



## PUBLICATIONS

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### **Nonlinear Revision Control for Images**

*Hsiang-Ting Chen, Li-Yi Wei, Chun-Fa Chang*  
*SIGGRAPH 2011*

### **Discrete Element Textures**

*Chongyang Ma, Li-Yi Wei, Xin Tong*  
*SIGGRAPH 2011*

### **Differential Domain Analysis for Non-uniform Sampling**

*Li-Yi Wei, Rui Wang*  
*SIGGRAPH 2011*

### **Nonlinear Beam Tracing on a GPU**

*Baoquan Liu, Li-Yi Wei, Xu Yang, Chongyang Ma, Ying-Qing Xu, Baining Guo, Enhua Wu*  
*Computer Graphics Forum 2011*

### **Parallel Poisson Disk Sampling with Spectrum Analysis on Surfaces**

*John Bowers, Rui Wang, Li-Yi Wei, David Maletz*  
*SIGGRAPH Asia 2010*

### **Anisotropic Blue Noise Sampling**

*Hongwei Li, Li-Yi Wei, Pedro V. Sander, Chi-Wing Fu*  
*SIGGRAPH Asia 2010*

### **Multi-class Blue Noise Sampling**

*Li-Yi Wei*  
*SIGGRAPH 2010*

### **Detail-Preserving Paint Modeling for 3D Brushes**

*Nelson Chu, William Baxter, Li-Yi Wei, Naga Govindaraju*  
*SIGGRAPH/EUROGRAPHICS Symposium on Non-Photorealistic Animation and Rendering 2010*

### **Fast Capacity Constrained Voronoi Tessellation**

*Hongwei Li, Diego Nehab, Li-Yi Wei, Pedro V. Sander, Chi-Wing Fu*  
*SIGGRAPH Symposium on Interactive 3D Graphics and Games 2010 Posters*

### **Motion Field Texture Synthesis**

*Chongyang Ma, Li-Yi Wei, Baining Guo, Kun Zhou*  
*SIGGRAPH Asia 2009*

### **State of the Art in Example-based Texture Synthesis**

*Li-Yi Wei, Sylvain Lefebvre, Vivek Kwatra, Greg Turk*  
*EUROGRAPHICS 2009 STAR*

### **Parallel Poisson Disk Sampling**

*Li-Yi Wei*  
*SIGGRAPH 2008*

### **Inverse Texture Synthesis**

*Li-Yi Wei, Jianwei Han, Kun Zhou, Hujun Bao, Baining Guo, Heung-Yeung Shum*  
*SIGGRAPH 2008*

### **Parallel White Noise Generation on a GPU via Cryptographic Hash**

*Stanley Tzeng, Li-Yi Wei*

*SIGGRAPH Symposium on Interactive 3D Graphics and Games 2008*

**High Dynamic Range Image Hallucination**

*Lydi Wang, Li-Yi Wei, Kun Zhou, Baining Guo, Heung-Yeung Shum*

*EUROGRAPHICS Symposium on Rendering 2007*

**Rendering from Compressed High Dynamic Range Textures on Programmable Graphics Hardware**

*Lydi Wang, Xi Wang, Peter-Pike Sloan, Li-Yi Wei, Xin Tong, Baining Guo*

*SIGGRAPH Symposium on Interactive 3D Graphics and Games 2007*

**Context-Aware Textures**

*Jianye Lu, Athinodoros S. Georgiades, Andreas Glaser, Hongzhi Wu, Li-Yi Wei, Baining Guo, Julie Dorsey, Holly Rushmeier*

*ACM Transactions on Graphics, Volume 26, Issue 1 (January 2007)*

**Visualizing Flow Fields by Perceptual Motion**

*Li-Yi Wei*

*Microsoft Research Technical Report MSR-TR-2006-82 June 2006*

**Multi-Layer Depth Peeling via Fragment Sort**

*Baoquan Liu, Li-Yi Wei, Ying-Qing Xu*

*Microsoft Research Technical Report MSR-TR-2006-81 June 2006 (later published in CAD/Graphics '09)*

**Fast Example-based Surface Texture Synthesis via Discrete Optimization**

*Jianwei Han, Kun Zhou, Li-Yi Wei, Minmin Gong, Hujun Bao, Xinming Zhang, Baining Guo*

*The Visual Computer (Pacific Graphics 2006)*

**Silhouette Texture**

*Hongzhi Wu, Li-Yi Wei, Xi Wang, Baining Guo*

*EUROGRAPHICS Symposium on Rendering 2006*

**Real-time Multi-perspective Rendering on Graphics Hardware**

*Xianyou Hou, Li-Yi Wei, Heung-Yeung Shum, Baining Guo*

*EUROGRAPHICS Symposium on Rendering 2006*

**Subspace Gradient Domain Mesh Deformation**

*Jin Huang, Xiaohan Shi, Xinguo Liu, Kun Zhou, Li-Yi Wei, Shang-Hua Teng, Hujun Bao, Baining Guo, Heung-Yeung Shum*

*SIGGRAPH 2006*

**Tile-based Texture Mapping**

*Li-Yi Wei*

*In GPU Gems II 2005*

**Tile-based Texture Mapping on Graphics Hardware**

*Li-Yi Wei*

*SIGGRAPH/EUROGRAPHICS Conference on Graphics Hardware 2004*

**Texture Synthesis from Multiple Sources**

*Li-Yi Wei*

*SIGGRAPH 2003 Sketches and Applications*

**Order-Independent Texture Synthesis**

*Li-Yi Wei, Marc Levoy*

*Submitted to SIGGRAPH 2003*

**Order-Independent Texture Synthesis**

*Li-Yi Wei, Marc Levoy*  
*Stanford Computer Science Department Technical Report 2002-01*

**Texture Synthesis by Fixed Neighborhood Searching**

*Li-Yi Wei*  
*Stanford University Ph.D. Dissertation, December 2001*

**Texture Synthesis over Arbitrary Manifold Surfaces**

*Li-Yi Wei, Marc Levoy*  
*SIGGRAPH 2001*

**Fast Texture Synthesis using Tree-structured Vector Quantization**

*Li-Yi Wei, Marc Levoy*  
*SIGGRAPH 2000*

**Deterministic Texture Analysis and Synthesis Using Tree Structure Vector Quantization**

*Li-Yi Wei*  
*XII Brazilian Symposium on Computer Graphics and Image Processing, 1999*

**Shape from Light Field using Looming Field Analysis**

*Li-Yi Wei*  
*Unpublished Manuscript, 1998*

**PATENTS**

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**Inverse Texture Synthesis**

*Li-Yi Wei, Jianwei Han, Kun Zhou, Baining Guo, Heung-Yeung Shum*  
*U.S. Patent 7973798 granted July 5, 2011*

**Soft Disk Blue Noise Sampling**

*Li-Yi Wei*  
*U.S. Patent Pending No. 12/789,445, filed May 27, 2010.*

**Multi-Class Poisson Disk Sampling**

*Li-Yi Wei*  
*U.S. Patent Pending, filed 2009.*

**Motion Field Texture Synthesis**

*Li-Yi Wei, Chongyang Ma, Baining Guo, Kun Zhou*  
*U.S. Patent Pending, filed 2009.*

**A Method and System for Processing Texture Samples with Programmable Filter Weights**

*Wei-Chao Chen, Li-Yi Wei*  
*U.S. Patent 7623136 granted November 24, 2009*

**Nonlinear Beam Tracing on a GPU**

*Li-Yi Wei, Baoquan Liu, Xu Yang, Ying-Qing Xu, Baining Guo*  
*U.S. Patent Pending, filed 2007.*

**High Dynamic Range Image Hallucination**

*Li-Yi Wei, Kun Zhou, Baining Guo, Heung-Yeung Shum*  
*U.S. Patent Pending, filed 2007.*

**Encoded High Dynamic Range Textures**

*Xi Wang, Peter-Pike Sloan, Li-Yi Wei, Xin Tong, Baining Guo*

*U.S. Patent 7885469 granted February 8, 2011*

**Three Dimensional Polygon Mesh Deformation Using Subspace Energy Projection**

*Jin Huang, Xiaohan Shi, Xinguo Liu, Kun Zhou, Li-Yi Wei, Baining Guo, Shum*

*U.S. Patent Pending, filed 2006.*

**A System and Method of Generating White Noise for use in Graphics and Image Processing**

*Li-Yi Wei*

*U.S. Patent Pending No. 10/956,954, filed September 30, 2004.*

**TEACHING**

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**Interactive Mobile Computing**

*Li-Yi Wei*

*HKU CSIS-0247 Spring 2012*

**How to write a SIGGRAPH paper**

*Danny Cohen-Or, Baining Guo, Dani Lischinski, Kun Zhou, Olga Sorkine, Hao Zhang, Li-Yi Wei*

*SIGGRAPH Asia 2011 Courses*

**Example-based Texture Synthesis**

*Vivek Kwatra, Li-Yi Wei, Sylvain Lefebvre, Greg Turk*

*SIGGRAPH 2007 Courses*

**BIOGRAPHICAL**

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**Citizenship:** dual USA and Taiwan

**Languages:** native in math and programming, fluent in Mandarin and English

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