

# Tony Chai

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<http://www.tonychai.com>

[Demo-Reel, Project Descriptions]

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## EXPERIENCE

### Walt Disney Animation Studios

March 10 – Present

<http://www.disneyanimation.com/>

Wreck-it Ralph (2012)

*General Technical Director*

Tangled Ever After (2012)

*Technical Director in Lighting/FX*

Developed and optimized tools to support heavy fx datasets for lighting to use seamlessly.

Prep and Landing: Naughty vs Nice (2011)

*Assistant Technical Director in Lighting/FX*

Pipeline data management between lighting and effects. Developed publish process and maya plugins to make sim data seamless between departments.

Lion King 3-D (2011)

*Stereo Artist and Assistant Technical Director*

Stereoscopic compositing and support. Built shots from legacy compositing software to Shake through scripts. Created depth maps in the original artwork layers to final shot.

Tangled (2010)

*Assistant Technical Director in Lighting*

Lighting and compositing. Brought shots through 2k rendering and stereoscopic compositing.

### soVoz

October 09 – February 10

<http://www.sovoz.com>

*Software Developer - Virtual Locomotion Controller*

Developed an immersive application for a virtual controller [boots, hip sensor, head-mounted display] to be used with a motorcycle racing game on an elliptical exercise machine.

## EDUCATION

### University of Pennsylvania, Penn Engineering/Penn CIS

Masters of Science in Engineering in Computer Graphics and Game Technology 12/2009

Relevant Courses: Computer Animation, Computer Graphics, Game Design and Development, 3D Modeling, Physically-Based Animation, Engineering Entrepreneurship

### University of California Irvine, College of Engineering

Bachelor of Science in Computer Engineering 03/2008

Honors: Dean's Honor List 04-06

Relevant Courses: Graphics (OpenGL), Algorithm Design, Electronics, Computer Architecture

## TECHNICAL

**Languages:** C++, Python, MEL, Qt, Java, C, OpenGL, LC-3, MIPS, HTML

**Applications:** Maya, RenderMan, Houdini, Nuke, Shake, Android App Development, Gamebryo, PhysX, MS Visual Studio, Motionbuilder, ZBrush, Adobe Premiere/After Effects/Photoshop, Adobe Dreamweaver, Arduino Microcontroller

## PROJECTS

- **Maya Plug-in**

Wrote a Maya Plug-in that automatically rigs a biped character. Based on Baran's SIGGRAPH 2007 Pinocchio paper [Automatic Rigging and Animation of 3D Characters].

- **Motion Capture**

Experience with UPenn's SIG Motion Capture Lab. Captured various self-motions in VICON Nexus and used the exported BVH data to design a character controller.

- **Rigid Body System**

Wrote an impulse-based rigid body system, including broadphase and narrowphase collision detection/resolution, contact resolution, gravity, and friction. Narrowphase collision detection based on SIGGRAPH 2003 paper [Nonconvex Rigid Bodies with Stacking].

- **Automatic Guitar Tuner**

Designed and invented an automatic guitar tuner that twists the pegs of a guitar to the correct pitch when plucked.

## ADDITIONAL

- Member of The Animation Guild Union Local 839 IATSE
- Member of ACM Special Interest Group in Graphics and Interactive Techniques (SIGGRAPH)
- Panel member of Music Teachers' Association of California (MTAC) Certificate of Merit