The George Washington University
Department of Computer Science
Colloquium

February 7, 2013 2:00 PM
Room 736 Academic Center, CS Conference Room
Faculty Host: Dr. Evan Drumwright
Speaker: Dr. James F. O'Brien
University of California, Berkeley

"Perception, Measurement, and Simulation"

Abstract:

This talk covers several graphics projects including cloth simulation, perceptually based tone mapping, and digital image/video forensics. These projects will be discussed in the context of exploring the common underlying theme of simulation based on human perception and measurement. I will show how measured data and models of the human visual system can be used for more realistic image reproduction, how simulation can be used to take measurements of the real-world and build more realistic cloth models, and how models of the word can be used to detect forgeries that otherwise fool human perception.

Bio:

James F. O'Brien is a Professor of Computer Science at the University of California, Berkeley. His primary area of interest is Computer Animation, with an emphasis on generating realistic motion using physically based simulation and motion capture techniques. He has authored numerous papers on these topics. In addition to his research pursuits, Prof. O'Brien has worked with several game companies on integrating advanced simulation physics into game engines, and his methods for destruction modeling have been used in more than 15 feature films. He received his doctorate from the Georgia Institute of Technology in 2000, the same year he joined the Faculty at U.C. Berkeley. Professor O'Brien is a Sloan Fellow and ACM Distinguished Scientist, Technology Review selected him as one of their TR-100, and he has been awarded research grants from the Okawa and Hellman Foundations. He is currently serving as ACM SIGGRAPH Director at Large.