



## SPECIAL SESSION (SS1.2)

### *“Fighting Against Crime Using Video Analysis”*

Law enforcement agencies, in large criminal investigations, usually have to analyse vast amounts of visual content, such as videos collected from street CCTV footage, hard drives with diverse sources of data or online resources (e.g. YouTube). In order to piece together a story of events leading up to an incident, and to determine what happened afterwards a typical procedure is to employ numerous officers and volunteers to watch many hours of content to locate, identify, understand and trace the movements of suspects, victims, witnesses, and even inanimate objects (e.g. luggage). However, studying large amounts of content is highly time consuming and requires lots of human resources. As an alternative, using automated video processing would lead to a quantum leap in efficiency, effectiveness and ultimately better crime solving and prevention.

This special session focuses on the investigation of novel approaches for analysis of video to support the security forces in the process of crime solving and prevention targeting challenging data sources. The goal is to present revisited and novel algorithms that show resilience when applied to challenging real content from CCTV, hard drives or online resources. The objective is to draw researcher’s attention to emerging strategies that are robust against the real challenges to be addressed when technologies developed in a laboratory environment are deployed in practice.

The workshop will leverage the results of the EU-funded SURVANT and ASGARD H2020 projects but in the spirit of openness welcomes contributions from the broader research community.

Papers to be presented in this special session cover topics related to:

- robust video processing algorithms for face detection, object detection, logo detection;
- object and human tracking, person re-identification;
- video pre-processing, stabilization, colour enhancement;
- action recognition, behaviour analysis and learning;
- biometric analysis (soft biometrics such as gait/gesture, clothes, face/skin colour);
- indexing and query optimization for very large video collections;
- benchmarking, introduction of new experimental datasets derived from real CCTV footage;

### Target Attendees

- Academia and Industry

### Chair:

- Dr. Petros Daras ([daras@iti.gr](mailto:daras@iti.gr)), ITI - Information Technologies Institute, Centre for Research and Technology Hellas (CERTH), Greece

### Co-Chair:

- Prof. Noel O’Connor ([noel.oconnor@dcu.ie](mailto:noel.oconnor@dcu.ie)), DCU – Dublin City University, Ireland

Organizing Committee: