

2012

第 6 期

Vol. 33 No. 6

第33卷 第6期

# Journal of Graphics

# 图 学 学 报



中国图学学会会刊  
中国中文核心期刊  
全国科技论文统计用刊

## 目 次

### 图形学与可视化

- 正轴测投影反求建模研究-----林大钧 (1)  
一种基于点集自适应分组构建Voronoi图的并行算法

- 王结臣, 蒲英霞, 崔 瑞, 陈 刚, 马劲松 (7)  
基于适应性相关测试和点斜式查表求交的圆形窗口快速裁剪方法-----路 通, 苏 丰, 杨若瑜 (14)

- 基于曲率的GPU光线投射-----袁 斌 (24)

### 几何设计与计算

- 曲面片的可展切曲面及其映射分析-----毛 昕, 杨静林, 马明旭 (31)  
矩形布局问题吸引子法的研究-----王金敏, 齐 杨 (38)  
格网划分的双策略跟踪多边形裁剪算法-----汪荣峰, 廖学军 (45)  
有效的混合圆弧扫描转换算法-----张胜男, 牛连强, 陈 欣 (50)  
基于弧长参数化的曲面W-M分形插值-----刘远东, 王清辉, 刘 林, 熊 巍 (59)

### 数字化设计

- 单锚腿系泊系统参数化设计的研究-----陈锦昌, 邓华东 (65)  
基于复杂网络理论的产品结构模块划分方法-----杨格兰 (69)  
基于梯度有限元的异质材料实体优化设计-----吴振华, 赵 韩, 董玉德, 柳吉庆 (76)

### 交互技术与虚拟现实

- 基于虚拟样机技术的电梯动态设计与优化-----刘 文, 刘艳斌, 张 星 (82)  
数控管切割机三维仿真加工若干问题的研究-----任清川, 何赛松, 徐 雷 (88)  
基于VRML的空间并联机器人运动仿真优化-----贾庆浩, 李啸隽, 刘 林 (93)

### 视觉与图像

- 基于笔法模型的国画一笔多色模拟-----邓学雄, 李 牧, 章 文, 王皖卿 (98)  
基于模糊理论决策的双向二维PCA步态识别算法-----陈祥涛, 张前进, 张双玲 (103)  
多彩色空间相关分析的人脸识别算法-----朱 杰, 陈长伟, 杨万扣, 唐振民 (110)

### 图学教育

- 工程图学计算机辅助教学实践与思考-----王建华, 郝育新, 刘令涛 (116)  
工程图学课程的自主性学习-----王志忠 (121)  
“3D机械制图”教学中提高学生读图能力的实践与思考-----续 丹 (124)

### 应用与交流

- 基于齿轮动态激励和弹流润滑的多目标优化-----钱学毅, 吴 双 (130)  
一种基于CAD的翼类曲面误差检测方法-----刘子路, 张 倒, 郑国磊 (136)  
以理想角度作两点透视图的一种简画法-----邱 冰, 张 帆 (140)  
基于模型的工艺信息标识方法研究-----张祥祥, 陈兴玉, 程五四, 张红旗, 曾祥宇 (146)  
《图学学报》2012年(第33卷)总目次----- (151)

# JOURNAL OF GRAPHICS

Vol.33 No.6 (Sum 106) December 2012

## CONTENTS

### Graphics and Visualization

- Research on converse construction of axonometric projection model-----Lin Dajun (1)  
A parallel algorithm for generating Voronoi diagrams based on point-set adaptive grouping  
----- Wang Jiechen, Pu Yingxia, Cui Can, Chen Gang, Ma Jinsong (7)  
A fast line clipping algorithm against circular windows based on adaptive identification  
and table-based intersections retrieval-----Lu Tong, Su Feng, Yang Ruoyu (14)  
GPU Raycasting based on curvature-----Yuan Bin (24)

### Geometric Design and Computing

- The developable tangent curved surface of a surface patch and mapping analysis between them  
----- Mao Xin, Yang Jinglin, Ma Mingxu (31)  
Research on attractive factor approach in rectangular packing problem-----Wang Jinmin, Qi Yang (38)  
Polygon clipping algorithm based on dual-strategies tracing and grid partition  
----- Wang Rongfeng, Liao Xuejun (45)  
Efficient hybrid scan-conversion algorithm for circles drawing  
----- Zhang Shengnan, Niu Lianqiang, Chen Xin (50)  
W-M fractals interpolation with freeform surface based on arc-length parameterization  
----- Liu Yuandong, Wang Qinghui, Liu Lin, Xiong Wei (59)

### Digitized Design

- Research on parametric design of single anchor leg mooring system  
----- Chen Jinchang, Deng Huadong (65)  
Module partition method based on complex network theory----- Yang Gelan (69)  
Optimal design of heterogeneous objects based on graded finite elements  
----- Wu Zhenhua, Zhao Han, DongYude, Liu Jiqing (76)

### Interactive Technology and Virtual Reality

- Dynamic design and optimization of elevator based on virtual prototype technology  
----- Liu Wen, Liu Yanbin, Zhang Xing (82)  
Research on some problems in 3D simulation of CNC pipe cutting machine processing  
----- Ren Qingchuan, He Saisong, Xu Lei (88)  
An operation simulation system for spatial parallel robot based on VRML  
----- Jia Qinghao, Li Xiaojun, Liu Lin (93)

### Vision and Image

- Simulation of brushstroke multi-color in Chinese painting based on technique of writing model  
----- Deng Xuexiong, Li Mu, Zhang Wen, Wang Wanqing (98)  
A gait recognition algorithm using fuzzy theory decision double-directional two-dimensional  
principal component analysis-----Chen Xiangtao, Zhang Qianjin, Zhang Shuangling (103)  
A fast color face recognition algorithm---Zhu Jie, Chen Changwei, Yang Wankou, Tang Zhenmin (110)

### Graphics Education

- The thinking and practice of engineering drawing CAI-----Wang Jianhua, Hao Yuxin, Liu Lingtao (116)  
Talking about self-learning of engineering graphics curriculum-----Wang Zhizhong (121)  
Practice and reflection on enhancing students' ability to interpret blueprints  
in the teaching of "3D mechanical drawing" -----Xu Dan (124)

### Application and Communication

- Multi objective optimization based on dynamic incentives and elastohydrodynamic lubrication of gear  
----- Qian Xueyi, Wu Shuang (130)  
Method of wing surface shape error detection based on CAD---Liu Zilu, Zhang Li, Zheng Guolei (136)  
A simple drawing method for two-point perspective in an ideal angle-----Qiu Bing, Zhang Fan (140)  
Process information identifying method based on model  
----- Zhang Xiangxiang, Chen Xingyu, Cheng Wusi, Zhang Hongqi, Zeng Xiangyu (146)  
JOURNAL OF GRAPHICS 2012 (Vol.33) ----- (155)