

CFP: IEEE Transactions on Systems, Man and Cybernetics –Part B

Special Issue on Recent Advances in Biometrics Systems

Biometrics technology, while being an integral part of law enforcement, is also critical to the rapidly growing suite of civilian applications, such as citizen ID cards, e-passports, and driver license. These systems not only need advanced biometric technology interfaces but also the ability to deal with security and privacy issues. The integration of biometrics with access control mechanisms and information security is another area of growing interest. The challenge to the research community is to develop integrated solutions that address the entire gamut of research problems from sensors and data acquisition, to biometric data analysis and systems design. One important aspect of biometrics that has not been adequately addressed by the research community thus far is that of large scale applications. For example, the US-VISIT must handle populations on the order of several millions of individuals on a regular basis. Such applications require biometric systems that scale efficiently, going beyond limited lab experiments to real-world installations.

There is a need for scientists and practitioners from the diverse fields of computing, sensor technologies, law enforcement, and social sciences to share a single forum to exchange ideas, research challenges, and results. This special issue will provide such a forum by consolidating the research and recent major results and also serve as a comprehensive record of recent advances in the field. We invite high quality original research papers to be considered for publication. Topics of interest include, but are not limited to:

Biometric Modalities: Fingerprints, Face (2D/3D/Thermal), Iris, Speech, Signature, Hand Geometry, Hand Vein/Palm Print, Gait, Retinal Patterns, Ear (2D/3D) etc.

Biometric Systems: Multi-modal Biometrics, Information Fusion in Biometrics, Indexing and Identification in Large Scale Databases, Novel Hardware Architectures, Security/Privacy Concerns, Biometric Cryptography, Storage and Security of Biometric Templates on Smart Cards

Novel Biometrics: Soft Biometrics, Chemical Biometrics, Skin Spectroscopy etc.

System Evaluation: Performance Metrics, Statistical Confidence Measures

Applications: Law Enforcement, Security, Travel Safety and Border Control, Physical and Virtual Access Control, Data Storage Standards

Submission Procedure:

Paper submissions and full-text review will be managed online via the Manuscript Central website (<http://smcb-ieee.manuscriptcentral.com>). To submit a paper to this special issue, authors should follow the instructions available on the website. Prospective authors should also send an email to Prof. Venu Govindaraju (venu@cubs.buffalo.edu) indicating their interest and a tentative title of the paper.

Important Dates:

Deadline for Manuscript Submission:	May 1, 2006
First reviews and decision	Aug. 1, 2006
Final Accepted Manuscript:	Nov. 1, 2006
Publication issue:	Oct. 2007

Guest Editors of Special Issue

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