

# PG2010

## Brief Program

	9/25(Sat)	9/26(Sun)	9/27(Mon)
08:15 - 08:45	Registration	Registration	Registration
08:45 - 09:00	Opening Ceremony		
09:00 - 10:10	Invited Talk 1 Hugues Hoppe	Invited Talk 2 Niloy J. Mitra	Invited Talk 3 Holly Rushmeier
10:10 - 10:25	Break	Break	Break
10:25 - 12:10	Paper Session 1 Geometry I	Paper Session 4 Rendering	Paper Session 8 Simulation
12:10 - 13:15	Lunch	Lunch	Lunch
13:15 - 14:35	Paper Session 2 Image and video I	Paper Session 5 Image and Video II	Paper Session 9 Geometry II
14:35 - 14:50	Break	Break	Break
14:50 - 16:10	Paper Session 3 Acquisition	Paper Session 6 Modeling	Paper Session 10 Visualization and Perception
16:10 - 16:25	Break	Break	Break
16:25 - 17:15	Poster Session 1	Paper session 7 Animation	Closing Ceremony
17:15 - 18:05		Poster Session 2	
19:00 - 20:00	Conference Dinner	Banquet	Conference Dinner

## Invited Talks

Hugues Hoppe (Microsoft Research, USA)  
Processing Large-Scale Imagery  
Saturday, 25 September | 9:00 AM - 10:10 AM

Niloy J. Mitra (IIT Delhi, India)  
Analysis and Manipulation of 3D Geometry  
Sunday, 26 September | 9:00 AM - 10:10 AM

Holly Rushmeier (Yale University, USA)  
Advances and Open Problems in Material Appearance Modeling  
Monday, 27 September | 9:00 AM - 10:10 AM

# Paper Sessions

## Session 1: Geometry I

Binary Orientation Trees for Volume and Surface Reconstruction from Unoriented Point Clouds

Yi-Ling Chen, Bing-Yu Chen, Shang-Hong Lai, and Tomoyuki Nishita

Least Squares Subdivision Surfaces

Simon Boye, Gael Guennebaud, and Christophe Schlick

Feature Oriented Progressive Lossless Mesh Coding

Jingliang Peng, Yan Huang, C.-C. Jay Kuo, Ilya Eckstein, Meenakshisundaram Gopi

Dirichlet Harmonic Shape Compression with Feature Preservation for Parameterized Surfaces

Yang Liu, Balakrishnan Prabhakaran, and Xiaohu Guo

## Session 2: Image and Video I

Instant Propagation of Sparse Edits on Images and Videos

Yong Li, Tao Ju, and Shi-Min Hu

Video Painting via Motion Layer Manipulation

Hua Huang, Lei Zhang, and Tian-Nan Fu

Efficient Mean-shift Clustering Using Gaussian KD-Tree

Chunxia Xiao and Meng Liu

## Session 3: Acquisition

Modeling Complex Unfoliated Trees from a Sparse Set of Images

Luis D. Lopez, Yuanyuan Ding, and Jingyi Yu

Modeling of Clouds from a Single Photograph

Yoshinori Dobashi, Yusuke Shinzo, and Tsuyoshi Yamamoto

Condenser-Based Instant Reflectometry

Yanxiang Lan, Yue Dong, Jiaping Wang, Xin Tong, and Baining Guo

## Session 4: Rendering

Real-time Depth of Field Rendering via Dynamic Light Field Generation and Filtering

Xuan Yu, Rui Wang, and Jingyi Yu

Metalights: Improved Interleaved Shading

William Faure and Chun-Fa Chang

Density-based Outlier Rejection in Monte Carlo Rendering

Christopher DeCoro, Tim Weyrich, and Szymon Rusinkiewicz

Variance Soft Shadow Mapping

Baoguang Yang, Zhao Dong, Jieqing Feng, Hans-Peter Seidel, and Jan Kautz

## **Session 5: Image and Video II**

Image Synthesis for Branching Structures

Dominik Sibbing, Darko Pavic, and Leif Kobbelt

An Example-based Approach to Synthesize Artistic Strokes using Graphs

Mikyung Kim and Hyun Joon Shin

Contour-based Interface for Refining Volume Segmentation

Takashi Ijiri and Hideo Yokota

## **Session 6: Modeling**

Manifold-Based 3D Face Caricature Generation with Individualized Facial Feature Extraction

Shu-Fan Wang and Shang-Hong Lai

B-Mesh: A Modeling System for Base Meshes of 3D Articulated Shapes

Zhongping Ji, Ligang Liu, and Yigang Wang

Feature Based Terrain Generation Using Diffusion Equation

Houssam Hnaidi, Eric Guerin, Samir Akkouche, Adrien Peytavie, and Eric Galin

## **Session 7: Animation**

L4RW: Laziness-based Realistic Real-time Responsive Rebalance in Walking

Mingliang Xu, Huansen Li, Pei Lv, Wenzhi Chen, Gengdai Liu, Pengyu Zhu, and Zhigeng Pan

Context-Dependent Crowd Evaluation

Alon Lerner, Yiorgos Chrysanthou, Ariel Shamir, and Daniel Cohen-Or

## **Session 8: Simulation**

Creating and Preserving Vortical Details in SPH Fluid

Bo Zhu, Xubo Yang, and Ye Fan

Fast Particle-based Visual Simulation of Ice Melting

Kei Iwasaki, Hideyuki Uchida, Yoshinori Dobashi, and Tomoyuki Nishita

Multi-Resolution Cloth Simulation

Yongjoon Lee, Sung-eui Yoon, Seungwoo Oh, Duksu Kim, and Sunghee Choi

## **Session 9: Geometry II**

Fast Updating of Delaunay Triangulation of Moving Points by Bi-cell Filtering

Yuanfeng Zhou, Feng Sun, Wenping Wang, Jiaye Wang, and Caiming Zhang

Semi-isometric Registration of Line Features for Flexible Fitting of Protein Structures

Sasakthi S. Abeysinghe, Matthew L. Baker, Wah Chiu, and Tao Ju

A Simple and Robust Thinning Algorithm on Cell Complexes

Lu Liu, Erin W. Chambers, David Letscher, and Tao Ju

## **Session 10: Visualization and Perception**

Towards Perceptual Simplification of Models with Arbitrary Materials

Nicolas Menzel, Michael Guthe

Automatic Animation for Time-Varying Data Visualization

Li Yu, Aidong Lu, William Ribarsky, and Wei Chen

Polygonal Surface Advection applied to Strange Attractors

Shi Yan, Nelson Max, and Kwan-Liu Ma

# **Poster Sessions**

## **Session 1**

Representing Progressive Dynamic 3D Meshes and Applications

Chi-Kang Kao, Bin-Shyan Jong, Tsong-Wuu Lin

Space-optimized texture atlases for 3D scenes with per-polygon textures

Jonas Martinez, Carlos Andujar

Procedural Modeling of Water Caustics and Foamy Water for Cartoon Animation  
Jing Liao, Jinhui Yu, Long Jia

High Quality Interactive Rendering of Massive Point Models using Multi-way kd-Trees  
Prashant Goswami, Yanci Zhang, Renato Pajarola, Enrico Gobbetti

A Simplified Plane-Parallel Scattering Model and its Application to Hair Rendering  
Mikio Shinya, Mishio Shiraishi, Yoshinori Dobashi, Kei Iwasaki, Tomoyuki Nishita

Real-time dehazing for image and video  
Xingyong Lv, Wenbin Chen, I-fan Shen

Fast Height-Field Rendering under Image-Based Lighting  
Noriaki Shinoyama, Nelson Max

Salient Region of Textured 3D Model  
Bailin Yang, Xun Wang, Frederick W.B. Li

Computing Efficient Matrix-valued Wavelets for Mesh  
Chong Zhao, Hanqiu Sun, Kaihuai Qin

Physically Based Rendering of Rainbows Under Various Atmospheric Conditions  
Shota Kanamori, Kazuya Fujiwara, Takahiro Yoshinobu, Bisser Raytchev, Toru Tamaki, Kazufumi Kaneda

Prefiltered Cross-Section Occluders  
Timothy Condon, Bruce Walter, Kavita Bala, Donald Greenberg

## **Session 2**

Rate-distortion Optimized Progressive 3D Reconstruction from Multi-view Images  
Viet Nam Nghiem, Jianfei Cai, Jianmin Zheng

Thread-based BRDF rendering on GPU  
Soonhyun Kim, Min-Ho Kyung, Joo-Haeng Lee

GPU-Based Ray Tracing of Splats  
Rhushabh Goradia, Sriram Kashyap, Parag Chaudhuri, Sharat Chandran

Synthesizing Subdivision Meshes using Real Time Tessellation  
Matthias Hollander, Tamy Boubekeur

Sample-Based Synthesis of Illustrative Patterns  
Vladimir Alves dos Passos, Marcelo Waltery, Mario Costa Sousa

