



美国《工程索引》( EI Compendex ) 收录期刊

ISSN 1007-449X

# 电机与控制学报

## ELECTRIC MACHINES AND CONTROL

第17卷 第8期 Vol.17 No.8

ISSN 1007-449X



08>

9 771007 449130

万方数据

2013 8

哈尔滨理工大学 主办

# 电机与控制学报

第 17 卷 第 8 期 (总第 106 期) 2013 年 8 月

## 目 次

### 分数槽集中绕组无铁心永磁直线同步电机推力分析

..... 唐勇斌, 李立毅, 刘家曦, 潘东华 (1)

### 直线电机分段供电故障诊断研究

..... 崔小鹏, 王公宝, 马伟明, 饶 金 (9)

### NPC 光伏并网逆变器共模电流抑制方法研究

..... 张勤进, 刘彦呈, 王 川 (15)

### 高速电气化铁路负序和諧波统一治理方法

..... 张志文, 黄际元, 罗隆福, 常 敏, 李欣然 (22)

### 基于支持过程向量机的航空发动机排气温度预测

..... 于广滨, 丁 刚, 姚 威, 黄 龙 (30)

### 电动汽车用永磁同步电机振动噪声的计算与分析

..... 李晓华, 黄苏融, 李良梓 (37)

### 三相 PWM 变换器相位补偿谐振控制策略

..... 杨云虎, 章家岩 (43)

### 动态负载 ICPT 系统稳频稳压特性研究

..... 夏晨阳, 贾 娜, 庄裕海, 左 兰, 孙 跃 (50)

### 高频并联谐振直流环节软开关逆变器

..... 王 强, 王天施, 刘晓琴, 黄 超, 黄 越 (57)

### 基于多截面场路耦合法的大型水轮发电机定子线棒换位分析

..... 梁艳萍, 吴 磊, 边 旭 (63)

### 基于摩擦模糊建模与补偿的机器人低速控制

..... 吴文祥, 朱世强, 王宣银, 刘华山 (70)

### 基于 $\Delta\Sigma$ 调制原理的全数字轴角变换算法

..... 周长攀, 杨贵杰, 苏健勇, 刘 剑 (78)

### 基于再置控制的船舶减摇系统

..... 刘彦文, 许保同, 王广雄 (85)

### FPGA 软硬件编程方法的模块化关节控制器设计

..... 张 奇, 谢宗武, 刘 宏, 蔡鹤皋 (91)

### 基于 FRFT-KPCA 的模拟电路非线性故障特征提取

..... 孙靖杰, 赵建军, 王汉昌, 乔凤兰 (100)

### 伺服系统的摩擦补偿

..... 王 毅, 何 朕 (107)

### 带有前馈和神经网络补偿的机械手系统轨迹跟踪控制

..... 王良勇, 杨 泉 (113)

---

期刊基本参数: CN 23-1408/TM\*1997\*m\*A4\*120\*zh\*P\*¥15.00\*2000\*17\*2013-08\*n

责任编辑: 于智龙      英文审校: 姜桂锋

# ELECTRIC MACHINES AND CONTROL

Vol. 17 No. 8 Agu. 2013

## CONTENTS

- Thrust analysis of air-core permanent magnet linear synchronous motors with fractional slot concentrated windings ..... TANG Yong-bin, LI Li-ji, LIU Jia-xi, PAN Dong-hua (1)
- Research on fault diagnosis of segment-powered linear induction motor ..... CUI Xiao-peng, WANG Gong-bao, MA Wei-ming, RAO Jin (9)
- Study of leakage current suppression method based on NPC photovoltaic grid-connected inverter ..... ZHANG Qin-jin, LIU Yan-cheng, WANG Chuan (15)
- Unified negative sequence and harmonic suppression control method for high-speed electric railway ..... ZHANG Zhi-wen, HUANG Ji-yuan, LUO Long-fu, CHANG Min, LI Xin-ran (22)
- Aeroengine exhaust gas temperature prediction using support process vector machine ..... YU Guang-bin, DING Gang, YAO Wei, HUANG Long (30)
- Calculation and analysis of vehicle vibration and noise of permanent magnet synchronous motor applied in electric vehicle ..... LI Xiao-hua, HUANG Su-rong, LI Liang-zi (37)
- Phase compensation resonant control strategy for three-phase PWM converters ..... YANG Yun-hu, ZHANG Jia-yan (43)
- Research on stable frequency stable voltage character of ICPT system with dynamic load ..... XIA Chen-ying, JIA Na, ZHUANG Yu-hai, ZUO Lan, SUN Yue (50)
- High frequency parallel resonant DC link soft-switching inverter ..... WANG Qiang, WANG Tian-shi, LIU Xiao-qin, HUANG Chao, HUANG Yue (57)
- Stator bars transposition analysis of large hydro-generator based on multi-section method coupled field-circuit ..... LIANG Yan-ping, WU Lei, BIAN Xu (63)
- Slow motion control of serial robots with friction compensation based on fuzzy logic system ..... WU Wen-xiang, ZHU Shi-qiang, WANG Xuan-yin, LIU Hua-shan (70)
- All-digital resolver-digital converter algorithm based on principle of  $\Delta\Sigma$  modulation ..... ZHOU Chang-pan, YANG Gui-jie, SU Jian-yong, LIU Jian (78)
- Ship roll reduction system based on reset control ..... LIU Yan-wen, XU Bao-tong, WANG Guang-xiong (85)
- Design of modular joint controller based on FPGA with software/hardware co-design methods ..... ZHANG Qi, XIE Zong-wu, LIU Hong, CAI He-gao (91)
- Nonlinear fault features extraction for analog circuit based on FRFT-KPCA ..... SUN Jing-jie, ZHAO Jian-jun, WANG Han-chang, QIAO Feng-lan (100)
- Friction compensation for servo systems ..... WANG Yi, HE Zhen (107)
- Trajectory tracking control for robotic manipulators endowed with feedforward and neural networks ..... WANG Liang-yong, YANG Xiao (113)

---

Serial parameters: CN 23-1408/TM\*1997\*m\*A4\*120\*zh\*P\*¥15.00\*2000\*17\*2013-08\*n

Responsible Editor: YU Zhi-long English Examiner: JIANG Yu-feng