

Andrew A. Kaufman

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OBJECTIVE

To work for a visual effects company, in production or research and development, focusing on physical simulation.

EDUCATION

University of British Columbia, Vancouver, BC
Master of Science in Computer Science
Graduated: September 2008
GPA: 3.60

Relevant Graduate Courses: Computer Animation, Geometric Modeling, Human Computer Interaction, Computer Vision, Numerical Methods for Graphics, Level Set Methods, Sensorimotor Computation

Northwestern University, Evanston, IL
Bachelor of Science in Computer Science from the McCormick School of Engineering & Applied Science with an **adjunct major in Animate Arts**
Graduated: June 2006
Major GPA: 3.77 / Overall GPA: 3.40

Relevant Undergraduate Courses: Computer Graphics, Human Computer Interaction, Graphics & Perception, Image Based Modeling & Rendering, Animation Studio, Animate Arts I, II, III, & IV, Computer Animation, Illustrated Worlds, Artificial Intelligence for Entertainment, Artificial Intelligence Programming, Scripting Languages

TECHNICAL SKILLS

Programming: C/C++, Python, MEL, Maya API, Java, OpenGL, tesh, CommonLisp, Visual Basic, HTML, JavaScript, Matlab
Multimedia: Maya, Houdini, Nuke, SolidWorks, Blender, Photoshop, After Effects, Flash, Dreamweaver, Final Cut, Poser.

PUBLICATIONS

S. Sueda, A. Kaufman, D. K. Pai. 2008. “**Musculotendon Simulation for Hand Animation**”, *In ACM Transactions on Graphics (Proceedings of SIGGRAPH 2008)*, Volume 27, Issue 3, Pages 83:1-83:8, Aug 2008.

WORK EXPERIENCE

Image Engine Design Inc., Vancouver, BC, Canada **September 2009 – Present**
Research & Development Programmer – Major projects include integrating hair dynamics with our proprietary grooming system, maintaining and contributing to the open source visual effects project “cortex-vfx”, and facility wide Houdini integration.

Image Engine Design Inc., Vancouver, BC, Canada **September 2008 – September 2009**
Junior R & D Programmer – Major projects included a python interface and GUI for manipulating Renderman compliant render passes; upgrading, maintaining, and building a GUI for our proprietary dynamic simulation software; render farm management of batch renders and networked preview renders; a tool allowing artists to view current work in place with cuts from editorial.

Sensorimotor Systems Lab, Vancouver, BC, Canada **Summer 2007 – September 2008**
Graduate Research Assistant – Developing a musculoskeletal simulation of the human upper limb using a strand-based muscle system; seamless integration of biomechanically realistic secondary motion into a traditional animation pipeline; created custom interfaces for the modeling of musculoskeletal systems; extended the simulation code base.

Tomorrow Lab, Evanston, IL **Summer 2005 – Winter 2006**
Research Assistant – MEL scripting for the visualization of complex molecular models. Created custom interfaces for specific user groups, solved real world research problems, and documented them as research papers.

ArticuLab, Evanston, IL **Summer 2005 – Fall 2005**
Animator – Responsible for animating a virtual character designed for collaborative storytelling with children. Improved the animation pipeline by reworking the connection between animation software and the code base; helped develop a real-time lip syncing system based on viseme animations and phonemes extracted from audio files.

RELEVANT PROJECT WORK

Simulated Control for Balancing, Computer Animation **Winter 2008**
Developed a controller for stabilizing the center of mass of an articulated character. Demonstrated the versatility of the balance controller with a range of simulated scenarios, including the effects of noise, reacting to projectiles, and the use of unstable and inclined ground surfaces.

Information, Animate Arts IV **Winter 2006**
Modeled, animated, simulated, and rendered an animated short based on a Rube Goldberg machine. Used Maya's physics engine to perform the rigid body collisions that drive the motion throughout the short.

Mime and Punishment, Animation Studio **Fall 2005 & Winter 2006**
Spent the fall developing a story, creating storyboards, modeling, and rigging the characters. Spent the winter instructing a group of novice animators to create a 3D animated short film ready for submission to animation festivals.

HONORS, ACTIVITIES, & INTERESTS

Exhibited Chicago New Media Artist 2006; SIGGRAPH Member since 2005; Dean's List: Spring 2006, Winter 2006, Fall, Spring & Winter 2005; Phi Gamma Delta Fraternity, 2002-2006; Northwestern University Men's Club Ice Hockey 2002-2003; Skiing, Hiking, Travel, Simulation of Natural Phenomena, Animation, Film, Sculpture, Installation Art, Interactive Media