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Marie Skłodowska - Curie ITN

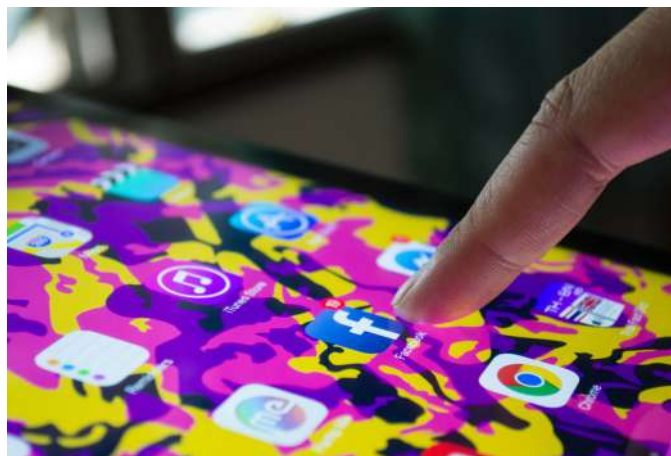
AMBER “enhAnced Mobile BiomEtRics”

Summer 2018 Newsletter

<https://www.amber-biometrics.eu/>

A Year in Review

AMBER has just completed the first year of research as a Marie Curie Innovative Training Network. In this time we have got our ten early stage researchers (ESR) on board, held our welcoming meeting here in Canterbury, and completed our first research conference in Rome Italy. Each ESR has started to make headway in their individual projects, as well as beginning to move around in the network to work alongside one another within the AMBER partners.



@AMBERBiometrics

Upcoming events



The **26th European Signal Processing Conference (EUSIPCO 2018)** is to be held in Rome and several papers from our early stage researchers have been submitted.

3rd September to 7th September 2018

Rome, Italy



Richard Guest will giving an update on AMBER at the **EAB Research Projects Conference**.

24th September to 25th September, 2018

Darmstadt, Germany



Lines from our project partner UC3M will be attending the **52nd Annual ICCST Conference** where the results from the first AMBER research conference hackathon will be shared.

22nd October to 25th October, 2018

Quebec, Canada

The first research conference, Rome 2018



First Research Conference, Rome May 2018

Over three days there were presentations on project progress, transferable skills, and topics such as GDPR in mobile biometrics. As well as presentations, our ESRs participated in a finger spoofing hackathon. Here we saw three teams use raw materials to create fake fingerprints to spoof several different devices. The hackathon provided a fantastic opportunity for the researchers to meet each other and work together.



Getting involved with Marie Curie Alumni

Marie Curie Actions offer a wealth of events that are free for fellows to attend. It is worthwhile joining as an alumni member and seeing what is available. The UK Alumni Chapter meeting in March was excellent and featured a Pub Slam event in the evening as well as great speakers. Barbara and Anas attended an event at the EuroScience Open Forum in Toulouse.

See the Marie Curie Alumni website for more details: <https://www.mariecuriealumni.eu>



Marie Curie Alumni

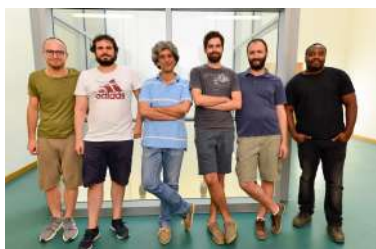
@Mariecurie_alum Follows you

Community of researchers benefiting (or who have benefited) from the Marie Skłodowska-Curie Actions programme. Tune in for updates on funding, news and events.

Meet the early stage researchers



Elakkiya, University of Kent: Usability Performance Assessment of Mobile Touch-Screen Behavioural Biometrics. The aim of Elakkiya’s project is to analyse the effect of body movement and environmental conditions on touch behaviour on the mobile device. Elakkiya has conducted a data collection at the University of Kent to capture the touch-dynamics exhibited by the users under different usage scenarios.



Teodors, University of Kent: Continuous and Instantaneous Authentication using Mobile Devices. Teodors has finished his literature survey with the aim to research how data is being used and managed in behavioural biometrics. From this, Teodors plans to offer a roadmap that should be taken into account when designing behavioural data collection.



Ebenezer, Università Roma Tre: Template protection in biometric-based mobile scenarios. Ebenezer’s project looks at minimizing privacy issues by designing biometric transform schemes that leak little or no information of the user’ biometric, leveraging the adopted biometric transform schemes to mobile scenarios.



Ridvan, Università Roma Tre: Multibiometrics architectures and privacy in a mobile environment. This project looks at the design and testing of architectures with respect to a mobile environment for fusing data acquired through a device’s multitude of sensors.

Jalil, Politechnika Warszawska: Countermeasure algorithms against subterfuge in mobile biometric systems. Jalil has highlighted the current challenges in detecting biometric direct attacks which fall into three areas; lack of generalization, unusable on mobile platform, and high error rates. He is also reviewing the challenges in liveness detection techniques covering the themes; speed, non-invasive, performance, user-friendly, and low cost.



Mohammadreza, Politechnika Warszawska: Making mobile biometrics more reliable. Mohammadreza will be reviewing several themes in this project: do biometrics change over time, age dependency or race dependency, and the effects of aging on the accuracy of biometric recognition system. One specific area to be focussed on is the iris, with consideration given to stress and the iris, iris aging and more.



Nicholas, Otto-von-Guericke Universität Magdeburg: Privacy in nomadic cross-system mobile. Nicholas has completed an overview of biometric technology trends and use-case scenarios, and completed an assessment of various modalities and areas of interest for Work Package 6 projects. He has one paper currently submitted to the European Signal Processing Conference (EUSIPCO 2018).

Salatiel, Otto-von-Guericke Universität Magdeburg: User-centric and self-determined privacy management in mobile biometrics. Salatiel is looking into new methods for user data privacy protection, providing data anonymity and usage transparency with user-centric data management to implement informed consent by organizational and technical means.



Anas, Universidad Carlos III de Madrid: Vulnerability assessment in the use of biometrics in unsupervised environments. Anas has finished the State of the Art review looking at generating a new taxonomy of attacks, and analysis on presentation attack detection methods. Physiological and behavioural modalities have been explored under presentation attack, wherein the proposed taxonomy exposes in detail the attacker intention and the generation of presentation attack instrument. The modalities being studied are; face, fingerprint, vascular, iris, handwritten signature and voice.

Barbara, Universidad Carlos III de Madrid: Traceable and comparable evaluation methodology for the usability of biometric systems. Barbara has already finished and submitted the State of the Art review which looked at: usability and HCI of biometric systems, user acceptance in biometrics, user-biometric system interaction and mobile biometric platform and international standards in biometric interaction assessment. The experimental part of the project is looking at helping people with accessibility concerns to perform daily tasks through biometric applications.

Dates for the diary

The second research conference for our ESRs will be happening from the **14th to the 16th November 2018 in Warsaw, Poland**. Our Polish partners Politechnika Warszawska will be hosting the conference.

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