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# Biometric ID Management and Multimodal Communication

Joint COST 2101 and 2102 International Conference
BioID_MultiComm 2009
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Proceedings

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# Preface

This volume contains the research papers presented at the Joint COST 2101 & 2102 International Conference on Biometric ID Management and Multimodal Communication, BioID_MultiComm 2009, hosted by the Biometric Recognition Group, ATVS, at the Escuela Politécnica Superior, Universidad Autónoma de Madrid, Spain, during September 16–18, 2009.

BioID_MultiComm 2009 was a joint international conference organized cooperatively by COST Actions 2101 & 2102. COST 2101 Action focuses on "Biometrics for Identity Documents and Smart Cards (BIDS)," while COST 2102 Action is entitled "Cross-Modal Analysis of Verbal and Non-verbal Communication." The aim of COST 2101 is to investigate novel technologies for unsupervised multimodal biometric authentication systems using a new generation of biometrics-enabled identity documents and smart cards. COST 2102 is devoted to developing an advanced acoustical, perceptual and psychological analysis of verbal and non-verbal communication signals originating in spontaneous face-to-face interaction, in order to identify algorithms and automatic procedures capable of recognizing human emotional states.

While each Action supports its own individual topics, there are also strong links and shared interests between them. BioID_MultiComm 2009 therefore focused on both Action-specific and joint topics. These included, but we are not restricted to: physiological biometric traits (face, iris, fingerprint, hand); behavioral biometric modalities (speech, handwriting, gait) transparent biometrics and smart remote sensing; biometric vulnerabilities and liveness detection; data encryption for identity documents and smart cards; quality and reliability measures in biometrics; multibiometric templates for next generation ID documents; operational scenarios and large-scale biometric ID management; standards and privacy issues for biometrics; multibiometric databases; human factors and behavioral patterns; interactive and unsupervised multimodal systems; analysis of verbal and non-verbal communication signals; cross modal analysis of audio and video; spontaneous face-to-face interaction; advanced acoustical and perceptual signal processing; audiovisual data encoding; fusion of visual and audio signals for recognition and synthesis; identification of human emotional states; gesture, speech and facial expression analysis and recognition; implementation of intelligent avatars; annotation of extended MPEG7 standard; human behavior and unsupervised interactive interfaces; and cultural and socio-cultural variability.

We sincerely thank all the authors who submitted their work for consideration. We also thank the Scientific Committee members for their great effort and high-quality work in the review process. In addition to the papers included in the present volume, the conference program also included three keynote speeches from outstanding researchers: Prof. Anil K. Jain (Michigan State University, USA), Prof. Simon Haykin (McMaster University, Canada) and Dr. Janet Slifka (Harvard – MIT, USA). We sincerely thank them for accepting the invitation to give their talks.

The conference organization was the result of a team effort. We are grateful to the Advisory Board for their support at every stage of the conference organization. We also thank all the members of the Local Organizing Committee, in particular Pedro Tome-Gonzalez for the website management, Miriam Moreno-Moreno for supervising the registration process, and Almudena Gilperez and Maria Puertas-Calvo for taking care of the social program. Finally, we gratefully acknowledge the material and financial support provided by the Escuela Politécnica Superior and the Universidad Autónoma de Madrid.

August 2009

Javier Ortega-Garcia
Julian Fierrez

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