COT 6930
Video and Image Processing in Multimedia Systems
(Video Processing)

Instructor: Borko Furht
Office: CSE 422, Office hours: WF 10:00-12:00

Prerequisite: Programming in C or C++ and permission of instructor

Course Description: Introduction to multimedia. Multimedia storage requirements. Multimedia compression techniques and standards. Implementations and applications of multimedia compression algorithms. Content-based image and video indexing and retrieval. Video processing using compressed data.

Course Outline:

1. Introduction to multimedia
2. Storage requirements for multimedia applications
3. Image concepts and structures
4. Classification of compression techniques
5. Image and video compression techniques and standards
6. Content-based image retrieval techniques
7. Content-based video indexing and retrieval techniques
8. Video scene analysis and video segmentation
9. Video processing using compressed data
10.   Case study in video parsing: television news

Textbook:

- B. Furht, S. Smoliar, and HJ Zhang, "Image and Video Processing in Multimedia Systems", Kluwer Academic Publishers, 1995.
- Articles and journal papers.

Grading format:

1. Understanding research papers and oral presentation	20%
2. Project and presentation	40%
3. Test	40%
TOTAL	100%