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THE DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, CS DIVISION

Presents the GAUSS Project Distinguished Lecturer Series

Thomas Huang

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"Human Computer Intelligent Interaction"

Thursday, March 22, 2012 2:00 p.m. HEC 101

Abstract

Computer technologies are progressing at a breakneck speed. But the tremendous computing speed and the enormous storage capacity come to naught, if we do not have intelligent human-computer interfaces. In this talk, I shall describe some of the research my students and I have been doing during the last decade on Human Computer Interaction. Specifically, information flow from human to computer: Hand/fingers tracking and gesture recognition; face tracking and emotion recognition; shrug detection; gender and age group recognition.

And information flow from computer to human: Audio- visual emotive avatar. These interfaces have applications in many areas including Gaming and Electronic Consumer Relation Management (ECRM). Examples in ECRM include: Collection of demographic data (how many % of white male teenagers buy Product X?), adaptive public display (what is displayed depends on the genders, ages, and emotional reactions of the audience), and embodied intelligent agent.

Biography

T. S. Huang received his Sc.D. from the Massachusetts Institute of Technology in Electrical Engineering, and was on the faculty of MIT and Purdue University. He joined University of Illinois at Urbana- Champaign in 1980 and is currently William L. Everitt Distinguished Professor of Electrical and Computer Engineering, Research Professor of Coordinated Science Laboratory, Professor of the Center for Advanced Study, and Co-Chair of the Human Computer Intelligent Interaction major research theme of the Beckman Institute for Advanced Science and Technology.

Huang is a member of the National Academy of Engineering and has received numerous honors and awards, including the IEEE Jack S. Kilby Signal Processing Medal (with Ar. Netravali) and the King-Sun Fu Prize of the International Association of pattern Recognition. He has published 21 books and more than 800 technical papers in network theory, digital holograpy, image and video compression, multimodal human computer interfaces, and multimedia databases.

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