3 algorithm
XU Lifang, FU Zhijie, MO Hongwei
- 30 Metric learning algorithm with adversarial sample triples constraints
WANG Xin, GUO Xinyao, WEI Wei, LIANG Jiye
- 38 Network security situation assessment architecture based on multi-source heterogeneous data fusion
CHANG Liwei, TIAN Xiaoxiong, ZHANG Yuqing, QIAN Yuhua, HU Zhiguo

Natural Language Processing and Comprehension

- 48 Clustering approach based on style transfer for unsupervised person re-identification
ZHANG Zhi, BI Xiaojun
- 57 Research on multi-view data fusion and balanced YOLOv3 for pedestrian detection
CHEN Li, MA Nan, PANG Guilin, GAO Yue, LI Jiahong, ZHANG Guoping, WU Zhixuan, YAO Yongqiang

Intelligent Systems

- 66 Performance analysis of PI-type active disturbance rejection generalized predictive control
REN Jia, CHEN Zengqiang, SUN Mingwei, SUN Qinglin
- 75 A target localization algorithm in NLOS environments
QI Xiaogang, ZHANG Haiyang, WEI Qian
- 81 Single frame image slope detection algorithm for mobile robots based on transfer learning
XIN Jing, DU Kenan, Wang Yuanyuan, LIU Ding
- 92 Intelligent analysis of system fault data and fault causal relationship
CUI Tiejun, LI Shasha

Knowledge Engineering

- 98 Semi-supervised class preserving locally linear embedding
DENG Tingquan, WANG Qiang

- 108 Small target detection based on a combination of feature pyramid and CornerNet
ZHAO Wenqing, KONG Zixu, ZHAO Zhenbing

- 117 Emotional persuasion model based on Agent's comprehensive trust evaluation
WU Jinghua, WANG Kaixin

Fundamentals of Artificial Intelligence

- 125 A new approach to swarm intelligence: role-matching labor division of a wolf pack
WU Husheng, XIAO Renbin

- 134 Concise line portrait generation method based on semantic segmentation
WU Tao, DONG Xiaoli, MENG Wei, XU Jian, QIN Hong, LI Weijun

Forum of Recipients of Wu Wenjun Artificial Intelligence Science and Technology Award

- 142 An algorithm for aspect-based sentiment analysis based on dual features attention-over-attention
XIAO Yuhan, LIN Huiping, WANG Quanbin, TAN Ying

- 152 AGV active landform exploration and perception in an unknown outdoor environment
ZHANG Wei, GE Quanbo, LIU Huaping, SUN Fuchun

- 162 Active semantic recognition method based on spatial-temporal period pattern mining
GUO Maozu, SHAO Shoufei, ZHAO Lingling, LI Yang

- 170 Investigation of multiple speech emotion classification algorithms based on data enhancement
LI Qianqian, SHEN Xiaoyan, REN Fuji, KANG Xin

- 178 Cold starts in collaborative filtering for federated recommender systems
WANG Jianzong, XIAO Jing, ZHU Xinghua, LI Zeyuan

Perspectives and Discussions

- 186 Liuxia answers academician Li Deyi's ten questions about general artificial intelligence
LIU Xiayi

News on CAAI

- 10 IEEE the 7th International Conference on Cloud Computing and Intelligent Systems
- 37 China National Conference on Dig Data and Social Computing
- 124 2021 China Granular Computing and Knowledge Discovery Conference
- 141 CAAI International Conference on Artificial Intelligence
- 177 The 4th Chinese Conference on Pattern Recognition and Computer Vision