

2020 8th International Workshop on Biometrics and Forensics (IWBF 2020)

**Porto, Portugal
29 – 30 April 2020**



**IEEE Catalog Number: CFP2008U-POD
ISBN: 978-1-7281-6233-1**

**Copyright © 2020 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2008U-POD
ISBN (Print-On-Demand):	978-1-7281-6233-1
ISBN (Online):	978-1-7281-6232-4

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

ORAL SESSION I: PRESENTATION ATTACK DETECTION

#70 - Can GAN Generated Morphs Threaten Face Recognition Systems Equally as Landmark Based Morphs? - Vulnerability and Detection.....1

Sushma Venkatesh, Haoyu Zhang, Raghavendra Ramachandra, Kiran Raja, Naser Damer, Christoph Busch

#55 - Interpretable Biometrics: Should We Rethink How Presentation Attack Detection is Evaluated?.....7

Ana F. Sequeira, Wilson Silva, João Ribeiro Pinto, Tiago Gonçalves, Jaime S. Cardoso

ORAL SESSION II: BIOMETRIC RECOGNITION

#19 - ActGAN: Flexible and Efficient One-shot Face Reenactment.....13

Ivan Kosarevych, Marian Petruk, Markian Kostiv, Orest Kupyn, Mykola Maksymenko, Volodymyr Budzan

#71 - ComSupResNet: A Compact Super-Resolution Network for Low-Resolution Face Images.....19

Aashish Rai, Vishal Chudasama, Kishor Upla, Kiran Raja, Raghavendra Ramachandra, Christoph Busch

#65 - Periocular Biometrics in Head-Mounted Displays: A Sample Selection Approach for Better Recognition.....25

Fadi Boutros, Naser Damer, Kiran Raja, Raghavendra Ramachandra, Florian Kirchbuchner, Arjan Kuijper

#40 - Towards adept hand-crafted features for ocular biometrics.....31

Ritesh Vyas

ORAL SESSION III: IMAGE FORENSICS

#45 - Robust video source recognition in presence of motion stabilization.....37

Pasquale Ferrara, Laurent Beslay

#51 - Development of a score-to-likelihood ratio model for facial recognition using authentic criminalistic data.....43

Anna Leida Mölder, Isabelle Enlund Åstrom, Elisabet Leitet

#52 - Use of Scene Geometry Priors for Data Association in Egocentric Views.....49

Huiqin Chen, Emanuel Aldea, Sylvie Le Hégarat-Masclé, Vincent Despiegel

ORAL SESSION IV: EMERGING BIOMETRICS

#46 - Which Ear Regions Contribute to Identification and to Gender Classification?.....55

Di Meng, Sasan Mahmoodi, Mark S. Nixon

#61 - Bilateral Symmetry in Central Retinal Blood Vessels.....61

Sangeeta Biswas, Johan Rohdin, Martin Drahansky

#21 - Contactless Finger Knuckle Authentication under Severe Pose Deformations.....67

Ajay Kumar

ORAL SESSION V: TEXT FORENSICS

#42 - Ensemble Method for Sexual Predators Identification in Online Chats.....73

Muhammad Ali Fauzi, Patrick Bours

#23 - Forensic Authorship Analysis of Microblogging Texts Using *N*-Grams and Stylometric Features.....79

Nicole Belvisi, Naveed Muhammad, Fernando Alonso-Fernandez

ORAL SESSION VI: SECURITY

#35 - Secure Triplet Loss for End-to-End Deep Biometrics.....85

João Ribeiro Pinto, Jaime S. Cardoso, Miguel V. Correia

#44 - Efficient Fingervein Sample Image Encryption.....91

Sanjay Shekhawat, Heinz Hofbauer, Bernhard Prommegger, Andreas Uhl

#05 - Security Assessment of Partially Encrypted Visual Data: Using Iris Recognition as Generic Measure.....97

Martin Rieger, Jutta Hämmerle-Uhl, Andreas Uhl

POSTER SESSION

#03 - Template Protection on Multiple Facial Biometrics in the Signal Domain under Visible and Near-Infrared Light.....103

Simon Kirchgasser, Luca Debiasi, Rudolf Schraml, Heinz Hofbauer, Andreas Uhl, Jonathan Boyle, James Ferryman

#06 - Analysing a Vein Liveness Detection Scheme.....109

Thomas Herzog, Andreas Uhl

#10 - Advanced Multi-Perspective Enrolment in Finger Vein Recognition.....115

Bernhard Prommegger, Andreas Uhl

#11 - Spatial-Temporal Omni-Scale Feature Learning for Person Re-Identification.....121

Aida Pločo, Andrea Macarulla Rodriguez, Zeno Geradts

#22 - Detecting Deepfakes with Metric Learning.....126

Akash Kumar, Arnav Bhavsar, Rajesh Verma

#28 - Comparison-Level Mitigation of Ethnic Bias in Face Recognition.....132

Philipp Terhöst, Mai Ly Tran, Naser Damer, Florian Kirchbuchner, Arjan Kuijper

#32 - Vulnerability Assessment and Detection of Makeup Presentation Attacks.....138

Christian Rathgeb, Pawel Drozdowski, Daniel Fischer, Christoph Busch

#39 - A Method for Curation of Web-Scraped Face Image Datasets.....144

Kai Zhang, Vitor Albiero, Kevin W. Bowyer

#53 - Deep Learning Based Stress Prediction From Offline Signatures.....150

Hakan Yekta Yatbaz, Meryem Erbilek

#58 - Human Emotion Distribution Learning from Face Images using CNN and LBC Features.....155

Abeer Almowallad, Victor Sanchez

DOCTORAL CONSORTIUM SESSION

#49DC -Biometrics as forensic evidence: some reflections from the Italian Criminal proceeding's point of view.....161

Ernestina Sacchetto