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School Address

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Education

University of North Carolina at Chapel Hill

Ph.D., Computer Science, *expected* in May 2011

National Taiwan University, Taipei, Taiwan

B.S., Computer Science and Information Engineering, June 2004

Average GPA: 3.9 Major GPA: 4.0 Rank: 2/103

Honors

- **The First Place Team Award, Best Creativity Team Award, and Best Mind-Stimulating Team Award**, National Creativity Mobile Game Competition, National Science Council, Taiwan, 2004
- **Student Service Education Award**, National Taiwan University, Taiwan, 2004. Top five percent students who have excelled in the service-learning experiential courses
- **Honorary Member**, the Phi Tau Phi Scholastic Honor Society of the Republic of China, Taiwan, 2004. Awarded to top ranked two students within department with enrollment of more than 100 annually
- **Six time National Taiwan University Presidential Award**, Taiwan, 2000-2003. Academic performance within the top fifth percentile in the class

Relevant

Coursework

Graduate Courses:

- Images, Graphics, and Vision
- Robotics
- Scientific Computation
- GPGP: General Purpose Computation using Graphics Processors
- Physically-Based Modeling, Simulation, and Animation
- Numerical Methods
- Computational Geometry
- Visualization in the Sciences
- Numerical ODE/PDE (I)
- Introduction to Medical Image Analysis
- Advanced Image Synthesis

Undergraduate Courses:

- Computer Graphics
- Pattern Analysis and Classification
- Data Mining and Machine Learning
- Digital Communications and Computing

Relevant

Experience

UNC-Chapel Hill

Physically-based Medical Image Registration, PBM

Fall 2007

- Implemented an FEM-based elastic body simulator for registering deformable organs in medical images

Real-Time 3D Fluid Simulation on the GPU, GPGP

Spring 2007

- Implemented a real-time Navier-Stokes based 3D fluid simulation and visualization system on NVidia G80 graphics cards

Feature-Guided Fluid Texturing, Reading and Research Fall 2006

- Synthesis of several textures on a simulated fluid surface according to features of the flow

Academia Sinica

Shot Change Detection via Local Keypoint Matching

- Built a system to detect shot changes in video by matching local feature points

National Taiwan University

Texture Synthesis on Surfaces, Special Project II Spring 2004

- Implemented papers by Greg Turk and by Li-Yi Wei and Marc Levoy in SIGGRAPH 2001

Face Recognition System, Pattern Analysis and Classification Spring 2004

- Built a simple system to recognize human faces based on PCA and MDA

Fragment-based Image Completion, Special Project I Fall 2003

- Implemented the paper "Fragment-based Image Completion" by Drori et al. in SIGGRAPH 2003

Work Experience **UNC-Chapel Hill**, Chapel Hill, NC Aug.,2008 – Present

Research Assistant, Department of Computer Science

Supervisor: Prof. Ming Lin

- Conducted research on physically-based image registration for deformable objects

Disney Animation Studios, Burbank, CA May,2008 – Aug., 2008

Graduate Associate, Technology Group

Supervisor: Dr. Kelly Ward and Dr. Maryann Simmons

- Helped developing software tools for long hair control for feature animation

UNC-Chapel Hill, Chapel Hill, NC Aug.,2007 – May, 2008

Research Assistant, Department of Radiation Oncology

Supervisor: Prof. Mark Foskey

- Helped developing medical image analysis tools for radiation therapy
- Conducted research on physically-based image registration for deformable objects

Siemens Corporate Research, Princeton, NJ May, 2007 – Aug., 2007

Summer Internship, Automation and Control Department

Supervisor: Dr. Richard McDaniel

- Helped developing a 3D physics simulation and visualization system for testing products in a virtual environment

UNC-Chapel Hill, Chapel Hill, NC Aug., 2006 – May, 2007

Teaching Assistant, Foundations of Programming (Fall 2006 and Spring 2007)

- Grade papers; hold recitations and office hours

Academia Sinica, Taipei, Taiwan Jan., 2006 – July, 2006

Research Assistant, Institute of Information Science

- Conducted research on feature tracking and video analysis

Taiwan Air Force, Taipei, Taiwan July, 2004 – Dec., 2005

Network Management Officer, Second Lieutenant

- Managed the use of network
- Inspected compliance of headquarters with computer security regulations
- Built and Maintained web pages and web-based systems

Skills

- C/C++, Java, Matlab, MFC, HTML, CSS, JavaScript, ASP, SQL
- OpenGL, Direct 3D, NVidia Cg, NVidia CUDA, MAYA
- Windows, Linux, UNIX, Mac OS X

Publications

- Huai-Ping Lee, Ming Lin, and Mark Foskey, "Physically-Based Validation of Deformable Medical Image Registration," MICCAI 2008.
- Rahul Narain, Vivek Kwatra, Huai-Ping Lee, Theodore Kim, Mark Carlson, and Ming Lin, "Feature-Guided Dynamic Texture Synthesis on Continuous Flows," Proceedings of Eurographics Symposium on Rendering, 2007.
- Chun-Rong Huang, Huai-Ping Lee, and Chu-Song Chen, "Shot Change Detection via Local Keypoint Matching," IEEE Transactions on Multimedia, vol. 10, no. 6, October 2008.
- Chun-Rong Huang, Huai-Ping Lee, and Chu-Song Chen, "A Local Keypoint Matching Technique for Transition Detection," Proceedings of IAPR Conference on Machine Vision Applications, MVA2007, May 2007.