Invited Seminar

Multimedia Data Transmission and Advanced Imaging Techniques

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Date: October 2, 2013    Time: 11:00 am to 11:50 am    Place: SSDE seminar Room NI-1027

Abstract: With the rapid development of multimedia communication in recent years, data compression and robust image transmission over packet-switched networks becomes a necessity. In particular, data compression plays an important role in multimedia information transmission as well as in various other applications including digital TV, video conferencing, telemedicine, and remote sensing images from satellite and reconnaissance aircraft. This talk is aimed at exploring efficient techniques for the purposes of the robust transmission of image data over packet-switched networks. The method which is based on an evolutionary algorithm provides an optimized data packetization scheme for the transmission of SPIHT coded bit streams. Additionally, in many image processing applications such as surveillance, satellite imaging, medical and scientific imaging, the enhancing of image resolution is of significant importance. An iterative scheme in which the frequency content of the image is adaptively increased during the reconstruction process of the high resolution images will also be presented.

Speaker Biography:

Dr. Ezzatollah Salari received his M.S. and Ph.D. degrees in Electrical Engineering from Wayne State University in 1978 and 1982, respectively. He is involved in teaching and research in the areas of image/video/signal processing, pattern recognition & neural networks, and data compression for multimedia communication. Prior to joining UT, he was with the Computer and Information Science Department at Cleveland State University, from 1982 to 1985. He has published about 40 journal papers and taught over 30 new courses in both the Electrical Engineering & Computer Science areas. He has supervised 9 Ph.D. dissertations and more than 25 M.S. theses. He served as Graduate Director of the EECS Department at UT from 2000 to 2005. Dr. Salari also worked as a research fellow at NASA Langley, Goddard and Lewis (Glenn) research centers during the summers of 1987, 1988, 1990 and 1991 on various projects. He worked on funded projects sponsored by NASA, Edison Center, and more recently on projects sponsored by MIOH-UTC, U.S. Department of Transportation.