

INTERNATIONAL JOURNAL OF COMPUTER VISION*Special Issue on*
Video Computing**Guest Editor**

Dr. Mubarak Shah, University of Central Florida, USA

Computer Vision has also been called Image Understanding, since the aim of vision has been to understand a single image of a scene, locate and identify objects, their shape and structure, spatial arrangements, and relationships between other objects, etc. Recently, computer vision has been progressing from image understanding to video understanding. The aim of video understanding is to understand a sequence of images instead of a single image, which includes detection and measurement of motion, motion-based recognition and motion recognition, etc. Video provides multiple temporal constraints, which make it easier to analyze a complex and coordinated series of events that cannot be understood by just looking at only a single image or a few frames. Since most videos are about people, during the last few years, researchers have focused on recognition of human actions, activities, gestures, visual speech, facial expressions etc. Video understanding has also been called an inverse Hollywood problem. Since in Hollywood the aim is to transform a script into a box office hit movie (video). On the other hand, the aim in video understanding is to transform a video (movie) into a transcript (symbolic or textual description).

The effective use of video requires understanding of video processing, video analysis, video synthesis, video retrieval, video compression and other related computing techniques. In this special issue of International Journal of Computer Vision, we will publish papers related to various aspects of video computing. We invite papers on recent results in video computing areas, including but not limited to the following topics:

Prospective authors are encouraged to submit high quality, original works, which have not appeared, nor are under consideration, in any other journals.

Video Understanding

- Gesture Recognition
- Facial Expression Recognition
- Visual Lipreading
- Human Activity Recognition

Video Surveillance and Monitoring

- Tracking
- Scene Change Detection
- Visual Traffic Monitoring
- Intruder Detection
- Video Sentries

Video Compression

- MPEG-4
- Knowledge-based Compression
- Semantic-based Compression
- Video Phones
- Video Mosaics

Video Abstraction

- Skims
- Abstracts
- Key Frames

Video Segmentation

- Shots, Scenes, Stories
- Layered Representations of Video
- Object-based segmentation of video

Video Synthesis

- Facial Animation
- Body Animation
- Motion Capture

Video Registration

- Model-based registration
- Geo-registration of video
- Site Modeling from video

Guest Editor

Dr. Mubarak Shah
School of Electrical Engineering and Computer Science
University of Central Florida
Orlando, FL 32816

shah@cs.ucf.edu

Tel. (407) 823-5077 / Fax: (407) 823-5419

For submission instructions please see Instructions for Authors below.

Instructions for Authors

- All manuscripts are subject to review. **To be considered for this special issue, prospective authors should submit seven (7) hardcopies of their complete manuscript by March 1, 2001 to Ms. Melissa Andersen, Kluwer Academic Publishers, 101 Philip Drive, Assinippi Park, Norwell, MA 02061; Tel: 781 871-6600; Fax: 617 871-6528; E-mail melissa.andersen@wkap.com. Please note on each submission: *Special Issue on Video Computing / International Journal of Computer Vision.***
- All manuscripts should include a title page containing the following information: paper title, full name(s) and affiliation(s), complete postal and electronic address(es), and telephone and fax numbers of the author(s). In addition, the contacting author should be clearly identified on the title page. Manuscripts should include a 50- to 100-word abstract and a list of keywords that identify the central issues discussed in the manuscript. Electronic submissions will not be accepted. Instructions for authors are regularly published in the Journal and may also be obtained from Ms. Melissa Andersen.

DEADLINES: The following is the time schedule for this Special Issue:

- **Submission Deadline: March 1, 2001**