

FunShing Sin

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Education	Carnegie Mellon University M.S. Robotics, School of Computer Science Advisor: Prof. Adam Bargteil (Utah) and Prof. Jessica Hodgins	December 08
	University of California, Berkeley B.S. Electrical Engineering and Computer Sciences Advisor: Prof. James O'Brien	December 05
Work Experience	Pixar Animation Studios Technical Director Resident	Feb 09
	THQ/Heavy-Iron Studios Junior Programmer Worked in the core technology team developing new features for the in-house game editor.	May 06 – September 06
Teaching	Grader (Operating Systems) Grader (Introduction of Computer Graphics) Grader (Machine Structures) Lab Assistant (Machine Structures)	Spring06 Fall05 Summer05 Fall04 - Spring05
Awards	Highest Score in compiler optimization contest (final project of CS 164 - compiler) Champion in Occupational Safety and Health Interactive Multimedia Design Competition First Runner-up in HSBC Hong Kong Schools IT Festival Inter-school IT Project	
Publications	“A Texture Synthesis Method for Liquid Animations” Adam Bargteil, Funshing Sin, Jonathan Michaels, Tolga Goktekin, and James O'Brien In ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2006. (Also in ACM SIGGRAPH 2006 Technical Sketch) “A Point-Based Method for Animating Incompressible Flow” Funshing Sin, Adam Bargteil, and Jessica Hodgins Submitted to Eurographics 2009	
Skills	Pixie (Renderman) Maya 3ds Max OpenGL C/C++/C# Java Tcl/Tk MFC Verilog HTML Photoshop Premiere CorelDraw Flash Mac Unix	
Activities	ACM SIGGRAPH Student Member Student Pilot (Single engine with 10 hours solo and 50.6 hours dual)	

Projects

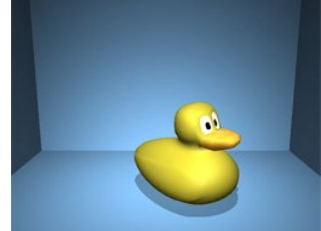
Fluid Simulator

Grid-based simulator. Features: Semi-Lagrangian Advection, Implicit Viscosity Solver, Monotonic Cubic Interpolation. With using Prof. Adam Bargteil's surface tracker. Rendered with Pixie.



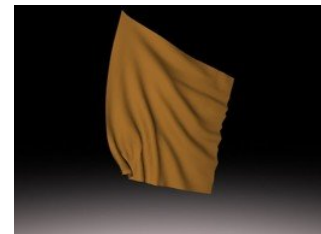
Meshless Deformations Based On Shape Matching

Implemented this SIGGRAPH paper. Using Lapack/Lapack++ for the Eigen/Polar Decomposition. Run in real-time. The duck model is borrowed from DefCol Studio. Rendered with OpenGL.



Cloth Simulator

Implemented the SIGGRAPH paper "Robust Treatment of Collisions, Contact and Friction for Cloth Animation". Using explicit integration method. Rendered with Pixie.



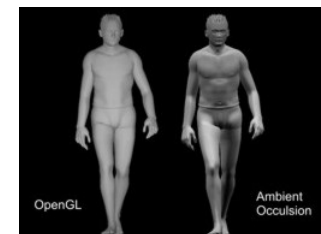
Invertible Finite Elements for Robust Simulation of Large Deformation

Implemented this SCA paper. Rendered with Pixie.



Real-Time Ambient Occlusion for Dynamic Character Skins

Implemented this I3D paper. Original Ambient Occlusion values are obtained from Pixie. The human model is drawn by Moshe Mahler (an artist in the CMU graphics group).



References

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Prof. Jessica Hodgins

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Prof. James O'Brien

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