

Sean Curtis

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OBJECTIVE

Seeking a position in the field of computer graphics and simulation which allows me to leverage my technical expertise and rich artistic background.

EDUCATION

University of North Carolina – Chapel Hill, Chapel Hill, NC

M.S. in Computer Science; May 2008.

University of Utah, Salt Lake City, UT

B.S. in Computer Science; graduated Summa Cum Laude in June 2006; GPA 4.0

Honors: Phi Kappa Phi, Phi Beta Phi, Golden Key, Eccles, Chevron, and Departmental Scholarship recipient

Brigham Young University, Provo, UT

B.A. German; graduated December 2001; GPA: 3.66

Honors: National Merit Finalist, Trustees Scholar

SKILLS

Programming: Python, C/C++, Java, OpenGL, 3D graphics data structures and algorithms.

Digital Content Creation: Very experienced in modeling, texturing, rigging and animating using Maya, 3DS Max, Mirai, MotionBuilder and Photoshop. Proficient in Adobe Premiere and After Effects.

WORK EXPERIENCE

Graduate Research Assistant, UNC-CH, GAMMA group 6/06 to present
Performed independent and collaborative research in acceleration structures, collision detection and crowd simulation.

Intern, Walt Disney Animation Studios 5/07 to 8/07
Worked with the simulation group to improve cloth simulation performance. Sped up the production collision detection algorithms by a factor of 3X.

Intern, NextPage 12/05 to 5/06
Assisted in the redesign and re-implementation of the core NextPage document tracking software, particularly the model abstraction between database and user interface.

Undergraduate Research Assistant, University of Utah, SCI 8/05 to 8/06
Worked with Prof. Mike Kirby on research in post-processing filters for finite element analysis.

Freelance 3D Artist 4/02 to 8/05
Created 3D content for various clients—most notably the National Center for Missing and Exploited Children and Dr. Florian Solzbacher at the Microsystems Laboratory at the University of Utah.

Senior Content Developer, Viewpoint 5/96 to 4/02
Senior modeler, lead animator and technical director. Responsible for developing animation services. Responsibilities included sculpting, modeling, texturing and animating in multiple packages on multiple platforms.

PUBLICATIONS

Min Tang, Sean Curtis, Sung-Eui Yoon, and Dinesh Manocha, “Interactive Continuous Collision Detection between Deformable Models using Connectivity-Based Culling”, To appear at ACM Solid and Physical Modeling Symposium (SPM), 2008.

Sean Curtis, Rasmus Tamstorf, and Dinesh Manocha, “Fast Collision Detection for Deformable Models using Representative-Triangles”, Proc. of Symposium on Interactive 3D Graphics and Games (I3D), 2008.

Avneesh Sud, Erik Andersen, Sean Curtis, Ming Lin, and Dinesh Manocha, “Real-time Path Planning in Dynamic Virtual Environments Using Multi-agent Navigation Graphs”, IEEE Transactions on Visualization and Computer Graphics, Accepted for Publication, 2007.

Michael Steffen, Sean Curtis, Robert M. Kirby and Jennifer K. Ryan, “Investigation of Smoothness-Increasing Accuracy-Conserving Filters for Improving Streamline Integration Through Discontinuous Fields”, IEEE Transactions on Visualization and Computer Graphics, Accepted for Publication, 2007.

Sung-Eui Yoon, Sean Curtis, and Dinesh Manocha, “Ray Tracing Dynamic Scenes using Selective Restructuring”, Eurographics Symposium on Rendering (EGSR), 2007.

Sean Curtis, Robert M. Kirby, Jennifer K. Ryan and Chi-Wang Shu, “Post-processing for the Discontinuous Galerkin Method Over Non-Uniform Meshes”, SIAM Journal of Scientific Computing, Vol. 30, Number 1, pages 272-289, 2007.

Avneesh Sud, Erik Andersen, Sean Curtis, Ming C. Lin, and Dinesh Manocha, "Real-time Path Planning for Virtual Agents in Dynamic Environments", IEEE Virtual Reality, 2007.

Peter Shirley, William Thompson, Sean Curtis, and David Gallup, "Stylized Browsing in Space and Time", VAST2004: The 5th International Symposium on Virtual Reality, Archaeology and Cultural Heritage, December 2004.

MISCELLANEOUS

High fluency in German. Basic conversational fluency in Japanese.

Sample gallery of artwork can be seen at: <http://www.cs.unc.edu/~seanc/artwork.html>