

美国《工程索引》(EI Compendex)刊源

ISSN 1671-5497

CODEN JDXGAH

吉林大学

学报

工学版

Journal of Jilin University
Engineering and Technology Edition

ISSN 1671-5497



4

2014

第44卷 第4期

Vol.44 No.4

中国·长春

Changchun, China

万方数据

吉林大学学报(工学版)

第 44 卷 第 4 期

2014 年 7 月

目 次

基于线性估计模型的电动汽车质心侧偏角估计·····	武冬梅, 丁海涛, 郭孔辉	(901)
汽车防抱死系统电磁阀的阶梯控制·····	初 亮, 祁富伟, 王彦波, 等	(907)
基于 SimScape 的半主动悬架垂直速度处理电路设计 ·····	李 静, 王子涵, 秦 民, 等	(912)
考虑全局最优性的汽车微观动态轨迹规划·····	孙 浩, 邓伟文, 张素民, 等	(918)
纯电动汽车电池箱的热特性·····	陈燕虹, 吴伟静, 刘宏伟, 等	(925)
离合器结构参数对其热弹性不稳定性的影响·····	马 彪, 赵家昕, 李和言, 等	(933)
液电馈能式减振器阻尼特性理论及试验·····	方志刚, 过学迅, 左 磊, 等	(939)
高强度钢板热成形三维温度场数值模拟分析·····	史栋勇, 盈 亮, 胡 平, 等	(946)
单进口轮流放行方式的四路环形交叉口交通信号控制·····	徐洪峰, 耿现彩, 何 龙	(953)
钢-混组合梁挠度增大系数的神经网络计算方法 ·····	魏海斌, 张仰鹏, 焦峪波, 等	(963)
预应力高强钢绞线网抗剪加固钢筋混凝土梁试验·····	郭俊平, 邓宗才, 卢海波, 等	(968)
基于荷载抗力设计法的受火钢柱可靠性分析·····	姜封国, 赵景鲁, 郑重远	(978)
缸内直喷乙醇均质充量压燃燃烧离子电流特性·····	邓 俊, 刘寅童, 陈裕霖, 等	(985)
基于统一变桨距控制的立轴风力机启动性能·····	张立勋, 梁迎彬, 张 松, 等	(991)
地下换热管热变形引起的管-土间隙 ·····	朱晓林, 于 鸣, 高 青, 等	(998)
并联式混合动力装载机模糊逻辑控制策略·····	赵丁选, 张志文, 李天宇, 等	(1004)
基于改进 EM 算法的多重威布尔可靠性建模 ·····	王继利, 杨兆军, 李国发, 等	(1010)
基于可穿戴传感系统的人体肢段定位动态评估·····	刘 坤, 韩 宣, 刘 政	(1016)
核磁共振地下水探测全波收录系统·····	林婷婷, 史文龙, 齐 鑫, 等	(1024)
基于通量分裂的一阶迎风差分格式在传输线分析中的应用 ·····	高印寒, 王天皓, 杨开宇, 等	(1031)
铝/钢异种金属焊接接头界面 Al-Fe 金属间化合物生成及其热力学分析 ·····	黄健康, 何翠翠, 石 玟, 等	(1037)
一种模型预测控制器的 FPGA 硬件实现 ·····	许 芳, 靳伟伟, 陈 虹, 等	(1042)
多缸锻造液压机的调平和跟踪控制·····	吴爱国, 杨 硕, 张 涵, 等	(1051)
测量丢失不确定性系统的迭代鲁棒滤波·····	冯建鑫, 王挺峰, 郭 劲	(1057)
基于改进蚁群算法的搜索机器人路径规划·····	康 冰, 王曦辉, 刘 富	(1062)
基于有限状态自动机的绿通车辆驾驶室避让控制·····	李寿涛, 马用学, 郭鹏程, 等	(1069)
汽车连杆裂解槽视觉检测技术·····	刘长英, 蔡文静, 王天皓, 等	(1076)
纯电动公交车锂离子动力电池的使用条件控制·····	龚敏明, 时 玮, 张言茹, 等	(1081)
基于多种硬件实现方式探索的软硬件划分算法·····	牛晚霞, 吴艳霞, 朱若平, 等	(1088)
面向多服务交互的相容性分析与适配器生成·····	范大娟, 黄志球, 肖芳雄, 等	(1094)

云存储系统聚合带宽测试技术·····	贺秦禄, 李战怀, 王乐晓, 等	(1104)
基于检查点机制的容错节能调度算法·····	张忆文, 郭锐锋	(1112)
改进的基于分簇无线传感器网络的数据聚合算法·····	付 帅, 马建峰, 李洪涛, 等	(1118)
基于密度聚类和多示例学习的图像分类方法·····	陈 涛, 邓辉舫, 刘 靖	(1126)
基于网格单元的 DBSCAN 算法 ·····	刘淑芬, 孟冬雪, 王晓燕	(1135)
基于视觉特征的不规则形状目标分割方法·····	李雄飞, 赵浩宇, 陈 霄, 等	(1140)
基于网络测量的电动车驱动控制系统建模仿真·····	于 赫, 秦贵和, 陈筠翰	(1145)
抵抗图像区域攻击的鲁棒性水印算法·····	王友卫, 刘元宁, 朱晓冬	(1151)
基于 LRU 淘汰机制的自适应大流检测算法 ·····	任高明, 夏靖波, 乔向东, 等	(1159)
基于压缩感知理论的宽带多用户认知系统合作检测·····	贺 岩, 赵晓晖	(1165)
级联编码的 MIMO-OFDM 水声通信系统 ·····	赵旦峰, 王 杨, 廖 希, 等	(1171)
量子无线通信网络构建及性能分析·····	刘晓慧, 裴昌幸, 聂 敏	(1177)
消散型同步的微弱周期信号检测及噪声影响分析·····	行鸿彦, 龚 平, 徐 伟	(1182)
自适应蒙特卡罗无线传感器网络移动节点定位算法·····	李建坡, 时 明, 钟鑫鑫	(1191)
标识点快速提取与高精度单点匹配式定位算法·····	李学军, 杨 晟, 李振举, 等	(1197)
基于视觉显著图的图像融合方法·····	王晓文, 赵宗贵, 庞秀梅, 等	(1203)
压缩感知框架下非均匀信息采集及重构·····	田文飏, 芮国胜, 张海波, 等	(1209)
高分辨率影像中城区树冠多尺度聚类识别方法·····	曹建农, 郭 佳, 王 蓓, 等	(1215)

Journal of Jilin University (Engineering and Technology Edition)

Vol. 44 No. 4 July 2014

Contents

Sideslip angle estimation based on linear estimation model for electric vehicle	WU Dong-mei, DING Hai-tao, GUO Kong-hui (901)
Stepped control of solenoid valve in vehicle ABS	CHU Liang, QI Fu-wei, WANG Yan-bo, et al. (907)
Design of vertical speed signal filter circuit for semi-active suspension with SimScape	LI Jing, WANG Zi-han, QIN Min, et al. (912)
Micro vehicle dynamic trajectory plan with global optimality	SUN Hao, DENG Wei-wen, ZHANG Su-min, et al. (918)
Thermal characteristics of battery for pure electric vehicles	CHEN Yan-hong, WU Wei-jing, LIU Hong-wei, et al. (925)
Effect of clutches' structural parameters on thermalelastic instability	MA Biao, ZHAO Jia-xin, LI He-yan, et al. (933)
Theory and experiment of damping characteristics of hydraulic electromagnetic energy-regenerative shock absorber	FANG Zhi-gang, GUO Xue-xun, ZUO Lei, et al. (939)
Numerical simulation of 3D temperature field in hot forming of high strength steel	SHI Dong-yong, YING Liang, HU Ping, et al. (946)
Signal timing plan for fully signalized four-leg roundabouts with single-approach-entering operation	XU Hong-feng, GENG Xian-cai, HE Long (953)
Neural network-based calculation of deflection increasing coefficient of steel-concrete composite beam	WEI Hai-bin, ZHANG Yang-peng, JIAO Yu-bo, et al. (963)
Experiment on shear behavior of reinforced concrete beams strengthened with prestressed high strength steel wire mesh	GUO Jun-ping, DENG Zong-cai, LU Hai-bo, et al. (968)
Reliability analysis of steel columns exposed to fire by load and resistance factor design	JIANG Feng-guo, ZHAO Jing-lu, ZHENG Zhong-yuan (978)
Characteristics of ion current signal in DI-HCCI combustion fueled with ethanol	DENG Jun, LIU Yin-tong, CHEN Yu-lin, et al. (985)
Self-starting capacity of vertical axis wind turbine with collective pitch control	ZHANG Li-xun, LIANG Ying-bin, ZHANG Song, et al. (991)
Pipe-soil gap induced by thermal deformation of ground heat exchange pipe	ZHU Xiao-lin, YU Ming, GAO Qing, et al. (998)
Fuzzy logic control strategy of parallel hybrid power loader	ZHAO Ding-xuan, ZHANG Zhi-wen, LI Tian-yu, et al. (1004)
Reliability modeling of finite Weibull distribution based on improved EM algorithm	WANG Ji-li, YANG Zhao-jun, LI Guo-fa, et al. (1010)
Ambulatory assessment of human segmental orientation using accelerometers	LIU Kun, HAN Xuan, LIU Zheng (1016)
Full-wave recording of MRS groundwater exploration system	LIN Ting-ting, SHI Wen-long, QI Xin, et al. (1024)
Application of first-order upwind difference scheme based on flux splitting method in transmission line analysis	GAO Yin-han, WANG Tian-hao, YANG Kai-yu, et al. (1031)
Thermodynamic analysis of Al-Fe intermetallic compounds formed by dissimilar joining of aluminum and galvanized steel	HUANG Jian-kang, HE Cui-cui, SHI Yu, et al. (1037)
Hardware implementation method for model predictive control on a FPGA chip	XU Fang, JIN Wei-wei, CHEN Hong, et al. (1042)

- Leveling and tracking control of multi-cylinder forging hydraulic press
..... WU Ai-guo, YANG Shuo, ZHANG Han, et al. (1051)
- Iterative robust filtering for uncertain systems with missing measurements
..... FENG Jian-xin, WANG Ting-feng, GUO Jin(1057)
- Path planning of searching robot based on improved ant colony algorithm
..... KANG Bing, WANG Xi-hui, LIU Fu(1062)
- Control method for vehicle cab avoidance in free toll lane of highway based on finite state machine
..... LI Shou-tao, MA Yong-xue, GUO Peng-cheng, et al. (1069)
- Vision inspection technology of fracture splitting notch of auto connecting rod
..... LIU Chang-ying, CAI Wen-jing, WANG Tian-hao, et al. (1076)
- Operating condition control of large format LiMn_2O_4 battery for electric bus
..... GONG Min-ming, SHI Wei, ZHANG Yan-ru, et al. (1081)
- Hardware/software partitioning algorithm based on multiple hardware implementation exploration
..... NIU Xiao-xia, WU Yan-xia, ZHU Ruo-ping, et al. (1088)
- Compatibility analysis and adaptor generation for multi-service interaction
..... FAN Da-juan, HUANG Zhi-qiu, XIAO Fang-xiong, et al. (1094)
- Testing technology for aggregate bandwidth of cloud storage system
..... HE Qin-lu, LI Zhan-huai, WANG Le-xiao, et al. (1104)
- Fault-tolerant energy-saving scheduling algorithm base on checkpoint scheme
..... ZHANG Yi-wen, GUO Rui-feng(1112)
- Improved data aggregation algorithm based on clustered wireless sensor network
..... FU Shuai, MA Jian-feng, LI Hong-tao, et al. (1118)
- Image categorization method using density clustering on region features and multi-instance learning
..... CHEN Tao, DENG Hui-fang, LIU Jing(1126)
- DBSCAN algorithm based on grid cell LIU Shu-fen, MENG Dong-xue, WANG Xiao-yan(1135)
- Irregular shape object segmentation based on visual feature
..... LI Xiong-fei, ZHAO Hao-yu, CHEN Xiao, et al. (1140)
- Modeling and simulation of electric vehicle drive control system based on network measurement
..... YU He, QIN Gui-he, CHEN Yun-han(1145)
- Novel robust watermarking algorithm for regional attacks of digital images
..... WANG You-wei, LIU Yuan-ning, ZHU Xiao-dong(1151)
- Adaptive algorithm of identifying and measuring elephant flow based on least recently used replacement
..... REN Gao-ming, XIA Jing-bo, QIAO Xiang-dong, et al. (1159)
- Compressed sensing based multi-user collaborative detection for wideband cognitive radio networks
..... HE Yan, ZHAO Xiao-hui(1165)
- BCH-LDPC coded MIMO-OFDM underwater acoustic communication system
..... ZHAO Dan-feng, WANG Yang, LIAO Xi, et al. (1171)
- Quantum wireless communication network model and performance analysis
..... LIU Xiao-hui, PEI Chang-xing, NIE Min(1177)
- Weak periodic signal detection based on dissipative coupling synchronization and noise impact analysis
..... XING Hong-yan, GONG Ping, XU Wei(1182)
- Self-adaptive Monte Carlo localization algorithm of mobile nodes in WSN
..... LI Jian-po, SHI Ming, ZHONG Xin-xin(1191)
- Quick extracting of marking cross points and accurate locating algorithm by single-point-mode matching
..... LI Xue-jun, YANG Sheng, LI Zhen-ju, et al. (1197)
- Image fusion method based on visual saliency maps
..... WANG Xiao-wen, ZHAO Zong-gui, PANG Xiu-mei, et al. (1203)
- Non-uniform information acquisition and reconstruction within compressed sensing framework
..... TIAN Wen-biao, RUI Guo-sheng, ZHANG Hai-bo, et al. (1209)
- Multi-scale method of urban tree canopy clustering recognition in high-resolution images
..... CAO Jian-nong, GUO Jia, WANG Bei, et al. (1215)

- ☆ 中文综合性科学技术类核心期刊
- ☆ 中国科技核心期刊
- ★ 美国《工程索引》(EI Compendex)收录期刊
- ★ 美国《化学文摘》(CA)收录期刊
- ★ 俄罗斯《文摘杂志》(AJ)收录期刊
- ★ 美国《剑桥科学文摘》(CSA)收录期刊
- ☆ 中国科学引文数据库(CSCD)统计源期刊
- ☆ 中国知网收录期刊
- ☆ 中国科技论文在线收录期刊
- ☆ 《中国学术期刊文摘》等国内十多种文摘收录期刊

吉林大学学报(工学版)

Jilin Daxue Xuebao(Gongxue Ban)

双月刊 1957年创刊

第44卷第4期(总第174期) 2014年7月

Journal of Jilin University

(Engineering and Technology Edition)

Bimonthly, Started in 1957

Vol. 44 No. 4 (Sum 174) July 2014

主管单位 中华人民共和国教育部
 主办单位 吉林大学
 主 编 任露泉
 常务副主编 陈永杰
 编 辑 吉林大学学报(工学版)编辑部
 (长春市人民大街5988号130022)
 电话:0431-85095297
 传真:0431-85094074
 E-mail: xbgxb@jlu.edu.cn
 http://xuebao.jlu.edu.cn/gxb
 出 版 吉林大学出版社
 印 刷 长春市赛德印业有限公司
 国内总发行 长春市报刊发行局
 国内订购处 全国各地邮局
 国外总发行 中国国际图书贸易总公司
 (北京399信箱,100044)

Responsible Institution Ministry of Education, the
 People's Republic of China
 Sponsored by Jilin University
 Editor-in-Chief Ren Lu-quan
 Standing Associate Chief Editor Chen Yong-jie
 Edited by Editorial Board of Journal of Jilin
 University (Engineering and Technology Edition)
 (5988 Renmin Street, Changchun 130022, China)
 Tel: 86-431-85095297
 Fax: 86-431-85094074
 E-mail: xbgxb@jlu.edu.cn
 http://xuebao.jlu.edu.cn/gxb
 Published by Jilin University Press
 Printed by Changchun Saide Printing Co., Ltd.
 Distributed Abroad by China International Book
 Trading Corporation
 (P. O. Box 399, Beijing 100044, China)
 International Subscription Code BM4549

中国标准连续出版物号 ISSN 1671-5497
 CN 22-1341/T

发行代号 国内 12-46
 国际 BM4549

国内定价 26.00元/期
 156.00元/年