Second IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS 08)

The IEEE Second International Conference on Biometrics: Theory, Applications and Systems, or "BTAS 08," was held September 28 – October 1 at the Hyatt Regency Crystal City in the Washington DC area. BTAS 08 built on the success of last year's conference, with the number of submitted papers increasing nearly 120 and the number of attendees increasing by 20% to over 150. This year's conference was again held under the sponsorship of the Systems, Man and Cybernetics Society of the IEEE, with new technical co-sponsorship this year by the Computer Society's Technical Committee on Pattern Analysis and Machine Intelligence. Corporate supporters of BTAS 2008 were Honeywell (sponsors of the Best Student Paper Award), Motorola and Progeny Systems. We thank them for their generous support of the conference. The complete program for BTAS 08 is available at www.cse.nd.edu/BTAS_08 and information on next year's conference is available at www.cse.nd.edu/BTAS_09/. Professor Mark Nixon joined the conference organizing team for BTAS '08, serving as Program Co-Chair. Professor Venu Govindaraju and Dr. Nalini Ratha served again as Program Co-Chairs, and Professor Patrick Flynn served as Publications Chair.

BTAS 2008

TECHNOLOGY TO IMPROVE PRIVACY AND SECURITY

Participation in BTAS 08 was truly international – there were papers from authors in Belgium, Brazil, Finland, France, Greece, Hong Kong, India, Italy, Japan, the Netherlands, Pakistan, People's Republic of China, Poland, Spain, Turkey, Switzerland and of course, the United States. Participation also cut across industry (Digital Signal Corporation, GE Global Research, Microsoft Research, IBM T.J. Watson Research, L1 Identity Solutions, NEC, Philips Research, Samsung Electro-Mechanics, Securics, and Thales Research & Technology), government (FBI, IARPA, NIST, National Policing Improvement Agency (UK), and the Ohio Bureau of Criminal Identification and Investigation) and academia.

Invited speakers for BTAS 08 included Josef Kittler, Pawan Sinha, David Skelton and Michael King. Professor Josef Kittler from the University of Surrey (UK) spoke on "Multi-Biometrics for Identity Authentication." Professor Pawan Sinha from MIT gave a cognitive science perspective with a talk titled "Face Recognition By Humans." Pawan's talk also touched on his work in Project Prakash, which seeks to restore sight to blind children in India, providing a most inspirational element to his talk. Professor Skelton from Indiana State University spoke from the legal perspective at the conference dinner. His talk was titled "Science for People Who Are Bad at Math: Socio-Legal Implications for the Developing Field

Invited speaker Josef Kittler from the University of Surrey.

of Biometrics." Dr Michael King from IARPA spoke about the desirable future performance capabilities for biometrics, with a talk titled "Exploring the Science of Biometrics Under Relaxed Constraints."

On the second day of the conference, there was a panel discussion on the topic "Crime and Biometrics." Panel participants included Richard Vorderbruegge from the FBI, who spoke on "The BCOE and the Future of Biometrics at the FBI," Ambika Suman from the National Policing Improvement Agency (UK), who spoke on "Using 3D Pose Alignment Tools in Forensic Applications of Face Recognition" and Nicole Spaun from the FBI, who spoke on "Forensic Identification of People from Images and Video." On the third day, there was a panel discussion on the theme of "Privacy and Biometrics: Why and How." Panel participants included Emile Kelkboom from Philips Research, Patrizio Campisi from University "Roma Tre," Kumar Bhagavatula from Carnegie Mellon, and Yagiz Sutcu from the Polytechnic Institute of NYU, and moderator Nalini Ratha from IBM Research.

"Privacy and Biometrics" panelists include, from left to right, Kelkboom, Sutku, Campisi, Ratha, and Bhagavatula.

The **Honeywell Best Student Paper Award** winners were recognized at the conference dinner. After considerable analysis beyond the original review process, the conference organizers decided to give two awards. The student author of one paper recognized with Honeywell Best Student Paper award is Lanthao Benedikt from Cardiff University (UK). Her paper is titled "3D Facial Gestures in Biometrics: From Feasibility Study to Application" and the co-authors are David Marshall and Paul Rosin from Cardiff University, and Darren Cosker from the University of Bath. The student author of another Honeywell Best Student Paper Award winner is Emanuele Maiorana. His paper is titled "Cancelable Biometrics for HMM-based Signature Recognition," with co-authors Patrizio Campisi, Javier Ortega-Garcia from UAM Madrid, and Alessandro Neri.

Jan Jelinek from Honeywell presents the Honeywell Best Student Paper Award to Lanthao Benedikt of Cardiff University.

Invited speaker Michael King from IARPA.

As with last year, the final conference session was devoted to a selection of the best-reviewed papers at the conference. Five papers were presented in this session. Two are the above-mentioned winners of the Honeywell Best Student Paper award. The others are: "Class Distance Weighted Locality Preserving Projection for Automatic Age Estimation," by Kazuya Ueki from NEC, and Masakazu Miya Tetsuji Ogawa, and Tetsunori Kobayashi, from Waseda University; "Extended Depth of Field Iris Recognition with Correlation Filters," by Vishnu Naresh Boddeti and Vijayakumar Bhagavatula, both from Carnegie Mellon University; and "Human and Computer Evaluations of Face Sketches with Implications for Forensic Investigations," by Yong Zhang, John Sullins, and Christine McCullough, all from Youngstown State University, and Christine Ross from the Ohio Bureau of Criminal Identification and Investigation.

Attendees at the conference voted to select Best Poster Paper Awards for each of the two poster paper sessions at the conference. The two papers receiving this award for the Monday poster session are "Profile Face Detection: A Subset Multi-Biometric Approach" by James Gentile, Kevin Bowyer and Patrick Flynn, all with the University of Notre Dame, and "Accelerating Iris Template Matching Using Commodity Video Graphics Adapters" by Randy Broussard, Ryan Rakvic and Robert Ives, all from the U.S. Naval Academy. The two papers receiving this award for the Tuesday session are "An Analysis of Minutia Neighborhood Probabilities" by Rein-Lien Hsu and Brian Martin, both with L1 Identity Solutions, and "A Novel Personal Entropy Measure Confronted with Online Signature Verification Systems' Performance" by Nesma Houmani, Sonia Garcia-Salicetti and Bernadette Dorizzi, all from TELECOM & Management SudParis.

Randy Broussard giving the preview of his poster voted a Best Poster Paper award by attendees.

Lale Akarun giving the preview of her poster.

BTAS 09 will be held on September 28 – 30, 2009, and additional info can be found at: www.cse.nd.edu/BTAS_09/. We hope to see you there!

Professor Kevin W. Bowyer
General Chair, BTAS 2008

Jacey-Lynn Minoi giving the preview of her poster.