

## Distinguished Lecture Series 2008

# Perceptually Motivated Multimedia

by

**Professor Anup BASU**

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**Date: 8 December 2008, Monday**

**Time: 10:30 a.m. – 12:00 noon**

**Venue: Room 222, 2/F, Ho Sin Hang Engineering Building, CUHK**

### Abstracts

In this talk we will discuss how biological motivation can help develop better and more robust image processing and computer vision algorithms. More specifically we will outline multi-camera motion estimation, active camera calibration, foveated image/video/3D compression, and the role of spatially varying sensing in 3D perception and depth reconstruction. We will also try to draw similarities between these algorithms and biological processing and understanding of images, and have a discussion with the audience regarding potential new research directions worth investigating.

### Biography of the Speaker

**Anup Basu** received his Ph.D. in CS from the University of Maryland, College Park, USA. He originated the use of foveation for image, video, stereo and graphics communication in the early 1990s; an approach that is now widely used in industrial standards. He also developed the first robust (correspondence free) 3D motion estimation algorithm using multiple cameras, a robust (and the first correspondence free) active camera calibration method, a single camera panoramic stereo, and several new approaches merging foveation and stereo with application to 3D TV visualization and better depth estimation. His current research applications include 3D/4D Image Processing and Visualization especially for medical applications, Multimedia in Education and Games, and Wireless 3D Multimedia transmission. He has been a Professor in the CS department at UofA since July 1999. He has also held the following positions: Visiting Professor, University of California, Riverside, 2003-2004; Guest Professor, Technical University of Austria, Graz, in 1996; Director, Hewlett-Packard Imaging Systems Instructional Lab., UofA, 1997 to 2000; and is currently an iCORE-NSERC Industry Research Chair.

\*\*\*\* ALL ARE WELCOME \*\*\*\* For ENQUIRIES: Tel: 3163 4351/ 2609 8486

*\* Light refreshment will be served before the lecture at 10:00am \**