

Spring 2015 Seminar Series

Presented by the CS Division

VIRTUAL HUMANS AND BEYOND: ALGORITHMS, SYSTEMS AND INTERDISCIPLINARY APPLICATIONS

MONDAY MARCH 30, 2015

10:00 AM – HEC 438

In this talk I will first give an overview on my recent research efforts on virtual human modeling, animation and interaction that have been primarily conducted in my research group during the past several years. Then, I will present a robust approach to accurately extract the linear blend skinning model with skeleton (the most widely employed skinning technique to date) from a set of example poses, and an fully-automated approach to generate realistic and coordinated head-and-eye motions on talking avatars, based on live speech input. After that, I will briefly introduce interdisciplinary research efforts in my group by focusing on one selected project: real-time MRI guide, robot-assisted, minimally invasive cardiac surgery. Finally, I will conclude the talk by describing the perspective and road map of my future research.

DR. ZHIGANG DENG
University of Houston

Zhigang Deng is currently an Associate Professor of Computer Science at the University of Houston (UH) and an Adjunct Associate Professor of Biomedical Informatics at the University of Texas Health Science Center at Houston (UTH). He is also the Founding Director of UH Computer Graphics and Interactive Media Lab (<http://graphics.cs.uh.edu>). His research interests include Computer Graphics, Computer Animation, Virtual Human Modeling and Animation, Human Computer Interaction, and Visual Computing for Biomedical Informatics. He received his Ph.D. in Computer Science at the University of Southern California in 2006, M.S. in Computer Science from Peking University (China) in 2000, and B.S. degree in Mathematics from Xiamen University (China) in 1997. He is the recipient of a number of awards including Google Faculty Research Award, Texas Norman Hackerman Advanced Research Award, University of Houston Teaching Excellence Award, NSFC Oversea and Hongkong/Macau Young Scholar Collaborative Research Award, and ACM ICMI Ten Year Technical Impact Award. His research has been funded by US National Science Foundation (NSF), National Institute of Health (NIH), National Aeronautics and Space Administration (NASA), Texas NHARP Program, National Natural Science Foundation of China (NSFC), Google, Nokia, and other industry resources. Besides CASA 2014 Conference general co-chair and SCA 2015 Conference general co-chair, he also serves as the Associate Editor of Computer Graphics Forum, and Computer Animation and Virtual Worlds Journal.

Hosted by: Dr. Lotzi Boloni

