

# **2019 Eighth International Conference on Emerging Security Technologies (EST 2019)**

**Colchester, United Kingdom  
22 – 24 July 2019**



**IEEE Catalog Number: CFP1951K-POD  
ISBN: 978-1-7281-5547-0**

**Copyright © 2019 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:	CFP1951K-POD
ISBN (Print-On-Demand):	978-1-7281-5547-0
ISBN (Online):	978-1-7281-5546-3
ISSN:	2373-0374

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# TABLE OF CONTENTS

Sequence Number	Paper Details
01	<b>Further Heuristic Discussion on Two Countermeasures against Reaction Attacks on McEliece Cryptosystems with QCLDPC Codes</b> Peter Farkas
02	<b>Benchmark of Visual SLAM Algorithms: ORB-SLAM2 vs RTAB-Map</b> Redouane Khemmar, Nicolas Ragot, Adithya Pokala, Romain Rossi, Benoit Decoux, Jean-Yves Ertaud
03	<b>EvoFIT Facial Composite Images: a Detailed Assessment of Impact on Forensic Practitioners, Police Investigators, Victims, Witnesses, Offenders and the Media</b> Charlie Frowd, Emma Portch, Abigail Killeen, Lydia Mullen, Alexander J. Martin, Peter J. B. Hancock
04	<b>Face Attributes and Detection of Drug Addicts</b> Sudarsini Tekkam Gnanasekar, Svetlana Yanushkevich
05	<b>Detecting Thermal Face Signature Abnormalities</b> Oluchukwu Obi-Alago, Svetlana Yanushkevich, Helen Wetherley
06	<b>Risk Inference Models for Security Applications</b> Jonathan Graf, Shawn Eastwood, Svetlana Yanushkevich, Reed Ferber
07	<b>Hybrid Score- and Rank-level Fusion for Person Identification using Face and ECG Data</b> Thomas Truong, Jonathan Graf, Svetlana Yanushkevich
08	<b>Mini-Block-Based Cipher Class for Physical Clone-Resistant Devices</b> Saleh Mulhem, Mouadh Ayache, Wael Adi
09	<b>Multi-Metric Evaluation of Thermal-to-Visual Face Recognition</b> Kenneth Lai, Svetlana Yanushkevich
10	<b>An Efficient Hardware Design for Combined AES and AEGIS</b> Amit Sardar, Bijoy Das, Dipanwita Roy Chowdhury
11	<b>Real Time Object Detection, Tracking, and Distance and Motion Estimation Based on Deep Learning: Application to Smart Mobility</b> Zhihao Chen, Redouane Khemmar, Benoit Decoux, Amphani Atahouet, Jean-Yves Ertaud
12	<b>A Machine Learning Method For Sensor Authentication Using Hidden Markov Models</b> Julian Murphy, Gareth Howells, Klaus McDonald-Maier

- 13 **Spatio-Temporal Texture Features for Presentation Attack Detection in Biometric Systems** + %  
Shi Pan, Farzin Deravi
- 14 **Usability of Skin Texture Biometrics for Mixed-Resolution Images** ++  
Hamed Alsufyani, Sanaul Hoque, Farzin Deravi
- 15 **Alphanumeric Glyphs Transformation Based on Shape Morphing: Context of Text Tattooing** , '  
Audrey Ledoux, Bich Ngoc Dao, Paul Lahmi, Mickael Coustaty
- 16 **Gaze-based Biometric Presentation Attack Detection for Users Wearing Tinted Glasses** , -  
Asad Ali, Nawal Alsufyani, Sanaul Hoque, Farzin Deravi
- 17 **MAC-PHY Cross-layer Design for Secure Wireless Avionics Intra-Communications** - (  
Ramiro Samano
- 18 **Two, Three and Four Dimensional BB84: A Comparative Analysis Based on C# Simulation** % \$ %  
Liliana Zisu
- 19 **Investigating the Effect of Writer Style, Age and Gender on Natural Revocability Analysis in Handwritten Signature Biometrics** % \$ \*  
Tasmina Islam, Mike Fairhurst
- 20 **Secure Device Identification using Multidimensional Mapping** % / &  
Supriya Yadav, Gareth Howells
- 21 **SortAlgo-Metrics: Identification of Cloud-Based Server Via a Simple Algorithmic Analysis** % / & +  
Samuel D Baba, Supriya Yadav, Gareth Howells
- 22 **Spreading Code Identification of Legal Drones in IoT Environment** % / & !  
Khattab Ali, Muzhir Shaban Al-Ani, Klaus McDonald-Maier