

# Pacific Graphics 2009

The 17th Pacific Conference on  
Computer Graphics and Applications

<http://cg.postech.ac.kr/pg2009>

October 7 - 9, 2009  
Jeju, Korea



## Program Overview

	Oct. 7 (Wed)	Oct. 8 (Thu)	Oct. 9 (Fri)
8:15 AM	Registration	Registration	Registration
8:45 AM	Opening Ceremony		
9:00 AM	Invited Talk <i>Steve Marschner</i>	Invited Talk <i>Kwan-Liu Ma</i>	Invited Talk <i>Neil Trevett</i>
10:10 AM	Break	Break	Break
10:25 AM	Paper Session 1 <i>Image-Based Modeling and Rendering</i>	Paper Session 4 <i>Animation</i>	Paper Session 7 <i>Rendering and Appearance Modeling</i>
12:10 PM	Lunch	Lunch	Lunch
1:30 PM	Paper Session 2 <i>Data Structure and Collision Detection</i>	Paper Session 5 <i>Image Editing</i>	Paper Session 8 <i>Abstraction and Design</i>
2:50 PM	Break	Break	Break
3:05 PM	Poster Session 1	Poster Session 2	Paper Session 9 <i>Digital Geometry Processing</i>
4:50 PM	Break	Break	Break
5:05 PM	Paper Session 3 <i>Modeling and Deformation</i>	Paper Session 6 <i>Image Restructuring</i>	Closing Ceremony
7:00 PM	Conference Dinner	Banquet	

• Welcome Reception at 7:00 pm on Tuesday, October 6

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## Invited Talks

### The Continuing Evolution of Reflection and Scattering in Graphics

*Steve Marschner* (Cornell University)

Wednesday, October 7, 9:00 am - 10:10 am

*Session Chair: Sung-Eui Yoon*

### Space for Visualization

*Kwan-Liu Ma* (University of California-Davis)

Thursday, October 8, 9:00 am - 10:10 am

*Session Chair: Yizhou Yu*

### Unlocking Mobile Visual Computing - The Khronos API Ecosystem

*Neil Trevett* (The Khronos Group / NVIDIA)

Friday, October 9, 9:00 am - 10:10 am

*Session Chair: Seungyong Lee*

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## Social Events

### Welcome Reception

Tuesday, October 6, 7:00 pm - 8:30 pm

Conference (*Luxury*) Building 1F Lobby

### Conference Dinner

Wednesday, October 7, 7:00 pm - 9:00 pm

Main (*Shineville*) Building 6F *Seolmundae Ballroom*

### Banquet

Thursday, October 8, 7:00 pm - 9:00 pm

*Shineville* Barbecue Garden

### Conference Tour (Optional)

Saturday, October 10, 8:30 am - 5:00 pm

Bus Tour in *Jeju Island*

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## Wednesday, October 7

### Session 1: Image-Based Modeling and Rendering

Wednesday, October 7, 10:25 am - 12:10 pm

*Session Chair: Shi-Min Hu*

SecondSkin: An Interactive Method for Appearance Transfer

*Anton van den Hengel, Dylan Sale, Anthony R. Dick*

Live Video Montage with a Rotating Camera

*Zilong Dong, Lei Jiang, Guofeng Zhang, Qing Wang, Hujun Bao*

Image-to-Geometry Registration: a Mutual Information Method Exploiting Illumination-related Geometric Properties

*Massimiliano Corsini, Matteo Dellepiane, Roberto Scopigno, Federico Ponchio*

An Intuitive Interface for Interactive High Quality Image-Based Modeling

*Martin Habbecke, Leif Kobbelt*

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### Session 2: Data Structure and Collision Detection

Wednesday, October 7, 1:30 pm - 2:50 pm

*Session Chair: Sang Il Park*

Linkless Octree Using Multi-Level Perfect Hashing

*Myung Geol Choi, Eunjung Ju, Jung-Woo Chang, Jehee Lee, Young J. Kim*

Approximate on-Surface Distance Computation using Quasi-Developable Charts

*Rafael P. Torchelsen, Francisco Pinto, Rui Bastos, Joao L. D. Comba*

HPCCD: Hybrid Parallel Continuous Collision Detection using CPUs and GPUs

*Duksu Kim, Jae-Pil Heo, Jaehyuk Huh, John Kim, Sung-eui Yoon*

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### Session 3: Modeling and Deformation

Wednesday, October 7, 5:05 pm - 6:25 pm

*Session Chair: Hujun Bao*

Procedural Generation of Rock Piles using Aperiodic Tiling

*Adrien Peytavie, Eric Galin, Jerome Grosjean, Stephane Merillou*

Affective Modelling: Profiling Geometrical Models with Human Emotional Responses

*Cheng-Hung Lo, Chih-Hsing Chu*

ProcDef: Local-to-global Deformation for Skeleton-free Character Animation

*Takashi Ijiri, Kenshi Takayama, Hideo Yokota, Takeo Igarashi*

## Thursday, October 8

### Session 4: Animation

Thursday, October 8, 10:25 am - 12:10 pm

*Session Chair: Yoshinori Dobashi*

Expression Synthesis and Transfer in Parameter Spaces

*Hyun Joon Shin, Yunjin Lee*

Simulation of Tearing Cloth with Frayed Edges

*Napaporn Metaaphanon, Yosuke Bando, Bing-Yu Chen, Tomoyuki Nishita*

Simulating Gaseous Fluids with Low and High Speeds

*Yue Gao, Chen-Feng Li, Shi-Min Hu, Brian A. Barsky*

Procedural Synthesis using Vortex Particle Method for Fluid Simulation

*Jong-Chul Yoon, Hyeong Ryeol Kam, Jeong-Mo Hong, Shin Jin Kang, Chang-Hun Kim*

### Session 5: Image Editing

Thursday, October 8, 1:30 pm - 2:50 pm

*Session Chair: Yu-Wing Tai*

Automatic Correction of Saturated Regions in Photographs using Cross-Channel Correlation

*Syed Z. Masood, Jiejie Zhu, Marshall F. Tappen*

Edit Propagation on Bidirectional Texture Functions

*Kun Xu, Jiaping Wang, Xin Tong, Shi-Min Hu, Baining Guo*

Gradient-Preserving Color Transfer

*Xuezhong Xiao, Lizhuang Ma*

### Session 6: Image Restructuring

Thursday, October 8, 5:05 pm - 6:25 pm

*Session Chair: Takeo Igarashi*

Optimizing Structure Preserving Embedded Deformation for Resizing Images and Vector Art

*Qi-xing Huang, Radomir Mech, Nathan Carr*

A Shape-Preserving Approach to Image Resizing

*Guo-Xin Zhang, Ming-Ming Cheng, Shi-Min Hu, Ralph R. Martin*

Texture Splicing

*Yiming Liu, Jiaping Wang, Su Xue, Xin Tong, Sing Bing Kang, Baining Guo*

## Friday, October 9

### Session 7: Rendering and Appearance Modeling

Friday, October 9, 10:25 am - 12:10 pm

*Session Chair: Steve Marschner*

The Dual-microfacet Model for Capturing Thin Transparent Slabs

*Qiang Dai, Jiaping Wang, Yiming Liu, John Snyder, Enhua Wu, Baining Guo*

Fast, Sub-pixel Antialiased Shadow Maps

*Minghao Pan, Rui Wang, Weifeng Chen, Kun Zhou, Hujun Bao*

Interactive Rendering of Interior Scenes with Dynamic Environment Illumination

*Yonghao Yue, Kei Iwasaki, Bing-Yu Chen, Yoshinori Dobashi, Tomoyuki Nishita*

Textures on Rank-1 Lattices

*Sabrina Dammertz, Holger Dammertz, Alexander Keller, Hendrik P. A. Lensch*

### Session 8: Abstraction and Design

Friday, October 9, 1:30 pm - 2:50 pm

*Session Chair: In-Kwon Lee*

Image and Video Abstraction by Anisotropic Kuwahara Filtering

*Jan Eric Kyprianidis, Henry Kang, Jurgen Dollner*

Interactive Cover Design Considering Physical Constraints

*Yuki Igarashi, Takeo Igarashi, Hiromasa Suzuki*

Flow-Based Automatic Generation of Hybrid Picture Mazes

*Fernando J. Wong, Shigeo Takahashi*

### Session 9: Digital Geometry Processing

Friday, October 9, 3:05 pm - 4:50 pm

*Session Chair: Wenping Wang*

Variational Surface Approximation and Model Selection

*Bao Li, Ruwen Schnabel, Shiyao Jin, Reinhard Klein*

Mesh Segmentation Refinement

*Lotan Kaplansky, Ayellet Tal*

Generalized Discrete Ricci Flow

*Yong-Liang Yang, Ren Guo, Feng Luo, Shi-Min Hu, Xianfeng Gu*

Curvature Aware Fundamental Cycles

*Pablo Diaz-Gutierrez, David Eppstein, M. Gopi*

Wednesday, October 7, 3:05 pm - 4:50 pm

Session Chair: Seungyong Lee

Guiding Flows for Controlling Crowds  
Min je Park

TF-IDF Approach for Measuring Mocap Data Relevances Based on Textual Search Queries  
Sindharta Tanuwijaya, Yoshio Ohno

A Surface-based Model for Small-scale Smoke Visualization  
Jinho Park, Yeongho Seol, Junyong Noh

An Adaptive Particle Level Set Method for Fluid Animation  
Guijuan Zhang, Dengming Zhu, Xianjie Qiu, Zhaoqi Wang

Toon Rendering of Water Animation  
Mi You, Jinho Park, Byungkuk Choi, Junyong Noh

Rendering Grass Blowing in The Wind with Global Illumination  
Nelson Max, Suguru Saito, Kazuya Watanabe, Masayuki Nakajima

An Interactive Lighting System via Data Clustering  
Younghui Kim, Junyong Noh

Interactive and Realistic Visualization System for Earth-Scale Clouds  
Yoshinori Dobashi, Tsuyoshi Yamamoto, Tomoyuki Nishita

Strokes and Shades for Artistic Oriental Stylization  
Seungju Bang, Kyoungju Park

# Poster Session 2

Thursday, October 8, 3:05 pm - 4:50 pm

Session Chair: Hyun Joon Shin

An Automatic Synthesis of Hand Postures Based on the Grasp Taxonomy  
Fumihito Kyota, Suguru Saito, Masayuki Nakajima

Graphical Interface for Motion Editing Using Procedure Visualization  
Ji-yong Kwon, In-Kwon Lee

Progressive Animation for Dynamic 3D Mesh Sequences  
Chi-Kang Kao, Bin-Shyan Jong, Pai-Feng Lee, Tsong-Wuu Lin

3D Displacement Map based on Surface Curvature  
Hanyoung Jang, JungHyun Han

Streaming Surface Reconstruction of Coherent Point Sets  
Lu Wang, Tiow-Seng Tan, Chi-Wan Lim, Cheng Du, Xiang-Xu Meng

Subsurface Scattering in Point-Based Rendering  
Hyeon-joong Kim, Bernd Bickel, Markus Gross, Soo-Mi Choi

Strokes by Example using Segmental Texture Synthesis  
Ryoichi Ando, Reiji Tsuruno

High-quality Terrain Visualization using GPU-based Geometry Splitting  
Eun-Seok Lee, Byeong-Seok Shin

General Spectral Camera Lens Simulation  
Benjamin Steinert, Holger Dammertz, Johannes Hanika, H.P.A.Lensch

## Organization

### Honorary Conference Co-Chairs

Hans-Peter Seidel (MPI Informatik, Germany)  
Sung Yong Shin (KAIST, Korea)

### Conference Co-Chairs

Baining Guo (Microsoft Research Asia, China)  
Chang-Hun Kim (Korea Univ., Korea)  
Leif Kobbelt (RWTH Aachen Univ., Germany)

### Program Co-Chairs

Seungyong Lee (POSTECH, Korea)  
Dani Lischinski (Hebrew Univ., Israel)  
Yizhou Yu (Univ. of Illinois at Urbana-Champaign, USA)

### Organization Co-Chairs

Jung-Ju Choi (Ajou Univ., Korea)  
Gyuhwan Oh (Ajou Univ., Korea)  
Sang Il Park (Sejong Univ., Korea)  
Byeong-Seok Shin (Inha Univ., Korea)  
Hyun Joon Shin (Ajou Univ., Korea)

## Conference (Luxury) Building 1F Floor Plan

