

Tutorials

TUTORIAL 1: MULTIMEDIA

Presenters:

K.R. Rao, Univ. of Texas, Arlington, TX, USA (rao@ee.uta.edu)

M.A. Bayoumi, Univ. of Southwestern Louisiana, LA, USA (mab@cacs.usl.edu)

Coordinator:

T.V. Subramaniam, ECIL, Hyderabad, India

Description: This tutorial will discuss the impact of the architecture and technology of ATM switches and fabrics on the communication parameters and quality of service. The communication parameters to be analyzed include: information rates, broadcast/multicast, performance, cell loss/cell insertion probability, switching delay, and so on. The switching architectures to be discussed include input, output and shared buffering; space division packet switches; crossbar fabrics; and banyan-based space division switches. A VLSI prototype will be discussed.

K.R. Rao (Ph.D. University of New Mexico), is a professor of Electrical Engineering with the University of Texas at Arlington. His research interests include discrete orthogonal transforms and digital image coding.

M.A. Bayoumi (Ph.D. University of Windsor), is the Edmiston Professor of Computer Engineering at the University of Southwestern Louisiana. His research interests include VLSI Design Methods and Architectures and Parallel Algorithm Design.

TUTORIAL 2: HW-SW CODESIGN

Presenters:

P. Subrahmanyam, Bell Labs, NJ, USA (subra@big.bell-labs.com)

R. Gupta, Univ. of California, Irvine, CA, USA (rgupta@cs.uiuc.edu)

Coordinator:

B.S. Rao, DRDL, Hyderabad, India

Description: This tutorial examines the latest progress in the co-design of interacting hardware and software components in embedded systems. The presentation is divided into three parts: The first part discusses issues in representation, language-level modeling, and computational models for embedded systems. The second part describes techniques and tools used for synthesis of embedded hardware and software. The third part summarizes current industrial practices.

P. Subrahmanyam is with Bell Laboratories Research and is a visiting Research Fellow at Princeton University. His current research interests include embedded system design, formal methods in system design and hardware-software co-design.

R. Gupta (Ph.D. Stanford Univ.) is an Assistant Professor in Computer Science at University of California, Irvine. His current research focus is on system-level design and CAD issues.