

Technical Program
The 8th IAPR International Conference on Biometrics (ICB2015)
19 - 22 May 2015, Phuket, Thailand

Time

Tuesday, May 19, 2015

8:00-9:00

Registration

Venue: Front Area of Merlin Grand Ballroom

9:00-12:30

Tutorial Morning Session TM1: An Overview of the Recent Development of Computational Forensics for Criminal and Victim Identification

Kong Wai-Kin Adams (*Nanyang Technological University, Singapore*)

Venue: Merlin Grand Ballroom A (Coffee Break at 10:30-11:00)

9:00-12:30

Tutorial Morning Session TM2: Remote, Mobile, and Wearable Video Face Recognition for Surveillance

Brian Lovell (*University of Queensland, Australia*)

Venue: Merlin Grand Ballroom B (Coffee Break at 10:30-11:00)

12:30-14:00

Lunch Break

Venue: Tri-Trang Restaurant

14:00-17:30

Tutorial Afternoon Session TA1: Spoofing and Anti-Spoofing in Biometrics: lessons learned from the TABULA RASA project

Sébastien Marcel (*Idiap research institute, Switzerland*)

Venue: Merlin Grand Ballroom A (Coffee Break at 15:30-16:00)

14:00-17:30

Tutorial Afternoon Session TA2: Deep Learning Methods for Face Recognition

Lior Wolf (*Tel Aviv University, Israel*)

Venue: Merlin Grand Ballroom B (Coffee Break at 15:30-16:00)

17:30-18:30

Registration

Venue: Front Area of Merlin Grand Ballroom

Time	Paper ID	Technical Program Wednesday, May 20, 2015
8:00-9:00		Registration Venue: Front Area of Merlin Grand Ballroom
9:00-9:10		Welcome Message from General Co-Chairs Massimo Tistarelli (<i>University of Sassari, Italy</i>), Yau Wei Yun (<i>Institute for Infocomm Research, Singapore</i>), and Vutipong Areekul (<i>Kasetsart University, Thailand</i>)
9:10-9:25		Welcome Message from ICB2015 Guest of Honour Methini Thepmani (<i>Permanent Secretary, Ministry of Information and Communication Technology, Thailand</i>)
9:25-9:30		Welcome Message from ICB2015 Host Peerayuth Charnsethikul (<i>Dean, Faculty of Engineering, Kasetsart University, Thailand</i>) Venue: Merlin Grand Ballroom C
9:30-10:30		Keynote speech: "MultiModal Smartphone Authentication" Deepak Chandra (<i>Google's Advanced Technology and Projects (ATAP) Organization, USA</i>) Session Chair: Anil K. Jain (<i>Michigan State University, USA</i>) Venue: Merlin Grand Ballroom C
10:30-11:00		Coffee Break Venue: Front Area of Merlin Grand Ballroom
11:00-12:00		Oral Session I: Iris and Ocular Session Co-Chairs: Mayank Vatsa (<i>IIIT-Delhi, India</i>) Venue: Merlin Grand Ballroom C
11:00-11:20	OS1-1	Recompression Effects in Iris Segmentation Thomas Bergmueller (<i>Authentic Vision, Austria</i>), Eleftherios Christopoulos (<i>University of Salzburg, Austria</i>), Martin Schnoell (<i>University of Salzburg, Austria</i>), and Andreas Uhl (<i>University of Salzburg, Austria</i>)
11:20-11:40	OS1-2	A Biomechanical Approach to Iris Normalization Inmaculada Tomeo-Reyes (<i>Queensland University of Technology, Australia</i>), Arun Ross (<i>Michigan State University, USA</i>), Antwan D. Clark (<i>West Virginia University, USA</i>), and Vinod Chandran (<i>Queensland University of Technology, Australia</i>)
11:40-12:00	OS1-3	Cross-Sensor Iris Verification Applying Robust Fused Segmentation Algorithms Eduardo Garea Llano (<i>Advanced Technologies Application Center - CENATAV, Cuba</i>), Juan M. Colores Vargas (<i>Universidad Autónoma de Baja California - ECITEC, México</i>), Mireya S. García-Vázquez (<i>Instituto Politécnico Nacional - CITEDI, México</i>), Luis M. Zamudio Fuentes (<i>Instituto Politécnico Nacional - CITEDI, México</i>), and Alejandro A. Ramírez-Acosta (<i>MIRAL R&D&I, USA</i>)
12:00-12:30		Poster Highlights I Session Co-Chairs: Brendan F. Klare (<i>Noblis, USA</i>) and Xiaoming Liu (<i>Michigan State University, USA</i>) Venue: Merlin Grand Ballroom C
12:30-14:00		Lunch Break Venue: Tri-Trang Restaurant
14:00-15:00		Panel I: Biometric Technology Adoption and Challenges for Seamless Border Control in ASEAN Session Co-Chairs: Wei-Yun Yau (<i>Institute for Infocomm Research, Singapore</i>) and Prarit Santipraphob (<i>Assumption University, Thailand</i>) Panelist: Azman azra bin Abdul Rahman (<i>Ministry of Home Affairs, Malaysia</i>), Peerapol Promwong (<i>Chanwanich Security Printing Co.Ltd, Thailand</i>), and Vutipong Areekul (<i>Kasetsart University, Thailand</i>) Venue: Merlin Grand Ballroom C
15:00-16:30		Poster Session I / Demo Session I Session Co-Chairs: Brendan F. Klare (<i>Noblis, USA</i>) and Xiaoming Liu (<i>Michigan State University, USA</i>) Venue: Merlin Grand Ballroom AB
	PS1-1	Predicting Segmentation Errors in an Iris Recognition System Nitin K. Mahadeo (<i>Monash University, Australia</i>), Gholamreza Haffari (<i>Monash University, Australia</i>), and Andrew P. Papliński (<i>Monash University, Australia</i>)
	PS1-2	On Fusion for Multispectral Iris Recognition Peter Wild (<i>University of Reading, UK</i>), Petru Radu (<i>University of Reading, UK</i>), and James Ferryman (<i>University of Reading, UK</i>)
	PS1-3	Authentication Based on a Changeable Biometric using Gesture Recognition with the Kinect Benoit Ducray (<i>University of London, UK</i>), Sheila Cobourne (<i>University of London, UK</i>), Keith Mayes (<i>University of London, UK</i>), and Konstantinos Markantonakis (<i>University of London, UK</i>)
	PS1-4	I Know That Voice: Identifying the Voice Actor Behind the Voice Lior Uzan (<i>Tel Aviv University, Israel</i>) and Lior Wolf (<i>Tel Aviv University, Israel</i>)
	PS1-5	Discriminative Regularized Metric Learning for Person Re-Identification Venice Erin Liang (<i>Advanced Digital Sciences Center, Singapore</i>), Yongxin Ge (<i>Chongqing University, China</i>) and Jiwen Lu (<i>Advanced Digital Sciences Center, Singapore</i>)
	PS1-6	One-handed Keystroke Biometric Identification Competition John V. Monaco (<i>Pace University, USA</i>), Gonzalo Perez (<i>Pace University, USA</i>), Charles C. Tappert (<i>Pace University, USA</i>), Patrick Bours (<i>Gjøvik University College, Norway</i>), Soumik Mondal (<i>Gjøvik University College, Norway</i>), Sudalai Rajkumar (<i>Tiger Analytics, India</i>), Aythami Morales (<i>Universidad Autónoma de Madrid, Spain</i>), Julian Fierrez (<i>Universidad Autónoma de Madrid, Spain</i>), and Javier Ortega-García (<i>Universidad Autónoma de Madrid, Spain</i>)
	PS1-7	Appearance-Based Person Re-identification by Intra-Camera Discriminative Models and Rank Aggregation Raphael Felipe de Carvalho Prates (<i>Universidade Federal de Minas Gerais, Brazil</i>) and William Robson Schwartz (<i>Universidade Federal de Minas Gerais, Brazil</i>)
	PS1-8	Viewpoint Invariant Subject Retrieval via Soft Clothing Biometrics Emad Sami Jaha (<i>King Abdulaziz University, Saudi Arabia</i>) and Mark S. Nixon (<i>University of Southampton, UK</i>)

		Fine-Grained Face Verification: Dataset and Baseline Results
PS1-9		Junlin Hu (<i>Nanyang Technological University, Singapore</i>), Jiwen Lu (<i>Advanced Digital Sciences Center, Singapore</i>) and Yap-Peng Tan (<i>Nanyang Technological University, Singapore</i>)
PS1-10		The ICB-2015 Competition on Finger Vein Recognition
		Ran Xian (<i>Peking University, China</i>), Liao Ni (<i>Peking University, China</i>), and Wenxin Li (<i>Peking University, China</i>)
PS1-11		VT-KFER: A Kinect-based RGBD+Time Dataset for Spontaneous and Non-Spontaneous Facial Expression Recognition
		Sherin Aly (<i>Virginia Tech, USA</i>), Andrea Trubanova (<i>Virginia Tech, USA</i>), Lynn Abbott (<i>Virginia Tech, USA</i>), Susan White (<i>Virginia Tech, USA</i>), and Amira Youssef (<i>City of Scientific Research and Technological Applications, Egypt</i>)
PS1-12		Live Face Video vs. Spoof Face Video: Use of Moiré Patterns to Detect Replay Video Attacks
		Keyurkumar Patel (<i>Michigan State University, USA</i>), Hu Han (<i>Michigan State University, USA</i>), Anil K. Jain (<i>Michigan State University, USA</i>) and Greg Ott (<i>KEYW Corporation, USA</i>)
PS1-13		Annotated Crowd Video Face Database
		Tejas I. Dhamecha (<i>IIIT-Delhi, India</i>), Priyanka Verma (<i>IIIT-Delhi, India</i>), Mahek Shah (<i>IIIT-Delhi, India</i>), Richa Singh (<i>IIIT-Delhi, India</i>), and Mayank Vatsa (<i>IIIT-Delhi, India</i>)
PS1-14		Sensor Ageing Impact on Finger-Vein Recognition
		Christof Kauba (<i>University of Salzburg, Austria</i>) and Andreas Uhl (<i>University of Salzburg, Austria</i>)
PS1-15		Harnessing Social Context for Improved Face Recognition
		Romil Bhardwaj (<i>IIIT-Delhi, India</i>), Gaurav Goswami (<i>IIIT-Delhi, India</i>), Richa Singh (<i>IIIT-Delhi, India</i>), and Mayank Vatsa (<i>IIIT-Delhi, India</i>)
PS1-16		Hierarchical Multi-Label Framework for Robust Face Recognition
		Lingfeng Zhang (<i>University of Houston, USA</i>), Pengfei Dou (<i>University of Houston, USA</i>), Shishir K. Shah (<i>University of Houston, USA</i>), and Ioannis A. Kakadiaris (<i>University of Houston, USA</i>)
PS1-17		INDUSTRY/DEMO TRACK
		Fingerprint Authentication System On Card
		Lawrence Chen Tai Pang (<i>Institute for Infocomm Research, Singapore</i>)
PS1-18		DOCTOR CONSORTIUM
		Liveliness-Based Adaptive Biometric System Using Iris and Sclera
		Abhijit Das (<i>Griffith University, Australia</i>)

16:00-16:30		Coffee Break
		Venue: Pre Function Area, Merlin Grand Ballroom

16:30-17:30		Oral Session II: Mobile and Remote Biometrics
		Session Chair: Raul Sanchez Reillo (<i>Carlos III University of Madrid, Spain</i>)
		Venue: Merlin Grand Ballroom C
16:30-16:50	OS2-1	Continuous Authentication of Mobile User: Fusion of Face Image and Inertial Measurement Unit Data
		David Crouse (<i>Michigan State University, USA</i>), Hu Han (<i>Michigan State University, USA</i>), Deepak Chandra (<i>Google Inc., USA</i>) Brandon Barbello (<i>Google Inc., USA</i>), Anil K. Jain (<i>Michigan State University, USA</i>)
16:50-17:10	OS2-2	Multi-modal Authentication System for Smartphones Using Face, Iris and Periocular
		Kiran B. Raja (<i>Gjøvik University College, Norway</i>), R. Raghavendra (<i>Gjøvik University College, Norway</i>), Martin Stokkenes (<i>Gjøvik University College, Norway</i>), and Christoph Busch (<i>Gjøvik University College, Norway</i>)
17:10-17:30	OS2-3	A Touch-less Fingerphoto Recognition System for Mobile Hand-held Devices
		Kamlesh Tiwari (<i>Indian Institute of Technology Kanpur, India</i>) and Phalguni Gupta (<i>National Institute of Technical Teachers' Training & Research, India</i>)

17:30-18:30		Oral Session III: Other Biometrics
		Session Chair: Brian Lovell (<i>University of Queensland, Australia</i>)
		Venue: Merlin Grand Ballroom C
17:30-17:50	OS3-1	Touch-Interaction Behavior for Continuous User Authentication on Smartphones
		Chao Shen (<i>Xi'an Jiaotong University, China</i>), Yong Zhang (<i>Xi'an Jiaotong University, China</i>), Zhongmin Cai (<i>Xi'an Jiaotong University, China</i>), Tianwen Yu (<i>Xi'an Jiaotong University, China</i>), and Xiaohong Guan (<i>Xi'an Jiaotong University, China</i>)
17:50-18:10	OS3-2	Optimal Feature Selection and Inter-Operability Compensation for On-Line Biometric Signature Authentication
		Ruben Tolosana (<i>Universidad Autonoma de Madrid, Spain</i>), Ruben Vera-Rodriguez (<i>Universidad Autonoma de Madrid, Spain</i>), Javier Ortega-Garcia (<i>Universidad Autonoma de Madrid, Spain</i>), and Julian Fierrez (<i>Universidad Autonoma de Madrid, Spain</i>)
18:10-18:30	OS3-3	Gait Regeneration for Recognition
		Daigo Muramatsu (<i>Osaka University, Japan</i>), Yasushi Makihara (<i>Osaka University, Japan</i>), and Yasushi Yagi (<i>Osaka University, Japan</i>)

19:00-22:00		Welcome Reception / IAPR TC4 - IEEE BC joint presentation
		Venue: Beach Lawn near Tri-Trang Restaurant

TIME	Paper ID	Thursday, May 21, 2015
8:00-9:00		Registration Venue: Front Area of Merlin Grand Ballroom
9:00-10:00		Keynote speech: "Reproducible research in Biometrics: moving to the BEAT" Sébastien Marcel (Idiap research institute, Switzerland) Session Chair: Massimo Tistarelli (University of Sassari, Italy) Venue: Merlin Grand Ballroom C
10:00-10:20		Coffee Break Venue: Front Area of Merlin Grand Ballroom
		Oral Session IV: Face Session Co-Chairs: Josef Kittler (University of Surrey, UK) and Stan Z. Li (Chinese Academy of Sciences, China) Venue: Merlin Grand Ballroom C
10:20-10:40	OS4-1	Color Local Phase Quantization (CLPQ)- A New Face Representation Approach using Color Texture Cues Akanksha Joshi (Centre for Development of advanced Computing, India) and Abhishek Kumar Gangwar (Centre for Development of advanced Computing, India)
10:40-11:00	OS4-2	Illumination-Normalized Face Recognition Using Chromaticity Intrinsic Image Wuming Zhang (Ecole Centrale de Lyon, France), Xi Zhao (Xi'an Jiaotong University, China), Di Huang (Beihang University, China), Jean-Marie Morvan (Université Claude Bernard Lyon 1, France), Yunhong Wang (Beihang University, China), and Liming Chen (Ecole Centrale de Lyon, France)
11:00-11:20	OS4-3	Example-Based 3D Face Reconstruction from Uncalibrated Frontal and Profile Images Jing Li (Sichuan University, China), Shuqin Long (Sichuan University, China), Dan Zeng (Sichuan University, China), and Qijun Zhao (Sichuan University, China)
11:20-11:40	OS4-4	3D Face Analysis for Demographic Biometrics Ryan Tokola (Oak Ridge National Laboratory, USA), Aravind Mikkilineni (Oak Ridge National Laboratory, USA), and Christopher Boehnen (Oak Ridge National Laboratory, USA)
11:40-12:00	OS4-5	Sparse Support Faces Battista Biggio (University of Cagliari, Italy), Marco Melis (University of Cagliari, Italy), Giorgio Fumera (University of Cagliari, Italy), and Fabio Roli (University of Cagliari, Italy)
12:00-12:30		Poster Highlights II Session Co-Chairs: Mark S. Nixon (University of Southampton, UK) and Richa Singh (IIIT Delhi, India) Venue: Merlin Grand Ballroom C
12:30-14:00		Lunch Break Venue: Tri-Trang Restaurant
12:30-14:00		Doctoral Consortium Meeting Session Chair: Arun Ross (Michigan State University, USA) Venue: Tongkha Room (Lunch will be served for only registered attendees (20 persons))
14:00-15:00		Panel II: Promote high quality Biometrics research Session Chair: Anil K. Jain (Michigan State University, USA) Panelist: Deepak Chandra (Google Inc., USA), Josef Kittler (University of Surrey, UK), Brendan F. Klare (Noblis, USA), Stan Z. Li (Chinese Academy of Sciences, China) Venue: Merlin Grand Ballroom C
15:00-16:30		Poster Session II Session Co-Chairs: Mark S. Nixon (University of Southampton, UK) and Richa Singh (IIIT Delhi, India) Venue: Merlin Grand Ballroom AB
	PS2-1	A Longitudinal Study of Automatic Face Recognition Lacey Best-Rowden (Michigan State University, USA) and Anil K. Jain (Michigan State University, USA)
	PS2-2	A Verify-Correct Approach to Person Re-identification Based on Partial Least Squares Signatures Gabriel Lorencetti Prado (University of Campinas, Brazil), Helio Pedrini (University of Campinas, Brazil), and William Robson Schwartz (Universidade Federal de Minas Gerais, Brazil)
	PS2-3	Unconstrained Face Detection: State of the Art Baseline and Challenges Jordan Cheney (Noblis, USA), Ben Klein, (Noblis, USA), Anil K. Jain (Michigan State University, USA), and Brendan F. Klare (Noblis, USA)
	PS2-4	Recognition at a Long Distance: Very Low Resolution Face Recognition and Hallucination Min-Chun Yang (Academia Sinica, Taiwan), Chia-Po Wei (Academia Sinica, Taiwan), Yi-Ren Yeh (Chinese Culture University, Taiwan), and Yu-Chiang Frank Wang (Academia Sinica, Taiwan)
	PS2-5	An Efficient Approach for Clustering Face Images Charles Otto (Michigan State University, USA), Brendan F. Klare (Noblis, USA), and Anil K. Jain (Michigan State University, USA)
	PS2-6	Composite Sketch Recognition via Deep Network - A Transfer Learning Approach Paritosh Mittal (IIIT-Delhi, India), Mayank Vatsa (IIIT-Delhi, India), and Richa Singh (IIIT-Delhi, India)
	PS2-7	Quaternion-Based Local Binary Patterns for Illumination Invariant Face Recognition Dayron Rizo-Rodriguez (Université de Sherbrooke, Canada) and Djemel Ziou (Université de Sherbrooke, Canada)
	PS2-8	Annotating Unconstrained Face Imagery: A Scalable Approach Emma Taborsky (Noblis, USA), Kristen Allen (Noblis, USA), Austin Blanton (Noblis, USA), Anil K. Jain (Michigan State University, USA), and Brendan F. Klare (Noblis, USA)
	PS2-9	Discriminative Transfer Learning for Single-Sample Face Recognition Junlin Hu (Nanyang Technological University, Singapore), Jiwen Lu (Advanced Digital Sciences Center, Singapore),

		Xiuzhuang Zhou (<i>Capital Normal University, China</i>), and Yap-Peng Tan (<i>Nanyang Technological University, Singapore</i>)
PS2-10		Attribute Preserved Face De-identification Amin Jourabloo (<i>Michigan State University, USA</i>), Xi Yin (<i>Michigan State University, USA</i>), and Xiaoming Liu (<i>Michigan State University, USA</i>)
PS2-11		Large Margin Coupled Feature Learning for Cross-Modal Face Recognition Yi Jin (<i>Beijing Jiaotong University, China</i>), Jiwen Lu (<i>Advanced Digital Sciences Center, Singapore</i>), Qiuqi Ruan (<i>Beijing Jiaotong University, China</i>)
PS2-12		A Transfer Learning Approach to Cross-Database Facial Expression Recognition Ronghang Zhu (<i>Sichuan University, China</i>), Tingting Zhang (<i>Sichuan University, China</i>), Qijun Zhao (<i>Sichuan University, China</i>) and Zhihong Wu (<i>Sichuan University, China</i>)
PS2-13		Secure Face Template Generation via Local Region Hashing Rohit K. Pandey (<i>University at Buffalo, SUNY, USA</i>) and Venu Govindaraju (<i>University at Buffalo, SUNY, USA</i>)
16:00-16:30		Coffee Break Venue: Front Area of Merlin Grand Ballroom
16:30-17:30		Oral Session V: Security & Spoofing Session Chair: Julian Fierrez (<i>Universidad Autonoma de Madrid, Spain</i>) Venue: Merlin Grand Ballroom C
16:30-16:50	OS5-1	Correlation Based Fingerprint Liveness Detection Zahid Akhtar (<i>University of Udine, Italy</i>), Christian Micheloni (<i>University of Udine, Italy</i>), and Gian Luca Foresti (<i>University of Udine, Italy</i>)
16:50-17:10	OS5-2	The Relation between the Secrecy Rate of Biometric Template Protection and Biometric Recognition Performance Raymond N.J. Veldhuis (<i>University of Twente, The Netherlands</i>)
17:10-17:30	OS5-3	On the Vulnerability of Palm Vein Recognition to Spoofing Attacks Pedro Tome (<i>Idiap Research Institute, Switzerland</i>) and Sébastien Marcel (<i>Idiap Research Institute, Switzerland</i>)
17:30-18:30		Oral Session VI: Hand and Vein Biometrics Session Chair: Andreas Uhl (<i>University of Salzburg, Austria</i>) Venue: Merlin Grand Ballroom C
17:30-17:50	OS6-1	Improving Feature based Dorsal Hand Vein Recognition through Random Keypoint Generation and Fine-Grained Matching Renke Zhang (<i>Beihang University, China</i>), Di Huang (<i>Beihang University, China</i>), Yiding Wang, (<i>North China University of Technology, China</i>), and Yunhong Wang (<i>Beihang University, China</i>)
17:50-18:10	OS6-2	Palm Region Extraction for Contactless Palmprint Recognition Koichi Ito (<i>Tohoku University, Japan</i>), Takuto Sato (<i>Tohoku University, Japan</i>), Shoichiro Aoyama (<i>Tohoku University, Japan</i>), Shuji Sakai (<i>Tohoku University, Japan</i>), Shusaku Yusa (<i>Tohoku University, Japan</i>), and Takafumi Aoki (<i>Tohoku University, Japan</i>)
18:10-18:30	OS6-3	Exploring Dorsal Finger Vein Pattern for Robust Person Recognition Raghavendra Ramachandra (<i>Gjøvik University College, Norway</i>) and Christoph Busch (<i>Gjøvik University College, Norway</i>)
19:00-22:00		Conference Banquet / Awards Ceremony Venue: Blue Village Beach Lawn

Time	Paper ID	Friday, May 22, 2015
8:00-9:00		Registration Venue: Front Area of Merlin Grand Ballroom
9:00-10:00		Keynote speech: "Deep Learning and Biometrics" Yan Shuicheng (National University of Singapore, Singapore) Session Chair: Wei-Yun Yau (Institute for Infocomm Research, Singapore) Venue: Merlin Grand Ballroom C
10:00-10:20		Coffee Break Venue: Front Area of Merlin Grand Ballroom
		Oral Session VII: Fingerprint Session Co-Chairs: Javier Ortega-Garcia (Universidad Autonoma de Madrid, Spain) and Kai Cao (Michigan State University, USA) Venue: Merlin Grand Ballroom C
10:20-10:40	OS7-1	Latent Orientation Field Estimation via Convolutional Neural Network Kai Cao (Michigan State University, USA) and Anil K. Jain (Michigan State University, USA)
10:40-11:00	OS7-2	Latent Fingerprint Match using Minutia Spherical Coordinate Code Fengde Zheng (Beijing Hisign Technology Co.Ltd., China) and Chunyu Yang (Beijing Hisign Technology Co.Ltd., China)
11:00-11:20	OS7-3	Crowd Powered Latent Fingerprint Identification: Fusing AFIS with Examiner Markups Sunpreet Arora (Michigan State University, USA), Kai Cao (Michigan State University, USA), Anil K. Jain (Michigan State University, USA), and Gregoire Michaud (Michigan State Police, USA)
11:20-11:40	OS7-4	Latent Fingerprints Segmentation Based on Rearranged Fourier Subbands Phumpat Ruangsakul (Kasetsart University, Thailand), Vutipong Areekul (Kasetsart University, Thailand), Krisada Phromsuthirak (Kasetsart University, Thailand), and Arucha Rungchokanun (Kasetsart University, Thailand)
11:40-12:00	OS7-5	On the Spatial Inhomogeneity of Fingerprint Minutiae: A Regression Approach Shuiwang Li (Sichuan University, China), Yi Wang (Hong Kong Baptist University, China), Qijun Zhao (Sichuan University, China), and Yi Zhang (Sichuan University, China)
12:00-12:30		Poster Highlights III Session Co-Chairs: Jiwen Lu (Advanced Digital Sciences Center, Singapore) and Raymond Veldhuis (University of Twente, Netherlands) Venue: Merlin Grand Ballroom C
12:30-14:00		Lunch Break Venue: Tri-Trang Restaurant
14:00-15:00		Plenary Talk IAPR Young Biometric Investigator Award Session Chair: Arun Ross (Michigan State University, USA) Venue: Merlin Grand Ballroom C
15:00-16:30		Poster Session III / Demo Session III Session Co-Chairs: Jiwen Lu (Advanced Digital Sciences Center, Singapore) and Raymond Veldhuis (University of Twente, Netherlands) Venue: Merlin Grand Ballroom AB
	PS3-1	k-Nearest Neighborhood Structure (k-NNS) based Alignment-free Method for Fingerprint Template Protection Mulagala Sandhya (Institute for Development and Research in Banking Technology, India) and Munaga V.N.K. Prasad (Institute for Development and Research in Banking Technology, India)
	PS3-2	Touchless Multiview Fingerprint Quality Assessment: Rotational Bad-positioning Detection Using Artificial Neural Networks Cauê Zaghetto (University of Brasilia, Brazil), Alexandre Zaghetto (University of Brasilia, Brazil), Flávio de B. Vidal (University of Brasilia, Brazil), and Luiz H. M. Aguiar (University of Brasilia, Brazil)
	PS3-3	Fingerprint Classification Using a Simplified Rule-Set Based on Directional Patterns and Singularity Features Kribashnee Dorasamy (Council for Scientific and Industrial Research, South Africa), Leandra Webb (Council for Scientific and Industrial Research, South Africa), Jules Tapamo (University of KwaZulu-Natal, South Africa), and Nontokozo P. Khanyile (Council for Scientific and Industrial Research, South Africa)
	PS3-4	Vectorized Fingerprint Representation using Minutiae Relation Code Narishige Abe (Fujitsu Laboratories Ltd., Japan) and Takashi Shinzaki (Fujitsu Laboratories Ltd., Japan)
	PS3-5	Band Selection for Gabor Feature Based Hyperspectral Palmprint Recognition Linlin Shen (Shenzhen University, China), Ziyi Dai (Shenzhen University, China), Sen Jia (Shenzhen University, China), Meng Yang (Shenzhen University, China), Zhihui Lai (Shenzhen University, China), and Shiqi Yu (Shenzhen University, China)
	PS3-6	Towards Bloom Filter-based Indexing of Iris Biometric Data Christian Rathgeb (Hochschule Darmstadt, Germany), Harald Baier (Hochschule Darmstadt, Germany), Christoph Busch (Hochschule Darmstadt, Germany), and Frank Breitingner (University of New Haven, USA)
	PS3-7	Grid Structured Morphological Pattern Spectrum for Off-line Signature Verification B.H. Shekar (Mangalore University, India), R.K. Bharathi (S J College of Engineering, India), Josef Kittler (University of Surrey, UK), Yu. V. Vizilter (State Research Institute of Aviation System, Russia), and Leonid Mestestskiy (Moscow State University, Russia)
	PS3-8	Algorithms for a Novel Touchless Bimodal Palm Biometric System Olegs Nikisins (Institute of Electronics and Computer Science, Latvia), Teodors Eglitis (Institute of Electronics and Computer Science, Latvia), Mihails Pudzs (Institute of Electronics and Computer Science, Latvia), and Modris Greitans (Institute of Electronics and Computer Science, Latvia)
	PS3-9	Superpixel based Finger Vein ROI Extraction with Sensor Interoperability Lu Yang (Shandong University, China), Gongping Yang (Shandong University, China), Lizhen Zhou (Shandong University, China), and Yilong Yin (Shandong University, China)
	PS3-10	Contactless Biometric Hand Geometry Recognition Using a Low-Cost 3D Camera Jan Svoboda (Universita della Svizzera Italiana Lugano, Switzerland), Michael Bronstein (Universita della Svizzera Italiana Lugano, Switzerland), and Martin Drahansky (Brno University of Technology, Czech Republic)
	PS3-11	Swipe Gesture based Continuous Authentication for Mobile Devices Soumik Mondal (Gjøvik University College, Norway) and Patrick Bours (Gjøvik University College, Norway)

	3D Face Recognition with Asymptotic Cones based Principal Curvatures	
PS3-12	Yinhang Tang (<i>Université de Lyon, France</i>), Xiang Sun (<i>King Abdullah University of Science and Technology, Saudi Arabia</i>), Di Huang (<i>Université de Lyon, France</i>), Jean-Marie Morvan (<i>King Abdullah University of Science and Technology, Saudi Arabia</i>), Yunhong Wang (<i>Beihang University, China</i>), and Liming Chen (<i>Université de Lyon, France</i>)	
PS3-13	Face Retriever: Pre-filtering the Gallery via Deep Neural Net	
	Dayong Wang (<i>Michigan State University, USA</i>) and Anil K. Jain (<i>Michigan State University, USA</i>)	
PS3-14	Subspace Learning with Frequency Regularizer: its Application to Face Recognition	
	Zhen Lei (<i>Chinese Academy of Sciences, China</i>), Dong Yi (<i>Chinese Academy of Sciences, China</i>), Xiangsheng Huang (<i>Chinese Academy of Sciences, China</i>), and Stan Z. Li (<i>Chinese Academy of Sciences, China</i>)	
PS3-15	Combining View-based Pose Normalization and Feature Transform for Cross-Pose Face Recognition	
	Hua Gao (<i>École Polytechnique Fédérale de Lausanne, Switzerland</i>), Hazim Kemal Ekenel (<i>Istanbul Technical University, Turkey</i>), and Rainer Stiefelwagen (<i>Karlsruhe Institute of Technology, Germany</i>)	
PS3-16	Audio-Visual Twins Database	
	Jing Li (<i>National University of Singapore, Singapore</i>), Li Zhang (<i>National University of Singapore, Singapore</i>), Dong Guo (<i>Facebook, USA</i>), Shaojie Zhuo (<i>Qualcomm, Toronto, Canada</i>), and Terence Sim (<i>National University of Singapore, Singapore</i>)	

16:00-16:30 **Coffee Break**
Venue: Front Area of Merlin Grand Ballroom

Oral Session VIII: Best Reviewed Papers Session I	
16:30-17:30	Session Chair: Stan Z. Li (<i>Chinese Academy of Sciences, China</i>) Venue: Merlin Grand Ballroom C
16:30-16:50	OS8-1 Enhanced On-Line Signature Verification Based on Skilled Forgery Detection Using Sigma-LogNormal Features Marta Gomez-Barrero (<i>Universidad Autonoma de Madrid, Spain</i>), Javier Galbally (<i>Universidad Autonoma de Madrid, Spain</i>), Julian Fierrez (<i>Universidad Autonoma de Madrid, Spain</i>), Javier Ortega-Garcia (<i>Universidad Autonoma de Madrid, Spain</i>), and Réjean Plamondon (<i>École Polytechnique de Montreal, Canada</i>)
16:50-17:10	OS8-2 Fast and Robust Self-Training Beard/Moustache Detection and Segmentation T. Hoang Ngan Le (<i>Carnegie Mellon University, USA</i>), Khoa Luu (<i>Carnegie Mellon University, USA</i>), and Marios Savvides (<i>Carnegie Mellon University, USA</i>)
17:10-17:30	OS8-3 The 1st Competition on Counter Measures to Finger Vein Spoofing Attacks Pedro Tome (<i>Idiap Research Institute, Switzerland</i>), Raghavendra Ramachandra (<i>Gjøvik University College, Norway</i>), Christoph Busch (<i>Gjøvik University College, Norway</i>), Santosh Tirunagari (<i>University of Surrey, UK</i>), Norman Poh (<i>University of Surrey, UK</i>), B. H. Shekar (<i>University of Surrey, UK</i>), Diego Gragnaniello (<i>University of Naples Federico II, Italy</i>), Carlo Sansone (<i>University of Naples Federico II, Italy</i>), Luisa Verdoliva (<i>University of Naples Federico II, Italy</i>), and Sébastien Marcel (<i>Idiap Research Institute, Switzerland</i>)

Oral Session IX: Best Reviewed Papers Session II	
17:30-18:30	Session Chair: Vijayakumar Bhagavatula (<i>Carnegie Mellon University, USA</i>) Venue: Merlin Grand Ballroom C
17:30-17:50	OS9-1 Single Sensor-based Multi-quality Multi-modal Biometric Score Database and Its Performance Evaluation Takuhiro Kimura (<i>Osaka University, Japan</i>), Yasushi Makihara (<i>Osaka University, Japan</i>), Daigo Muramatsu (<i>Osaka University, Japan</i>), and Yasushi Yagi (<i>Osaka University, Japan</i>)
17:50-18:10	OS9-2 Security Analysis of Bloom Filter-based Iris Biometric Template Protection Julien Bringer (<i>Morpho, France</i>), Constance Morel (<i>Morpho, France</i>), and Christian Rathgeb (<i>Hochschule Darmstadt, Germany</i>)
18:10-18:30	OS9-3 Multi-label CNN Based Pedestrian Attribute Learning for Soft Biometrics Jianqing Zhu (<i>Chinese Academy of Sciences, China</i>), Shengcai Liao (<i>Chinese Academy of Sciences, China</i>), Dong Yi (<i>Chinese Academy of Sciences, China</i>), Zhen Lei (<i>Chinese Academy of Sciences, China</i>), and Stan Z. Li (<i>Chinese Academy of Sciences, China</i>)

Closing Ceremony
Session Co-Chairs: Massimo Tistarelli (*University of Sassari, Italy*), Yau Wei Yun (*Institute for Infocomm Research, Singapore*), and Vutipong Areekul (*Kasetsart University, Thailand*)
Have a good weekend at Phuket/ Have a safe trip back home