



# Call for Papers



## Special Issue on Human Detection and Recognition

### IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY

With a very security conscious society, biometrics based authentication and identification have become the center of attention for many important applications as it is believed that biometrics can provide the necessary accuracy and reliability. Biometrics research and technology continue to mature rapidly, driven by pressing industrial and government needs and supported by industrial and government funding. As the number and types of biometrics architectures and sensors increase, the need to disseminate research results increases as well. This special issue is intended to be positioned at the frontier of biometrics research and showcase the excellent advanced work underway at academic and private research organizations as well as the government laboratories.

Many of the applications require higher level of performance not feasible with a single biometric today. It is believed that fusing multiple biometrics will provide a wider coverage of the population who may not be able to provide a single biometric and will also improve security of the systems in terms of spoof attacks. This special issue will address all aspects of research issues in different modes and levels of fusion of biometrics samples, sensing modes and modalities with the goal of improving performance of biometrics. Theoretical studies on sensor fusion techniques applied to biometrics authentication, recognition and performance modeling are encouraged.

The goals of the special issue are to provide the reader with an overview of the state of the art in this field, and to collect significant research results. Possible topics for papers submitted to the special issue include, but are not limited to:

- Sensing; intensity, depth, thermal, pressure, time-series, exotic
- Face, finger, ear, eye, iris, retina, vein pattern, palm, gait, foot, handwriting, voice, exotic
- Biometric template computation and feature extraction, matching
- Data and performance baselines in multi-biometric systems
- Evolution of standards, protocols, competitions and organized challenge problems
- Score level, decision level and feature level integration
- Architectures for integration, evidence integration
- Fusion based identification techniques, attacks on biometric systems
- Normalization techniques involved in fusion techniques
- Signal processing and machine learning techniques in biometrics fusion
- Public databases and score files in multi-biometrics
- Application dependence personalization of multi-biometrics systems
- Theoretical studies in showing models for integration
- Performance modeling, prediction and evaluation of multi-biometrics systems
- Security improvement assessment for multi-biometrics systems
- Real-world applications

#### INSTRUCTIONS FOR MANUSCRIPTS

Manuscripts should be submitted electronically by following the information for authors at <http://www.ieee.org/organizations/society/sp/tifs.html>. Both the manuscripts and cover letter should be clearly marked to indicate that they are being submitted for consideration for this Special Issue. They will be logged and sent to the Special Issue Editors for review. Both full-length regular papers and short papers will be considered, subject to the normal *Transactions* page limits. Papers must not have been published previously or submitted for publication elsewhere. All papers will be reviewed by following the guidelines of the transactions.

#### IMPORTANT DATES

|               |                                      |              |                                      |
|---------------|--------------------------------------|--------------|--------------------------------------|
| Nov. 1, 2006  | Paper submission deadline            | Jan. 2, 2007 | Completion of first round of reviews |
| May 1, 2007   | Final review and selection of papers | June 1, 2007 | Final manuscripts to IEEE            |
| Sept. 1, 2007 | Publication of the Special Issue     |              |                                      |

#### GUEST EDITORS

|  |   |   |  |  |
|--|---|---|--|--|
| <b>Bir Bhanu</b><br>Univ. of California<br>Riverside, CA | <b>Nalini Ratha</b><br>IBM TJ Watson Center<br>Yorktown Heights, NY | <b>B.V.K. Vijaya Kumar</b><br>Carnegie Mellon Univ.<br>Pittsburgh, PA | <b>Rama Chellappa</b><br>Univ. of Maryland<br>College Park, MD | <b>Josef Bigun</b><br>Halmstad Univ.<br>Sweden |
|--|---|---|--|--|