

SESSION SEVEN

Click here to read our brand new Three Laws of Biometrics

<https://www.biometricsinstitute.org/the-three-laws-of-biometrics>

Members can read the State of Biometrics Report here. If you have forgotten your password, email nicky@biometricsinstitute.org.

<https://www.biometricsinstitute.org/state-of-biometrics-report-2020>

Read more about the Biometrics Institute's Good Practice Framework here:

<https://www.biometricsinstitute.org/biometrics-institute-good-practice-framework/>

Beverly Good, Executive Director, Admissibility and Passenger Programs, U.S. Customs and Border Protection

Mrs. Beverly Good is currently the Acting Assistant Director, Admissibility and Passenger Programs, at U.S. Customs and Border Protection (CBP) in Washington, DC. The Executive Director oversees national policies related to the entry of persons into the United States including the Trusted Traveler Programs like Global Entry and SENTRI, which further secure and facilitate lawful travel. In addition, the Executive Director leads efforts to support the Administration's strategy to enhance border security through rigorous enforcement of existing laws in respect to international travelers and goods.

from Kim

Hi, All: For more info on Biometric Entry/Exit at CBP, please go to our new enhanced website: biometrics.cbp.gov

Elaine Chew, Group Data Protection Officer and Senior Legal Counsel, Changi Airport Group, Singapore

Elaine is Group Data Protection Officer and Senior Legal Counsel at Changi Airport Group. Her work includes policy development and implementation across the group, advising on regulatory compliance measures, drafting and negotiating complex data transactions, leading incident response and conducting data protection impact assessments.

Rebecca Heyer, Group Leader Biometrics, Intelligence, Surveillance and Space Division, Defence Science & Technology Group, Australia

Rebecca is the Group Leader Biometrics at the Defence Science and Technology (DST) Group in Australia. She has a PhD in facial recognition and for the past 13 years has led a range of research projects in biometrics and identity across Australian government. Her areas of current interest are human-algorithm teaming, and the impact of synthetic data on biometric systems (with a focus on face and voice).

from Damianos

Great job, Rebecca. Lots of interesting topics for further discussion.

from Carl

Agreed.

There is still extensive focus on “algorithms”. The top algorithms are all within an hair’s breadth of each other.

There is often little discussion on the problem being solved, holistic system design and dovetailing the system with the human.

The best algorithm won’t save a poorly designed user experience or workflow.

Mei Ngan, Her research focus includes evaluation of face recognition and tattoo recognition technologies. She is currently involved in a number of key face recognition testing activities at NIST, including leading the Face Recognition Vendor Test (FRVT) MORPH project to evaluate face morphing detection algorithms. Mei has authored and co-authored several technical publications, including outcomes from large-scale evaluation of face recognition algorithms, the accuracy of face recognition with face masks, performance of facial age and gender estimation algorithms, and publication of a seminal open tattoo database for developing tattoo recognition research, which she received the Special Contribution Award for at the 2015 IEEE International Conference on Identity, Security and Behavior Analysis (ISBA). Mei is a recipient of the 2020 Women in Biometrics Award, a globally-recognized award dedicated to innovative women in the biometrics field.

from Carl

Algorithms are often interchangeable

from Rebecca

Please join us online to continue these discussions and more: Unfamiliar Face Identification Group (UFIG) meeting

4-5 February 2021 (online, free)

Register your interest: UFIG@unsw.edu.au

More info (including links to previous agendas): <http://forensic.psy.unsw.edu.au/ufig.html>

from Martin

@Carl - good points. "The best algorithm won’t save a poorly designed user experience or workflow". So how do we set up objective evaluations of the human factors side, and is there an appetite to do this?

from Shelley

Also good points operational tests, not just NIST...

from Carl

yes, give me an "excellent" system and "good" algorithm over a "good" system and "excellent" algorithm anyday.

Irina Zhigalova, Product owner, Sberbank ID, Russia

Graduated as Master of Informatics and Robotics from the Ufa Aviation Technical University.

Since 2006 Irina has been working in banking on the topics of CRM, development of front-end systems and mobile applications, clients' identification (incl. biometrics).

Sandrine Trochu, Senior Sales Director – Border Control, IDEMIA (Platinum sponsor)

Sandrine joined the Safran Group, at the time it was Sagem, in 1994 as a Sales Manager for Hispanic speaking countries. After six years of expatriation, in Mexico and Argentina, she came back in 2006 to develop the newly created Border Control activity.

In 2014, she became Senior Sales Director for the Border Management solutions of IDEMIA and Key Account Manager for eu-LISA.

Nina Suchankova, Business Development Manager, Innovatrics (Silver sponsor)

Nina is responsible for business development in North America at Innovatrics. Having been with the company for more than three years, Nina has made her way from leading the Innovatrics SDK sales platform to the big league of governmental and enterprise biometric projects.

Following on from Carl's comment - "The best algorithm won't save a poorly designed user experience or workflow". So how do we set up objective evaluations of the human factors side, and is there an appetite to do this?

Some questions / comments from earlier

Given that there are struggles with bias and determining how face will be formally introduced in legal cases what will border and immigration entities need to do to further gain public support and advance standards work for a broader use like fingerprint?

For Elaine, If you have already begun to institute the approach you briefed...What has your success and failure looked like with the approach you have outlined for Singapore? Are there aspects of this approach mandated, like requiring ID cards, etc.?

from Martin

@Beverly I like the idea of transparency in monitoring the experience of people using real world systems, and obtaining good feedback from them

Are we talking about 1:1 or 1:Many facial capture because the challenge has remained with capturing faces in the wild...1:many and that's where the public becomes skeptical.

SESSION EIGHT

Anil Jain is a University Distinguished Professor in the Department of Computer Science at Michigan State University. His research covers pattern recognition, computer vision and biometric authentication He is a Fellow of ACM, IEEE, IAPR, AAAS and SPIE. He was a member of the United States Defense Science Board and the Forensics Science Standards Board. He has received Fulbright, Guggenheim, Humboldt, and King Sun Fu awards. Anil was elected a member of the United States National Academy of Engineering and The World Academy of Science, and foreign members of the Indian National Academy of Engineering and the Chinese Academy of Sciences

Link to Full report - <https://arxiv.org/pdf/2010.03624.pdf>

Roger Baldwin is a Member of the Biometrics Institute Advisory Board and former Deputy Chairman and Director of the Biometrics Institute. Previously he was the Head of Counter Terrorism Forensic Services with the Metropolitan Police, New Scotland Yard, London. Roger was the 'Penholder' for the UN CTED Project on the Compendium of Good Practice for the Responsible Use of Biometrics in

Counter Terrorism. He is an independent consultant specializing in developing forensic science and biometric capabilities in fragile and developing countries

Vinh Nguyen-Xuan is the Senior Project Manager at Frankfurt Airport (FRA). His tasks include portfolio management for IT as well as the development of innovative passenger processes, especially automated border control and biometrics related applications

Parinda Kularatne is the Product lead for Biometrics in Visa. Visa is a strong advocator for biometrics. They have been leading many authentication initiatives using biometric technology. Earlier this year they did a trial with Natwest bank in the UK to use behavioural biometrics to replace passwords when authenticating digital transactions. They presented the POC results to various regulators and in particular the UK regulator supported the use of behavioural biometrics over passwords. As a result of this many EU and UK financial institutes are now implementing behavioural biometrics. Parinda lead this project in Visa and now providing thought leadership to the industry.

Niall McCann is UNDP's Policy Advisor and Project Manager on Legal Identity, based at the UNDP office in Brussels. In this position he provides programming and advisory support to UNDP Country Offices engaged in supporting national civil registration and identity management schemes (approx. 30 per year), as well as contributing to the development of the UN's policy on civil registration, national identity schemes, privacy, data protection, and regulating the use of biometric technologies.

Terry Aulich is the Head of the Biometrics Institute's Privacy and Policy Expert Group and provides strategic advice to the CEO and Board.

He was a state Minister and Federal Senator for over sixteen years where he was chair of a number of influential committees, one of which was the Australia Card committee which recommended the successful implementation of Australia's Privacy Act, the 100 point bank identification system, the tax file number system and other anti-fraud measures.

Pam Dixon is a member of the Biometrics Institute's Privacy and Policy Expert Group.

An author and researcher, she has written respected and influential studies in the area of privacy, identity, biometrics, AI, health privacy, and other topics. Pam served as Rapporteur for the first Roundtable of African Data Protection Authorities regarding identity systems. She also conducted substantive biometrics research in India and wrote a scholarly article analyzing India's Aadhaar, biometrics, and EU-US data policies, A Failure to Do No Harm, (Springer-Nature). She is an expert advisor to OECD on AI/Machine learning. Pam's work in digital identity is recognised globally.

Mick O'Connell is a member of both the Biometrics Institute's Advisory Council and Future Direction Group (FDG), and has wide international expertise, diplomacy and cultural awareness. He's held a variety of senior roles in organisations within international, governmental, industry and law enforcement environs. Mick now works across the globe with clients delivering insight, guidance and leadership for their business transformation in the digital age.

Ted Dunstone is the Head of Security & Integrity Expert Group (BSIEG) of the Biometrics

Institute and its founder. He has personally provided consultancy and biometric evaluation services over the past 20 years to a wide range of government agencies, NGO's and corporations. He is recognized internationally for his expertise, particularly in the area of vulnerabilities and identity systems, and he is a frequent speaker on the application of biometrics. He also co-authored one of the first textbooks on biometric data analysis.

Dr. Stephanie Schuckers is a Director and the Head of the ARIG of the Biometrics Institute. Stephanie is also the Paynter-Krigman Endowed Professor in Engineering Science in the Department of Electrical and Computer Engineering at Clarkson University and serves as the Director of the Center for Identification Technology Research (CITeR), a National Science Foundation Industry/University Cooperative Research Center. Her work is funded from various sources, including National Science Foundation, Department of Homeland Security, and private industry, among others. She has started her own business, testified for US Congress, and has over 40 journal publications as well as over 60 other academic publications.

Dr. Bourlai is an Associate Professor at the University of Georgia and a member of the Academic Research and Innovation Expert Group of the Biometrics Institute. He also serves as an adjunct assistant professor in the WVU School of Medicine, Department of Ophthalmology, the Department of Forensic and Investigative Science, and the Department of Chemical Engineering (Biomedical Engineering). He is also the founder (2010) and director of the Multi-Spectral Imagery Lab.

Dr. Bourlai, is also a Series Editor of the Advanced Sciences and Technologies for Security Applications) book-series by Springer (2015 – 2018), an Associate Editor of the IET Electronics Letters Journal, an Associate Editor of the Pattern Recognition Letters (Elsevier), and the VP on Education of the IEEE Biometrics Council.

Hans de Moel is a Director of the Biometrics Institute and a member of the Borders and Major Travel Programmes User Group (BUG). Hans is working for the Royal Netherlands Marechaussee (KMar), part of the Dutch Ministry of Defence. As a Document & Biometrics Expert he has been working on projects concerning the automation of Border Control and Security. Hans is based at the Hague in the Netherlands.

Martin George is a member of the Biometrics Institute Digital Identity Group (DIG) has 25 years' history of working within the Biometrics and Identification Technologies community. He has worked with voice, face and iris biometrics, bringing to market product, software and systems solutions underpinned by academic research and related intellectual property rights (IPR), deployed worldwide in applications ranging from Physical Access Control, to Defence Force protection, Refugee Management, Automated Border Control, and Smart Phones. More recently Martin's work has involved the link of biometrics with Digital Identities and physical identity credentials, and the challenge of proving a "Root of Trust".

Here are the links to the documents Ted has just referred to:

PAD liveness <https://www.biometricsinstitute.org/presentation-attack-detection-and-liveness-guiding-document/>

Top Ten Vulnerability Questions

<https://www.biometricsinstitute.org/top-10-vulnerability-questions/>

Biometrics Vulnerability Assessment Checklist

<https://www.biometricsinstitute.org/biometrics-vulnerability-checklist/>

from Niall

Great point, Hans! I do not agree with removing age and sex at all. I think the point was that the concepts of "objective variables of identity" are being challenged enormously and will continue to be so. And the irony is that one of the consequences of the push, by many privacy advocates, for identity variables to be under the control of the data subject, may well drive the demand for biometrics -

controlled by the state and not by the individual - to be the the primary, if not the sole, determinant of identity.

from Hans

Niall, as you might have deducted I don't agree with it either. In my opinion currently we are listening more to some minorities on certain topics than to the majority in our democratic society.

from Terry

I agree with Hans and Niall, Beware of what you say you want. Pam's statement about middle level countries in terms of their capabilities is also relevant here. Some of those countries will need biometrics to distribute food or medicine or basic banking services.

To the panel: Human in the loop? Will humans be up to the job by the end of this decade with the exponential development of CNN algorithms and the advent of the next generation of super computers?

from Kerry

Human capital costs vs less expensive technology....

from Niall

We absolutely need to be able to count and identify the number of boys and girls in the world, particularly in lower income countries where ensuring mass birth registration, vaccination and enrolment in early childhood education for young girls, in particular, is of paramount importance in ensuring the empowerment of women from a young age. If we are not counting the number of boys and girls in the world in order to protect the rights of a relatively small number of persons not agreeing - when they are older - that they are boys or girls, then I think we are breaking the "do no harm" rule, and are dramatically disempowering young women and girls.

from Mahos

An interesting article by FT - The impact of AI on business and society: <https://www.ft.com/content/e082b01d-fbd6-4ea5-a0d2-05bc5ad7176c>

from Michael

Thanks @Mahos its a good stimulating read. Lots to do.... :-)

Many thanks all for your keen interest to the debate and the work of the Institute... stay safe!

from Mahos

"Healthcare is definitely sector to benefit from AI's rapid development". "As well as establishing ownership of AI strategy at board level, companies will also need to consider how to deal with the ethical challenges the technology brings." Interesting discussion also on Ethics and Bias, Employment and Education. "... if public consent and trust are to be gained, then AI-driven processes should be both transparent and easily explained."

Poll of audience - How optimistic do you feel about biometric opportunities/projects over the next 12 months?

Very optimistic 17%, Quite 75%, not very 8%