Yuting Ye

CONTACT INFORMATION

1 Letterman Drive
Letterman Digital Art Center
San Francisco, CA 94129

Mobile: (415) 746-2496
E-mail: yye@ilm.com
WWW: http://www.cc.gatech.edu/~yuting

CURRENT POSITION

Industrial Light & Magic — San Francisco, CA
R&D Engineer II, Supervisor: Zoran Kacic-Alesic — January 2012 - present

- Maintain in-house software tools and develop new algorithms for artists to create digital contents more intuitively and efficiently.

EDUCATION

Georgia Institute of Technology — Atlanta, Georgia, USA
Ph.D. in Computer Science (GPA 4.0) — August 2007 - December 2011

- Dissertation: "Simulation of Characters with Natural Interactions"
- Advisor: Dr. C. Karen Liu

University of Southern California — Los Angeles, California, USA
Ph.D. student in Computer Science (GPA 4.0) — August 2006 - May 2007

- Advisor: Dr. C. Karen Liu

University of Virginia — Charlottesville, Virginia, USA
M.CS. in Computer Science (GPA 3.73) — August 2004 - May 2006

- Master's project: "A Momentum-Based Bipedal Balance Controller"
- Advisor: Dr. David C. Brogan

Peking University — Beijing, China
B.S. in Computer Science (GPA 3.66) — September 2000 - June 2004

- Bachelor thesis: "A 2*D* Vector Graphics Editing System With Elaborate Rendering"
- Advisor: Dr. Guoping Wang

RESEARCH EXPERIENCES

Georgia Institute of Technology — Atlanta, GA
Graduate Research Assistant, Advisor: Dr. C. Karen Liu — August 2007 - December 2011

- Developed optimal control algorithms for balance control, motion tracking, and motion planning of human locomotion and dexterous hand manipulations.
- Developed both linear and nonlinear dimensionality reduction techniques for learning and synthesizing responsive behaviors of human characters in a simulated environment.
- Assisted in writing two NIH proposals.

USC Information Sciences Institute (ISI) — Marina del Rey, CA
Research Intern, Advisor: Dr. Stacy Marsella — May 2007 - August 2007

- Integrated physics-based balance and tracking control into a kinematics-based control system.

University of Southern California — Los Angeles, CA
Graduate Research Assistant, Advisor: Dr. C. Karen Liu — August 2006 - May 2007

- Developed and integrated a numerical optimization framework with physics-based simulation for high-level controls of virtual characters.

University of Virginia — Charlottesville, VA
Graduate Research Assistant, Advisor: Dr. David C. Brogan — August 2004 - May 2006

- Developed a balance controller for articulated characters through angular momentum regulation.
- Developed a hierarchical neural network to simply a complex dynamic system.

Honors and Awards

Third place in Student Research Competition (SRC), ACM SIGGRAPH	2007
Mingde Fellowship, Peking University	2000 - 2004
First class Freshmen Scholarship, Peking University	2000
Rank first over 180,000 in the College Entrance Exam. Guangdong Province, China	2000

Publications

Y. Ye, C. K. Liu. 2012. "Synthesis of detailed hand manipulations using contact sampling". *To appear in ACM Transactions on Graphics (SIGGRAPH).*

Y. Ye, C. K. Liu. 2010. "Optimal feedback control for character animation using an abstract model". *ACM Transactions on Graphics (SIGGRAPH)* 29(4) Article 74. doi:10.1145/1778765.1778811

Y. Ye, C. K. Liu. 2010. "Synthesis of responsive motion using a dynamic model". *Computer Graphics Forum (Eurographics)* 29(2) Pages 555-562. doi:10.1111/j.1467-8659.2009.01625.x

S. Jain, **Y. Ye**, C. K. Liu. 2009. "Optimization-based interactive motion synthesis". *ACM Transactions on Graphics (TOG)* 28(1) Article 10. doi:10.1145/1477926.1477936

Y. Ye, C. K. Liu. 2008. "Animating responsive characters with dynamic constraints in near-unactuated coordinates". *ACM Transactions on Graphics (SIGGRAPH Asia)* 27(5) Article 112. doi:10.1145/1409060.1409065

S. Jain, **Y. Ye**, C. K. Liu. 2007. "Optimization-based interactive motion synthesis for virtual characters". In *ACM SIGGRAPH 2007 sketches* Article 39. doi:10.1145/1278780.1278828

Teaching Experiences

Teaching Assistantship

- CSCI 101 Fundamentals of Computer Science, USC — Fall 2006 - Spring 2007
- CS 660 Theory of Computation, UVA — Spring 2006
- CS 201 Software Development Methods (in Java), UVA — Fall 2004 -Spring 2006

Guest Lectures

- "Optimal Control", CS 7496: Character Animation, Georgia Tech. — Fall 2011
- "Inverse Kinematics", CS 4496: Character Animation, Georgia Tech. — Spring 2011
- "3D Rotations", CS 4496: Character Animation, Georgia Tech. — Fall 2010
- "Articulated Rigid Body Dynamics", CS 7496: Character Animation, Georgia Tech. — Fall 2009
- "Articulated Rigid Body Dynamics", CS 7496: Character Animation, Georgia Tech. — Spring 2008

Skills

Languages: C/C++, Java, Javascript, LaTeX.
Tools: OpenGL, GLUT, Open Dynamic Engine (ODE), Bullet physics engine, Eigen library, Computational Geometry Algorithms Library (CGAL), Fast Light Toolkit (FLTK), Cocoa, MOSEK, SNOPT, gnuplot.
Softwares: MATLAB, SVN, Mercurial, Autodesk Maya, Adobe Photoshop, Illustrator, and Premiere, Vicon IQ and Blade.
Platforms: Mac OSX, Linux, Windows.

Professional Activities

Reviewer

SIGGRAPH Asia 2011, 2010, 2009
Motion in Games 2011, 2010
Eurographics 2012, 2011, 2010, 2009
Computer Graphics International 2010

Editor

Papers preview video, SIGGRAPH 2008

Membership

ACM SIGGRAPH student member, since 2006