

## Day 1: Saturday June 17, 2006

8:00-8:30 Breakfast

8:30 Welcome

8:30 Invited talk - I (8:30-9:15)

Seeing the Big Picture: How Passwords, Smart Cards, and Biometrics Fail for User Authentication -- Dr. Lawrence O’Gorman, Avaya Labs

### *Session I - Liveness/security (9:15-10:15)*

1. Liveness Detection for Fingerprint Scanners Based on the Statistics of Wavelet Signal Processing  
*Bozhao Tan, Stephanie Schuckers*
2. Fingerprint authentication device based on optical characteristics inside a finger  
*Emiko Sano, Takuji Maeda, Takahiro Nakamura, Masahiro Shikai, Koji Sakata, Masahito Matsushita, Koichi Sasakawa*
3. Empirical Mode Decomposition Liveness Check in Fingerprint Time Series Captures  
*Aditya Abhyankar, Stephanie Schuckers*
4. Protecting Face biometric Data on Smartcard with Reed-Solomon Code  
*Y C Feng, Pong C Yuen*
5. Automatic Image Quality Assessment with Application in Biometrics  
*Hartwig Fronthaler, Klaus Kollreider, Josef Bigun*

10:15-10:45 Coffee Break

### **Data driven classifier performance improvements (10:15-11:45)**

6. Biometric Verification: Looking Beyond Raw Similarity Scores  
*Gaurav Aggarwal, Nalini Ratha, Ruud Bolle*
7. Incorporating Generic Learning to Design Discriminative Classifier Adaptable for Unknown Subject in Face Verification  
*Qiong Yang, Xiaoou Tang*
8. Empirical Studies of the Existence of the Biometric Menagerie in the FRGC 2.0 Image Corpus  
*Michael Wittman, Patrick Davis, Patrick Flynn*
9. Analysis of Local Appearance-based Face Recognition: Effects of Feature Selection and Feature Normalization  
*HAZIM KEMAL EKENEL, RAINER STIEFELHAGEN*
10. On the use of SIFT features for face authentication  
*Manuele Bicego, Andrea Lagorio, Enrico Grosso, Massimo Tistarelli*

## Estimating Sample Size Requirements for Reliable Personal Authentication Using User-Specific Samples

*Jay Bhatnagar, Ajay Kumar*

Lunch break 11:45-1:00 PM

Invited talk II (1-1:45) Dr. George Robert Blakly, Chief Scientist, Security & Privacy, IBM.

### Biometrics + Gait (1:45-3:15)

12. Person Verification by Lip Motion

*Maycel-Isaac Faraj, Josef Bigun*

13. Particle Dynamics Warping Approach for Offline Signature Recognition

*Gady Agam, Suneel Suresh*

14. Keystroke Biometric Recognition Studies on Long-Text Input under Ideal and Application-Oriented Conditions

*Charles Tappert, Giang Ngo, Justin Simone, Huguens St. Fort, Sung-Hyuk Cha, Mary Villani*

15. Peg-Free Hand Shape Verification Using High Order Zernike Moments

*Gholamreza Amayeh, George Bebis, Ali Erol, Mircea Nicolescu*

16. Model Selection Within a Bayesian Approach to Extraction of Walker Motion Ziheng

*Zhou, Robert Damper, Adam Prugel-Bennett*

3:15 - 3:45 Coffee Break

### Face Recognition I(3:45 - 4:45)

17. Image Intensification for Low-Light Face Recognition

*Diego Socolinsky, Lawrence Wolff, Andrew Lundberg*

18. Partial & Holistic Face Recognition on FRGC-II data using Support Vector Machine Kernel Correlation Feature Analysis

*Marios Savvides, Ramzi Abiantun, Jingu Heo, Sungwon Park, Chunyan Xie, B.V.K. Vijaya Kumar*

19. Illumination Invariant Elastic Bunch Graph Matching for Efficient Face Recognition

*Nikunj Kela, Ajita Rattani, Phalguni Gupta*

20. Block Selection in the Local Appearance-based Face Recognition Scheme

*HAZIM KEMAL EKENEL, RAINER STIEFELHAGEN*

### Face Recognition II (4:45-5:55)

21. Comparison of Feature Space Methods for Face Recognition

*Chunyan Xie, Marios Savvides, B.V.K. Vijaya Kumar*

22. Pose and Illumination Invariant Registration and Tracking for Video-based Face Recognition

*Yilei Xu, Amit Roy-Chowdhury*

23. **Wavelet Kernel Construction for Kernel Discriminant Analysis on Face Recognition**  
*W S Chen, Pong C Yuen, J Huang, J H Lai*
24. **Estimating Mixing Factors Simultaneously in Multilinear Tensor Decomposition for Robust Face Recognition and Synthesis**  
*Sung Won Park, Marios Savvides*

Black - Oral regular 20 minutes

Orange - Oral short 10 minutes

## Day 2 Sunday June 18, 2006

**8:00-8:30 Breakfast**

**Invited talk 3 (9:00- 9:50)**

**"Selected Topics in Biometric Fusion: Summary of Results" Presenters:  
Austin Hicklin and Brad Ulery, MITRETEK**

### **Multi-view/multi-spectral (9:55 - 12:05)**

**25. Human Face Modeling and Recognition Through Multi-View High Resolution Stereopsis**

*Xin Chen, Timothy Faltemier, Patrick Flynn, Kevin Bowyer*

10:15-10:45 Coffee Break

**26. Multispectral Iris Analysis: A Preliminary Study**

*Christopher Boyce, Arun Ross, Matthew Monaco, Lawrence Hornak, Xin Li*

**27. Multi-Sensory Face Biometric Fusion (for Personal Identification)**

*Ognjen Arandjelovic, Riad Hammoud, Roberto Cipolla*

**28. Pose-Invariant Physiological Face Recognition in the Thermal Infrared Spectrum**

*Pradeep Buddharaju, Ioannis Pavlidis, Panagiotis Tsiamyrtzis*

**29. An Indoor and Outdoor, Multimodal, Multispectral and Multi-illuminant Database for Face Recognition**

*Hong Chang, Harishwaran Hariharan, Mingzhong Yi, Andreas Koschan, Besma Abidi, Mongi Abidi*

12:05 -1:30 Lunch

### **1:30 - 2:30 Panel discussion**

**"On the future of biometrics - research, application and social challenges and how do we overcome" Panel Chair - Prof. Venu Govindraj**

### **Fusion methods (2:35 - 4:45)**

**30. When to Fuse Two Biometrics**

*Elham TABASSI, George W. QUINN, Patrick GROTH*

**31. Incorporating Quality Metrics in Multimodal Biometric Fusion**

*Michael Chan, Rebecca Brown, Wesley Turner*

3:15 - 3:45 Coffee Break

**32. Integrating Face and Gait for Human Recognition**

*Xiaoli Zhou, Bir Bhanu*

**33. Classifier Combination Types for Biometric Applications**

*Sergey Tulyakov, Venu Govindaraju*

**34. An Ensemble Approach to Robust Biometrics Fusion**

*Costin Barbu, Raja Iqbal, Jing Peng*

**35. A Comparison of 3D Biometric Modalities**

*Damon Woodard, Tim Faltemier, Ping Yan, Patrick Flynn, Kevin Bowyer*

**36. Which Reference View is Effective for Gait Identification Using a View Transformation Model?**

*Yasushi Makihara, Ryusuke Sagawa, Yasuhiro Mukaigawa, Tomio Echigo, Yasushi Yagi*  
(moved at authors request)

Black - Oral regular 20 minutes

Orange - Oral short 10 minutes