Preface

Biometrics is the science of recognizing people by their physiological and behavioral characteristics. It holds a lot of promise in revolutionizing the way authentication works today. 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.

After an extremely successful workshop last year, we are pleased to offer the second workshop in the series covering biometrics. This is the second multi-modal biometrics workshop under the IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR) umbrella and 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 accuracy 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 workshop will address all aspects of research issues in different modes of biometrics and levels of fusion of multi-biometrics samples with the goal of improving the performance of biometrics.

We received a large number of papers and based on the reviews provided by an excellent program committee we accepted 13 papers for the oral presentation and 12 papers for the short oral presentation covering many aspects of recent advances in biometrics recognition. In addition, we plan to have an invited talk during a busy but exciting day in June in Minneapolis.

We would like to thank the CVPR organizers to provide us with the opportunity to put together this workshop for the benefit of all the researchers. We hope the papers and the research results presented at this conference will inspire new research in the area of multi-modal biometrics.

Bir Bhanu, University of California, Riverside

Nalini Ratha, IBM T. J. Watson Research Center

Co-chairs, CVPR Biometrics 2007

April 30, 2007

Final Program

Breakfast 7:45--8:30 AM

Session 1: Face recognition in video (8:30 – 9:20)

1. **Pose and Illumination Invariant Face Recognition in Video**
   Yilei Xu, Amit Roy-Chowdhury, Keyur Patel
2. **Online Appearance Model Learning for Video-based Face Recognition**
   Liang Liu, Yunhong Wang, Tieniu Tan
3. **Face Recognition in Video: Adaptive Fusion of Multiple Matchers**
   Unsang Park, Anil Jain, Arun Ross

Session 2: Iris recognition (9:20 – 10:10 minutes)

4. **Non-intrusive Iris Image Capturing System Using Light Stripe Projection and Pan-Tilt-Zoom Camera**
   Sowon Yoon, Ho Gi Jung, Jae Kyu Suhr, Jaihie Kim
5. **On the Efficacy of Correcting for Refractive Effects in Iris Recognition**
   Jeffery Price, Timothy Gee, Vincent Paquit, Kenneth Tobin
6. **Automated Individualization of Deformable Eye Region Model and Its Application to Eye Motion Analysis**
   Tsuyoshi Moriyama, Takeo Kanade

Break 10:10-10:30 AM

Session 3: Security & privacy enhancement in biometrics (10:30—11:30)

7. **Anonymous and Revocable Fingerprint Recognition**
   Faisal Farooq, Nalini Ratha, Tsai-Yang Jea, Ruud Bolle
8. **Real-time Automatic Deceit Detection from Involuntary Facial Expressions**
   Zhi Zhang, Vartika Singh, Thomas Slowe, Sergey Tulyakov, Venugopal Govindaraju, n/a
9. **Using Genetic Algorithms to Improve Matching Performance of Changeable biometrics from Combining PCA and ICA Methods**
   MinYi Jeong, Jeung-Yoon Choi, Jaihie Kim
10. **Secure Biometric Templates from Fingerprint-Face Features**
    Yagiz Sutcu, Qiming Li, Nasir Memon

Session 4: Multi-modal (11:30-12:30)

11. **Fusing palmprint and palm vein images by an integrated line-preserving and contrast-enhancing method for person recognition based on "Laplacianpalm" feature**
    Jian-Gang Wang, Wei-Yun Yau, Andy Suwandy, Eric Sung
12. **A Novel Approach to Improve Biometric Recognition Accuracy Using Rank level fusion**
    Jay Bhatnagar, Ajay Kumar, Nipun Saggar
13. **Multi-modal Person Identification in a Smart Environment**
    Hazim Ekenel, Mika Fischer, Qin Jin, Rainer Stiefelhagen
14. **Improving Iris Identification using User Quality and Cohort Information**
    Arun Passi, Ajay Kumar

Lunch 12:30 – 2 PM

Invited talk: 2 PM – 3:00 PM

Dr. Jonathon Phillips, NIST

Break 3:00-3:20

Session 5: Fingerprint + hand geometry + palm (3:20—4:00)

15. **BIOMETRIC AUTHENTICATION USING FINGER-BACK SURFACE**
    Ravikanth Ch., Ajay Kumar
16. **A Robust Warping Method for Fingerprint Matching**
    Dongjin Kwon, Il Dong Yun, Sang Uk Lee
17. **A Component-Based Approach to Hand Verification**
    Gholamreza Amayeh, George Bebis, Ali Erol, Mireca Nicolescu

Session 6: Behavioral Biometrics (4:00 – 4:40 minutes)

18. **Are Digraphs Good for Free-Text Keystroke Dynamics?**
    Terence Sim, Rajkumar Janakiraman
19. **Facial Expression Biometrics Using Tracker Displacement Features**
    Sergey Tulyakov, Thomas Slowe, Zhi Zhang, Venu Govindaraju
20. **Improving Variance Estimation in Biometric Systems**
    Ross Micheals, Terry Boult

Session 7: Advances in face recognition (4:40 – 6:00 PM)

21. **Recognizing Faces of Moving People by Hierarchical Image-Set Matching**
    Masashi Nishiyama, Mayumi Yuasa, Tomoyuki Shibata, Tomokazu Wakasugi, Tomokazu Kawahara, Osamu Yamaguchi
22. **Robustness of the New Owner-Tester Approach for Face Recognition Experiments**
    Wai Han Ho, Paul Watters, Dominic Verity
23. **Kernel Fukunaga-Koontz Transform Subspaces For Enhanced Face Recognition**
    Yung-hui Li, Marios Savvides
24. **An Active Illumination and Appearance (AIA) Model for Face Alignment**
    Fatih Kahraman, Muhittin Gokmen, Sune Darkner, Rasmus Larsen
25. **Robust Face Alignment For Illumination and Pose Invariant Face Recognition**
    Fatih Kahraman, Binnur Kurt, Muhittin Gokmen

* names in red are short papers. Long papers have 20 minutes for the presentation. Short papers have 10 minutes for the presentation.