

Signal Processing Seminar

Title: Image, Video, and Multimedia Processing

Speaker: Professor Thomas S. Huang's Research Group
University of Illinois at Urbana-Champaign
Department of Electrical and Computer Engineering
Coordinated Science Laboratory
Beckman Institute for Advanced Science and Technology

Date: Wednesday, April 8, 2009

Time: 4:00 - 5:00 pm

Where: 4269 Beckman Institute

Abstract: We shall describe some of the on-going research projects in our Group. Our research is currently motivated by 4 interrelated application areas: Biometrics (hard Biometrics-person identification, as well as soft Biometrics-recognition of gender, age group, ethnicity, and emotion); Video surveillance (recognition of spatial-temporal patterns-objects, sites, action and events); Human Computer Interaction (using audio and visual modalities); Multimedia data indexing, retrieval, search, and mining (esp. how to take advantage of Web-scale multimedia data, Web-scale interconnection, and Web-scale computing). I shall first give a brief overview. Then, my students (Xi Zhou, Mert Dikmen, Dennis J. Lin, and Edmond Shen-Fu Tsai) will present some details on 4 research projects, one each from the above 4 application areas: Age estimation; NIST TRECVID video event detection Evaluation 2008; 3D hand tracking; Mining Wikipedia.

Biography: Thomas S. Huang received his B.S. Degree in Electrical Engineering from National Taiwan University, Taipei, Taiwan, China; and his M.S. and Sc.D. Degrees in Electrical Engineering from the Massachusetts Institute of Technology, Cambridge, Massachusetts. He was on the Faculty of the Department of Electrical Engineering at MIT from 1963 to 1973; and on the Faculty of the School of Electrical Engineering and Director of its Laboratory for Information and Signal Processing at Purdue University from 1973 to 1980. In 1980, he joined the University of Illinois at Urbana-Champaign, where he is now William L. Everitt Distinguished Professor of Electrical and Computer Engineering, and Research Professor at the Coordinated Science Laboratory, and at the Beckman Institute for Advanced Science. He is Technology and Co-Chair of the Institute's major research theme Human Computer Intelligent Interaction.

Dr. Huang's professional interests lie in the broad area of information technology, especially the transmission and processing of multidimensional signals. He has published 21 books, and over 600 papers in Network Theory, Digital Filtering, Image Processing, and Computer Vision. He is a Member of the National Academy of Engineering; a Member of the Academia Sinica, Republic of China; a Foreign Member of the Chinese Academies of Engineering and Sciences; and a Fellow of the International Association of Pattern Recognition, IEEE, and the Optical Society of America.

Among his many honors and awards: Honda Lifetime Achievement Award, IEEE Jack Kilby Signal Processing Medal, and the KS Fu Prize of the Int. Assoc. for Pattern Recognition.