European
Association for
Biometrics
e a b
Human Identity in Europe

Europese
Commissie

EAB RPC 2018

EAB Research Projects Conference

**Darmstadt, Germany,
24-25 September 2018**

The leading voice for digital ID & biometrics, in Europe

Table of content

From the conference chair

Dr. Javier Galbally

Conference-chair EAB-RPC

Dear participants,

As Chair of the conference, on behalf of the whole organizing committee, it is my pleasure to welcome you to the 5th Edition of the EAB Research Projects Conference 2018, organized by the European Association for Biometrics (EAB) in cooperation with DG Joint Research Centre of the European Commission and Fraunhofer IGD.

The conference was born already five years ago with the aim of providing a common platform to European funded projects in the field of biometrics to disseminate their results and to present the latest developments in this thriving technology. I think that it is safe to say that, since its creation to this 5th edition, the conference has gone a long way and has quite brilliantly achieved its original goal, consolidating itself as one of the yearly main research events in Europe in biometrics. Furthermore, the conference has become a meeting venue not only for researchers, but also for all other parties involved in the development of biometrics, including vendors, developers and policy makers. We are proud to say that many of the participants from previous editions have praised the event due to its unique environment, which has allowed them to better understand the needs and points of view of other organizations, providing them the opportunity to enlarge their network and to find new partners for future projects.

This year's edition features the participation of 18 European Projects, three keynote speeches, a demo session and a round table on the always controversial topic of "biometrics and data protection". On the opening keynote speech, the Executive Director of eu-LISA will update us on the latest developments on large European IT systems, the use of biometrics within them and the strategies for their interoperability. The organizing team has worked hard to deliver to you the best possible event, which we hope you find informative and helpful for your future research endeavors. Hopefully, all together we can make the future of biometrics even a brighter one.

Welcome!
Javier Galbally
Chair of EAB-RPC

From the EAB Chairman
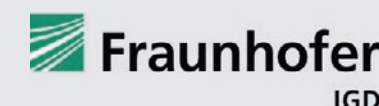
The Organizing Committee

- **Conference Chair**
  - Dr. Javier Galbally,
    European Commission DG-JRC
- **Scientific Co-Chair**
  - Prof. Dr. Farzin Deravi,
    EAB Deputy chairman of the board
- **Demo and Posters Chair**
  - Dr. Fernando Alonso-Fernandez,
    Halmstad University

- **Publicity and Local Committee Chair**
  - Alexander Nouak,
    EAB Chairman of the board,
- **Local Committee Co-Chair**
  - Prof. Dr. Christoph Busch,
    EAB Board member

Alexander Nouak

Chairman EAB

For the fifth year running we're proud to organise this unique conference on European Research Projects. 2018 has been an important year for Europe's ID community. From the Facebook scandal to GDPR legislation, the citizens of Europe (and the world) began to ask important questions about how their personal data is gathered, used and shared. It's going to be one of the big topics for debate at this year's conference.

It's at events like this that we're able to come together and share ideas about some of the big challenges facing ID in Europe. At this year's event the EAB is launching a strategic plan for the year ahead, called the 'Four Strategic Challenges'. It focuses on some of the key issues facing ID in Europe, from privacy protection to border control & migration. This is the first year we've

published such a plan and your feedback is warmly welcomed. I hope to share more as the conference gets underway.

If this is your first year attending the conference, I'd like to say a few words about the EAB. Our role is to be the leading voice for biometrics and digital ID in Europe. As a non-profit, non-partisan association, we ultimately serve the citizens of Europe to enhance their lives and drive economic growth. The EAB actively promotes collaboration across our membership, whether it's in sharing advice & expertise; showcasing best practices & new innovations; or simply in facilitating new introductions...as I'm sure you will have the opportunity to do over the coming days.

Even though our focus in on the European agenda, the EAB is also actively involved in global campaigns and causes that advance the adoption and responsible use of modern digital ID systems. As part of this, we support the SDG 16.9 (Legal Identity for all) calling for 16 September as International ID Day.

If you are interested in becoming a member of the EAB, email: secretariat@eab.org. All that remains is for me to wish you a happy (and stimulating) conference and I look forward to catching up with many of you over the coming days.

Alexander Nouak - chairman EAB.

Our partners and Sponsors

The EAB-RPC conference is organized by The European Association for Biometrics (EAB) in cooperation with the Joint Research Center (DG-JRC) of the European Commission.

We kindly thank our sponsors for supporting the EAB-RPC conference

Monday, September 24

Room 074		Session: Opening			
Start	**End**	**Monday, September 24**			
9:30	9:35.	01-1	Alexander Nouak	EAB	Conference Opening
9:35	9:45.	01-2	Michiel van der Veen	EAB	EAB as the leading voice for Digital ID & Biometrics, in Europe
9:45	10:00	01-3	Javier Galbally	EC DG-JRC	DG-JRC Support in biometrics to EU policy

Room 074		Session: Keynotes			
Start	**End**	**Monday, September 24**			
10:00	10:45	02-1	Rasa Karbauskaite	FRONTEX	Role in EU Border Security Research and activities in the area of biometrics.
10:45	11:00	Coffee break + POSTERS			

Room 074		Session: Updates of on-going projects (BODEGA, LIGHTEST, iBorderCtrl)			
Start	**End**	**Monday, September 24**		**Chair: Javier Galbally**	
11:00	11:30	03-1	Sirra Toivonen	VTT	BODEGA - Project Update
11:30	12:00	03-2	Rachelle Selung	Fraunhofer IAO	LIGHTEST - Project Update
12:00	12:30	03-3	Georgios Boultadakis, Rodoula Makri	EuroDyn, ICSS	iBorderCtrl - Project Update
12:30	13:30	Lunch Break + POSTERS			

Room 074		Session: Updates of on-going projects (SWAN, AMBER, IDENTITY)			
Start	**End**	**Monday, September 24**		**Chair: Javier Galbally**	
13:30	14:00	04-1	Christoph Busch	NTNU	SWAN - Project Update
14:00	14:30	04-2	Richard Guest	Kent Univ.	AMBER - Project Update
14:30	15:00	04-3	Massimo Tistarelli	Sassari Univ.	IDENTITY - Project Update
15:00	15:30	Communication-Break + POSTERS			

Room 074		PARALLEL Session: SMILE			
Start	**End**	**Monday, September 24**		**Chair: Javier Galbally**	
15:30	15:50	05-1	Georgios Stavropoulos	ITI	SMILE project overview
15:50	16:10	05-2	Georgios Stavropoulos	ITI	Architecture and use cases
16:10	16:35	05-3	Georgios Stavropoulos	ITI	Technical solution presentation
16:35	17:00	05-4	Georgios Stavropoulos	ITI	Pilot scenarios

Room 073		PARALLEL Session: PROTECT			
Start	**End**	**Monday, September 24**		**Chair: James Ferryman, Assistant: Alexander Nouak**	
15:30	15:40	06-1	James Ferryman	Reading Univ.	Overview of PROTECT concept, status and results to date
15:40	15:50	06-2	Chris Hurrey	Intrepid Minds	Demonstrator scenarios
15:50	16:20	06-3	James Ferryman	Reading Univ.	Biometric innovations
16:20	16:40	06-4	Frank Schmalz	Veridos	Biometric-base border solutions
16:40	17:00	06-5	Frank Dumortier	Univ. of Namur	Legal and social issues

Room 048		PARALLEL session: LETSCROWD			
Start	**End**	**Monday, September 24**		**Chair: Jordi Arias, Assistant: Christoph Busch**	
15:30	15:50	07-1	Jordi Arias	Grupo ETRA	Mass gathering events, a security challenge for LEAs
15:50	16:10	07-2	Carlo Dambra	PROPRS	From static to more dynamic risk assessment
16:10	16:35	07-3	Paul Townsend	Crowd Dynamics	Crowd modelling and simulation tool
16:35	17:00	07-4	Iosu Alonso	Ertzaintza	Challenges in crowd security
17:00	17:30	Communication-Break + POSTERS			

Room 074		DEMO SESSION (iBorderCtrl, LIGHTEST, FACCESS, SMART-TRUST, SIGNA 2.0)			
Start	**End**	**Monday, September 24**		**Chair: Fernando Alonso**	
17:30	18:30	08-1	iBorderCtrl		
17:30	18:30	08-2	LIGHTEST		
17:30	18:30	08-3	FACCESS		
17:30	18:30	08-4	SMART-TRUST		
17:30	18:30	08-6	SpeechXrays		
18:30	21:30	Reception dinner and get together			

Tuesday, September 25

Room 074		Session: Keynotes			
Start	**End**	**Tuesday, September 25**		**Chair: Javier Galbally**	
9:00	9:45	09-1	Krum Garkov	eu-LISA	Management and interoperability of large biometric IT systems in the EU
9:45	10:15	09-2	Els Kindt	Univ. Leuven	Challenges and opportunities under the GDPR for biometric data processing.
10:15	10:45	Communication Break + POSTERS			

Room 073		PARALLEL Session: SpeechXrays			
Start	**End**	**Tuesday, September 25**		**Chair: Dijana Petrovska, Assistant: Alexander Nouak**	
10:45	11:00	10-1	Michel Kostucki & Jean-Loup Depinay	IDEMIA	The SpeechXrays project
11:00	11:15	10-2	Alexandru Nicolin	IFIN-HH	The workforce SpeechXrays Use Case
11:15	11:30	10-3	Dijana Petrovska	TELECOM	Face biometrics within the SpeechXRays Project
11:30	11:45	10-4	Ioannis Markopoulos	FORTHNET	SpeechXRays: The Greek Consumer User Case-Testing Methodology and Cohorts Engagements
11:45	12:00	10-5	Neil MacDonald	Voice Trust	Active voice authentication within the SpeechXRays project
12:00	12:15	10-6	Iacob Crucianu	SIVECO	Biometric Integration

Room 074		PARALLEL Session: Just-finished (FLYSEC) and just-started projects (TRESSPASS, CybSPEED, FOLDOUT			
Start	**End**	**Tuesday, September 25**		**Chair: Dimitris K. Kyriazanos, Assistant: Javier Galbally**	
10:45	11:15	11-1	Dimitris K. Kyriazanos	DEMOKRITOS	The FLYSEC project
11:15	11:35	11-2	Dimitris K. Kyriazanos	DEMOKRITOS	An introduction to the TRESSPASS project
11:35	11:55	11-3	Manuel Graña	EHU	Biometric innovations. An introduction to the CybSPEED project
11:55	12:15	11-4	Georg Melzer-Venturi	EUTEMA	An introduction to the FOLDOUT project
12:15	13:15	Lunch Break + POSTERS			

Room 074		Session: SME projects (FACCESS, Smart-Trust, QuardCard)			
Start	**End**	**Tuesday, September 25**		**Chair: Javier Galbally**	
13:15	13:45	12-1	Javier Mira, Tania Martínez	Facephi Biometria	Biometrics as a differentiating factor
13:45	14:15	12-2	Pedro Torres	Vision-box	Smart Trust: Secure mobile ID for Trusted Smart Borders
14:15	14:45	12-3	Frank Sandelov	Cardlab	The QuardCard project
14:45	15:15	30		Communication-Break + POSTERS	

Room 074		Round table. BIOMETRICS AND DATA PROTECTION: FINDING THE RIGHT BALANCE			
Start	**End**	**Tuesday, September 25**		**Chair: Farzin Deravi**	
15:15	16:15	13-1	Farzin Deravi (Chair), Els Kindt (Univ. Leuven), Marta Gomez-Barrero (Univ. Darmstadt), Pedro Torres (Vision-Box)		

Room 074		Session: Closing			
Start	**End**	**Tuesday, September 25**			
16:15	16:20	14-1	Alexander Nouak, Javier Galbally	EAB, DG JRC	Conference Closing

Room 074		EAB Members General Assembly	
Start	**End**	**Tuesday, September 25**	
17:00	19:00		

Speakers

Speakers at a glance

Keynote speakers
- Krum Garkov   eu-LISA
- Rasa Karbauskaite   Frontex
- Dr. Els Kindt   KU Leuven

Speakers and conference chairs
- Javier Galbally   European Commission (DG-JRC)
- Alexander Nouak   EAB (Chairman of the board)
- Dr. Michiel van der Veen   EAB (Chief Executive)
- Prof. Dr. Christoph Busch   Norwegian University of Science and Technology
- Dr. Fernando Alonso-Fernandez   Halmstad University

Round table discussion: Biometrics and Data Protection. Finding the right balance

- Prof. Dr. Farzin Deravi   University of Kent
- Els Kindt   University of Leuven
- Marta Gomes-Barrero   University of Darmstadt
- Pedro Torres   Vision-Box

Krum Garkov
Keynote Speaker

Krum has more than 15 years of cross-cultural experiences spanning the public and private sectors. Prior to taking up the Executive Director post in eu-LISA in November 2012, Mr Garkov was the Operations Director for Experian Group ltd., a leading global information provider serving the finance industry. Prior to that, he was a Program Manager at Hewlett Packard. Mr Garkov has also served the National Revenue Agency and the Centre for Mass Privatization in Bulgaria.

Krum holds a M.Sc. in Computer Technologies from Technical University (Varna, Bulgaria) and an MBA in Information Systems from Stevens Institute of Technology (New Jersey, United States). He received executive education from the London School of Business & Finance (London, United Kingdom) with a Master of Business Administration in Management Consulting.

Dr. Els Kindt
Keynote Speaker

Els J. Kindt is an associate professor and senior legal researcher with respectively eLaw of Leiden University and with the Centre for IT and IP Law (CITIP) of KU Leuven. She teaches European Data Protection law in the LL.M programme IT and IP law of the KU Leuven. She studied law and philosophy and is recognized as a specialist on legal aspects of biometric technologies. She published with Springer a a monograph on privacy and data protection issues of biometric applications, and various articles and book chapters on the topic. She gained her expertise in this domain through close collaboration with engineers and technical experts and

policy makers. She has been involved in several national and European research projects, in particular in the field of biometric technologies, border management and identity. Projects in which she was/is involved include BioSec, Turbine, Fidelity, FastPass, Eksistenz and currently Victoria, all funded by the European Commission. Els is an attorney at the Brussels Bar as well. Before pursuing her academic ambitions, she was for about 15 years with Linklaters, Brussels, active in the domain of data protection and information technology law.

Rasa Karbauskaite
Keynote Speaker

Rasa has many years of experience in biometrics in various contexts. She joined Frontex Research and Development Unit in 2006 and works as a Senior Research Officer and manages the Future of Border Checks (FOBC) project at Frontex. Currently she is managing a new project called Harmonisation of the EU border control capacities, which among other things focuses on developing harmonized capability tools on biometric solutions for border control. One of the latest products include development of harmonized training on Vulnerability Assessment and Testing of ABC systems.

Prior to joining Frontex in 2006, Rasa has worked at DePaul University (United States) on research projects related to US-Mexico migration and immigrants in the labour force. She holds a MA in International Studies (United States) and a BA in Social Geography (Lithuania). She has received training in Military Operational Research as well as Strategic Development and Planning in Security Sector from Cranfield Defence Academy (United Kingdom). Rasa also holds a Diploma in Demography and Geodemography from Charles University (Czech Republic).

Dr. Javier Galbally
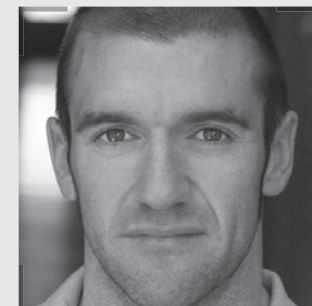
Javier Galbally received the M.Sc. degree in Electrical Engineering from the Universidad de Cantabria, Spain, in 2005, and the Ph.D. degree in Electrical Engineering from the Universidad Autónoma de Madrid, Spain, in 2009, where he was an Assistant Professor until 2012. In 2013, he joined the European Commission in DG Joint Research Centre, where he is currently a Scientific/Technical Officer. His research interests are mainly focused on the security and performance evaluation of biometric systems, pattern and biometric recognition. He is actively involved in different European projects

dealing with biometrics and their use in large IT systems. He has authored over 100 publications mainly focused on the biometrics field. He has also been the recipient of a number of distinctions, including the IBM Best Student Paper Award at ICPR 2008, finalist of the EBF European Biometric Research Award 2009, Best Ph.D. Thesis Award by the Universidad Autónoma de Madrid 2010, Best Poster Award at ICB 2013, Best Paper Award at ICB 2015 and Best Poster Award at IJCB 2018. He is the Chair of the EAB Research Project Conference since 2017.

Alexander Nouak

Alexander Nouak is co-founder and chairman of the EAB and since 2016, managing director of the Fraunhofer ICT Group, a service provider and partner for the 21 Fraunhofer Institutes.Earlier, Alexander was head of the Competence Center „Identification and Biometrics" at the Fraunhofer Institute for Computer Graphics Research IGD in Darmstadt, Germany for a period of 11 years. He was responsible for the acquisition, the management, and the controlling of various applied research and development projects. His department staff consisted of up to ten scientists in addition to several guest researchers and

student research associates. Alexander Nouak was an active member of the DIN NIA 37 working group on biometrics as well as a contributor to the WG5 on „Biometric testing and reporting" of ISO/IEC JTC1 SC37. Since 2009, Alexander Nouak is a certified Common Criteria Evaluator (CC 3.1) and a member of IEEE. As a member of the Gesellschaft für Informatik (GI) he participates in the steering committee of the special group BIOSIG and he chairs the Biometrics Working Group of TeleTrusT as a deputy.

Prof. Dr. Christoph Busch

Christoph Busch is member of the Norwegian University of Science and Technology (NTNU), Norway. He holds a joint appointment with Hochschule Darmstadt (HDA), Germany. Further he lectures Biometric Systems at Denmark's DTU since 2007.

On behalf of the German BSI he has been the coordinator for the project series BioIS, BioFace, BioFinger, BioKeyS Pilot-DB, KBEinweg and NFIQ2.0. He was partner of the EU projects 3D-Face, FIDELITY, TURBINE, and others. He is also principal investigator in the Research Center CRISP and is co-founder of the European Association for Biometrics.

Christoph co-authored more than 400 technical papers and has been a speaker at international conferences. He member of the editorial board of the IET journal on Biometrics and of IEEE TIFS journal.

Furthermore he chairs the TeleTrusT biometrics working group as well as the German standardization body on Biometrics and is convenor of WG3 in ISO/IEC JTC1 SC37.

Dr. Michiel van der Veen

Michiel is Chief Executive of EAB and supports the ID community with executive leadership and thought leadership in the field of digital ID & Biometrics.

From 2000 onward, Michiel had several technical and leaderships roles in Philips Electronics, and received, in 2007, the Distinguished Employee Award. In 2008, Michiel founded priv-ID, an early innovator in biometric and digital identity. It later merged with GenKey in 2011, with Michiel appointed CEO. He has led GenKey through multiple stages of growth to become one of the most trusted brands in the market to provide Identity for Development. In 2012 GenKey helped to deliver the world's first digital ID solution for Ghana's Presidential Elections.

Since then, Michiel has been involved in many large-scale digital identity projects for governments and businesses, across Africa and Europe.

Michiel is a regular industry contributor, speaking about digital identity and biometric; along with future thinking about innovation and market trends. Currently, he is Chief Executive of the European Association for Biometrics (EAB), the leading voice for digital ID & biometrics, for Europe. Michiel is also advisor digital identity to the ID4D initiative of the World bank.

Michiel has a Ph.D from the Swiss Federal Institute of Technology (ETH Zurich) and further business education from Stanford.

Dr. Fernando Alonso-Fernandez

Fernando Alonso-Fernandez received the M.S. and Ph.D. degrees in telecommunications engineering from the Universidad Politecnica de Madrid, Spain, in 2003 and 2008, respectively. Since 2010, he has been with the Centre for Applied Intelligent Systems Research, Halmstad University, Sweden, first as a recipient of a Marie Curie IEF and a Post-Doctoral Fellowship from the Swedish Research Council, and later as a recipient of a Project Research Grant for Junior Researchers of the Swedish Research Council. Since 2017, he has been an Associate Professor with Halmstad University. He has been actively involved in multiple EU (such as FP6 Biosecure NoE and COST IC1106) and national projects (such as SIDUS-AIR and CAISR) focused on biometrics

and human–machine interaction. He has carried out research internships in several laboratories and companies in Italy, Malta, Norway, France, UK and The Netherlands. He has over 70 international contributions at refereed conferences and journals, and has authored several book chapters. His research interests include signal and image processing, pattern recognition, and biometrics, with emphasis on facial cues and body biosignals. He Co-Chaired ICB2016, the 9th IAPR International Conference on Biometrics. Since 2018, he has been an Associate Editor of the IET Biometrics journal and the IEEE Biometrics Council Newsletter.

Prof. Dr. Farzin Deravi

Farzin Deravi is with the School of Engineering and Digital Arts at the University of Kent where he is the Professor of Information Engineering. His current research interests include pattern recognition and signal processing with applications in security and healthcare. He was the founding chair of the IET Professional Network on Visual Information Engineering and is currently Editor-in-Chief of the IET Image Processing journal. He is the Deputy Chair of the European Association for Biometrics's Management Board and the Vice President of the BioSecure Association. He also serves on BSI and ISO committees on biometric standardisation

Marta Gomez-Barrero

Marta Gomez-Barrero received her MSc degrees in Computer Science and Mathematics, and her PhD degree in Electrical Engineering from Universidad Autonoma de Madrid, in 2011 and 2016, respectively. Since 2016 she is a postdoctoral researcher at the Center for Research in Security and Privacy (CRISP), Germany. Her current research focuses on security and privacy evaluations of biometric systems, Presentation Attack Detection (PAD) methodologies and biometric template protection schemes. She is the recipient of a number of distinctions, including: EAB European Biometric Industry Award 2015, Best Ph.D. Thesis Award by Universidad Autonoma de Madrid 2015/16, Siew-Sngiem Best Paper Award at ICB 2015, Archimedes Award for young researches from Spanish MECD and Best Poster Award at ICB 2013.

Dr. Els Kindt

Els J. Kindt is an associate professor and senior legal researcher with respectively eLaw of Leiden University and with the Centre for IT and IP Law (CITIP) of KU Leuven. She teaches European Data Protection law in the LL.M programme IT and IP law of the KU Leuven. She studied law and philosophy and is recognized as a specialist on legal aspects of biometric technologies. She published with Springer a a monograph on privacy and data protection issues of biometric applications, and various articles and book chapters on the topic. She gained her expertise in this domain through close collaboration with engineers and technical experts and policy makers. She has been involved in several national and European research projects, in particular in the field of biometric technologies, border management and identity. Projects in which she was/is involved include BioSec, Turbine, Fidelity, FastPass, Eksistenz and currently Victoria, all funded by the European Commission. Els is an attorney at the Brussels Bar as well. Before pursuing her academic ambitions, she was for about 15 years with Linklaters, Brussels, active in the domain of data protection and information technology law.

Pedro Torres

Mr. Torres is Innovation Director, being responsible for managing the market making process at Vision-Box. Particularly focused on the Happy Flow solution, he oversees the full end-to-end product development cycle including Idea Generation, Idea Development, Business Analysis, Market Testing and Business Models. Pedro is also in charge of European Affairs, coordinating all participations in major public funding programmes (H2020, FP7, EU-Lisa), as well as identifying, pursuing and managing Intellectual Property Rights opportunities. Previously, Pedro was International R&D Coordinator at Portugal Telecom. As part of his role he was involved in building and managing core international R&D alliances with industry and academia, and in devising and implementing the R&D strategy in close articulation with the business development roadmaps across the entire company. Pedro has been in the ICT area for over 10 years and has managed different institutions' participations in more than 10 FP7/H2020 projects for over 5 years, acting as coordinator for STREAMLINE, a Big Data project in H2020, before taking his position at Vision-Box where he is coordinating Smart-Trust, an on-going SME-Instrument (Phase 2) led by Vision-Box.

Research Projects 2018

Research projects 2018

1. **BODEGA**
   - Sirra Toivonen

2. **LIGHTEST**
   - Isaac Henderson
     Johnson Jeyakumar
   - Rachelle Sellung

3. **iBorderCtrl**
   - Georgios Boultadakis,
   - Rodoula Makri

4. **SWAN**
   - Christoph Busch

5. **AMBER**
   - Richard Guest

6. **IDENTITY**
   - Massimo Tistarelli

7. **SMILE**
   - Georgios Stavropoulos

8. **PROTECT**
   - James Ferryman
   - Chris Hurrey
   - Philipp Mayr
   - Frank Dumortier

9. **LETSCROWD**
   - Jordi Arias
   - Carlo Dambra
   - Paul Townsend
   - Iosu Alonso

10. **SpeechXrays**
    - Michel Kostucki
    - Jean-Loup Depinay
    - Alexandru Nicolin
    - Ioannis Markopulos
    - Dijana Petrovska
    - Neil MacDonald
    - Iacob Crucianu

11. **FLYSEC**
    - Dimitris K. Kyriazanos

12. **TRESSPASS**
    - Dimitris K. Kyriazanos

13. **CybSPEED**
    - Manuel Graña

14. **FOLDOUT**
    - Georg Melzer-Venturi

15. **FACCESS (SME)**
    - Javier Mira,
    - Tania Martínez

16. **Smart-Trust (SME)**
    - Pedro Torres

17. **QuardCard (SME)**
    - Frank Sandelov

1. PROJECT BODEGA

BODEGA - Enhancement of human performance in border control: solutions for enhancing border guards' performance of critical tasks. A holistic view of the Human Factors with respect to the Smart Borders will be developed. The project focuses on human and organizational factors of border control technologies and processes and examines the effects of introducing innovative technologies into key border guard tasks, traveller's performance and behaviour and to the total system at different levels and at different border control types: rail, sea and air borders. PROPER toolbox integrates ethical and societal dimensions to enable a leap of border control towards improved effectiveness and harmonisation across Europe. http://bodega-project.eu

2. PROJECT LIGHTEST

Lightweight Infrastructure for Global Heterogeneous Trust management in support of an open Ecosystem of Stakeholders and Trust schemes. The objective of LIGHTest is to create a global cross-domain trust infrastructure that renders it transparent and easy for verifiers to evaluate electronic transactions. By querying different trust authorities world-wide and combining trust aspects related to identity, business, reputation etc. it will become possible to conduct domain-specific trust decisions.

This is achieved by reusing existing governance, organization, infrastructure, standards, software, community, and know-how of the existing Domain Name System, combined with new innovative building blocks. This approach allows an efficient global rollout of a solution that assists decision makers in their trust decisions. By integrating mobile identities into the scheme, LIGHTest also enables domain-specific assessments on Levels of Assurance for these identities.

Sirra Toivonen

Sirra Toivonen is a Senior Scientist at the VTT Technical Research Centre of Finland. She has worked at the Risk Management knowledge centre since 1995. The research interests include border control and border management technologies, security management of global supply chains, product and system usability design and testing and value creation in security area product innovations. In 2013, she earned her certification as a Project Manager.

Isaac Henderson Johnson Jeyakumar

Isaac Henderson Johnson Jeyakumar is a Research Assistant in the competence team of Identity Management at the Fraunhofer IAO and also currently pursuing his Masters in Informatics (Embedded System Specialization). He has been actively involved with Fraunhofer IAO for the past one and half years in developing various IOT projects and also developing the demo of LIGHTEST under the supervision of Dr. Heiko Roßnagel and Dr. Sven Wagner. He has received Bachelors of Engineering in Electronics and Communication Engineering domain at Thiagarajar College of engineering, Madurai, India.

Rachelle Sellung

Rachelle Sellung is a Senior Scientist in the competence team of Identity Management at the University of Stuttgart / Fraunhofer IAO. Within this interdisciplinary team with an array of skill sets, she provides the Economic perspective for not only Identity Management, but a variety of IT Security related technologies. She contributed a socio-economic perspective in the large scale EU FP7 project FutureID, which developed an identity management infrastructure for Europe. Specifically, it considered the integration of existing eID technology, trust infrastructures, federated identity management services. Currently, she is the lead for the University of Stuttgart in the EU Horizon2020 project, LIGHTest, which seeks to create a global cross-domain trust infrastructure that is transparent and makes it easier for verifiers to evaluate electronic transactions. Rachelle Sellung has achieved a Master's of Science in Economics at the University of Hohenheim in Stuttgart, Germany. As well as, a Bachelor's of Business Administration in Marketing at the University of Mississippi in the USA.

3. PROJECT iBORDERCTRL

iBorderCtrl envisages to enable faster thorough border control for third country nationals crossing borders of EU, with technologies that adopt the future development of the Schengen Border Management. The project will present an optimal mixture of an enhanced, voluntary form of a Registered Traveller Programme and an auxiliary solution for the Entry/Exit System based on involving bona fide travellers. iBorderCtrl designs and implements a system that adopts mobility concepts and consists of a two-stage procedure, designed to reduce cost/time spent per traveller at the crossing station. It leverages software and hardware technologies ranging from portable readers/scanners, various emerging and novel subsystems for automatic controls, wireless networking for mobile controls, and secure backend storage and processing. The two-stage procedure includes: (A) registration before the travel to gather initial data, perform a short interview with an avatar for lie detection; (B) the actual control at the border that complements pre-registered information with results of security controls that are performed with a portable unit that can be used inside buses/trains or any point.

Dr. Georgios Boultadakis
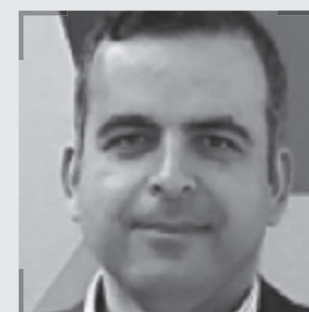
Dr. Georgios Boultadakis holds a PhD in Radar Imaging and Signal Processing from the National Technical University of Athens (NTUA), and a Dipl-Ing degree from the Hellenic Air Force Academy - Engineering Department. He conducted his doctoral research in the Division of Information Transmission Systems and Material Technology of NTUA. His research concentrated on transmission technologies across the frequency spectrum, including theoretical and modeling work on applied electromagnetics, and was implemented within the NATO Research and Technology Organization/ Sensors and Electronics Technology panel works. Since 2001, he has acted as Research Associate of "Radar Systems & Remote Sensing Laboratory", focusing on valuable research in the areas of radar systems, remote sensing and generally in the area of radio and satellite communications, in the fields of ISAR/InSAR studies, high-frequency electromagnetic techniques studies, etc. For 15 years he worked as engineering manager for the Hellenic Air Force, in areas of maintenance of avionics systems, as well as quality control/assurance engineer. He joined European Dynamics in 2014 as a Senior R&D consultant, where he has participated in/ coordinated projects (HORSE, BENEFFICE, CHARGED, IBORDERCTRL, FLEXITRANSTORE, SPACE-O, etc.) for EC HORIZON 2020 funded Research programme.

Rodoula Makri

Dr. Rodoula Makri (Dipl. Ing., PhD, MBA) is Senior Researcher and Technical Manager of ICCS (Institute of Communications & Computer Systems, Athens, Greece) since 2000. She holds Diploma in Electrical and Computer Engineering (1992) and a PhD (1999) both from the National Technical University of Athens (NTUA) and an MBA (2001, Athens University of Economics and Business). She has large experience in wireless systems, RF/microwave systems for telecommunications and radars applications, systemic analysis, sensors and modelling. She has published over 40 papers in refereed scientific journals and conferences. Since 2008 she serves as Lecturer at the Hellenic Army Academy. She has also served as the IEEE MTT (Microwaves Theory & Techniques Society) Greek Chapter Chair. She has participated in more than 35 (15 European, 20 national) research projects. Currently she serves as the Technical Manager of the H2020 project "iBorderCtrl" (Secure Societies / Land Border Security, 2015 Call).

4. PROJECT SWAN

Crimes involving illegal access to accounts are simpler than ever based? on the widespread password-based approach, which is proven to be vulnerable and no longer user-friendly. Identity theft and impersonation to steal money from personal accounts is one of the most critical threats that directly concerns economic development. The SWAN project will research and develop countermeasures and innovative technologies, which lead to a usable, economic, and privacy-preserving access control platform based on biometrics. Our research will allow the authentication of banking transactions and secure access to services over wired and mobile networks, using biometric identifiers.

This can be extended to other eServices (e.g eHealth). Biometric references will be stored, controlled and verified locally based on a pre-shared secret, which can be used to seal and authenticate transaction data. This overcomes the need of centralized storage of biometric data. Furthermore smartphones will act as hardware tokens to which the additional functionalities will be integrated to capture the biometric characteristics like (face, fingerprint, voice and eye). Processes are designed to serve scalable security needs. The biometric authentication will be designed to be privacy compliant and to align with existing and emerging standards in the field.

Prof. Dr. Christoph Busch

Christoph Busch is member of the Norwegian University of Science and Technology (NTNU), Norway. He holds a joint appointment with Hochschule Darmstadt (HDA), Germany. Further he lectures Biometric Systems at Denmark's DTU since 2007.

On behalf of the German BSI he has been the coordinator for the project series BioIS, BioFace, BioFinger, BioKeyS Pilot-DB, KBEinweg and NFIQ2.0. He was partner of the EU projects 3D-Face, FIDELITY, TURBINE, and others. He is also principal investigator in the Research Center CRISP and is co-founder of the European Association for Biometrics.

Christoph co-authored more than 400 technical papers and has been a speaker at international conferences. He member of the editorial board of the IET journal on Biometrics and of IEEE TIFS journal.

Furthermore he chairs the TeleTrusT biometrics working group as well as the German standardization body on Biometrics and is convenor of WG3 in ISO/IEC JTC1 SC37.

5. PROJECT AMBER

AMBER ("enhAnced Mobile BiomEtRics") is a EU Marie Skłodowska-Curie Innovative Training Network which addressing a range of current issues facing biometric solutions on mobile devices. AMBER comprises ten integrated Marie Skłodowska-Curie Early Stage Researcher (ESR) projects across five EU universities:

· University of Kent (UK)
· Università degli Studi Roma Tre (Italy)
· Universidad Carlos III de Madrid (Spain)
· Politechnika Warszawska (Poland) and
· Otto-von-Guericke-Universität Magdeburg (Germany)

The Network has the direct support of seven Industrial Partners.

The aim of the Network is to collate Europe-wide complementary academic and industrial expertise, train and equip the next generation of researchers to define, investigate and implement solutions and theory to ensure secure, ubiquitous and efficient authentication whilst protecting privacy of citizens. The themes for investigation include: mobile platform usability and reliability, novel solutions for mobile biometric interaction, and privacy, security and confidence in mobile biometric interaction.

Richard Guest

Dr Richard Guest is Reader in Biometric Systems Engineering at the University of Kent. His research interests lie broadly within image processing and pattern recognition, specializing in biometric and forensic systems, particularly in the areas of image and behavioral information analysis, standardization and document processing. He has significant involvement with biometric standards development as Panel Chair of the UK BSI IST/44 Working Group on Biometric Technical Interfaces and as UK Principal Expert to ISO/IEC in this area representing the UK industrial, governmental and academic interests. He has over 100 peer-reviewed publications, acted as editor of 3 international standards and has obtained funding from UK EPSRC, ESRC, EU, charitable funds and industry. He is the Project Coordinator of the AMBER EU Marie Curie ITN on mobile biometrics systems.

6. PROJECT IDENTITY

Computer Vision Enabled Multimedia Forensics and People Identification

The main objective of IDENTITY is to enhance international and European collaborations in research, entrepreneurial development and innovation within the area of multimedia and biometric forensics. To this end, IDENTITY has the following specific objectives:
1. To promote knowledge transfer among research institutions and private companies about methodologies for identification within a forensic context. Two main lines of identification are considered, imaging device identification for multimedia forensics, and people identification, for biometric forensics.
2. To enhance research programs by incorporating experience of private companies and police investigators from real identification scenarios and forensic cases.
3. To disseminate knowledge and technologies internationally to ensure a wide impact and a continuing fostering of the multimedia forensics and biometric forensics communities.

IDENTITY follows three methodological approaches in order to create impact:
1. Research
2. Knowledge transfer
3. Communication

Prof. Dr. Massimo Tistarelli

Massimo Tistarelli received the Phd in Computer Science and Robotics in 1991 from the University of Genoa. He is Full Professor in Computer Science (with tenure) and director of the Computer Vision Laboratory at the University of Sassari, Italy. Since 1994 he has been the director of the Computer Vision Laboratory at the Department of Communication, Computer and Systems Science of the University of Genoa, and now at the University of Sassari, leading several National and European projects on computer vision applications and image-based biometrics. He is a founding member of the Biosecure Foundation, which includes all major European research centers working in biometrics. His main research interests cover biological and artificial vision (particularly in the area of recognition, three-dimensional reconstruction and dynamic scene analysis), pattern recognition, biometrics, visual sensors, robotic navigation and visuo-motor coordination. Prof. Tistarelli is one of the world-recognized leading researchers in the area of biometrics, especially in the field of face recognition and multimodal fusion. Since 2003 he is the founding director for the Int.l Summer School on Biometrics (now at the 15th edition – http://biometrics.uniss.it). He is the Scientific Director of the Italian Platform for Biometric Technologies, 1st vice-president of the IAPR, Fellow member of IAPR and Senior member of IEEE.

7. PROJECT SMILE

SMILE proposes a novel mobility concept that addresses the aforementioned challenges by designing, implementing and evaluating a prototype management architecture, for the accurate verification, automated control, monitoring and optimization of people' flows at Land Border Infrastructures. It leverages the capabilities of the smart mobile devices in biometric control for secure and trusted authentication and elaborates on their exploitation as part of a multimodal biometric verification process that supplements / complements existing approaches. Furthermore, SMILE's mobility concept builds upon Private Cloud Infrastructure technologies which communicate with remote SMILE handhelds through a secure gateway. SMILE ecosystem will target EU land borders which will be the beneficiaries of the proposed solutions. SMILE aims to (1) minimise the exposure of BCPs to security risks and threats, and (2) help them successfully respond to security incidents, while relieving them from all unnecessary and costly efforts of identifying, acquiring and using the appropriate technology. To this CNBP, HBP & RBP BCP partners will deploy and validate the proposed secure & reliable ecosystem in two use cases (Romania Bulgaria), in which the adaptation of SMILE framework to focused applications will be performed.

Georgios Stavropoulos

Georgios Stavropoulos received the Diploma degree in Electrical and Computer Engineering from the Aristotle University of Thessaloniki, Thessaloniki, Greece, in 2006. He is currently a research associate in the Information Technologies Institute Center for Research and Technology Hellas in Thessaloniki, since 10/2006 and a PhD Candidate with the Department of Electrical and Computer Engineering of the University of Patras, since 02/2014. His main research interests include signal processing, computer vision, machine learning, visual analytics, text mining and more. He is an expert developer, with a lot of experience in C++, C# and Python programming languages, a number of libraries, SDKs and API's, and has developed numerous applications and algorithms for information collection and visualization, text mining, text sentiment estimation and more. He is a member of the Technical Chamber of Greece. His involvement with these research areas has led to the authoring and co-authoring of articles in refereed journals and international conferences. Since 2006, Mr. Stavropoulos has been involved in a number of FP7 & H2020 European projects, as well as a number of national projects, in both technical and managerial roles.

8. PROJECT PROTECT

PROTECT (2016-2019) is a 3-year EC H2020 project funded under the Secure Societies workprogramme (border security and external security) coordinated by the University of Reading, and which commenced in September 2016. The main aim of PROTECT is to build an advanced biometric-based person identification system that works robustly across a range of border crossing types and that has strong user-centric features. The main concept studied is a Biometric Capture Area (BCA), a sensor network configuration that spans a corridor performing reliable person identification while travellers are 'on the move'. This scenario is supported through enhanced utilisation of traveller's mobile devices to perform biometric template storage and transmission to enable fluent identification, and greater exploitation of data held within future travel documents, to enable storage and access of other/enhanced biometrics. The project will hold two demonstrations in 2019: one at a land border in Poland and one at an air/sea border in the UK.

Prof. James Ferryman

Prof. James Ferryman is a Professor Computational Vision at the University of Reading, UK. Prof. Ferryman leads the Computational Vision Group within the Department of Computer Science, School of Mathematical, Physical and Computational Sciences (SMPCS). His research interests include multimodal biometrics, automated surveillance, autonomous systems and performance evaluation. He is the author of more than 100 scientific publications. He has participated in a wide range of UK and EU funded research programmes including the EU EFFISEC project (FP7-217991) on efficient integrated security checkpoints and the EU FastPass project (FP7-312583) on development of a harmonised modular reference system for all European automated crossing points. Prof. Ferryman coordinates the 10 partner EU PROTECT project (H2020-700259, 2016-2019) on exploration of current and future use of biometrics in border control. Prof. Ferryman is a member of the British Computer Society and has acted as the Director of both the British Machine Vision Association and the Security Information Technology Consortium. Since 2000, he has been a Co-Chair of the IEEE International Workshop on Performance Evaluation of Tracking and Surveillance.

Chris Hurrey

"Chris regards himself as being lucky enough to have been at the start of the technical revolution in border crossing technology, having worked on early computerisation projects for watchlists, case working databases and intelligence management, eBorders and automated border control. Since leaving the UK's border authority as Assistant Director after 34 years of service in late 2010 Chris has worked as a freelance consultant in border control technology in Eastern Europe, the Caucasus, the Middle East, North & East Africa, the Caribbean, South Asia and the UK.

His specialty is the application of science - hard and soft - and technology to border control and similar problems, but with an emphasis on simplicity and effectiveness for end-users. Currently he is coordinating innovation and stakeholder interaction in PROTECT, an EU Horizon 2020-funded project on biometric 'contactless' border controls."

9. POJECT LETSCROWD

LETSCROWD will overcome challenges preventing the effective implementation of the European Security Model with regards to mass gatherings. This will be achieved by providing the following to security policy practitioners and in particular, Law Enforcement Agencies (LEAs):

- A dynamic risk assessment methodology for the protection of crowds during mass gatherings centred on human factors in order to effectively produce policies and deploy adequate solutions.
- A policy making toolkit for the long-term and strategic decision making of security policy makers, including a database of empirical data, statistics and an analytical tool for security policies modelling, and
- A set of human centred tools for LEAs, including real time crowd behaviour forecasting, innovative communication procedures, semantic intelligence applied to social networks and the internet, and novel computer vision techniques.

LETSCROWD impact will be measured under practical demonstrations involving seven LEAs and relevant emergency services units.

Frank Dumortier

Franck Dumortier is senior researcher at the Information Technology, Law and Society Research Centre (CRIDS) at the University of Namur since 2005. He also was assistant teacher in "Sources and Principles of law" between 2008 and 2013. His research particularly focuses on cybersecurity and cybercrime law and their links with the fundamental human rights to privacy and to data protection. He published numerous articles in national and international journals and participated to several European projects – such as the B-CCENTRE (the Belgian Cybercrime Centre of Excellence for Training and Education) - in his research fields. He is lecturer of legal aspects of IT security in the Master in Cybersecurity which is organized by four universities and two University Colleges (https://masterincybersecurity.ulb.ac.be/) and teaches cybercrime and cybersecurity law in educational programs which are organized by CRIDS. He is occasionally designated as expert in cybersecurity and cybercrime issues by the Council of Europe and by the Geneva Centre for the Democratic Control of Armed Forces (DCAF).

Jesús Alberto Alonso-Velasco

Mr. Alonso began working in the Department of Security of the Basque Government from May 1986 until today, being his first destination Mobile Brigade Unit of the Ertzaintza, as agent, and currently as Chief Commissioner of Mobile Brigade Sections Coordination, through different units and services. Since September of 2012 until today, within the Central headquarter of tactical support of the Mobile Brigade and as Chief Commissioner of Mobile Brigade Sections Coordination, carried out functions of coordination and command of centers or operative groups under the direction of upper scale, in addition to the tasks that demands the execution of police services and the needs of public security.

During the same year 2012, as Deputy Chief of the Operational Management Centre of the Rescue and Tactical Support Unit, carried out tasks of support to the Unit Director, planning and management of the tasks of the unit; Sections of helicopters, sea-diving; and Mountain – rescue dogs. Monitoring of the selective processes and course to the different specialties of the unit.

Paul Townsend

Paul is a highly qualified crowd movement and behaviour expert who has a unique understanding of the dynamics of large crowds. Aside from leading cutting edge research and development in crowd simulation, communication and analysis techniques, he has been commissioned all over the world to devise strategies and technologies for managing crowded spaces.

From major sports events to religious gatherings, Paul has created techniques in order to analyse crowds specific to situations, and has put in place the optimum strategies that have kept crowds safe and moving efficiently. He has undertaken highly specialist commissions, studying terrorism, crowd collapses and religious rituals. His work has undoubtedly saved many lives to date.

Dr. Carlo Dambra

Dr. Carlo Dambra. Carlo is the Research & Development Director of PROPRS Ltd. He received his PhD in Computer Science and Electronic Engineering in 1993 from the University of Genova (Italy). He has a long-standing expertise in RTD project management on both

nationally- and EC-funded projects (ICT, RTD Transport, RTD Environment). His main expertise is on risk assessment and data analytics. He has been also invited as expert in RTD DG ICT and DG Research proposals evaluation and in support to negotiation.

Jordi Arias

Jordi is Civil Engineer from the Polytechnic University of Valencia (Spain). He finalized his master degree in the Uniwersytecka Politechnika Warszawska (Poland). He is currently working as a project coordinator of LETSCROWD and also actively participates in SAURON project in the area of cybersecurity (specific solution

for protecting EU ports and increasing their systemic resilience in the face of a physical, cyber or combined threat). He has been involved in several multinational collaborative R&D projects in other areas as energy, transport, and mobility, such as MATCHUP and PLUG-N- HARVEST projects.

10. PROJECT SEECHXRAYS

SPEECHXRays

The SpeechXRays project will develop and test a user recognition platform based on voice acoustics analysis and audio-visual identity verification, in real-life environments. Our goal is to develop and test a cost effective, convenient, privacy-preserving multimodal biometric solution based on acoustic and machine vision analysis of audio-visual biometric data. The novel biometric solution is implemented for a broadband network, giving access to smart services running over networks with state-of-the-art security, avoiding single points of failure. The platform will guarantee interoperability and portability between systems and services.

The technology developed in the project is versatile and can be used to provide secure access to networks as well as physical locations (the workforce use case will include a physical access control demonstration). The technology is designed to be portable across different operating systems.

The solution will be validated by industrial partners in large-scale real-life use cases. The project will test the solution in three real-life use cases requiring various degrees of security:
· workforce use case,
· eHealth use case,
· consumer use case.

Michel Kostucki

Michel Kostucki is director collaborative projects at IDEMIA.
Michel KOSTUCKI started his career in 1980 as a software consultant in SOBEMAP, a large software company located in Belgium. In 1988, Michel joined MORPHO SYSTEMS, today IDEMIA. Up to year 2000, Michel occupied several positions of responsibility in the company, among them project manager for the delivery of the New-York State DCJS AFIS ((Integrated) Automatic Fingerprint Identification System) (1992-1994), of the FBI IAFIS (1) (1995-1998) and of the Columbia PMT (Technology Modernization Program) (1998-2000). In

2000, he moved to the Criminal Justice Business Unit and became Deputy Director in 2004. During that period of time, he was in charge of a number of important business opportunities and contracts, among others for the AFIS of the South African Police Services (2001-2007), the UK Police Forces (2004-2011), the European Biometric Management System opportunity (awarded in 2006) and the FBI NGI (Next Generation Identification) program (2007-2011). In 2011, Michel became Director of the Criminal Justice Business Unit. In May 2015, he moved as Product VP in Identity Management. Michel occupies his current position since November 2016.

Jean-Loup Depinay

Jean-Loup DEPINAY is a Program Manager with experience in Eureka, JTI and H2020 programmes. He contributed to innovative projects within different domains of application for end to end security (automotive, eHealth, Payment, Telecommunications, Cloud Computing…) for the last 10 years. He has a strong experience as project leader and architect in related specialties: operating systems architecture, smart cards, software security. He also participated to international technical exchanges in the context of design and management of standards: member of technical and Business committees of JavaCard Forum, member and of Global Platform in the period 2000-2010. He is involved in International project management for IDEMIA (former Oberthur Technologies) with vast multi-cultural experience covering over 21 projects with various partners in the academic or the industrial world.

Dr. Ioannis Markopoulos

Dr. Ioannis Markopoulos holds a PhD in Telecommunications from the National Technical University of Athens, Electrical Engineering Department. He is a National Technical University of Athens, Electrical Department Graduate and a member of the Technical Chamber of Greece. Since 2007, he is also PMP certified. He has been working and leading numerous European and Domestic R&D projects in the domain of broadband telecommunications, value added services, management, etc. He has also produced and participated in several publications. He has participated in the Federation of Hellenic ICT Enterprises, promoting frameworks capitalising on EU structural funds. He is currently leading Forthnet's Innovation &Project Management Department. His research interests include: big data analytics, customer experience measurement methods, value added & OTT services, and customer loyalty & trust methods.

Alexandu Nicolin

Dr. Alexandru Nicolin started his physics studies at Politehnica University of Bucharest, Romania, in 2000, and then moved to University of Copenhagen, Denmark, from where he graduated in 2008 with a Ph.D. in theoretical physics. Following his Ph.D., Dr. Nicolin joined The Horia Hulubei National Institute for Physics and Nuclear Engineering in Magurele, Romania, where he is currently a Senior Scientist with the Department of Computational Physics and Information Technologies. In 2014, Dr. Nicolin defended his Habilitation Thesis at Politehnica University of Bucharest, where he now serves as Ph.D. supervisor. Starting 2018 also holds the position of Associate Professor of Physics at University of Bucharest. The research interests of Dr. Nicolin cover the nonlinear dynamics of classical and quantum mesoscopic systems and the statistics of the Romanian language.

Dijana Petrovska-Delacrétaz

Dijana Petrovska-Delacrétaz obtained her degree in Physics and her PhD from the Swiss Federal Institute of Technology (EPFL) in Lausanne. She was working as a Consultant at AT&T, as a Post-Doc at EPFL, Télécom ParisTech, and as a Senior Scientist in the Informatics Department of Fribourg University, Switzerland. In 2004 she joined Télécom SudParis as associate professor. Her research activities are oriented towards pattern recognition, signal processing, and machine learning methods, that are exploited for different applications such as speech, speaker and language recognition, very low-bit speech coding, e-health, biometrics (2D and 3D face, and voice), and crypto-biometrics (including privacy preserving biometrics). As per January 2018, her publication list is composed of four patents, two publicly available biometric databases, and more than 100 publications. She supervised five PhD researchers, and participated in different European and national collaborative projects.

Neil MacDonald

Neil MacDONALD serves as Chief Commercial Officer at VoiceTrust and leads on all commercial and partner relationships. He is a 25-year veteran of the Mobile, IT and Communications industries, focusing on disruptive and innovative technologies particularly around Human-Computer-Interaction involving Speech and Speaker Recognition. For the last 10 years, Neil has been instrumental in bringing many Deep-Learning and RNN based actual applications to the market, for use in solving real-world communication problems.

11. PROJECT FLYSEC

The FLYSEC EU H2020 project addressed the European Union's research priority for improving the aviation security chain and aligned with the roadmap and recommendations reflected within the IATA/ACI Smart Security programme. FLYSEC facilitates the three main principles specified in Smart Security: strengthened security, increased operational efficiency and improved passenger experience. Evaluation of the FLYSEC system included a large range of engaged stakeholders, including airport higher management and security practitioners, law enforcement agencies, airport commercial/sales, passengers' departments and others. The FLYSEC project may have closed at the end of July 2018, however its impact and next actions are to follow in the short, mid and long term.

FLYSEC validated an innovative concept and identified opportunities in process optimization and regulatory framework. FLYSEC provides promising and enabling technical solutions which will also be further developed for a closer to market technology readiness level, including computer vision analytics, AI and machine learning algorithms as well as on the fly identification and screening techniques. Finally, the alignment between FLYSEC and the IATA/ACI Smart Security programme paved the path for the promotion of FLYSEC into a certified Smart Security implementation.
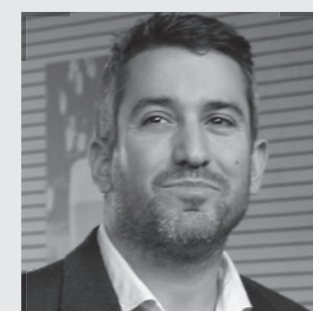
Iacob Crucianu

Iacob Crucianu is currently Technical Leader for JAVA and AI technologies in the SIVECO's CAD Department. Mr. Iacob Crucianu has a university degree in Applied Mathematics provided by the Faculty of Mathematics, University "Al. I Cuza" Iasi, and possesses a solid and proven experience in integrated information systems design and development, including technical leadership and project management, team coaching and mentoring, solutions architecture, and hands-on applications and databases development and configuration. He has also a vast experience in conducting Research and Development projects in the area of Image Processing, Pattern Recognition and Machine Learning.

He is the technical leader in a Horizon 2020 SpeechXRays project, coordinated by IDEMIA, where SIVECO is the system integrator. The SpeechXRays project will develop and test in real-life environments a user recognition platform based on voice acoustics analysis and audio-visual identity verification.

He is also the integration work package leader for Horizon 2020 SMILE project.

Dr. Dimitris M. Kyriazanos

Dr. Dimitris M. Kyriazanos received his Diploma in 2005 and his Ph.D. degree in 2009 both in Electrical and Computer Engineering (ECE) from the National Technical University of Athens (NTUA), Greece. In 2006 he joined and remains since with the Integrated Systems Laboratory (ISL) of the Institute of Informatics and Telecommunications (IIT). He is currently a Research Assistant Professor and Head of ISL Security Unit. He has obtained significant European Commission (EC) research grants in the challenging areas of preparedness for and management of large scale forest fires (FP7 Integration Project AF3), airport security (FLYSEC DRS-16-2014) and risk based screening at border crossing (TRESSPASS SEC-15-BES-2017) -having acted as Coordinator in the latter two. applications and services, while publishing the results of his work in scientific journals, international conferences and book chapters. His research interests include integrated security management and command and control systems, risk based security, automated decision making, indoor location based services, data fusion, data protection and PETs, privacy and ethics by design and other topics. He is an active member of the European and international community of researchers, professionals and end users working jointly in the area of secure and resilient societies, participating in multiple bodies and advisory boards as a known expert in the area.

12. PROJECT TRESSPASS

TRESSPASS is a H2020 42-month Innovation action project that covers air, maritime and land (including car and train) border crossing points, and specifically travel routes that combine different modalities. It excludes border crossings outside of border crossing points, as it happens with boats of refugees on the Mediterranean. With regards to threats, this includes smuggling, irregular immigration, cross border crime, and terrorism, including threats to the transport itself (e.g. aviation security – per the topic text). It also excludes other threats as posed by state-actors. The project includes all tiers of the four-tier access model:

(1) measures undertaken in, or jointly with third countries or service providers;
(2) cooperation with neighbouring countries;
(3) border control and counter-smuggling measures, and
(4) control measures within the area of free movement.

TRESSPASS will
develop a single cohesive risk-based border management concept concept and develop three pivoting pilot demonstrators: Schiphol Airport, Polish Land Border at External EU crossing control point and Port of Piraeus

Dr. Dimitris M. Kyriazanos

Dr. Dimitris M. Kyriazanos received his Diploma in 2005 and his Ph.D. degree in 2009 both in Electrical and Computer Engineering (ECE) from the National Technical University of Athens (NTUA), Greece. In 2006 he joined and remains since with the Integrated Systems Laboratory (ISL) of the Institute of Informatics and Telecommunications (IIT). He is currently a Research Assistant Professor and Head of ISL Security Unit. He has obtained significant European Commission (EC) research grants in the challenging areas of preparedness for and management of large scale forest fires (FP7 Integration Project AF3), airport security (FLYSEC DRS-16-2014) and risk based screening at border crossing (TRESSPASS SEC-15-BES-2017)

-having acted as Coordinator in the latter two. applications and services, while publishing the results of his work in scientific journals, international conferences and book chapters. His research interests include integrated security management and command and control systems, risk based security, automated decision making, indoor location based services, data fusion, data protection and PETs, privacy and ethics by design and other topics. He is an active member of the European and international community of researchers, professionals and end users working jointly in the area of secure and resilient societies, participating in multiple bodies and advisory boards as a known expert in the area.

13. PROJECT CYBSPEED

The main topic covered by MSCA-RISE grant #777720 CybSPEED is the study of the role that cyberphysical systems may plan in improving the educational assistance to children and adults with special educational needs. Specifically, the kind of cyberphysical systems that attracts most attention are the social robots, such as the well known Nao robot developed by Aldebaran, France and now commercialized by Softbank, Japan. Japan is leading all aspects of insertion of robots in everyday life, and it is a key partner in CybSPEED project. The experimental side of the project, thus, is devoted mostly to assess the effect of the exposure of children and adults with special educational needs to the interaction with the Nao robot. Though Nao has been proposed to help children with autism spectrum disorders (ASD), the experiments also include other populations, such as children with hearing and speaking difficulties. The main research question can be stated as follows: Does the interaction with the anthropomorphic robot improve in some way the performance of the children with special needs? Each of the experimental settings defines a specific scenario and measures of children response. A central feature in some of the experiments is the fusion of neural activity and behavioral information which constitute a kind of neuroethological fingerprint of the experimental subject. Correlation analysis of the neural activity and the behavior observations allows to answer questions about the neural origins of behavior. Specifically,

Manuel Graña Romay

Manuel Graña Romay received the M.Sc. and Ph.D. degrees from Universidad del Pais Vasco (UPV/EHU), Donostia, Spain, in 1982 and 1989, respectively, both in computer science. His current position is a Full Profesor (Catedrático de Universidad) with the Computer Science and Artificial Intelligence Department of the Universidad del Pais Vasco (UPV/EHU). He is the head of the Computational Intelligence Group (Grupo de Inteligencia Computational). His current research interests are in applications of computational intelligence to social robotic systems, computer aided diagnosis in the neurosciences, multimodal human computer interaction, remote sensing image processing, biometric systems, lattice computing, semantic modelling, data processing, classification, and data mining.

14. PROJECT FOLDOUT

In the last years irregular migration has dramatically increased, and is no longer manageable with existing systems. Improved methods for border surveillance are necessary to ensure an effective and efficient EU border management.

FOLDOUT focus is on through foliage detection in the inner and outermost regions of the EU. Foliage penetration is an unsolved important part of border surveillance. By solving the problem of unreliable detections in such harsh environments border guards' workloads are reduced, costs are reduced and lives can be saved.

Detecting people through dense foliage in extreme climates with only a penetration technology is prone to high fault rates. FOLDOUT will build a system that combines various sensors and technologies and intelligently fuses these into an effective and robust intelligent detection platform.

FOLDOUT will make the tasks of Border Guards simpler and faster by combining events from various sensors to give a complete situation threat assessment combined with suggested reaction scenarios.

A two year pilot in Bulgaria and demonstrators in Greece, Finland and French Guiana FOLDOUT will provide fundamental enhancements in the domain of border surveillance and improved search & rescue scenarios.

Dipl. Ing. Georg Melzer-Venturi

Dipl. Ing. Georg Melzer-Venturi MSc (male) holds an engineering degree from the University of Natural Resources and Life Sciences, Vienna. He is an experienced facilitator of many international RTD projects and has an in-depth knowledge of ICT in combination with Life Science, e.g. AAL or e-Health. He is an experienced organizer of events - ranging from topical seminars to sports events for more than 2000 people. He has been involved in the EU Framework Programme since 2001 and has experience as a coordinator, a partner as well as a consultant on the preparation of proposals from FP5 to h2020. From 2000-2002 he was active at the NCP in Austria. Since 2003 he is active as Evaluator for the EC. Georg Melzer-Venturi has a Masters Degree in Biotechnology, as well as in Engineering Management and in Pedagogics. Since 2006 he is a State Certified Management Consultant. He has successfully managed several EC Projects and Tenders including EPIC, eCAIMAN, EcoWeb, CoFET and FLEET, and Participated in others such as RTD2Farm.

15. PROJECT FACCESS (SME)

FacePhi has developed a face recognition technology, specifically designed to overcome the current barriers preventing the large-scale deployment of banking biometrics.

Now, in the FACCESS we seek demonstrating our facial recognition technology can actually unleash the large-scale deployment of banking biometrics by the implementation of our product in the mobile/online platforms of 6 international banking institutions, with whom FacePhi has already closed agreements thanks to the Phase 1 project. Through to these collaborations, we are able to test our product with >3.000.000 million users (more than 500.000 users per bank institution engaged in the project), becoming a worldwide leader in banking biometrics.

Javier Mira

CEO and Co-founder at FacePhi, global leader Company specialized in Face Recognition technologies applied on financial sector. Always passionate about entrepreneurship and new challenges.

Previously worked at F7 Corporation, Panama Jack, LOEWE (LVMH Group) and Fujitsu Japan. ETP: Executive Training Program in Japan Master and hold an IMSD at Sophia University in Tokyo

Over 20 years of experience in global enterprises, team management and growth and expansion implementation policies. Multicultural profile and expertise in international markets.

Tania Martinez

Deputy Manager at FacePhi. Joined the Company in 2014 and since then she works directly with the CEO coordinating and leading projects such as the Horizon2020 in the European Commission, leading Investor Relations and managing other departments and teams. Speaker in congresses such as the European FinTech Awards 2017 in Brussels and the AEMAB (Association for companies listed on the Spanish Alternative Investment Market) where FacePhi is listed since July 2014.

Graduated in Economics, specialized in Analysis with a Master in Communication, Marketing and Investment Markets. In the past, worked for Renta 4 Bank in Spain and Quastel Midgen Solicitors in England.

16. PROJECT SMART TRUST (SME)

Smart-Trust is a highly innovative H2020 project for border control, which introduces a new technological enabler for Mobile ID and increases the reliability and trust levels of identity verification at European borders, strongly improving the security of member states. In a world where mobile is king, Vision-Box Mobile ID™ technology goes one step further and transforms the way people identify themselves. By enabling a digital hands-free authentication through mobile devices, this first-class solution allows to have a complete paperless travel experience, where there is no need for physical passport checks, hence expediting travel and improving passenger experience, while increasing security. Smart Trust will simultaneously address the business needs of governments, airports, airlines and border police in major pilots in the international airports. Smart-Trust will be implemented by delivering an agile, configurable and open platform providing Mobile ID services based on TrustChain™.

Pedro Torres

Mr. Torres is Innovation Director, being responsible for managing the market making process at Vision-Box. Particularly focused on the Happy Flow solution, he oversees the full end-to-end product development cycle including Idea Generation, Idea Development, Business Analysis, Market Testing and Business Models. Pedro is also in charge of European Affairs, coordinating all participations in major public funding programmes (H2020, FP7, EU-Lisa), as well as identifying, pursuing and managing Intellectual Property Rights opportunities. Previously, Pedro was International R&D Coordinator at Portugal Telecom. As part of his role he was involved in building and managing core international R&D alliances with industry and academia, and in devising and implementing the R&D strategy in close articulation with the business development roadmaps across the entire company. Pedro has been in the ICT area for over 10 years and has managed different institutions' participations in more than 10 FP7/H2020 projects for over 5 years, acting as coordinator for STREAMLINE, a Big Data project in H2020, before taking his position at Vision-Box where he is coordinating Smart-Trust, an on-going SME-Instrument (Phase 2) led by Vision-Box.

17. PROJECT QUARDCARD (SME)

CardLab and QuardLock brings a disruptive, highly secure smart card (QuardCard), including a three-factor authentication system to improve the security of online and physical transactions including E-banking, E-commerce and E-government, which is currently facing major increases in fraud levels and Cyber-attacks. QuardCard combines, for the first time, the following for authentication:

- Something you have: a smart card – all data is kept inside the card with only encrypted keys are released (privacy is protected)
- Something you are: a biometric fingerprint – highly accurate and impossible to copy (only correct biometric will give access)
- Something you know: the password, CVV (Card Verification Value), PIN (Personal Identification Number) or OTP (OneTime Passcode)

The "System-on-Card" approach, i.e. storing fingerprint within the card and never exchanging data with external devices/databases, allowing the personal data inside the card to be kept secure and preventing any fraudulent attacks. As such, the card only works with the rightful owner's fingerprint.

The card will be able to send codes via dynamic magstripe, contactless interface, display, dual interface EMV or other communication channels to a backend authentication server providing maximum security. Loss of biometric data to hacker is eliminated, but full user identification and privacy protection is obtained.

Frank Sandeløv

Frank has 8 years of operational experience with CardLab starting with 3 years as Chairman of the board and 5 years as managing director (CEO) with main areas of responsibility being: Daily management & business development, Sales, Contracts and agreements, IPR and Public relations.

Frank has a strong Army Aviation Officer background and served 11 years as Platoon leader, flight instructor, maintenance & test pilot and electronic warfare officer. This was followed by 24 years of experience within the airline business, including 14 years' experience as a Captain at Scandinavian Airlines with crew management and coordination responsibility. During a period of 3 years Frank served as a SAS representative in the SESAR workgroup under the EU Commission with main areas of work to be Concept of operation and passenger processing at airports.

Today Frank also serve as the CardLab representative supporting the IATA strategic partnership and is a member of the IATA One ID workgroup as a biometric industry representative. Frank has in addition held several board position in different companies and organizations over the last 30 years and have dedicated this time to provide better user identification and better privacy protection for virtual and physical interaction with IT world.

Demonstrations

PROJECT FACCESS (SME)

FACCESS

DEMO

Selphi, is the face recognition Solution of FacePhi that allows the user to get authenticated or make transactions in the banking sector with just taking a selfie.This innovative technology enhances the client experience effortlessly by simply using the camera on their mobile device to take a selfie; this then becomes their method of identification and interaction with the bank's mobile application.

FacePhi has entirely designed and developed its own robust algorithm,

and thanks to the user experience and the extra services that offers as well as the support and maintenance, will close the year with a forecast of 30 contracts signed with different banks around the world and expects 500M of authentications with 5M of users at the end of 2018. An absolute success in the adoption of the facial recognition to login to their private accounts in one year with the 90% of the users and 0% of fraud in all the clients in production.

PROJECT IBORDERCTRL

DEMO

"The iBorderCtrl system introduces an online application to enable travellers to upload pictures of their passport, visa and proof of funds, then use a webcam to answer questions from a computer-animated border guard (avatar), personalised to the traveller's gender, ethnicity and language. This unique approach to 'deception detection' analyses the micro-expressions of

travellers to figure out if the interviewee is lying. This pre-screening step is the first of two stages; before arrival at the border, it also informs travellers of their rights and travel procedures, as well as providing advice and alerts to discourage illegal activity."

PROJECT SMART-TRUST:

Smart Trust.

DEMO

Smart-Trust is a highly innovative H2020 project for border control, which introduces a new technological enabler for Mobile ID and increases the reliability and trust levels of identity verification at European borders, strongly improving the security of member states. In a world where mobile is king, Vision-Box Mobile ID™ technology goes one step further and transforms the way people identify themselves. By enabling a digital hands-free authentication through mobile devices, this first-class

solution allows to have a complete paperless travel experience, where there is no need for physical passport checks, hence expediting travel and improving passenger experience, while increasing security. Smart Trust will simultaneously address the business needs of governments, airports, airlines and border police in major pilots in the international airports. Smart-Trust will be implemented by delivering an agile, configurable and open platform providing Mobile ID services based on TrustChain™.

PROJECT LIGHTEST

LIGHTest

DEMO

Lightweight Identity and Access Management Demo using the Domain Name System (DNS)

This demo is to design an infrastructure for validation and authentication of sensor data of one or several organizations using a Raspberry pi Cluster. It is based on the distributed trust infrastructure which is currently developed in the EU project LIGHTest

(https://www.lightest.eu//), and which makes use of the existing Internet Domain Name System (DNS) and its global trust anchor. Due to the proposed architecture, this approach exhibits a good scalability for dynamic and large systems of sensor data, with possible use cases in the fields of IoT, predictive maintenance, etc.

The leading voice for digital ID & biometrics, in Europe

Join Europe's leading ID community

www.eab.org

BECAUSE IT MATTERS

SDG 16.9
made Legal Identity for All a development goal

http://www.id-day.org/

THE NETHERLANDS

NORWAY

ESTONIA

NIGERIA

KENYA

SIERRA LEONE

ETHIOPIA

GUINEA

CAMEROON

CENTR. AFRICAN REP.

MAURITANIA

MADAGASCAR

CHAD

SOUTH SUDAN

MAURITANIA

NIGER

CHAD

MALI

GHANA

SOUTH SUDAN

DJIBOUTI

MAURITANIA

LIBERIA
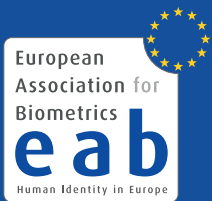
SENEGAL

ESWATINI (SWAZILAND)

SOUTH AFRICA

If you are a decision maker or can influence the leadership of your institution, please have your organization join the coalition partnership. It does not imply any financial commitment but it demonstrates that your institution endorses this initiative which is important as we sensitive UN member states about the importance of identity and the need to have an observance day. To join contact Malick Diouf, at m.diouf@id4africa.com

Coalition partners as of 13 September 2018

Lest the world forgets, join the coalition calling for the recognition of September 16 as International Identity Day

Notes

EAB
European Association for Biometrics

The leading voice for digital ID & Biometrics, in Europe