

F5000



传感技术学报

2023年 第36卷 第1期

Chinese Journal of
SENSORS AND ACTUATORS

Volume 36 Number 1 2023

A Publication of Chinese Society of Micro/NanoTechnology

ISSN 1004-1699
CN 32-1322/TN
中文核心期刊
中国科技核心期刊
中国精品科技期刊

Online: chinatransducers.seu.edu.cn

东南大学·中国微米纳米技术学会 主办

传感技术学报

第三十六卷第一期

(月刊)

二〇二三年一月

目次

传感器研究

- 高压驱动三波腹多环盘式硅微陀螺仪 夏敦柱 姚默晗 杜森(1)
抗电磁宽频率响应 IEPE 型压电式振动传感器设计研究 王天资 章建文 张磊 白鸽(9)
基于集成芯片的压电换能器频率跟踪技术研究 罗锡棋 郭南翔 颜海霞 董林玺(15)

传感器信号处理

- 分布式 MIMO 声纳系统中移动目标的精确定位方法 王超迪 王赞喆 杨承霖 吴晓平(22)
基于靶标内点与边缘角点双重约束的激光雷达与相机联合标定 董文波 于海鹏 于龙(30)
基于改进 YOLO v5 的道路小目标检测算法 牛为华 殷苗苗(36)
基于双域融合与亮度补偿的室内图像增强算法 徐耀松 刘翰林 王雨虹(45)
基于节点自补偿的 IEEE 1588 时钟同步算法 卢灏 余修武 刘永(53)
基于深度图和时空特征的邮局场景人物交互行为识别 王苾蓉 吴静静(60)
一种融合改进 A* 算法与改进动态窗口法的 AGV 路径规划 潘富强 曾成 马国红 刘继忠(68)
基于 WiFi 信号和深度学习的身份识别技术研究 吴哲夫 肖新宇 林超 龚树凤 方路平(78)
基于图像 EKF 跟踪的水下激光通信 APT 方法 张美燕 吴培鹏 王志强 蔡文郁(85)
基于树突神经网络的 MEMS 压力传感器误差补偿方法 赵月爱 白渊铭(93)
基于分段香农能量与结构特征提取的心电 R 波检测方法 张靖峰 谢志军(99)
基于振动传感器的风力发电机故障检测算法 朱广贺 朱智强 袁逸萍(108)
经验模态分解算法在角位移传感器信号去噪中的应用 胡璞 刘利民(113)
多目标遗传算法在航空发动机传感器中的稳态分析 刘钊勇 张艺婷 李源彬(118)

无线传感器技术

- 基于状态着色的水声网络 MAC 协议 田晓静 杜秀娟 王丽娟 李冲 韩多亮(124)
云框架超大规模资源处理下无线传感网络数据异常检测 李红映 张天荣(135)
基于循环神经网络的多模态无线传感数据自适应融合方法 宋永 杨阔 覃觅觅(141)
随机通信时延下传感器连通覆盖保持算法研究 郭彩萍(147)

传感器应用

- 近海浅层气甲烷浓度原位在线监测方法与仪器研究 吴秀山 童仁园 李青(153)
动态胎压传感器在公路路面行车舒适性检测技术中的应用研究
..... 叶伟 胡晓阳 刘晓江 徐正卫 高博 李立国(159)

《传感技术学报》期刊征订 (封三)

CHINESE JOURNAL OF SENSORS AND ACTUATORS

Vol. 36 No. 1

(Monthly)

Jan. 2023

CONTENTS

Research on Sensors

- High Voltage Driven Three-Antinode Multi-ring Disc Resonant Gyroscope XIA Dunzhu YAO Mohan DU Sen(1)
Design and Research of IEPE Piezoelectric Vibration Sensors with Anti-Electromagnetic Interference and Wide Frequency Response
..... WANG Tianzi ZHANG Jianwen ZHANG Lei BAI Ge(9)
Research on Frequency Tracking Technology of Piezoelectric Transducer Based on Integrated Chip
..... LUO Xiqi GUO Nanxiang YAN Haixia DONG Linxi(15)

Signal Processing for Sensors

- Accurate Localization Methods for Mobile Target in Distributed MIMO Sonar Systems
..... WANG Chaodi WANG Yunzhe YANG Chenglin WU Xiaoping(22)
The Joint Calibration of LiDAR and Camera Based on Dual Constraints of Interior Points and Edge Corners
..... DONG Wenbo YU Haipeng YU Long(30)
Road Small Target Detection Algorithm Based on Improved YOLO v5 NIU Weihua YIN Miaomiao(36)
Indoor Image Enhancement Algorithm Based on Dual-Domain Fusion and Brightness Compensation
..... XU Yaosong LIU Hanlin WANG Yuhong(45)
IEEE 1588 Clock Synchronization Algorithm Based on Node Self-Compensation LU Hao YU Xiuwu LIU Yong(53)
Human-Object Interaction Behavior Recognition Based on Depth Map and Space-Time Features in the Scene of Post Office
..... WANG Congrong WU Jingjing(60)
A Novel AGV Path Planning Algorithm Based on Improved A* Algorithm and Improved Dynamic Window Approach
..... PAN Fuqiang ZENG Cheng MA Guohong LIU Jizhong(68)
Research on Identity Recognition Technology Based on WiFi Signal and Deep Learning
..... WU Zhefu XIAO Xinyu LIN Chao GONG Shufeng FANG Luping(78)
Image EKF tracking based APT Method for Underwater Laser Communication ZHANG Meiyuan WU Peipeng WANG Zhiqiang CAI Wenyu(85)
Dendritic Neural Network-Based Error Compensation Method for MEMS Pressure Sensors ZHAO Yueai BAI Yuanming(93)
Electrocardiogram R-Wave Detection Method Based on Shannon Energy Segmentation and Structure Feature Extraction
..... ZHANG Jingfeng XIE Zhijun(99)
Fault Detection Algorithm of Wind Turbine Based on Vibration Sensor ZHU Guanghe ZHU Zhiqiang YUAN Yiping(108)
Application of Empirical Mode Decomposition Algorithm in Signal Denoising of Angular Displacement Sensor HU Pu LIU Limin(113)
Steady-State Analysis of Multi-Objective Genetic Algorithm in Aeroengine Sensor LIU Zhaoyong ZHANG Yiting LI Yuanbin(118)

Technology of Wireless Sensor

- State Coloring Based MAC Protocol for Underwater Acoustic Networks
..... TIAN Xiaojing DU Xiujuan WANG Lijuan LI Chong HAN Duoliang(124)
Data Anomaly Detection in Wireless Sensor Networks Under Very Large-Scale Resource Processing in Cloud Framework
..... LI Hongying ZHANG Tianrong(135)
Adaptive Fusion Method of Multimodal Wireless Sensor Data Based on Recurrent Neural Network SONG Yong YANG Kuo QIN Mimi(141)
Research on Sensor Connectivity Coverage Preserving Algorithm Under Random Communication Delay GUO Caiping(147)

Sensor Applications

- In-situ Online Monitoring Method and Instrument Study for Methane Concentration in Offshore Shallow Gas
..... WU Xiushan TONG Renyuan LI Qing(153)
Application of Dynamic Tire Pressure Sensor in Driving Comfort Detection of Highway Pavement
..... YE Wei HU Xiaoyang LIU Xiaojiang XU Zhengwei GAO Bo LI Ligu(159)