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The paper submission deadline of the 18th International Conference of the Biometrics Special Interest Group has been extended to 15th June.

BIOSIG 2019 will provide a forum for computer scientists and engineers from around the world to present their latest research findings and share new ideas in biometrics technology. The conference will discuss technology and biometric applications in areas like border control, national ID cards, e-banking, e-commerce, e-health etc. But also Large-scale applications such as the European Union Visa Information System (VIS), Entry–Exit–System (EES) and Unique Identification (UID). Research contributions on a broad range of biometrics modalities such as face, iris, fingerprint, veins, handwriting, gait and other modalities are welcome.

The BIOSIG 2019 conference addresses these issues and will present innovations and best practices that can be transferred into future applications. The conference is jointly organized by the Competence Center for Applied Security Technology (CAST), the German Federal Office for Information Security (BSI), the European Association for Biometrics (EAB), the Joint Research Centre of the European Com–mission (JRC), the TeleTrusT–Association, the Norwegian Biometrics Laboratory (NBL), the National Research Center for Applied Cybersecurity (CRSIP), the Fraunhofer Institute for Computer Graphics Research IGD, IET Biometrics Journal and the special interest group BIOSIG of the Gesellschaft für Informatik e.V. (GI).

The conference will be technically co-sponsored by IEEE and papers will be added to IEEE Xplore. We invite stakeholders and technical experts to submit original re-search papers. Industrial contributions presenting lessons learnt from practical usage, case study, recent results of prototypes, are also wel–comed. Submissions should be full papers (max. 8 pages) in English. Each paper will be subjected of a double blind peer review.

Important Dates:

- 15.06.2019 Deadline for submissions (extended)
- 20.07.2019 Notification of authors via e-mail
- 20.08.2019 Deadline for final papers (ready for press)
- 16.09.2019 Satellite Workshop TTT Working Group
- 16.–18.09.2019 EAB–Research Project Conference
- 18.09.2019 EAB European Research and Industry Award
- 18.–20.09.2019 Main Conference: Talks and Presentations

Appointment of Jean Salomon as CEO of EAB

The European Association for Biometrics (EAB) announced today the appointment of Jean Salomon as Chief Executive Officer.

According to EAB’s Chairman Alexander Nouak, “We are pleased to appoint Jean as our new CEO to help pursue an even more cooperative contribution of EAB to the multi-disciplinary evolution of Digital Identity, around and beyond our current position of leading association for Biometrics and Identity in Europe.”

Jean Salomon said: “I’m both honored and challenged by this position, and fully acknowledge the merit of past individual and collective EAB leadership, its breakthroughs and bold achievements. As a past delegate myself, EAB has always be part of my own core association with the biometric industry, acting both as a learning center and a professional forum, enabling privileged exchanges and networking with biometrics-savvy colleagues.”

He added: “Our true ambition is to further strengthen the problem-solving capacity of each of our EAB Members in their communities, and also develop collectively proactive links and platforms reaching out to all biometric stakeholders in their quest for a secure development of both European, national and individual Digital Identity schemes”.

Jean concluded: “EAB stakeholders, governments, academia, as well as the surrounding industries, should also thrive together at sustaining and diversifying the use of privacy-by-design biometric processes protecting EU nations’ security, as well as that of their respective citizens, in an even more seamless and law-abiding way”.

EAB’s short- to mid-term ambition and program come at a time the European legislation has finally paved the way for all its Member States to successfully collectively implement their future border security and identity environments. A large scale, secure, biometric-enriched IT portfolio of EU applications will be officially developed around and beyond the EES through a privacy-by-design portfolio of linked biometric and biographic repositories using harmonized efficient cross-linked query systems.

EAB aims at playing a leading role in the sustainability of EU’s evolving best biometric practices. The association is eager to welcome each new individual and collective participation in this endeavor.

About Jean Salomon

After his Ph.D., Jean joined IBM France, then devoted 10 years to Medical Imaging in clinical academic R&D and Product engineering. He spent 20 years with IER, a world leading manufacturer of Transportation Industry equipment securing passenger flows across airports, with special emphasis on border management processes and technologies.

As ISO SC17 and SC37 delegate, he is member of ICAO’s NTWG and ICBWG, focusing on process reengineering in Border Management systems, including harmonization of Biometrics and breeder documents. Since 2008 Jean is Principal at JSCP, a consulting practice solely focused on Travel and Border Security.

Jean took part in several ICAO field assessment missions about Civil Registration in Africa. He served as co-chair of the E.U. FIDELITY’s Advisory Board, and reviewed several FP7 and H2020 proposals. He is a frequent speaker and moderator in large international Transportation Industry Security and Facilitation fora.
The submission deadline for the thirteenth European Biometrics Research and Industry Awards has been extended to June 8, 2019.

These prestigious awards are granted annually to individuals who have been judged by a panel of internationally respected experts to be making a significant contribution to the field of biometrics research and innovations in Europe.

You can find the call for papers at: [https://www.eab.org/award/cfp.html](https://www.eab.org/award/cfp.html)

Shortlisted candidates will be asked to present their research made within the scope of the EAB Biometric Research and Industry Award, focusing only on one specific research topic, in front of the jury, EAB members and public audience on 18 September 2019 during the European Association for Biometric scientific symposium in Darmstadt, Germany.
The second edition of the Swedish Biometrics Forum was organized on May 29th at Halmstad University, Sweden.

A total of 15 people registered to the event, including 6 attendants from other parts of Sweden, and 2 from Germany. About 60% of the participants were representing the industry and government agencies. The Swedish Biometrics Forum is an open platform dedicated to regular exchange of information and experience related to the field of Biometrics and Security in Sweden. Dr. Fernando Alonso–Fernandez and Prof. Josef Bigun from Halmstad University welcomed the audience of this meeting. The following speakers presented their projects or related activities in biometrics and security:

- **Benjamin Tams**, Senior Consultant, Division Homeland Security from secunet Security Networks AG gave the first presentation of the day about the EES (Entry Exit System) to be implemented in the coming years at external EU borders, and about the importance of capturing good quality data for this system.

- **Kevin Hernandez-Diaz**, PhD student at Halmstad University, presented ongoing work on multispectral periocular biometrics, including verification experiments as well as spectral conversion of images based on deep-learning techniques.

- **Nicole Belvisi**, Master student of the Network Security program at Halmstad University. She talked about her experiments and results on textual analysis of online text for identity recognition purposes, with a focus on Tweeter post.

- **Pelle Viberg**, CEO of Raytelligence, spoke about a radar sensor commercialised by the company, with capabilities to measure position of people with millimetre precision. He also presented some application examples with the radar, including counting of people, liveness monitoring (including vital signals acquisition such as respiration or heart rate), and identity.

- **After the lunch break, Dr. Lena Klasén**, Research Director of the Swedish National Police Authority, gave a talk about applied research at the Swedish Police authority. She illustrated her talk with some case examples of different nature that conform the usual operation of the Swedish Police regarding forensics analysis.

- **Johan Karlsson**, Senior Research Engineer of Autoliv Research, gave an overview of active occupant monitoring activities of the company, with focus on use cases involving driver and passenger safety, security and comfort.

- The workshop was then closed with a panel session leaded by Prof. Josef Bigun on current research challenges and directions that can constitute project ideas. The session was contributed by all attendants to the forum interactively, where both the speakers and the audience engaged in a conversation. The discussion continued informally among some attendees after the forum was ended at 15h.

The forum concluded asking to the participants about the satisfaction and interest of such meeting being organized on a regular basis. Given the positive answer received, Dr. Fernando Alonso–Fernandez and Prof. Josef Bigun committed to organise a new edition of the forum.
Welcome to new EAB members

Since the beginning of the year numerous new biometricians have joined EAB! It is a pleasure to welcome the following

Institutions:
- Aculab Plc.
- BioID GmbH
- ekey biometric systems Deutschland GmbH
- Tykn B.V.

Individuals:
- Fernando Ducay Real (Zkteco Europe, S.L.)
- Hansjörg Koch
- Robert Mueller
- Petter Taugbøl (Vallvi AS)Kevin Hernandez Diaz (Halmstad University)
- Anas Husseis (Universidad Carlos III de Madrid)
- Visa Vallivaaka (University of Oulo)
- Salatiel Ezennaya-Gómez (Otto-von-Guericke Universität Magdeburg)

EAB is an inclusive association and provides, subject to approval by the EAB board, financial support to existing members and potential members who cannot afford the membership fee. The membership for students is free of charge. Please spread this word.

For more information read: https://www.eab.org/membership/types_of_membership.html
EU Entry/Exit System (EES)

EU's External Borders will Become Biometric

As part of the Smart Borders Initiative, the European Parliament has decided to introduce the common biometric EU Entry/Exit System (EES) to register all travellers from third countries.

Therefore, from 2021 onwards, nationals of non-EU countries – so called “Third Country Nationals”, or TCN for short, will have to register with four fingerprints and a facial image when entering Schengen countries through land, sea and air borders. The biometric data will be stored in the EES together with the identity data and other information taken from the travel document. Each data record resembles an electronic stamp (thus replacing the previous manual stamping procedure) and will be used to calculate the legitimate duration of stay within the Schengen area. Once the EES is introduced, it will become much easier to verify whether the permitted duration of a short stay (maximum of 90 days within a 180-day period) is exceeded.

Each state in the Schengen area is responsible for organising and managing its own national border control infrastructure at sea, land and air borders and connecting to the central EES.

To ensure the EES’ optimal performance, technical guidelines and standards play an important role. As a matter of fact the German Federal Office for Information Security (BSI) has published various technical guidelines in the area of biometrics and eIDs with regards to EES the following two technical guidelines are of particular importance.

- BSI TR–03121 Biometrics for Public Sector Applications
- BSI TR–03135 Machine Authentication of MRTDs for Public Sector Applications

Both technical guidelines are available as download (free of charge) on the BSI website. Another technical guideline is currently in the works: BSI TR–03156 Public Sector Identity Management in Conjunction with European Registers and Border Control.

With regards to biometric quality, ISO/IEC 19794–5 (Facial image) and NFIQ 2.0 (Fingerprint image) are relevant.


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Voice Presentation Attack Detection

Two Calls Open for Papers on Voice PAD

The ASVspoof 2019 challenge for fake audio detection in automatic speaker verification (ASV) will be presented at Interspeech 2019 in Graz, Austria.

The challenge's database is freely available via the Edinburgh data share. For analyses extending the challenge’s protocol, researchers are invited to submit their contributions to the ASRU 2019 Special Session ”ASVspoof 2019 Analyses”. For elaborating on advances in ASV anti-spoofing (voice PAD), researchers are invited to submit their manuscripts to the Computer Speech and Language (CSL) Special Issue on “Advances in Automatic Speaker Verification Anti-spoofing”. This special issue features a fast publication track with tentative publication in March 2020.


CSL Special Issue: [https://www.journals.elsevier.com/computer-speech-and-language/call-for-papers/advances-in-automatic-speaker](https://www.journals.elsevier.com/computer-speech-and-language/call-for-papers/advances-in-automatic-speaker)
Impact of Facial Recognition Technology on Civil Rights and Liberties

The U.S. House Committee on Oversight and Reform held a hearing on Facial Recognition Technology to examine the impact of Facial Recognition Technology on civil rights and liberties on May 22nd 2019.

The purpose of the hearing is to examine the use of facial recognition technology by government and commercial entities and the need for oversight on how this technology is used on civilians.


Identity and non-existence Recognition Challenge


You can find more information at: https://gotcha2019.wordpress.com/

About GOTCHA2019:

Identity recognition in videos captured from a camera in motion is an extremely relevant topic in security applications, e.g. the use of police body cameras. The organizers have built the GOTCHA dataset that makes it possible to find the identity of subjects of interest in videos by different methods and biometric traits in those types of conditions.

Challenge participants have to build an algorithm which recognizes the subject in video captured by wearable devices. If the subject has never been seen before, according to strategies and rules of open-set identification the algorithm has to realize that instead of forcing to classify the subject in one of the known classes.

It is expected that the contributions could provide an interesting point of view on techniques which best suit this type of situation, whether open-set identification can be reliably carried out in mobile uncontrolled settings. Currently, camera in motion and body cameras find large application in security fields. In particular, body worn cameras and wearable cameras are already used in National and municipal police of many countries, and also by rail and public transport officers in some countries. New challenges therefore arise as to process data from this kind of cameras in order to extract and analyse biometric traits of subjects in video. If a system is able to detect and recognize specific subjects in these videos in a reasonable elapse of time, this can make a huge difference in the possibility of intervention. If there is also the possibility of discriminate between recorded subjects and never-seen-before subjects, the latter may be possibly recorded in new classes for future recognition.

The objective of GOTCHA is to capture the latest advances in biometric research field, for both hard and soft biometrics, soliciting papers and ideas above this new kind of data, quite similar to the reality.

Read more on the GOTCHA challenge and the requirements at: https://gotcha2019.wordpress.com/submission-protocol/
Honorary EAB Membership for Max Snijder

One year ago the EAB co-founder and secretary Max Snijder passed away. Today the EAB management board announces honorary EAB membership of Max.

We remember Max as one of the driving forces of the association. More than ever, we are very motivated to continue his work and raise the profile EAB to be the leading voice for digital identity and biometrics, for Europe.

Conference Report on IEEE FG 2019

The 14th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2019) was held in Lille, France.

Report on Biometrics at ICASSP 2019

ICASSP is the world's largest and most comprehensive technical conference focused on signal processing and its applications.

The 2019 conference featured world-class presentations by internationally renowned speakers, cutting-edge session topics and provided a fantastic opportunity to network with like-minded professionals from around the world. Over 3000 participants made this year's event the largest ever ICASSP conference over the past 44 years. During the conference, the world largest international companies and publishers sponsored a number of prestigious awards. In addition, there was a significant record in tutorial registrations as over 1200 people have registered for the tutorial sessions to be held in the first two days of the conference, and many events have been organized, such as Student Luncheons, Women in Signal Processing, and Young Professionals Development Workshop. The IEEE Signal Processing Cup student competition explored the Search & Rescue with Drone–Embedded Sound Source Localization.

Four plenary session placed focus on: "Handling Uncertainty" (by Sir David John Spiegelhalter), an intelligent openness to demonstrate trustworthiness is needed in admitting uncertainty; "Machine Learning at Google" (by Corinna Cortes), an overview of research efforts with recent advantages in federated learning and structured prediction (e.g., to privacy preservation); "Internet of Skills – Where 5G, Robotics and AI Meet" (by Mischa Dohler), the vision, technology and building blocks to an ultra–responsive from content–delivery to skillset–delivery networks; "The 2018 Norbert Wiener Society Award" (by John R. Treichler), a revisit of how radar/sonar technology and research evolved over the past decades with iterations of DARPA (and other) funding cycles resulting in daily use technology; and "40 years of automatic speech recognition: from statistical decision theory to deep learning" (by Hermann Ney), an homage on the world existing before/concurrent to/after deep learning and the experimental results to show how deep learning in particular improved the acoustic and language models of the data–driven approach in a Bayesian decision framework.

Biometrics was well–perceived at the ICASSP 2019, which featured seven sessions dedicated to biometrics, out of which four poster and two lecture sessions were on speaker recognition. Contributions to biometrics were further covered in sessions on Image/Video Processing, Anomaly Detection and Intent Inference in Object Tracking, Multimodal Representation Learning for Language Generation and Understanding, IoT, and Speech Analysis of Extralinguistic Factors. Among the newly elevated IEEE Fellows, Javier Ortega–Garcia (elevated in 2018) was presented for his contributions to biometrics for forensic speaker verification and signature recognition. With the IEEE Ganesh N. Ramaswamy Memorial Student Travel Grant, David Snyder (Johns Hopkins University) was recognized for his work on "Speaker Recognition for Multi–speaker Conversations Using X–vectors".

Read more at: https://2019.ieeeicassp.org/

UBIO Workshop in Naples, Italy

UBIO 2019, the International Workshop on Ubiquitous implicit BIOmetrics and health signals monitoring for person–centric applications will take place co–located with the SITIS Conference in Naples, Italy from November 26 to 29.

The second edition of this workshop aims at bringing together both theoretical and application research related to the emerging topics of context and condition awareness provided by wearable sensors. In particular, the wide availability of several such sensors on mobile devices spurs a continuous evolution of related applications. Moreover, nowadays less invasive and more acceptable devices allow capturing even body signals like EEG and ECG. In the future, the fusion of IoT, biometrics and wearable signal processing technologies is expected to open new and unexpected scenarios.
EAB Biometric News, May 30, 2019

Biometrics and Forensics (BIOFOR 2019)

2nd International Workshop on Recent Advances in Digital Security

BIOFOR will be held in conjunction with the 20th International Conference on Image Analysis and Processing.
Trento, Italy, September 10th, 2019

The 2nd International Workshop on Recent Advances in Digital Security: Biometrics and Forensics (BioFor 2019) focuses on the ongoing research in the fields of security, forensics, and biometrics, which include many key sectors like Forensics Analysis, Watermarking & Data Hiding, Steganography, Surveillance, Biometrics and Soft Biometrics, Biometric analysis of crime scene traces, etc. It also aims to be an international forum where scientist and researchers can develop synergies between the biometrics and forensic research areas.

The Proceedings of the BioFor 2019 workshop will be published in the Springer Lecture Notes in Computer Science (LNCS) series. The length of the papers is maximum 8 pages (with references included; always an even number of pages). There is no minimum paper length. Papers will be selected by a single blind (reviewers are anonymous) review process based on their originality, relevance, and clarity of presentation. For other information about the submission format, please refer to the workshop website http://www.grip.unina.it/biofor2019/

Workshop on Tracking and Behaviour Analysis

For biometric experts working in the field of video surveillance and gait recognition the recently posted call for papers for the International Workshop on Human Tracking and Behaviour Analysis (HTBA 2019) is of interest.

This workshop aims to investigate the various meanings, media (2D or 3D captors) and constraints (real–time) that leads to answer to the three mean steps of this problematic : tracking, description and learning. The workshop will take place in Sorrento, Italy, from November 26 to 29, 2019.

San Francisco does not operate Face Recognition

The city of San Francisco has decided to ban the use of face recognition software by the police and other agencies. Also other cities in the U.S. are considering a similar decision. You can read more at: [https://www.nytimes.com/2019/05/14/us/facial-recognition-ban-san-francisco.html](https://www.nytimes.com/2019/05/14/us/facial-recognition-ban-san-francisco.html)

You might also want to read the IBIA comment on this decision: [https://www.ibia.org/download/datasets/4899/IBIA-San%20Francisco%20Ban-Comments.pdf](https://www.ibia.org/download/datasets/4899/IBIA-San%20Francisco%20Ban-Comments.pdf)

Keynote Talks at ICASSP 2019


You can view several talks from the ICASSP conference at: [https://www.facebook.com/ieeeSPS](https://www.facebook.com/ieeeSPS)

Swedish Biometrics Forum on 29 May in Halmstad

Halmstad University (HH) in cooperation with the European Association for Biometrics (EAB) would like to invite you to a new edition of the Swedish Biometrics Forum (SBF) that will take place at Halmstad University on Wednesday, May 29th, 2019.

The Swedish Biometrics Forum (SBF) is a new open platform dedicated to regular exchange of information and experience related to the field of Biometrics and Security. We also welcome contributions that extend biometric technologies beyond traditional person authentication, including for example human behaviour. The target of the group is the interdisciplinary discussion between researchers, technology developers, data privacy experts, governmental agencies, operators, service providers and end-users of Biometric Systems. In the regular meetings new applications, latest research results and products are presented.

You can register at: [https://www.eab.org/events/registration/189](https://www.eab.org/events/registration/189)
**NIST is seeking Information on Artificial Intelligence**

In the process of the U.S. National Institute of Standards and Technology (NIST) plan for federal engagement in the development of standards and tools in support of reliable, robust and trustworthy systems that use AI technologies, a Request for Information (RFI) was published.


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**Open Source Fingerprint Identification System**

Anil Jain’s team at the Michigan State University Pattern Recognition and Image Processing (PRIP) Lab has published the fully automated, end-to-end latent fingerprint identification system “LatentAFIS”.

The source code is published on GitHub: [https://github.com/luannd/MSU-LatentAFIS](https://github.com/luannd/MSU-LatentAFIS)

The white paper describing the technical details of the system can be found on arxiv: [https://arxiv.org/abs/1812.10213](https://arxiv.org/abs/1812.10213)

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**Understanding what Deep Convolutional Neural Networks learn about Faces**

Prof. Alice J. O’Toole from the University of Texas at Dallas will deliver a Distinguished Lecture on Deep Learning and CNN at TU Darmstadt, Germany on June 3rd.

The lecture will be entitled: “Turning a face recognition black box white: Understanding what deep convolutional neural networks learn about faces”.

From the abstract of the lecture:

Real-world face recognition requires an ability to perceive the uniqueness of a face across multiple, variable images. Deep convolutional neural networks (DCNNs) accomplish this feat and can be analyzed in a multidimensional “face space”. We examined the organization of viewpoint, illumination, gender, and identity in this space. Specifically, we probed a DCNN trained with in-the-wild images with an in-the-lab dataset consisting of rendered images from 3D laser scans of faces. We show that DCNNs create a highly organized face similarity structure in which identities and images coexist. Natural image variation is organized in this hierarchy, with face identity nested under gender, illumination under identity, and viewpoint under illumination. To examine identity, we caricatured faces and found that identification accuracy increased with caricaturing. Mimicking human perception, DCNN caricature representations “resembled” their veridical counterparts. Caricaturing also minimized illumination and viewpoint representational variation. DCNNs offer a theoretical framework that reconciles decades of behavioral and neural results that emphasized either the image or the object/face in representations, without understanding how a neural code could seamlessly accommodate both.