THE UNIVERSITY   **OF HONG KONG**

Department of Mathematics

Numerical Mathematics and Applied Analysis Group Seminar (NMAA)

Challenges in Display Technology

Dr. Felix Lor

R&D and Visual Perception Director of VP Dynamics Ltd.

on Wednesday, April 12, 2006 at 2:30p.m.
in Room 517, Meng Wah Complex, HKU

Abstract

Improving the manufacturing process to produce a finer pitch size is not the only method to make a better quality of displays. A display system consists of display equipment and viewers. Besides focusing on the advancement of technical specification of devices, the fitness of devices to users can be considered. That is the emerging human-centered technology investigating how visual perception alters the design of displays. For instance, current color display technology uses red (R), green (G) and blue (B) color sub-pixels as a unit to represent luminance and chrominance information of a spot. However, it may not be an efficient way to display color images because of different sensitivity between luminance and chrominance of human eyes. In the talk, new configurations of color matrix are introduced in order to enhance the visual quality. Moreover, more challenges in display technology based upon visual perception are discussed.

Background:

Dr. Lor has a background in artificial intelligence and computational neuroscience as well as more than 10-year of research experiences in intelligent and interactive systems. He got his B.Sc. degree in mathematics and physics at the University of Hong Kong in 1993. Then he graduated his M.Phil. degree in physics at the Hong Kong University of Science and Technology in 1995 with a thesis entitled "Neural Routing in Circuit-Switched Networks?" He then got a scholarship and studied one year in the Institut für Neuroinformatik at the Ruhr-Universität Bochum. The project was to develop an intelligent safety system for automobiles with OPEL Auto GmbH and a smart robot for European Aerospace. In 2002, he got scholarships from MARINER and BT Labs, and achieved his Ph.D. in the Intelligent and Interactive Systems section at Imperial College of Science, Technology & Medicine. During his study in UK, he guided some Ph.D. and Master students on neural networks research for brain images analysis and computer gaming strategy. He was also a temporary consultant in the Hong Kong University of Science & Technology. After he got his Ph.D., he has been the principal neuro-analyst in the computational ergonomics laboratory at the Hong Kong University of Science & Technology. Furthermore, he was one of the founders to develop a new discipline, computational ergonomics, and taught an advanced course for postgraduate students. Currently, Dr. Lor is R&D and Visual Perception Director of VP Dynamics Ltd. He heads the team for investigating VP technology and developing VP Display, including hardware and software, as well as multimedia compression.

All are welcome