

SESSION 1 | ANTI-SPOOFING, TEMPLATE PROTECTION AND FORENSICS**Spoofing Deep Face Recognition with Custom Silicone Masks**

Sushil Bhattacharjee*, IDIAP Research Institute; Amir Mohammadi, IDIAP Research Institute; Sébastien Marcel, IDIAP Research Institute

CrazyFaces: Unassisted Circumvention of Watchlist Face Identification

Naser Damer*, Fraunhofer IGD; Yaza Wainakh, Fraunhofer IGD; Viola Boller, Fraunhofer IGD; Sven von den Berken, Fraunhofer IGD; Philipp Terhörst, Fraunhofer Institute for Computer Graphics Research IGD; Andreas Braun, Fraunhofer IGD; Arjan Kuijper, Fraunhofer Institute for Computer Graphics Research IGD and Mathematical and Applied Visual Computing group, TU Darmstadt

LivDet 2017—Fingerprint Systems Liveness Detection Competition

David Yambay*, Clarkson University; Stephanie Schuckers, Clarkson University; Samantha Denning, Clarkson University; Constantin Sandmann, DERMALOG Identification Systems GmbH; Andrey Bachurinski, Green Bit s.p.a; Josh Hogan, Compact Imaging

Unknown Presentation Attack Detection with Face RGB Images

Fei Xiong*, Information Sciences Institute; Wael Abd-Almageed, Information Sciences Institute

Learning a Shared Transform Model for Skull to Digital Face Image Matching

Maneet Singh, IIIT-Delhi, India; Shruti Nagpal, IIIT-Delhi; Richa Singh, IIIT-Delhi; Mayank Vatsa*, IIIT-Delhi

Secure Face Matching Using Fully Homomorphic Encryption

Vishnu Boddeti*, Michigan State University

SESSION 2 | OTHER BIOMETRICS MODALITIES**Geometrically Consistent Pedestrian Trajectory Extraction for Gait Recognition**

Yasushi Makihara*, Osaka University, Japan; Gakuto Ogi, Osaka University; Yasushi Yagi, Osaka University

DeepLearningFrameworksforOff-AngleIrisRecognition

Mahmut Karakaya*, University of Central Arkansas

Presentation Attack Detection for Cadaver Irises

Mateusz Trokielewicz*, Warsaw University of Technology; Adam Czajke, University Notre Dame

From the Perspective of CNN to Adversarial Iris Images

Yi Huang*, NTU

Body-Taps:AuthenticatingYourDeviceThroughaFewSimpleTaps

Diksha Shukla, Syracuse University; Guangcheng Wei, Syracuse University; Donghua Xue, Syracuse University; Zhanpeng Jin*, University at Buffalo, SUNY; Vir Phoha, Syracuse University

Fully Connected Networks & Generative Neural Networks Applied to Scera Segmentation

Diego Lúcio*, Federal University of Paraná; Rayson Laroca, Federal University of Paraná; David Menotti, Federal University of Paraná; Alceu Britto, Pontifical Catholic University of Parana; Evair Severo, Federal University of Paraná

Fingerprint Match in Box

Joshua Engelsma*, Michigan State University; Kai Cao, Michigan State University; Anil Jain, Michigan State University

Prosodic-Enhanced Siamese Convolutional Neural Networks for Cross-Device Text-Independent Speaker Verification

Sobhan Soleymani*, West Virginia University; Ali Dabouei, West Virginia University; Seyed Mehdi Iranmanesh, West Virginia University; Hadi Kazemi, WVU; Jeremy Dawson, West Virginia University; Nasser Nasrabadi, West Virginia University

Focusing the Beam—A New Laser Illumination Based Data Set Providing Insights to Ringer-Vein Recognition

Christof Kauba*, University of Salzburg; Bernhard Prommegger, University of Salzburg; Andreas Uhl, University of Salzburg

Multi-Perspective Finger-Vein Biometrics

Bernhard Prommegger*, University of Salzburg; Christof Kauba, University of Salzburg; Andreas Uhl, University of Salzburg

SESSION 3 | PHYSIOLOGICAL BIOMETRICS

Fakingit,Makingit:FoolingandImprovingBrain-BasedAuthenticationwith Generative Adversarial Networks

Tanya Piplani*, University of California, Berkeley; Nick Merrill, University of California, Berkeley; John Chuang, University of California, Berkeley

Novel Biometrics: Analysis of an Unattended Health Monitoring System

Wei-yao Ku, Rochester Institute of Technology; Nicholas Conn, Rochester Institute of Technology; David Borkholder, Rochester Institute of Technology; Ifeoma Nwogu*, Rochester Institute of Technology

Hand in Motion: Enhanced Authentication Through Wrist and Mouse Movement

Borui Li, Binghamton University, SUNY; Wei Wang, University at Buffalo; Yang Gao, University at Buffalo; Vir Phoha, Syracuse University; Zhanpeng Jin*, University at Buffalo, SUNY

Biometric Distinctiveness of Brain Signal Based on EEG+D20

Sukun Li*, Pace University; Sung-Hyuk Cha, Pace University; Charles C. Tappert, Pace University

A Non-Contact PPG Biometric System Based on Deep Neural Networks

Omkar Patil, Binghamton University, SUNY; Wei Wang, University at Buffalo; Yang Gao, University at Buffalo; Zhanpeng Jin*, University at Buffalo, SUNY

Adversarial Embedding and Variational Aggregation for Video Face Recognition

Yibo Hu*, Institute of Automation, Chinese Academy of Sciences; Lingxiao Song, Institute of Automation, Chinese Academy of Sciences; Bing Yu, Noah's Ark Laboratory, Huawei Technologies Co., Ltd.; Ran He, Institute of Automation, Chinese Academy of Sciences; Zhenan Sun, Chinese Academy of Sciences

Adversarial Occlusion-aware Face Detection

Yujia Chen*, Institute of Automation, Chinese Academy of Science; Lingxiao Song, Institute of Automation, Chinese Academy of Sciences; Ran He, Institute of Automation, Chinese Academy of Sciences

From Hard to Soft Biometrics Through DNN Transfer Learning

Eduardo Ramos Muguerza*, University of Vigo; Laura Docio-Fernandez, Universidade de Vigo; Jose Alba-Castro, Vigo University

SESSION 4 | FACE

SSFD: A Face Detector via a Single-Scale Feature Map

Lei Shi*, University of Houston; Xiang Xu, University of Houston; Ioannis Kakadiaris, University of Houston

Face Recognition: Primitives in the Wild

Debayan Deb*, Michigan State University; Susan Wiper, University of Chester; Alexandra Russo, Conservation Biologist; Gong Sixue, Michigan State University; Yichun Shi, Michigan State University; Cori Tymoszek, Michigan State University; Anil Jain, Michigan State University

Matching ID Document Photos to Selfies

Yichun Shi*, Michigan State University; Anil Jain, Michigan State University

On Detecting Alterations Made Using GANs and Retouching

Anubhav Jain, Indraprastha Institute of Information Technology, Delhi; Richa Singh, IIIT-Delhi; Mayank Vatsa*, IIIT-Delhi

IJB-S: IARPA Janus Surveillance Video Benchmark

Nathan Kalka*, Noblis; Brianna Maze, Noblis; James Duncan, Noblis; Kevin O'Connor, Purdue University; Stephen Elliott, Purdue Polytechnic Institute; Kaleb Hebert, Noblis; Julia Bryan, Purdue University; Anil Jain, Michigan State University

DeepSketch-Photo Face Recognition Assisted by Facial Attributes

Seyed Mehdi Iranmanesh*, West Virginia University; Hadi Kazemi, West Virginia University; Sobhan Soleymani, West Virginia University; Ali Dabouei, West Virginia University; Nasser Nasrabadi, West Virginia University

Polarimetric Thermal to Visible Face Verification via Attribute Preserved Synthesis

Di Xing*, Rutgers University; He Zhang, Rutgers; Vishal Patel, Rutgers University

Recursive Binary Template Embedding for Face Image Set

Mengjun Leng*, University of Houston; Yuhang Wu, University of Houston; Ioannis Kakadiaris, University of Houston

Are Image-Agnostic Universal Adversarial Perturbations for Face Recognition Difficult to Detect?

Akshay Agarwal, IIIT Delhi; Richa Singh, IIIT-Delhi; Mayank Vatsa*, IIIT-Delhi; Nalini Ratha, IBM

On Matching Faces with Alterations Due to Plastic Surgery and Disguise

Saksham Suri, IIITD; Anush Sankaran, IIIT Delhi; Mayank Vatsa*, IIIT-Delhi; Richa Singh, IIIT-Delhi

SESSION 5 | FINGERPRINT**Latent Fingerprint Cropping**

Dinh-Luan Nguyen*, Michigan State University; Kai Cao, Michigan State University;
Anil Jain, Michigan State University

Orientation Field Estimation for Latent Fingerprints by Exhaustive Search of Large Database

Qihao Yin*, Tsinghua University; Jianjiang Feng, Tsinghua University; Jiwen Lu,
Tsinghua University; Jie Zhou, Tsinghua University, China

Latent Fingerprint Recognition: Role of Texture Template

Kai Cao*, Michigan State University; Anil Jain, Michigan State University

DeepMasterPrints: Generating MasterPrints for Dictionary Attacks via Latent Variable Evolution

Philip Bontrager*, New York University; Aditi Roy, New York University;
Julian Togelius, New York University; Nasir Memon, New York University;
Arun Ross, Michigan State University

Fingerprint Template Ageing Revisited—It's the Quality, Stupid!

Simon Kirchgasser*, University of Salzburg; Andreas Uhl, University of Salzburg;
Katy Castillo-Rosado, Advanced Technologies Application Center (CENATAV);
David Estévez-Bresó, Advanced Technologies Application Center (CENATAV);
Emilio Rodríguez-Hernández, Advanced Technologies Application Center (CENATAV);
José Hernández-Palancar, Advanced Technologies Application Center (CENATAV)

ID Preserving Generative Adversarial Network for Partial Latent Fingerprint Reconstruction

Ali Dabouei*, West Virginia University; Sobhan Soleymani, West Virginia University;
Hadi Kazemi, West Virginia University; Seyed Mehdi Iranmanesh,
West Virginia University; Jeremy Dawson, West Virginia Univ; Nasser Nasrabadi,
West Virginia University

Altered Fingerprints: Detection and Localization

Elham Tabassi, Michigan State University; Tarang Chugh*, Michigan State University;
Debayan Deb, Michigan State University; Anil Jain, Michigan State University

SESSION 6 | MISCELLANEOUS TOPICS**A Likelihood Ratio Classifier for Histogram Features**

Raymond Veldhuis*, University of Twente; Kiran Raja, NTNU; Raghavendra
Ramachandra, NTNU, Norway

On the Use of Mobile Calling Patterns for Soft Biometric Classification

Tempest Neal*, University of Florida; Damon Woodard, University of Florida

An Empirical Evaluation of Deep Architectures on Generalization of Smartphone-based Face Image Quality Assessment

Pankaj Wasnik*, NTNU; Raghavendra Ramachandra, NTNU, Norway; Kiran Raja,
NTNU; Christoph Busch, Norwegian University of Science and Technology

Pushing the Limits of Unconstrained Face Detection: a Challenge Dataset and Baseline Results

Hajime Nada*, Fujitsu Laboratories LTD.; Vishwanath Sindagi, Rutgers University;
He Zhang, Rutgers; Vishal Patel, Rutgers University

Validation of Biometric Identification of Dairy Cows based on NIR Udder Images

Keivan Bahmani*, Clarkson University; Benjamin Schilling, Clarkson University;
Stephanie Schuckers, Clarkson University

Gender Privacy: An Ensemble of Semi Adversarial Networks for Confounding Arbitrary Gender Classifiers

Vahid Mirjalili*, Michigan State University; Sebastian Raschka, University of Wisconsin-Madison; Arun Ross, Michigan State University

On Efficiency and Effectiveness Trade-offs in High-Throughput Facial Biometric Recognition Systems

John Howard*, Maryland Test Facility; Andrew Blanchard, Maryland Test Facility

An Investigation of High-Throughput Biometric Systems: Results of the 2018 Biometric Technology Rally

John Howard*, Maryland Test Facility; Andrew Blanchard, Maryland Test Facility

SmartBox: Benchmarking Adversarial Detection and Mitigation Algorithms for Face Recognition

Akhil Goel, Indraprastha Institute of Information Technology, Delhi; Anirudh Singh,
Indraprastha Institute of Information Technology, Delhi ; Akshay Agarwal, IIT Delhi;
Mayank Vatsa*, IIT-Delhi; Richa Singh, IIT-Delhi

Who wants Continuous Authentication on Mobile Devices?

Sanka Rasnayaka*, National University of Singapore; Terence Sim,
National University of Singapore

Special Session on Image And Video Forensics In Biometrics Oral Presentations

MorGAN: Recognition Vulnerability and Attack Detectability of Face Morphing Attacks Created by Generative Adversarial Network: Naser Damer; Alexandra Moseguí Saladié; Andreas Braun; Arjan Kuijper

PRNU Variance Analysis for Morphed Face Image Detection: Luca Debiasi; Christian Rathgeb; Ulrich Scherhag; Andreas Uhl; Christoph Busch

Mind the Gap: A Practical Framework for Classifiers in a Forensic Context: Chris Zeinstra; Didier Meuwly; Raymond Veldhuis; Luuk Spreuwiers

Recent Advances in Biometric Technology for Mobile Devices Abhijit Das, Chiara Galdy, Hu Han, Raghavendra Ramachandra, Jean-Luc Dugelay, Antitza Dantcheva, Inria, Sophia Antipolis, France, EURECOM, Sophia Antipolis, France, Institute of Computing Technology, CAS, China, Norwegian University of Science and Technology, Norway

Pulse-based Features for Face Presentation Attack Detection: Guillaume Heusch; Sebastien Marcel

Exploring the Use of IrisCodes for Presentation Attack Detection: Cunjian Chen; Arun Ross

Thermal Features for Presentation Attack Detection in Hand Biometrics: Ewelina Bartuzi; Mateusz M. Trokielewicz

Special Session on Recent Advances in Biometric Technology for Mobile Devices Oral Presentations: Applications

Mobile NIR Iris Recognition: Identifying Problems and Solutions: Heinz Hofbauer, Univ. of Salzburg*; Ehsaneddin Jalilian, Univ. of Salzburg; Ana Sequeira, UNIV. OF READING, UK; James Ferryman, UNIV. OF READING, UK; Andreas Uhl, Univ. of Salzburg

Heterogeneity Aware Deep Embedding for Mobile Periocular Recognition: Yashasvi Baweja, IIIT Delhi; Rishabh Garg, IIIT-Delhi; Soumyadeep Ghosh, IIIT Delhi; Mayank Vatsa, IIIT-Delhi; Richa Singh, IIIT-Delhi*; Nalini Ratha, IBM

Dual-Minimax Probability Machines for One-class Mobile Active Authentication: Pramuditha Perera, Johns Hopkins University*; Vishal Patel, Johns Hopkins University

Near-Infrared Illumination Add-On for Mobile Hand-Vein Acquisition: Luca Debiasi, University of Salzburg*; Christof Kauba, University of Salzburg; Bernhard Prommegger, University of Salzburg; Andreas Uhl, University of Salzburg

Comparison of Deep Learning Models for Biometric-based Mobile User Authentication: Sai Narsi Reddy Donthi Reddy, University of Missouri - Kansas City*; Ajita Rattani, University of Missouri - Kansas City; Prof. Reza Derakhshani, University of Missouri-Kansas City