

IEEE Systems Journal

Special Issue on "Biometrics Systems"

Guest Editors:

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Biometrics is nowadays an important application area receiving continuously growing interest, due to the criticality and the social impact of the applications themselves. The increasing needs for security as well as medical diagnosis make biometrics more and more valuable world-wide, both as theory, technologies, design methodologies, and applications are concerned. This field is of growing interest both for the academy, the industry, the government, and the general public.

Biometrics is a narrow scientific and technological field which, however, is highly interdisciplinary since encompasses various aspects in different disciplines (e.g., physiology, biology, medicine, psychology, sociology, chemistry, physics, material sciences, computer science, computer engineering, electronics, system automation, telecommunications, and economics). Inter-disciplinary and synergetic interactions among disciplines are key aspects of this area. To create a biometric system various issues need to be studied in an integrated way: from sensing to measurement procedures, from signal analysis and interpretation to quality assessment, from feature extraction to classification and analysis, from knowledge creation to extraction, from algorithms to data structure, from computational complexity to system performance, from system engineering to software engineering, from privacy to social implications, and much more. Integration and cooperative combination are another key aspects of biometrics systems and applications.

This special issue is directed to collect original papers that address any aspect of the design, implementation and application of biometrics systems. Research areas of relevance to this issue would therefore include, but not be limited to, the following topics at system level:

- Biometrics sensing systems
- Multi-sensor multi-modal analysis, fusion and features extraction for biometrics systems applications
- Biometrics systems engineering
- Networking biometrics systems and applications
- Privacy, anonymity and security in biometrics systems
- Biometrics, Public Key Infrastructure and Identity Base Encryption
- Biometric knowledge systems
- Integration and interoperability in biometrics systems
- Adaptable biometrics systems
- Reliability, availability and dependability of biometrics systems
- Human factors in complex biometrics systems
- Biometrics systems for security applications (e.g., authentication, surveillance, computer security, national defense, transportation)
- Biometrics systems for secure applications (e.g., e-commerce, e-banking, e-government)
- Biometrics systems for medical applications
- Management and operations of biometrics systems
- Social implications of biometrics systems

This special issue will focus on the system-level issues of biometrics environments and applications. Papers addressing only a specific technology or a specific aspect of a biometric system will not be considered.

Submission and Review Process

Questions about the special issue should be directed to Prof. Vincenzo Piuri (vincenzo.piuri@unimi.it).

All manuscripts for this special issue should be submitted electronically to the IEEE Systems Journal website (<http://www.systemsjournal.org/login.php>). Authors should indicate that their manuscript is being submitted for the Special Issue on Biometrics Systems. A copy of the manuscript should be emailed in PDF format to Prof. Vincenzo Piuri.

Schedule:

Submission Deadline: January 15, 2009 Acceptance Notification: Apr. 15, 2009 Target Publication: August 2009