Spring 2007

CS 790-01: Multimedia Coding and Communication (II)

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CS 790 -01 – Multimedia Coding and Communication (II)
4 Credits, Spring Quarter 2007

Syllabus

Time/Place: Lecture: 8:00 – 9:15 PM, M/W, 155 Russ Engineering Center

Instructor: Dr. Yong Pei, Joshi Research Center
Tel. 937-775-5111, Email: yong.pei@wright.edu
Office Hours: 1:00-3:00pm, Tu.

Prerequisites: MTH 253 or MTH 355 (or equivalent)

Textbook:

Reference:

Course Objectives:
This Course is designed to introduce students to:
1. The theory and techniques of transform coding, subband coding and wavelets.
2. The state-of-the-art image coding techniques and industry standards, such as JPEG/JPEG2000, SPIHT.
3. Motion estimation techniques and Motion compensated compressions.
4. The state-of-the-art image/Video coding techniques and industry standards, such as H.261/H.263/H.264, Motion JPEG2000, and MPEG2/MPEG4, MPEG21.
5. Error-resilient coding techniques.
7. Multimedia over Internet: Voice over IP (VoIP), and Video on Demand (VoD).
10. The evolution of data compression techniques and its impact on the economy and every-day life.
11. Computer tools and WWW resources, such as AVC, OpenH323.

Website: CS 790-01 in WebCT.

Grading:
Project – 40 %
Homework – 10%
Midterm Exam – 25%
Final – 25%