



The 2nd EAI International Conference on Future Intelligent Vehicular Technologies  
OCTOBER 17–19, 2017 | ISLAMABAD, PAKISTAN

## Call for Papers

### Special Session: BIOMetrics, bioMedical Image and Signal Analysis (BIOMISA)

#### Outline:

Biometrics refers to the science of recognizing individuals based on their physical, physiological or behavioral traits such as face, fingerprints, iris, gait and voice etc. In last few decades, a number of biometric solutions are incorporated in various access control and identity management applications, such as laptops and border control systems. Human identification methods based on credentials, such as identification documents and PIN, cannot meet the growing demand for security in applications such as ID cards, border crossings, and access control. As a result, recognition methods based on physiological and behavioral characteristics are increasingly adopted to enforce person identification applications. However, biometric systems that are based on a single trait often suffer from limitations such as lack of invariant representation, non-universality, noisy sensor data, lack of individuality of the biometric trait and susceptibility to circumvention. There are still several challenging problems in improving the accuracy, robustness, efficiency, security, privacy and ergonomics of multibiometric systems. Secondly, technological advances in medical imaging systems have led to an increasing use of images in all phases of the management of the disease, including diagnosis, prognosis and treatment of pathologies. As a consequence, imaging has taken a major place in clinical practice to assist medical expert in the decision-making. The counterpart is, they have to deal with a large amount of data, and face with an increasing complexity of the image contents. The interpretation, mainly based on the observations, is tedious and subject to error (i.e. false positive or negative readings), which renders the procedure, highly dependent on both skill and experience of the clinicians. They express thus a strong demand for detection, quantification and classification support tools in diagnostic and interventional procedures. Computer-aided diagnosis (CAD) is a growing research area that aims at meeting these demands. The objective is to speed up the diagnostic process, reduce diagnostic errors, and improve quantitative evaluation.

#### Topics:

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

- Biometric Technologies: face, fingerprint, DNA, ear, hand, handwriting, gait, gesture, iris, ocular, handprint/footprint, vascular, voice, other modalities, multi-modalities, soft biometrics, and novel sensing technologies.
- Biometric System Designs & Standards: anti-spoofing, cancelable template and protection, encryption, large-scale identification and big data, mobile and remote biometrics, security and privacy, smart card, standardization, template selection and update.
- Biometric Applications: border and access control, civil registry, e-payment, forensics, law enforcement, health care, mobile and internet, social networking.
- Biometric Evaluations: aging effects, confidence interval estimation, databases, environment impacts, performance modeling and prediction, protocol and benchmarking, social impacts, and usability studies.
- Multibiometrics: New data sensing technologies for multibiometrics and mobile-biometrics; Data pre-processing, template update, feature extraction, recognition, and matching techniques for multibiometric and mobile-biometric systems; Cloud-based solutions for multibiometrics and mobile-biometrics

- Biometrics Databases: Establishing new public databases for biometrics and mobile-biometrics
- CAD designs for clinical applications
- Performance evaluation of CAD systems for clinical applications
- Medical and biological imaging
- Multi-dimensional microscopy imaging
- Image processing for biological systems
- Medical images filtering, restoration and segmentation
- Image representation and analysis
- Medical image texture analysis
- Feature extraction and image description
- Medical image quality assessment
- Artificial intelligence and evolutionary based image processing

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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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