**Imagery forensics and analysis**

Digital visual media is nowadays one of the main means of interpersonal communication. Unlike text and voice, visual media represent an effective and above all, natural way of communication between humans. This is due to their immediacy and ease in which humans can interpret and understand image content. As a result, both still imagery and video have become important information carriers in our digital era.

However, in conjunction with the expressive potential of visual media and the ease of their acquisition, distribution and storage, they are also more and more exploited by persons and organizations with malicious intent. As a consequence, today images and videos represent a common source of evidence.

**Image enhancement**

Imagery relating to a crime or calamity is often of a quality that requires additional interpretation and enhancement, i.e. with regard to disputed identity or vehicle identification. Until recent, material suitable for enhancement was generally derived from security camera systems, either analogue or digital. Nevertheless, it nowadays emphatically encompasses an increasing variety of sources, ranging from mobile phones through webcams to aerial and satellite imagery.

**Image authentication**

Digital images are now routinely introduced to either substantiate or dispel alleged allegations or suspicions. Therefore, the ability to effectively distinguish between actual photographs from digital cameras and computer generated images has become of paramount importance. Validating photographic evidence, identification of type of camera used, and assessing the authenticity of social media images are just some examples.

**Image interpretation and analysis**

Image interpretation encompasses the process of drawing conclusions about subjects or objects depicted in images. Applications include, but are not limited to:

- The identification of subjects, objects, and events within imagery.
- Determining the conditions under which, or the process by which, the image was captured or created.
- Identifying or interpreting physical aspects of imagery.
- Retrieving the provenance of imagery.