

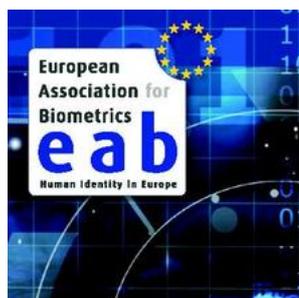
## REPORT: Norwegian Biometrics Forum, meeting 16 November 2017



The Norwegian Biometrics Forum meeting was organized on November 16th at the National ID Center in Oslo. Participants were representing government agencies, industry and research organizations from Norway, Sweden and other non-Scandinavian countries. A full report of the meeting

[Full story](#)

## REPORT: EAB-RPC 2017, Darmstadt 18-19 September



The EAB and the Directorate-General Joint Research Center (DG-JRC) jointly organized in the 4th EAB Research Projects Conference (EAB-RPC) Darmstadt. Research results of 14 EU projects were presented and the results and benefits for our European society were discussed. The report

[Full story](#)

## China to build giant facial recognition database to identify any citizen within seconds



China is building the world's most powerful facial recognition system with the power to identify any one of its 1.3 billion citizens within three seconds. The goal for the system is to be able to match someone's face to their ID photo with about 90% accuracy. The system can be

[Full story](#)

### Next events:

**September 24 – 25, 2018:** EAB Research Projects Conference (EAB-RPC) 2018

**September 25, 2018:** 8<sup>th</sup> EAB General Assembly

**September 26, 2018:** German TeleTrusT Biometrics Working Group

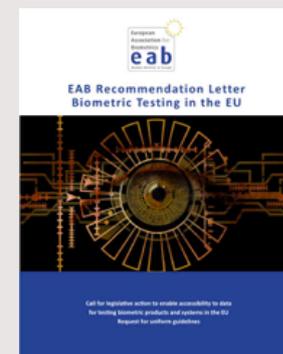
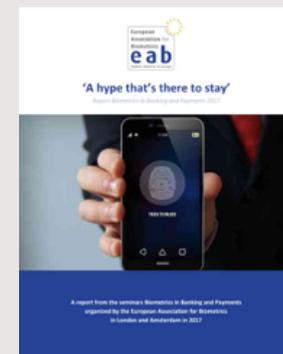
**September 26, 2018:** EAB Biometrics Research and Industry Awards 2018

**September 27 – 28, 2018:** BIOSIG 2018 – 17<sup>th</sup> International Conference of the Biometrics Special Interest Group

**November 9, 2018:** Seminar on Biometric Data and the GDPR

**November 23, 2018:** Norsk Biometri Forum Meeting

### Special reports:



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## REPORT: Norwegian Biometrics Forum, meeting 16 November 2017



The Norwegian Biometrics Forum meeting was organized on November 16th at the National ID Center in Oslo. Participants were representing government agencies, industry and research organizations from Norway, Sweden and other non-Scandinavian countries. A full report of the meeting is now available.

### Report: Norwegian Biometrics Forum, meeting 16 November 2017

The fall edition of the Norwegian Biometrics Forum was organized on November 16th at the National ID Center in Oslo. Participants were representing government agencies, industry and research organizations from Norway, Sweden and other non-Scandinavian countries. The Norwegian Biometrics Forum is an informal meeting place for presentation and discussion in the field of the use of biometrics. The following speakers presented their projects.

**Lisa Mari Løkke** (Politiet-Direktorat) reported about the progress of the IDeALT project. ID-crime is continuously increasing in Norway. Yet there have been noted several cases that not the person that appeared in front of the court, does later after a verdict appears in jail. The contract for the Passport and ID project (PoID) has started in July 2017 and it includes the deployment of physical equipment for biometric capture, document reader and the manufacturing and personalization of ID-documents. Upon enrolment a 1:n facial comparison will be conducted, to avoid duplicate identities. Roll-out of the first new passports shall start end of 2018. The design for the National ID-card is ready including a functionality as a travel document within the EEA. The intention is to also replace the widely used Bank-ID card. Moreover the ID-card will contain the eID. Enrolment transactions will also cross-check against potential previous enrolments in the passport database. On the application side the mobile device will start in January 2018 and will focus on fingerprint recognition for person control, to be augmented later for face recognition. From the organization perspective the IDeALT program will be transformed into a ID-section in the politiet-direktorat.

**Asbjørn Hovstø** reported about the European Platforms Initiative on 3-factor authentication schemes in the context of Internet of Things (IoT). IoT networks are about to observe the behaviour of individuals in the application areas of medical devices and health services. The concept deals with an integrated approach of identity-conforming credentials of authentication based on knowledge, possession and biometric characteristics. Reference projects are active in the areas automotive and retail. Applications are shown in the Smart City Pilot in Berlin (e.g. with parking applications)

**Dana Jaedicke** (Datatilsynet) reported about the General Data Protection Regulation (GDPR 2016/679) and the required preparation steps to introduce processes that are compliant with the regulation. Norway will apply the regulation directly but will issue a complementary national law (revised LOV-2000-04-14-31 Personal data act). The regulation will be incorporated as an annex to the EEA agreement. A draft of a new data protection act discussed on a public hearing in October 2017. The act is expected to be discussed in parliament in March 2018. Included in national leeway is the threshold age for consent for children, which is expected to be lowered.

**Björn Aildén** (Speed-Identity) talked about the efforts invested in the establishment of a high quality database. Focus is given on the quality of components (sensors and lenses) and the reduction of interaction needed by enrolment officers, while maintaining universal access. He presented the mobile equipment that is meeting the requirement with less than 10 kilo weight.

**Christian Bull** (telenor) and **Guoqiang Li** (NTNU) talked about data driven authentication. The intent of their joint project is, to simplify authentication procedures. Their approach is, to exploit the sensor data from smartphones (microphone, accelerometer, Gyroscope and GPS). Processing of data is handled via a convolutional neural networks (CNN). In addition to

the neural network based approach, the project is also analysing data with explicit algorithms specifically for accelerometer data and WiFi-information. Data was sampled with 144 data subject over multiple days. First findings in the project are focused on pure WiFi based authentication and 30 minutes signal recordings. In parallel the accelerometer data was analysed based on 3s recordings. With a combination of WiFi and accelerometer data an Equal Error Rate of 9,19% can be reached.

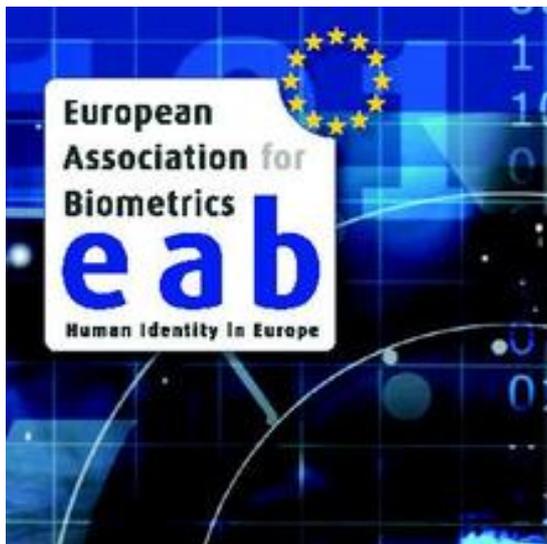
**Kiran Raja** (NTNU) reported about trustworthy and reliable smartphone authentication with camera based sensor data. His talk provided an overview of the Secure Access Control over Wide Area Networks (SWAN) project, which is funded by the Research Council Norway as part of the IKTPLUSS program. This international project is addressing the need for secure biometric transaction authentication e.g. for financial services. In a joint European effort the Norwegian Biometric Laboratory is developing in cooperation with French, Swiss and German experts mechanisms, that can detect potential presentation attacks against a smartphone camera (e.g. presentation of recorded videos on high resolution displays).

The final talk was provided by **Marianne Henriksen** from the Norwegian Tax Administration. She provided an update on the new Norwegian Population Registry and the new legislation. Moreover she talked about the ID breeder. As of today 5,3 million residents are registered in Norway. In addition approximately 2 million non-residents are recorded in the registry, as they are tax liable to Norway. Norway has identified the need for a holistic approach to the administration of personal identities, that includes interaction of processes from the police, the Norwegian Directorate of Immigration (UDI) and the population register. The intention of the project is to minimize the risk areas for ID-management regarding i) the issuance and use of CPR-numbers, ii) the issuance of passports and ID-cards, iii) and proper control of ID-documents.

More information and slides are available at: <https://www.eab.org/events/program/155>

EAB Biometric News, February 14, 2018

## REPORT: EAB–RPC 2017, Darmstadt 18–19 September



The EAB and the Directorate–General Joint Research Center (DG–JRC) jointly organized in the 4th EAB Research Projects Conference (EAB–RPC) Darmstadt. Research results of 14 EU projects were presented and the results and benefits for our European society were discussed. The report can now be downloaded.

Report: 4th EAB Research Projects Conference 2017

The European Association for Biometrics (EAB), the Directorate–General Joint Research Center (DG–JRC) and numerous EU research projects, namely ARIES, iBorderCtrl, PYCSEL, AMBER, LIGHTest, ABC4EU, HECTOS, BODEGA, PROTECT, SIIP, SWAN, INGRESS, FastPass and Tabula Rasa jointly organized in Darmstadt the 4th EAB Research Projects Conference (EAB–RPC) to present research results and to discuss the benefits of this research for our European society. This fourth conference took place on September 18th and 19th and presented updates of the projects introduced in the previous conferences and also new projects in the fields of border control, speaker identification,

identity management, template protection and more.

The conference was opened with a keynote talk from **Richard Rinkens** from the Directorate–General of Migration and Home affairs (DG–HOME), who illustrated the current cascaded silo structure of European Information systems (SIS, the new EES, VIS, ETIAS, EURODAC). He introduced the European concept for a shared biometric information system that benefits from flagged information, releasing data on a need to know basis. A core element in the concept will be the Common Identity Repository (CIR) that operates as European search portal, through which police agents and border officers could access SIS, VIS and EURODAC with the intention to detect duplicate enrolments potentially stored under different identifiers (i.e. different biographic information). In an equivalent manner, current forensic investigations under the Prüm treaty are conducted through numerous bilateral information exchange channels, which could benefit from a European Search Portal. Building up such CIR will require control of biometric data quality in this distributed data warehouse. The plan is to implement the CIR by the year 2022. The CIR concept is elaborated in more detail in the High Level Expert Group (HLEG) report, which can be downloaded from:

<http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=32600&no=1>

On the second day, **Ciaran Carolan** representing the European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice (eu-LISA) provided a keynote talk on requirements for large-scale IT Systems for migration, borders and security. The requirements presented were related to eu-LISA's current operational responsibility for the management of SIS-II, VIS and EURODAC. The projection for future themes was elaborated by identifying shortcomings e.g. limited issues of quality that can result in operational inefficiencies. A number of issues are already being addressed through policy planning yet research can play a role in ensuring that such changes are feasible and subsequently optimally implemented. In this regard, he mentioned the proposed lowering of the age of fingerprinting from 14 down to 6 years in Eurodac and the additional storage of facial images. Moreover, the need for new systems to address gaps in information management was elaborated. He described the proposed EES and ETIAS systems, expected to be in operation by the year 2020. The travel information & authorization system (ETIAS) is a transposed concept of the US ESTA-system, requiring an online application for travel authorizations. He also discussed reasons for and benefits of the shared Automatic Biometric Information System (ABIS/BMS) previously described by Mr. Rinkens and discussed some research challenges around this concept. Key challenges identified were EU standards on quality control, device certification, mobile technologies, privacy enhancing technologies.

The final keynote was provided by **Jorge Silva Rodrigues** from FRONTEX, who discussed in his talk the role of the FRONTEX research and innovation unit (RIU), which, following the role specified in their new mandate regarding the support in the development of technical standards for equipment, is an active participant in standardisation bodies such as the CEN TC224 WG18. FRONTEX is seeking to strengthen the monitoring and contribution to European Border security contributing to standards at tactical-level command, control, communication, as well as technical surveillance to ensure interoperability at Union and National level. One of the current activities is the harmonization of ABC systems and the performance assessment methodology for Document Inspection Systems (DIS). Another focus point is biometrics on the move and its application for border control.

At the end of the conference a panel discussion organized by **Evgeni Moyakine** (University of Groningen) reflected principles for effective and sustainable biometric systems with global research while investigating results from the SiiP and the INGRESS project.

The final panel was chaired by **Farzin Deravi** (University of Kent) and started with a report from **Mark Branchflower** (INTERPOL), who explained the needs of biometric operators for face, fingerprint and DNA. In the discussion, once again the issue of quality control specifically for facial images was formulated. Such measures are relevant to ensure the quality of reference data captured in constrained environments but on the mid-term also improvement of quality of probes/traces, stemming for instance from CCTV data, will become relevant. In addition, the panel demanded that privacy enhancing technologies (e.g. biometric template-protection algorithms) should reach a technical maturity level sufficient for integration in operational systems.

The presentations and complementary information from the speakers are available on the EAB-website at:

<http://eab.org/events/program/122>

The conference was well attended and thus a fifth edition is going to take place next year, which is scheduled for the 24th and 25th of September 2018. The EAB Research Projects Conference 2018 will again be co-located with the IEEE BIOSIG conference that will take place later that same week. Please read more at: <http://eab.org/events/program/151>

## China to build giant facial recognition database to identify any citizen within seconds



China is building the world's most powerful facial recognition system with the power to identify any one of its 1.3 billion citizens within three seconds. The goal for the system is to be able to match someone's face to their ID photo with about 90% accuracy. The system can be connected to surveillance camera networks and will use cloud facilities to connect with data storage and processing centres distributed across the country.

### China to build giant facial recognition database to identify any citizen within seconds

Stephen Chen, China Morning Post, 2017

China is building the world's most powerful facial recognition system with the power to identify any one of its 1.3 billion citizens within three seconds. The goal is for the system to be able to match someone's face to their ID photo with about 90 per cent accuracy.

The project, launched by the Ministry of Public Security in 2015, is under development in conjunction with a security company based in Shanghai.

The system can be connected to surveillance camera networks and will use cloud facilities to connect with data storage and processing centres distributed across the country, according to people familiar with the project.

Chinese companies are already taking the commercial application of facial recognition technology to new heights. With a smile or blink of the eyes to a camera, students can now enter their university halls, travellers can board planes without using a boarding pass and diners can pay for a meal at KFC.

Some public lavatories in Beijing also use facial recognition so that the automatic dispensing machines will deny toilet paper to people who ask for it more than once within a given period.

Facial recognition could supersede other personal identification methods that are used to make payments such as scanning fingerprints or QR codes on a mobile phone.

<http://www.scmp.com/news/china/society/article/2115094/china-build-giant-facial-recognition-database-identify-any>

## Welcome to 11 new EAB members from 8 countries!

As from January 2018 we registered 11 new members They are: Seebus Special Projects (NL), Copenhagen Business School (DK), Hochschule Wismar (D), University of Camerino (I), Swiss Distance Learning University (CH), INRIA (F), Norwegian National Police Directorate (N), Veridos (D), Matthew Boakes, University of Kent (UK), Bundesverwaltungsamt (D), Bridge Corporation Biometric Intelligence (D).

## Call for Chapters: Springer Handbook of Vascular Biometrics

EAB and SPRINGER agreed to jointly inform the community about new research and developments in biometric and sensing technologies. The first joint activity is to publish a book on vascular biometrics. Editors are A. Uhl, C. Busch, S. Marcel and R. Veldhuis. This Handbook will provide the first comprehensive presentation of the state-of-the-art in biometrics exploiting the outlay of human blood vessels for biometric recognition, i.e. vascular biometrics, including finger vein recognition, hand/palm vein recognition, retina recognition, and sclera recognition.

### **Handbook of Vascular Biometrics (1st edition) – Call for Chapters**

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Editors of the handbook are: Andreas Uhl, Christoph Busch, Sébastien Marcel and Raymond Veldhuis.

Biometrics is a tremendously active research field including developments in sensing technology, signal and image processing, information security, and applied machine learning, and strong links with other research areas such as forensic science, human-computer interaction, and systems engineering. In the last decade, and especially in the last few years, vascular biometrics have become established as important biometrics modalities.

This Handbook provides the first comprehensive presentation of the state-of-the-art in biometrics exploiting the outlay of human blood vessels for biometric recognition, i.e. vascular biometrics, including finger vein recognition, hand/palm vein recognition, retina recognition, and sclera recognition. After an introductory chapter composed by one of the editors which will summarize the state of the art and availability of commercial systems and open datasets / open source software, individual chapters will be dedicated to specific aspects of one of the considered biometric modalities including questions of usability, security, and privacy.

Besides chapters of purely academic nature, the handbook will contain chapters contributed by major industrial manufacturers.

This first Edition of the Handbook of Vascular Biometrics is now planned for publication in the Springer Advances in Computer Vision and Pattern Recognition series in 2019. The editorial team is soliciting chapter contributions from members of the biometrics, pattern recognition and machine learning research communities. Contributions from other communities which cover aspects strongly related to vascular biometrics are also welcome, e.g., information security, human-computer interaction, and systems engineering.

Targeted contents include:

- Fingerprint, Handvein, Retina, and Sclera-based Recognition Systems
- Less established vascular recognition schemes
- Sensor-related developments in these areas
- Security- and Privacy issues in these areas, e.g. template protection schemes, presentation attack detection
- Release of new public datasets and corresponding results • Robustness and usability aspects.

### **Originality**

Chapter contributions are expected to present novel content as compared to earlier published work (a percentage of 25–30% novel content as compared to earlier published work is expected). Reports of significant real-world applications of vascular biometric systems are also welcome.

### **Reproducible Research – Standard Compliance**

The Handbook of Vascular Biometrics will have a focus on reproducible research (RR). All contributions are required to meet the following conditions:

- experiments should relate to publicly available datasets as a first requirement for RR;
- system scores generated with proposed methods should be openly available as a second requirement for RR.

Additionally, the sharing of plots or performance figures should align with the international standard ISO/IEC 19795–1. Moreover open source code of the proposed methods and detailed instructions to reproduce the experiments is strongly encouraged.

We are seeking a harmonized appearance of all chapters and thus invite authors to align their manuscripts with the Harmonized Biometric Vocabulary, as published in the international standard ISO/IEC 2382–37:

[http://standards.iso.org/ittf/PubliclyAvailableStandards/c066693\\_ISO\\_IEC\\_2382-37\\_2017.zip](http://standards.iso.org/ittf/PubliclyAvailableStandards/c066693_ISO_IEC_2382-37_2017.zip)

EAB Biometric News, February 14, 2018

## EAB to join the panel at European Payment Summit: 25% reduction for EAB members

On 14–15 March 2018 the European Payment Summit takes place in The Hague (NL). The European Payment Summit offers a unique 2 day dual program featuring key developments in the payments/transaction space.

The EAB will join the panel 'PSD2 and strong Customer Authentication (track A4) on 15 March from 11.30 – 12.15 hrs.

**EAB members can register with 25% discount via code EAP-EPS: [www.europeanpaymentsummit.com](http://www.europeanpaymentsummit.com)**

The European Payment Summit offers a unique 2 day dual program featuring key developments in the payments/transaction space combined with a key sessions on international Security & Fraud in a special collaboration with Hague Security Delta (HSD). Next to plenary introductions, delegates can create a meaningful 2 day program in order to gain best insights on developments, debate on key issues and learn from best practices.

The digitally connected world has changed the way we transact. New technology and new schemes enable us to by-pass regulated models. New payments techniques require new rules as we need to protect users (businesses and consumers). This fast changing landscape opens door to instant payments, optimisation of processes and logistics but also new security risks. The 2018 program will address key issues and changes in this space with leading thought leaders.

### Key Highlights at European Payment Summit 2018

- PSD2 & Next Steps – Creating an Open Secure Market for Retail Payments
- The GDPR Challenge: Bridging Legal – Finance – Technology
- Security & Identity – the Estonian Strategy Shared
- Why Identity will be bigger than Payments
- Quantum Technology and Payment Security
- Open Banking Evolution – Repositioning of Banks and PSPs
- Preventing Payment Transaction Fraud – blue print
- AI in Payments
- Out of the Sandbox Thinking – regulatory reforms in Europe
- FSI-Fintech co-operation: Why Fin-Tech has grown rapidly in China

EAB Biometric News, February 14, 2018

## SDW2018: Special rate for EAB members

The EAB and Security Document World 2018 (SDW2018) have engaged into a marketing agreement, which includes a special reduced entrance fee for EAB members. EAB Members can access this rate by going to [www.sdwexpo.com/delegate-booking.com](http://www.sdwexpo.com/delegate-booking.com), then scroll down the page until you reach their booking rate mentioning “Association Members”.

The EAB and Security Document World 2018 (SDW2018) have engaged into a marketing agreement, which includes a special reduced entrance fee for EAB members. The special member rate will be £899 (full rate £1,250) providing a rebate of £351. This provides full facilities at the 3–day conference, including conference materials, catering, post–event conference proceedings and access to the exhibition. Members can access this rate by going to [www.sdwexpo.com/delegate-booking.com](http://www.sdwexpo.com/delegate-booking.com) and then scroll down the page until you reach their booking rate which is the “Association Members” rate. There is no need to input a code. You can just go ahead and book. This rate will remain firm for them right up to the show taking place.

## **17th International Conference of the Biometrics Special Interest Group (BIOSIG): Darmstadt, 26–28 September 2018**

The 17th International Conference of the Biometrics Special Interest Group (BIOSIG) will take place from September 26 – 28, 2018. The conference will be technically co-sponsored by IEEE and papers will be added to IEEE Xplore. Stakeholders and technical experts are invited to submit original research papers by May 30th, 2018. The call for papers is available at: <http://www.biosig.de/biosig-2018>.

The BIOSIG 2018 conference will present innovations and best practices that can be transferred into future applications. The conference is jointly organized by the CAST (UK), BSI (D), the EAB (NL), the EC-JRC (I), the TeleTrusT-Association (D), the Norwegian Biometrics Laboratory, CRSIP (D), the Fraunhofer IGD (D), IET Biometrics Journal (UK) and BIOSIG of the Gesellschaft für Informatik (D).