THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

Seminar

Statistical Modeling and Analysis of Content Identification and Retrieval

by

Professor Pierre Moulin
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Date : **26 January, 2010 (Tue.)**
Time : **3:00-4:00pm**
Venue : **Room 833, Ho Sin Hang Engineering Building**
The Chinese University of Hong Kong

Abstract

A number of hash-based algorithms for audio and video identification have been studied in recent literature, and some have been deployed as mobile phone applications and on file sharing sites. A fundamental question is what is the relationship between database size, hash length, and robustness, that any reliable content identification system should satisfy. Also what performance loss results from using hashes, if any. This paper presents some answers under a statistical model for the signals of interest. Based on this theory, a fairly general architecture for hash function design is proposed.

Biography

Pierre Moulin received his doctoral degree from Washington University in St. Louis in 1990, after which he joined at Bell Communications Research in Morristown, New Jersey, as a Research Scientist. In 1996, he joined the University of Illinois at Urbana-Champaign, where he is currently Professor in the Department of Electrical and Computer Engineering, Research Professor at the Beckman Institute and the Coordinated Science Laboratory, affiliate professor in the Department of Statistics, and Sony Faculty Scholar.

His fields of professional interest include image and video processing, compression, statistical signal processing and modeling, media security, decision theory, and information theory.

Dr. Moulin has served on the editorial boards of the IEEE Transactions on Information Theory, the IEEE Transactions on Image Processing. He currently serves on the editorial boards of the Proceedings of IEEE and of Foundations and Trends in Signal Processing. He was co-founding Editor-in-Chief of the IEEE Transactions on Information Forensics and Security (2005-2008), member of the IEEE Signal Processing Society Board of Governors (2005-2007), and has served IEEE in various other capacities.

He received a 1997 Career award from the National Science Foundation and an IEEE Signal Processing Society 1997 Senior Best Paper award. He is also co-author (with Juan Liu) of a paper that received an IEEE Signal Processing Society 2002 Young Author Best Paper award. He was 2003 Beckman Associate of UIUC's Center for Advanced Study and plenary speaker for ICASSP 2006 and several other conferences. He is an IEEE Fellow.

** ALL ARE WELCOME **

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