

Pitchaya Sitthi-amorn

Curriculum Vitae

MIT, CSAIL
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Research Interests

Realtime Rendering, General-purpose Programming on Graphics Hardware, Graphics Hardware Architecture, Computational Fabrication, Interactive and Global Illumination Rendering Algorithms.

Employment Post-doctoral Associate, MIT Computer Science and Artificial Intelligence Laboratory (Fall 2011-Present)

Education *Ph.D, Computer Science, May 2011, University of Virginia*
Thesis: *Shader Optimizations using Reprojection and Simplification*
B.S., Computer Science, May 2007, University of Virginia
Graduated with High Honor Distinction
Thesis: *Interactive three-dimensional surface reconstruction using the level set method on parallel computer architectures*
GPA: 3.78/4.0

Publications

Journal Papers

- Piotr Didyk, Pitchaya Sitthi-Amorn, William T. Freeman, Frédo Durand, and Wojciech Matusik. Joint view expansion and filtering for automultiscopic 3d displays. *ACM Transactions on Graphics (Proceedings SIGGRAPH Asia 2013, Hong Kong)*, 32(6), 2012.
- Desai Chen, David I. W. Levin, Piotr Didyk, Pitchaya Sitthi-Amorn, and Wojciech Matusik. Spec2Fab: A reducer-tuner model for translating specifications to 3D prints. *ACM Transactions on Graphics (Proceedings SIGGRAPH 2013, Anaheim, CA)*, 32(4):135:1–135:10, 2013.
- Desai Chen, Pitchaya Sitthi-amorn, Justin T. Lan, and Wojciech Matusik. Computing and Fabricating Multiplanar Models. *Computer Graphics Forum*, 32(2):305–315, 2013.
- Pitchaya Sitthi-Amorn, Nicholas Modly, Westley Weimer, and Jason Lawrence. Genetic programming for shader simplification. *ACM Transactions on Graphics*, 30(6):152:1–152:12, December 2011.
- Lei Yang, Diego Nehab, Pedro V. Sander, Pitchaya Sitthi-amorn, Jason Lawrence, and Hugues Hoppe. Amortized supersampling. *ACM Transactions on Graphics*, 28(5):135:1–135:12, December 2009.
- Pitchaya Sitthi-amorn, Fabiano Romeiro, Todd Zickler, and Jason Lawrence. Interactive editing of lighting and materials using a bivariate brdf representation. *Computer Graphics Forum*, 29(4):1461–1468, 2010.
- Pitchaya Sitthi-amorn, Jason Lawrence, Lei Yang, Pedro Sander, Diego Nehab, and Jiahe Xi. Automated reprojection-based pixel shader optimization. *ACM Transactions on Graphics (Proc. SIGGRAPH Asia)*, 2008.

Conference Papers

Pitchaya Sitthi-amorn, Jason Lawrence, Yang Lei, Pedro V. Sander, and Diego Nehab. An improved shading cache for modern gpus. In *Graphics Hardware*, 2008.

Pitchaya Sitthi-amorn, Dee Weikle, and Kevin Skadron. Exploring the impact of normality and significance test in architecture experiments. In *Workshop on Modeling, Benchmarking and Simulation*, 2006.

Academic Activities

Research Assistant

“Data Amortization in Real-time Computer Graphics,” (May 2008 – May 2011)

“Automatic Shader Optimization using the Reverse Reprojection Cache” (May 2007 – May 2008)

University Service

Member of web development team for the CS department (Fall 2005 – Fall 2007).

Teaching Assistant

“Programming and Data Representation,” CS216 (Spring 2005, Fall 2007)

“Software Development Methods” CS201 (Fall 2007)

Computer Competition

Selected and Participated at International Olympiad in Informatics (IOI) (Fall 2002)

Internships

Disney Interactive

Intern at a Disney Interactive research unit (Summer 2010)