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Optimal Resource Allocation for Video Streaming over Distributed Communication Networks

Prof. Ling Guan
Department of Electrical and Computer Engineering, Ryerson University, Canada

Date and Time: Friday, 19 September 2008, 4:30pm – 5:30pm
Venue: Room **CD634**, Hong Kong Polytechnic University
Reception starts at 4:15pm
(Language: **English**)

Abstract

In this presentation, we maximize the performance of video streaming over distributed networks, by optimally allocating the resources via distributed algorithms. It starts with a brief introduction to convex optimization and the associated duality properties. Then we will show how this optimization principle can be applied to resource allocation in distributed video communication infrastructures, including a) Peer-to-Peer (P2P) Video-on-Demand (VoD) systems, b) video streaming over wireless ad hoc networks, and c) wireless visual sensor networks. Simulation results will be provided to demonstrate the effectiveness of the proposed optimization framework.

About the Speaker

Prof. Ling Guan is a Tier I Canada Research Chair in Multimedia and Computer Technology, and a Professor of Electrical and Computer Engineering at Ryerson University, Toronto, Canada. He received his Bachelor's Degree from Tianjin University, China, Master's Degree from University of Waterloo, Canada and Ph.D. Degree from University of British Columbia, Canada. Prof. Guan has made several seminal contributions to image, video and multimedia signal processing and published extensively in the field. Prof. Guan is a Fellow of the IEEE and a recipient of the 2005 IEEE Transactions on Circuits and Systems for Video Technology Best Paper Award.

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