Call for Papers

Special Session: Computer Vision, Image Understanding and Applications

Outline:

Computer vision is an area of computer science and engineering which enables machines to see. For the purpose, it includes theory and methods to automatically acquire, analyze and understand useful information from images, sequence of images or from multi-dimensional data generated from scanner or sensors. Computer vision tasks include image and video processing, analysis, coding, retrieval and indexing. A computer vision system can consists in many functions unique to the application, from areas of signal processing, pattern recognition and machine learning. These functions include image acquisition and preprocessing, feature extraction, dimensionality reduction and Feature selection, classification and clustering, ensemble methods etc. By and large, there is a vast variety of algorithms available to perform such a function for the purpose of designing a computer vision system. As an example one recently powerful approach that is outperforming on many recognition problems in Computer vision are based on deep learning algorithms; deep learning is a hottest buzzwords in machine learning community. With the explosive increase of digital data, instead of using hand crafted features typical to traditional systems, these algorithms extract useful representations for many computer vision tasks.

Topics: **Topics include but are not limited to:**

- **Image and Video Processing and Analysis**
    - Image enhancement and restoration
    - Image and video segmentation
    - Mathematical morphology
    - Color, texture and motion analysis
    - 3D image processing and analysis
    - Shape and matching
    - Tracking
- **Image and Video Coding**
    - Still image and video coding
    - Image and video encryption
- **Image Retrieval and Indexing**
    - Image and video databases
    - Image and video retrieval and indexing
- **Pattern Recognition and Machine Learning Methods**
    - Feature extraction and selection methods
    - Classification and Clustering techniques
    - Ensembles and multi-classifiers
    - Hybrid methods
    - Syntactical methods

- **Applications**
  - Computer vision in road safety and Intelligent Traffic
  - Deep learning based Computer vision systems
  - Biomedical Image Analysis, Segmentation and Image Labeling
  - Document Processing
  - Multimedia
  - Biometrics
  - Security Systems
  - Remote Sensing
  - Sports and Entertainment
  - Other applications

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Important Dates:
Full Paper Submission deadline: 1 June 2017
Notification deadline: 31 July 2017
Camera-ready deadline: 31 August 2017

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