

光学精密工程

Guangxue Jingmi Gongcheng

第 19 卷 第 8 期 2011 年 8 月

目 次

· 现代应用光学 ·

13.5 nm Schwarzschild 显微镜系统及成像实验

..... 王 新,穆宝忠,黄 怡,朱京涛,王占山,贺鹏飞(1709)

基于 FPGA 的自适应光学系统波前处理机 贾建禄,王建立,赵金宇,王鸣浩,曹景太(1716)

机载激光对埋地管道的自主定位..... 刘海芳,王 瑞,钟诗胜,刘克强(1723)

甚高精度星模拟器设计 孙高飞,张国玉,姜会林,郝云彩,高玉军(1730)

凸面光栅成像光谱仪的干涉法装调..... 刘玉娟,巴音贺希格,崔继承,唐玉国(1736)

全反射式无焦 ZH 系统的装调 何红星,赵劲松,潘顺臣(1743)

RB-SiC 反射镜的材料制备、表面改性及非球面加工 闫 勇,金 光(1750)

两路脉冲固体激光器的相干合成

..... 卢常勇,李 莉,刘 旭,朱孟真,米朝伟,刘 洋,黎 伟,张广远(1757)

离轴抛物镜检测中调整误差对波前畸变的影响..... 李俊峰,宋淑梅(1763)

· 微纳技术与精密机械 ·

悬臂梁式压电振动能采集器的建模及实验验证 贺学锋,杜志刚,赵兴强,温志渝,印显方(1771)

用单站光电雷达一体化系统测量目标三维姿态..... 王小明,乔彦峰,宋立维,王守印(1779)

基于机器人的柔性电子检具测量系统 郝继贵,郭 磊,刘常杰,林嘉睿,叶声华(1787)

应用地球椭球的三线阵立体测绘相机像移补偿..... 武星星,刘金国(1794)

振动模态对压电发电机陶瓷片粘贴位置的影响 刘树林,许小勇,翟宇毅,刘彦峰,李余珍(1801)

球面旋涂光刻胶工艺..... 刘小涵,冯晓国,赵晶丽,高劲松,张红胜,程志峰(1810)

多台阶平板静电驱动的高占空比微镜阵列的研制 李四华,徐 静,龙 亮,钟少龙,吴亚明(1816)

轻型空间相机调焦机构的优化设计与精度试验

..... 贾学志,王 栋,张 雷,安 源,姚劲松,金 光(1824)

复合薄膜磁致伸缩系数求解及悬臂梁结构优化·····	王福吉, 贾振元, 刘巍, 赵显嵩(1832)
基于 Paden-Kahan 子问题求解滚仰式导引头角增量·····	朱明超, 贾宏光(1838)
非正交二维 MEMS 倾斜镜的研制·····	庄须叶, 汪为民, 陶逢刚, 姚军, 高福华(1845)
基于 PDMS 和玻璃材料的毛细管被动阀临界压力分析·····	杜新, 张平, 刘永顺, 吴一辉(1852)
柔性变栅距光栅角位移传感器的精度分析与工艺实现 ·····	包艳, 杨德兴, 李秉实, 王东辉, 郑普超(1859)
数字磁罗盘的全姿态罗差补偿·····	刘仁浩, 王华(1867)
精确约束二自由度微动角位移机构设计·····	王大志, 何凯, 杜如虚(1874)
反射镜组件模态分析的误差评价·····	董得义, 张学军(1883)
· 信息科学 ·	
双机器人系统的快速手眼标定方法·····	魏振忠, 张博, 张广军(1895)
CCD 视觉检测系统的整体标定·····	唐启敬, 田行斌, 耿明超, 周游, 赵铁石(1903)
实时手指交互系统的嵌入式实现·····	向守兵, 苏光大, 任小龙, 吉倩倩, 方飞(1911)
参数自适应的亮度稳健特征提取变换·····	陈敏, 邵振峰(1921)
谱域 OCT 成像系统在口腔组织检测中的应用 ·····	彭诚, 张芹芹, 吴晓静, 朱思伟, 高志, 袁小聪(1931)
光转换单元中锁相环带宽的优化·····	袁建国, 李好, 何清萍(1937)
提高光栅莫尔条纹信号质量的滤波方法·····	吴宏圣, 曾琪峰, 乔栋, 郭帮辉(1944)
采用多尺度隐式马尔可夫模型的红外图像背景抑制·····	秦翰林, 周慧鑫, 刘群昌, 赖睿(1950)
回转体形貌测量中的相机自标定·····	李雅倩, 林洪彬(1957)
高精度实时全帧频 SURF 电子稳像方法·····	张坤, 许廷发, 王平, 冯亮(1964)
运动成像混合模糊的全变分图像复原·····	石明珠, 许廷发, 张坤(1973)
运动模糊退化图像的双字典稀疏复原·····	冯亮, 王平, 许廷发, 石明珠, 赵峰(1982)

Optics and Precision Engineering

Vol. 19 No. 8 Aug. 2011

Contents

Modern Applied Optics

- 13.5 nm Schwarzschild microscope and imaging experiment
..... WANG *Xin*, MU *Bao-zhong*, HUANG *Yi*, ZHU *Jing-tao*, WANG *Zhan-shan*, He *Peng-fei* (1709)
- Adaptive optical wave-front processor based on FPGA
..... JIA *Jian-lu*, WANG *Jian-li*, ZHAO *Jin-yu*, WANG *Ming-hao*, Cao *jin-tai* (1716)
- Helicopter-borne laser autonomous positioning of buried pipeline
..... LIU *Hai-fang*, WANG *Rui*, ZHONG *Shi-sheng*, LIU *Ke-qiang* (1723)
- Design of very high accuracy star simulator
..... SUN *Gao-fei*, ZHANG *Guo-yu*, JIANG *Hui-lin*, HAO *Yun-cai*, GAO *Yu-jun* (1730)
- Interferometric alignment of imaging spectrometers with convex gratings
..... LIU *Yu-juan*, Bayanheshig, CUI *Ji-cheng*, TANG *Yu-guo* (1736)
- Optical alignment of all-reflective afocal ZH optical system
..... HE *Hong-xing*, ZHAO *Jin-song*, PAN *Shun-chen* (1743)
- Material preparation, surface modification and aspheric processing of RB-SiC mirrors
..... YAN *Yong*, JIN *Guang* (1750)
- Coherent combining of two pulsed solid state lasers
..... LU *Chang-yong*, LI *Li*, LIU *Xu*, ZHU *Meng-zhen*, MI *Chao-wei*, LIU *Yang*, LI *Wei*, ZHANG *Guang-yuan* (1757)
- Influence of adjustment error on wavefront aberration in off-axis paraboloid test
..... LI *Jun-feng*, SONG *Shu-mei* (1763)

Micro/Nano Technology and Fine Mechanics

- Modeling and experimental verification for cantilevered piezoelectric vibration energy harvester
..... HE *Xue-feng*, DU *Zhi-gang*, ZHAO *Xing-qiang*, WEN *Zhi-yu*, YIN *Xian-fang* (1771)
- Measurement of three-dimensional attitude by single opto-electrical and radar integration instrument
..... WANG *Xiao-ming*, QIAO *Yan-feng*, SONG *Li-wei*, WANG *Shou-yin* (1779)
- Measurement system of flexible electronic checking fixture on robot
..... ZHU *Ji-gui*, GUO *Lei*, LIU *Chang-jie*, LIN *Jia-rui*, YE *Sheng-hua* (1787)
- Image motion compensation of three-line stereo mapping camera using earth ellipsoid
..... WU *Xing-xing*, LIU *Jin-guo* (1794)
- Effect of vibration modes on positions of piezoelectric ceramic patches for cantilever generators
..... LIU *Shu-lin*, XU *Xiao-yong*, Zhai *Yu-yi*, LIU *yan-feng*, LI *yu-zhen* (1801)
- Process of spherical photoresist spin coating
..... LIU *Xiao-han*, FENG *Xiao-guo*, ZHAO *Jing-li*, GAO *Jin-song*, ZHANG *Hong-sheng*, CHENG *Zhi-feng* (1810)

Fabrication of high fill-factor micro-mirror array with multi-terraced-plate structure
 *LI Si-hua, XU Jing, LONG Liang, ZHONG Shao-long, WU Ya-ming* (1816)

Optimizing design and precision experiment of focusing mechanism in lightweight space camera
 *JIA Xue-zhi, WANG Dong, ZHANG Lei, AN Yuan, YAO Jin-song, JIN Guang* (1824)

Calculation of magnetostrictive coefficient of composite thin film and structure optimization of cantilever
 *WANG Fu-ji, JIA Zhen-yuan, LIU Wei, ZHAO Xian-song* (1832)

Solution of angle increments for roll-pitch seekers based on Paden-Kahan sub-problems
 *ZHU Ming-chao, JIA Hong-guang* (1838)

Development of non-perpendicular 2D MEMS tilt mirrors
 *ZHUANG Xu-ye, WANG Wei-min, TAO Feng-gang, YAO Jun, GAO Fuhua* (1845)

Burst pressure of capillary burst valve based on glass and PDMS
 *DU Xin, ZHANG Ping, LIU Yong-shun, WU Yi-hui* (1852)

Precision analysis and process implementation of angular displacement sensor based on flexible varied line-space
 grating *BAO Yan, YANG De-xing, LI Bing-shi, WANG Dong-hui, ZHENG Pu-chao* (1859)

All attitude magnetic deviation compensation for digital magnetic compass *LIU Ren-hao, WANG Hua* (1867)

Design of exact constraint micro-motion angle displacement mechanism with two degrees of freedom
 *WANG Da-zhi, HE Kai, DU Ru-xu* (1874)

Error valuation for mode analysis of reflective mirror set *DONG De-yi, ZHANG Xue-jun* (1883)

Information Sciences

Rapid hand-eye calibration of dual robot system *WEI Zhen-zhong, ZHANG Bo, ZHANG Guang-jun* (1895)

Global calibration method for CCD based visual inspective system
 *TANG Qi-jing, TIAN Xing-bin, GENG Ming-chao, ZHOU You, ZHAO Tie-shi* (1903)

Embedded implementation of real-time finger interaction system
 *XIANG Shou-bing, SU Guang-da, REN Xiao-long, JI Qian-qian, FANG Fei* (1911)

Parameter adaptive illumination robust feature extraction transform *CHEN Min, SHAO Zhen-feng* (1921)

Application of spectral domain optical coherence tomography to oral cavity tissue test
 *PENG Cheng, ZHANG Qin-qin, WU Xiao-jing, ZHU Si-wei, GAO Zhi, YUAN Xiao-cong* (1931)

Optimization of bandwidth for phase-locked loop in OTU *YUAN Jian-guo, LI Hao, He Qing-ping* (1937)

Filtering method of improving quality of grating Moiré fringe
 *WU Hong-sheng, ZENG Qi-feng, QIAO Dong, GUO Bang-hui* (1944)

Suppression of infrared image background by multiscale hidden Markov model
 *QIN Han-lin, ZHOU Hui-xin, LIU Qun-chang, LAI Rui* (1950)

Camera calibration in morphology measurement of axisymmetric body *LI Ya-qian, LIN Hong-bin* (1957)

Real-time full-frame digital image stabilization system by SURF
 *ZHANG Kun, XU Ting-fa, WANG Ping, FENG Liang* (1965)

Total variation image restoration for mixed blur in moving image
 *SHI Ming-zhu, XU Ting-fa, ZHANG Kun* (1973)

Dual dictionary sparse restoration of blurred images
 *FENG Liang, WANG Ping, XU Ting-fa, SHI Ming-zhu, ZHAO Feng* (1982)