

工矿自动化

第 48 卷 第 3 期 2022 年 3 月

目 次

· 科研成果 ·

- 煤矿智能化信息综合承载网..... 孙继平 程加敏(1)
坚硬厚煤层大采高综采支架分段调阻煤壁弱化研究..... 吉磊(5)
综采工作面透明化开采模式及关键技术..... 原长锁 王峰(11)

· 综述 ·

- 复杂条件工作面智能化开采关键技术及发展趋势..... 张帅 任怀伟 韩安 巩师鑫(16)

· 分析研究 ·

- 多接入边缘计算在智慧矿山网络中应用分析..... 刘海鹏 周淑秋(26)
煤层群接续开采方案优选评价研究..... 刘县委 张彦董 单成方 李亚锋 王海洋 马英建 郭宇鸣(32)
突出薄煤层中间巷掩护掘进消突技术研究..... 张楠 徐九洲 邱黎明(40)
基于广域电流暂态分量的井下供电系统接地故障区段定位方法.....
..... 欧阳敏 杜三恩 李文俊 侯刚 薛忠新 杨斐文 高彬 范生军 王峰 毛浩 韩培强(47)

· 实验研究 ·

- 基于 G-RRT* 算法的煤矸石分拣机器人路径规划..... 朱子祺 李创业 代伟(55)
煤矿护盾式掘进机器人系统精确定位研究..... 马宏伟 杨金科 毛清华 汪强(63)
基于改进粒子群算法的钻车机械手轨迹规划研究..... 申树策 史艳楠 宋建锋 任泽 王毅颖 王翰秋(71)
尾矿库排洪隧洞探测机器人多传感器融合定位..... 周祎博 周唯逸 郭振武 王斌锐(78)
基于 Dense-YOLO 网络的井下行人检测模型..... 张明臻(86)
基于机器学习的通风网络故障诊断方法研究..... 张浪 张迎辉 张逸斌 李左(91)
煤与瓦斯突出危险性预测..... 李燕 南新元 蔺万科(99)
基于固-气耦合的不同氧气条件下煤粉点燃数值研究..... 要华伟 何晓东 王喆(107)
基于 OPC UA 的煤矿安全生产监控系统信息模型..... 荣雪 黄友锐 储怡然 徐善永(112)
矿用钢丝绳损伤检测磁通回路优化设计..... 田劼 田壮 郭红飞 刘凝哲 马建武(118)

· 经验交流 ·

- 井下位置服务系统设计..... 杜志刚 储楠 罗克(123)
基于语义多尺度的矿山地下空间建模方法..... 李雯静 张馨心 林志勇 邱莉 邱立强(129)

· 广告索引 ·

公益广告(后插一); 《工矿自动化》征稿启事(后插二、三); 天地(常州)自动化股份有限公司(后插四)

期刊基本参数:CN 32-1627/TP * 1978 * m * A4 * 134 * zh * P * ¥30.00 * 2000 * 20 * 2022-03

JOURNAL OF MINE AUTOMATION

Vol. 48 No. 3 March 2022

CONTENTS

• Achievements of Scientific Research •

- Coal mine intelligent information comprehensive carrier network *SUN Jiping CHENG Jiamin* (1)
- Study on the weakening of coal wall with section resistance adjustment of fully mechanized support in hard thick coal seam with large mining height *JI Lei* (5)
- Transparent mining mode and key technologies of fully mechanized working face *YUAN Changsuo WANG Feng* (11)

• Overview •

- Key technology and development trend of intelligent mining in complex condition working face *ZHANG Shuai REN Huaiwei HAN An GONG Shixin* (16)

• Analysis Research •

- Application analysis of multi-access edge computing in intelligent mine network *LIU Haipeng ZHOU Shuqiu* (26)
- Study on optimization and evaluation of continuous mining scheme in coal seam group *LIU Xianwei ZHANG Yandong SHAN Chengfang LI Yafeng WANG Haiyang MA Yingjian GUO Yuming* (32)
- Research on outburst elimination technology of shield tunneling in middle roadway of outburst thin coal seam *ZHANG Nan XU Jiuzhou QIU Liming* (40)
- Underground power supply system grounding fault section positioning method based on wide-area current transient component *OUYANG Min DU San'en LI Wenjun HOU Gang XUE Zhongxin YANG Feiwen GAO Bin FAN Shengjun WANG Feng MAO Hao HAN Peiqiang* (47)

• Experimental Research •

- Path planning of coal gangue sorting robot based on G-RRT* algorithm *ZHU Ziqi LI Chuangye DAI Wei* (55)
- Research on precise positioning of shield roadheader robot system in coal mine *MA Hongwei YANG Jinke MAO Qinghua WANG Qiang* (63)
- Research on trajectory planning of drill rig manipulator based on improved particle swarm optimization *SHEN Shuce SHI Yannan SONG Jianfeng REN Ze WANG Yiyang WANG Hanqiu* (71)
- Multi-sensor fusion positioning of detection robot for tailings pond flood discharge tunnel *ZHOU Yibo ZHOU Weiyi GUO Zhenwu WANG Binrui* (78)
- Underground pedestrian detection model based on Dense-YOLO network *ZHANG Mingzhen* (86)
- Research on fault diagnosis method of ventilation network based on machine learning *ZHANG Lang ZHANG Yinghui ZHANG Yibin LI Zuo* (91)
- Risk prediction of coal and gas outburst *LI Yan NAN Xinyuan LIN Wanke* (99)
- Numerical study of pulverized coal ignition under different oxygen conditions based on solid-gas coupling *YAO Huawei HE Xiaodong WANG Zhe* (107)
- Information model of coal mine safety production monitoring system based on OPC UA *RONG Xue HUANG Yourui CHU Yiran XU Shanyong* (112)
- Optimization design of magnetic flux circuit for mine wire rope damage detection *TIAN Jie TIAN Zhuang GUO Hongfei LIU Ningzhe MA Jianwu* (118)

• Experience Exchange •

- Underground location service system design *DU Zhigang CHU Nan LUO Ke* (123)
- Mine underground space modeling method based on semantic multi-scale *LI Wenjing ZHANG Xinxin LIN Zhiyong QIU Li QIU Liqiang* (129)