

美国《工程索引》(EI Compendex)刊源

ISSN 1671-5497

CODEN JDXGAH

吉林大學

学报

工学版

Journal of Jilin University
Engineering and Technology Edition



9 771671 549150

4

2015

第45卷 第4期

Vol.45 No.4

中国·长春

Changchun, China

万方数据

吉林大学学报(工学版)

第 45 卷 第 4 期

2015 年 7 月

目 次

基于制动感觉的制动能量回收系统的设计与匹配·····	初 亮, 杨 毅, 张世桐, 等	(1029)
基于路面识别的汽车驱动力模糊滑模控制·····	赵 健, 张 进, 朱 冰	(1036)
基于灵敏度分析的 EPS 转向性能试验客观评价指标 ·····	张泽星, 陈国迎, 宗长富	(1043)
电液复合制动系统踏板感觉及其影响因素·····	刘 杨, 孙泽昌, 冀文斌	(1049)
永磁式缓速器的制动力矩分级结构设计·····	何 仁, 王 晶, 胡东海	(1056)
基于物元模型的高速轨道车辆传动系可靠性评价·····	刘玉梅, 赵聪聪, 熊明烨, 等	(1063)
基于 FE-SEA 混合法研究高速列车静音地板的隔声性能 ·····	郝志勇, 丁政印, 孙 强	(1069)
基于向量误差修正模型的短时交通参数预测·····	邴其春, 杨兆升, 周熙阳, 等	(1076)
协调控制交叉口短车道长度和配时参数协同优化·····	姚荣涵, 彭 程, 周红媚	(1082)
多源数据条件下信号交叉口排队长度估算方法·····	王忠宇, 蔡 青, 吴 兵, 等	(1088)
驾驶人分心时长对车道偏离影响的实车试验·····	马 勇, 石涌泉, 付 锐, 等	(1095)
应力对混凝土中氯离子渗透性的影响·····	王 涛, 裴存栋, 韩万水, 等	(1102)
隔板式钢-混凝土曲线组合梁弯扭性能 ·····	张彦玲, 孙 瞳, 侯忠明, 等	(1107)
N ₂ 和 CO ₂ 稀释对天然气发动机燃烧和 NO _x 排放的影响 ·····	李伟峰, 刘忠长, 王忠恕, 等	(1115)
轮式装载机液压系统的散热器匹配及仿真·····	张钦国, 秦四成, 马润达, 等	(1124)
滚柱叶片式双定子多速马达的原理与实验验证·····	闻德生, 刘巧燕, 刘忠迅, 等	(1130)
串联式混合动力推土机节能率的解析分析·····	张宝迪, 张 欣, 席利贺, 等	(1139)
车辆综合传动装置交互装配技术·····	刘 飞, 闫清东, 姚寿文, 等	(1148)
Y 型微混合器结构与工作参数在两相脉动混合中的优化·····	刘国君, 赵 天, 王聪慧, 等	(1155)
压电悬臂梁多模态发电装置的仿真与试验·····	吴 越, 杨志刚, 陈 龙, 等	(1162)
被动箝位大行程直线压电驱动器的设计·····	曲建俊, 郭文峰, 李 将, 等	(1168)
新型人字齿同步带传动干涉与啮合仿真分析·····	郭建华, 姜洪源, 胡清明, 等	(1175)
考虑信号特点的合成量子启发结构元素·····	张培林, 陈彦龙, 王怀光, 等	(1181)
防撞梁热冲压模具冷却系统的数值分析及优化·····	谷净巍, 陆冠含, 李 欣, 等	(1189)
高强度硼钢淬火界面热交换系数的实验与模拟·····	张志强, 贾晓飞, 赵 勇, 等	(1195)
固溶态 Mg-Gd-Y-Nd 合金强流脉冲电子束表面改性 ·····	关庆丰, 李 艳, 侯秀丽, 等	(1200)
基于损伤-相变本构模型的高强钢热成形数值模拟分析 ·····	庄蔚敏, 解东旋, 余天明, 等	(1206)
产品规划中顾客需求分析的集成方法·····	吕 锋, 杨印生, 汤 晋	(1213)

基于分数阶 $PI^{\lambda}D^{\alpha}$ 的橡胶坝充排水恒流控制	单泽彪, 石要武, 单泽涛, 等	(1219)
高效无线射频识别自适应型跟踪树防碰撞算法	王鑫, 贾庆轩, 高欣, 等	(1225)
基于超导储能系统的不对称电压跌落补偿方法	包广清, 毛振鹏	(1234)
一种基于 LDA 的 k 话题增量训练算法	辛宇, 杨静, 谢志强	(1242)
药物分子对接动态任务迁移优化	董悦丽, 郭权, 孙斌, 等	(1253)
基于频繁闭合序列模式挖掘的学生程序雷同检测	王克朝, 王甜甜, 苏小红, 等	(1260)
大型正交多幕投影系统光辐射补偿算法	韩成, 张超, 秦贵和, 等	(1266)
基于光谱融合的掌纹精细纹路提取	康冰, 刘富, 魏祺桦	(1274)
多相流数值模拟中复杂地质体网格剖分实现技术	杨艳林, 靖晶, 杨志杰, 等	(1281)
船载折反射全景视觉系统电子稳像算法	朱齐丹, 徐从营, 蔡成涛	(1288)
基于随机共振和 MIMO 技术的协方差矩阵频谱感知算法	赵晓晖, 李晓燕	(1297)
基于 Markov 链的车载自组网 MAC 层建模及分析	孙伟, 张和生, 潘成, 等	(1304)
基于质心参照拓扑的灰色航迹抗差关联算法	董凯, 刘瑜, 王海鹏	(1311)
基于双权重聚合的立体匹配算法	何凯, 朱程涛, 姚静娴	(1318)
基于随机置乱的内容感知图像缩放算法	赵旦峰, 王博, 杨大伟	(1324)
基于欠定盲源分离的电磁干扰分离方法	郭慧, 付永庆, 苏东林, 等	(1329)
基于四维四元数频域的彩色图像双重水印算法	王定成, 田翠翠, 陈北京, 等	(1336)
基于信号子空间的激光主动成像散斑去除	王灿进, 孙涛, 王挺峰, 等	(1347)
基于 MSA 特征和模拟退火优化的遥感图像多目标关联算法		
.....	李晖晖, 滑立, 杨宁, 等	(1353)
结合噪声去除的极大似然图像复原	姜超, 耿则勋, 刘立勇, 等	(1360)
仿骨 β 相磷酸三钙多孔生物陶瓷制备及降解	马云海, 尚文博, 范雪莹, 等	(1367)
操作压力对过热蒸汽流化床干燥的影响	肖志锋, 乐建波, 吴南星, 等	(1375)

Journal of Jilin University (Engineering and Technology Edition)

Vol. 45 No. 4

July 2015

Contents

- Design and match of regenerative braking system based on braking feeling
..... CHU Liang, YANG Yi, ZHANG Shi-tong, et al. (1029)
- Fuzzy sliding mode traction control based on road friction coefficient estimation
..... ZHAO Jian, ZHANG Jin, ZHU Bing (1036)
- Objective evaluation indices of steering performance for EPS based on sensitivity analysis
..... ZHANG Ze-xing, CHEN Guo-ying, ZONG Chang-fu (1043)
- Brake pedal feeling and its influencing factors for electro-hydraulic brake system
..... LIU Yang, SUN Ze-chang, JI Wen-bin (1049)
- Design of braking torque graded structures of permanent magnet retarder
..... HE Ren, WANG Jing, HU Dong-hai (1056)
- Reliability assessment of high-speed railway drivetrain based on matter-element model
..... LIU Yu-mei, ZHAO Cong-cong, XIONG Ming-ye, et al. (1063)
- Sound insulation performance of the silent floor of high-speed train based on FE-SEA hybrid method
..... HAO Zhi-yong, DING Zheng-yin, SUN Qiang (1069)
- Short-term traffic parameters prediction method based on vector error correction model
..... BING Qi-chun, YANG Zhao-sheng, ZHOU Xi-yang, et al. (1076)
- Synergistic optimization of short lane length and signal timing parameters for adjacent intersections with coordinated signals
..... YAO Rong-han, PENG Cheng, ZHOU Hong-mei (1082)
- Queue length estimation for signalized intersections based on multi-source data
..... WANG Zhong-yu, CAI Qing, WU Bing, et al. (1088)
- Impact of driver's distracted driving time on vehicle lane departure
..... MA Yong, SHI Yong-quan, FU Rui, et al. (1095)
- Influence of stress on chloride permeability in concrete
..... WANG Tao, PEI Cun-dong, HAN Wan-shui, et al. (1102)
- Bending-torsion characteristics of steel-concrete curved composite beams stiffened with diaphragms
..... ZHANG Yan-ling, SUN Tong, HOU Zhong-ming, et al. (1107)
- Effects of N₂ and CO₂ dilution on the combustion and NO_x emissions of natural gas engines
..... LI Wei-feng, LIU Zhong-chang, WANG Zhong-shu, et al. (1115)
- Match and simulation analysis of hydraulic system radiator of wheel loader
..... ZHANG Qin-guo, QIN Si-cheng, MA Run-da, et al. (1124)
- Principle and experiment validation of roller tip-vane type double-stator multi-speed motor
..... WEN De-sheng, LIU Qiao-yan, LIU Zhong-xun, et al. (1130)
- Analysis of energy saving ratio in series hybrid electric bulldozer
..... ZHANG Bao-di, ZHANG Xin, XI Li-he, et al. (1139)
- Interactive assembly technology for vehicle integrated transmission
..... LIU Fei, YAN Qing-dong, YAO Shou-wen, et al. (1148)
- Optimization of structure and working parameters of Y type micro-mixer in two-phase pulsating mixing
..... LIU Guo-jun, ZHAO Tian, WANG Cong-hui, et al. (1155)
- Simulation and experiment of piezoelectric cantilever generator with multi-modal
..... WU Yue, YANG Zhi-gang, CHEN Long, et al. (1162)
- Design of an inverse clamping piezoelectric inchworm motor with linear long distance
..... QU Jian-jun, GUO Wen-feng, LI Jiang, et al. (1168)
- Transmission interference and meshing simulation of double helical synchronous belt
..... GUO Jian-hua, JIANG Hong-yuan, HU Qing-ming, et al. (1175)

Compound quantum-inspired structuring element considering signal characteristics
..... ZHANG Pei-lin, CHEN Yan-long, WANG Huai-guang, et al. (1181)

Numerical analysis and optimization of cooling system of anti-collision beam hot stamping die
..... GU Zheng-wei, LU Guan-han, LI Xin, et al. (1189)

Experiment and simulation on quenching interface heat transfer coefficient of high-strength boron steel
..... ZHANG Zhi-qiang, JIA Xiao-fei, ZHAO Yong, et al. (1195)

Modification of solid solution Mg-Gd-Y-Nd alloy irradiated by high current pulsed electron beam
..... GUAN Qing-feng, LI Yan, HOU Xiu-li, et al. (1200)

Numerical simulation of hot forming of high-strength steel based on damage-phase transformation constitutive model
..... ZHUANG Wei-min, XIE Dong-xuan, YU Tian-ming, et al. (1206)

Integration method for customer requirement analysis in product planning
..... LYU Feng, YANG Yin-sheng, TANG Jin (1213)

Constant current control of water filling and drainage system for rubber dam using fractional order PID^α
..... SHAN Ze-biao, SHI Yao-wu, SHAN Ze-tao, et al. (1219)

Highly efficient RFID adaptive tracking tree anti-collision algorithm
..... WANG Xin, JIA Qing-xuan, GAO Xin, et al. (1225)

Superconducting magnetic energy storage based dynamic voltage restoration strategy for unbalanced voltage sags
..... BAO Guang-qing, MAO Zhen-peng (1234)

K-topic increment training algorithm based on LDA XIN Yu, YANG Jing, XIE Zhi-qiang (1242)

Dynamic task migration optimization for molecule docking DONG Yue-li, GUO Quan, SUN Bin, et al. (1253)

Plagiarism detection in student programs based on frequent closed sequence mining
..... WANG Ke-chao, WANG Tian-tian, SU Xiao-hong, et al. (1260)

An algorithm of optical radiometric compensation for projective system of large-scale orthogonal multi-screens
..... HAN Cheng, ZHANG Chao, QIN Gui-he, et al. (1266)

Palmpoint fine line feature extraction based on spectral fusion KANG Bing, LIU Fu, WEI Qi-wei (1274)

Grid subdivision technology for multiphase flow simulation with complex geological condition
..... YANG Yan-lin, JING Jing, YANG Zhi-jie, et al. (1281)

Electronic image stabilization algorithm for on board catadioptric omnidirectional vision system
..... ZHU Qi-dan, XU Cong-ying, CAI Cheng-tao (1288)

Covariance matrix spectrum sensing algorithm based on stochastic resonance and MIMO technology
..... ZHAO Xiao-hui, LI Xiao-yan (1297)

Modeling and analysis of the MAC layer of VANETs based on Markov chain
..... SUN Wei, ZHANG He-sheng, PAN Cheng, et al. (1304)

Grey track anti-bias association algorithm based on centroid topology of reference
..... DONG Kai, LIU Yu, WANG Hai-peng (1311)

Stereo matching algorithm based on double weighting aggregation
..... HE Kai, ZHU Cheng-tao, YAO Jing-xian (1318)

Content-aware image resizing based on random permutation ZHAO Dan-feng, WANG Bo, YANG Da-wei (1324)

Method to separate electromagnetic interference sources based on underdetermined blind sources separation
..... GUO Hui, FU Yong-qing, SU Dong-lin, et al. (1329)

Dual watermarking for color images based on 4D quaternion frequency domain
..... WANG Ding-cheng, TIAN Cui-cui, CHEN Bei-jing, et al. (1336)

Speckle noise suppression method for laser active imaging based on signal subspace
..... WANG Can-jin, SUN Tao, WANG Ting-feng, et al. (1347)

Multi-target association algorithm for remote sensing images based on MSA features and simulated annealing optimization
..... LI Hui-hui, HUA Li, YANG Ning, et al. (1353)

Maximum likelihood image restoration combined with image denoising
..... JIANG Chao, GENG Ze-xun, LIU Li-yong, et al. (1360)

Preparation and degradation of porous β -tricalcium phosphate bioceramic for bone imitaion
..... MA Yun-hai, SHANG Wen-bo, FAN Xue-ying, et al. (1367)

Effect of operation pressure on superheated steam fluidized bed drying
..... XIAO Zhi-feng, LE Jian-bo, WU Nan-xing, et al. (1375)

- ☆ 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 45 卷 第 4 期(总第 180 期) 2015 年 7 月

Journal of Jilin University

(Engineering and Technology Edition)

Bimonthly, Started in 1957

Vol. 45 No. 4 (Sum 180) July 2015

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