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Editorial

Image and vision computing journal special issue on multimodal biometrics

Since its beginning in 2003, the International Summer School on Biometrics proved to be a unique forum, where advanced research students and lecturers in biometrics gathered together for a full week of study in several aspects of the science and technology of biometric recognition. This special issue includes some contributions of the school lecturers and the school students.

The papers included represent the diversity of the current issues of biometric technologies.

Three papers are related to the use of face images in recognition, but investigate different problems. One is on the mechanisms of human face perception to define some guidelines for automatic recognition systems. The second paper proposes a novel technique for liveness detection from the face motion. The third paper addresses the face spoofing problem, proposing a methodology to improve the recognition performances despite impostor attacks.

One paper addresses fingerprint matching, which is a classical biometric modality, but from a new perspective. In particular the modeling of fingerprint skin elasticity and distortions is discussed in detail with a view to enhance practical applications.

Handwriting verification is addressed from a multi-modal and multi-algorithmic perspective. Two papers address the system security. The first uses multiple modalities and watermarking

techniques applied to biometric templates. The last paper discusses the introduction of biometric data in e-passports, which is one of the most recent applications of biometrics.

The school meetings have been a rare opportunity to evaluate different technological challenges and the current advances while sharing existing know-how in tutorials. The latter is important as the amount of studies have been massive in the field. However, the hope has been to give not only new insights, but also to promote the application of a research which is already mature in many respects to offer an answer to a variety of problems, ranging from security enforcement to advanced man machine interfaces.

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