Department of Computer Science
SEMINAR SPRING 2011

WHEN: **Monday, February 7, 2011**
WHERE: **PGH 232**
TIME: **10:00 AM – 11:00 AM**
Interview: **11:00 AM – 12:00 PM**

SPEAKER: Dr. Matthew Turk, University of California Santa Barbara

Host: Dr. Ioannis Kakadiaris

Title: Computational Illumination

Abstract:
The field of computational photography includes computational imaging techniques that enhance or extend the capabilities of digital photography, a combination of computer vision, computer graphics, and applied optics. Computational illumination is an aspect of computational photography that considers how to modify illumination in order to facilitate useful techniques in computer vision and imaging. This talk will present research using multiflash imaging and coded shadow photography, two families of techniques in computational illumination, where the results produce reliable scene information that is often difficult to robustly compute otherwise. Applications in a variety of areas will be shown, including nonphotorealistic rendering, medical imaging, and stereo vision.

Short bio:
Matthew Turk received a B.S. from Virginia Tech in Electrical Engineering, an M.S. in Electrical and Computer Engineering from Carnegie Mellon University, and a Ph.D. from the MIT Media Lab. He worked for Martin Marietta Denver Aerospace from 1984 to 1987 on vision for autonomous robot navigation. In 1992 he moved to Grenoble, France as a visiting researcher at LIFIA/ENSIMAG, then took a position at Teleos Research (in Palo Alto, CA) in 1993. In 1994, Matthew joined Microsoft Research as a founding member of the Vision Technology Group. In 2000 he joined the faculty of the University of California, Santa Barbara, where he is now a full Professor in the Computer Science Department and former Chair (2005-2010) of the Media Arts and Technology Graduate Program. He co-directs the UCSB Four Eyes Lab, where the research focus is on the "four I's" of Imaging, Interaction, and Innovative Interfaces. He is a founding member and former chair of the advisory board for the International Conference on Multimodal Interfaces and on the editorial board of the Journal of Image and Vision Computing and the ACM Transactions on Intelligent Interactive Systems. He is general chair of the upcoming 2011 IEEE Conference on Automatic Face and Gesture Recognition.