كلية الهندسة
College of Engineering
QATAR UNIVERSITY جامعة قطر

EE SEMINARS

Speaker's Bio:

Received B.Sc and M.Sc degree (both with first-class honors) in Physics from Sambalpur University, Orissa, in 1987 and 1989, respectively. Received Ph.D degree in the area of VLSI for Digital Signal Processing from Berhampur University, Orissa in 2000.

In 1992 he was selected by OPSC (Orissa Public Service Commission) and joined as faculty member in the Department of Physics, SKCG College (Autonomous) Paralakhemundi, Orissa. In 2001 he joined as Lecturer in EEE Department, BITS Pilani, Rajasthan. Then he joined as an Assistant Professor in the Department of ECE, Mody Institute of Education Research (Deemed University), Rajasthan. In 2003 he joined Jaypee University of Engineering and Technology, Guna, Madhya Pradesh, where he becomes Associate Professor in 2005 and full Professor in 2007.

Currently he serves as the reviewer of IEEE Transactions on Circuits and Systems-II: Express Briefs, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Very Large Scale Integration (VLSI) Systems. IET Circuit Device and Technology and Journal of Circuit, System and Signal Processing, Springer. He has member of various technical committees of International Conferences Sponsored by IEEE.

A Senior Member of IEEE and Life Time Member of IETE (Institution of Electronics and Telecommunication Engineering), New Delhi, India.

His research interest includes algorithm design, mapping and implementation for high-performance, resource-constrained multi-media signal processing applications and secured communication. He has published nearly 40 technical papers in reputed journal and conference proceeding.

The Department of Electrical Engineering cordially invites you to a seminar on

Area-Power Efficient VLSI Architectures for High-Speed Implementation of Discrete Wavelet Transform

By

Prof. Basant Kumar Mohanty

Date: Wednesday, October 17, 2012
Time: 11:00am - 12:30 pm
Venue: Male Engineering Building, G - 209

Abstract

The discrete wavelet transform (DWT) is widely used due to its remarkable advantage over the unitary transforms like discrete Fourier transform (DFT), discrete cosine transform (DCT) and discrete sine transform (DST) for various applications due to its multiple time-frequency resolution. DWT of different dimensions has emerged as a powerful tool for speech, image and video coding in recent years. For example: 1-D DWT has been adopted as transform coder of MP3 speech coding standard, 2-D DWT adopted as transform coder of JPEG2000 image compression standard and 3-D DWT is found to provide superior performance in video compression, 3-D medical images and volumetric image compression, and video watermarking etc. The multidimensional DWTs are particularly more computation intensive and many of its application are constrained with space, power and need real-time processing speed for better performance. Multi-dimensional DWT, therefore, require to be implemented in very large scale integrated (VLSI) systems for low-power and low-area real-time applications.