朝陽科技大學 097學年度第2學期教學大綱
Digital Video Processing 數位視訊處理

當期課號	7777	Course Number	7777
授課教師	洪國龍	Instructor	HUNG,KUO LUNG
中文課名	數位視訊處理	Course Name	Digital Video Processing
開課單位	資訊管理系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程涵蓋數位視訊處理之基礎理論及技術，包括空間時間取樣、動作分析、參數動作模型、動作補償濾波、視訊處理作業、雜訊去除、視訊復原、高解析度、反交錯、視訊取樣結構轉換、壓縮、以及各類進階議題，例如：視訊分割、視訊浮水印、及壓縮域視訊處理等。	Objectives	This course covers the fundamentals of digital video processing. Coverage includes spatio-temporal sampling, motion analysis, parametric motion models, motion-compensated filtering, and video processing operations including noise reduction, restoration, superresolution, deinterlacing and video sampling structure conversion, and compression (frame-based and object-based methods). A number of advanced topics will be covered, including video segmentation and layered video representations, watermarking, video streaming, compressed-domain video processing.
教材	1.A. Murat Tekalp, "Digital Video Processing"Yao Wang, Jorn Ostermann, 2.Ya-Qin Zhang, "Video processing and communications"	Teaching Materials	1.A. Murat Tekalp, "Digital Video Processing"Yao Wang, Jorn Ostermann, 2.Ya-Qin Zhang, "Video processing and communications"
成績評量方式	Homework + Exam + Term paper	Grading	Homework + Exam + Term paper
教師網頁	http://www.cyut.edu.tw/~klhung/		
教學內容	1.Representation of Digital Video 2.Two-D Motion Estimation 3.Three-D Motion Estimation 4.Video Coding (JPEG, MPEG, H.26X, Wavelet T., Fractal, Model-based,... 5.Multimedia Applications(Content-based Retrieval, Multimedia over IP Networks)	Syllabus	1.Representation of Digital Video 2.Two-D Motion Estimation 3.Three-D Motion Estimation 4.Video Coding (JPEG, MPEG, H.26X, Wavelet T., Fractal, Model-based,... 5.Multimedia Applications(Content-based Retrieval, Multimedia over IP Networks)

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