Ioana Boureanu

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Professional Summary

Ioana is a **Senior Fellow of UK's Royal Society**, a Fellow of the Higher Education Academy (FHEA), and a Senior Lecturer in Secure Systems at Surrey. She is the Deputy Director of Surrey's GCHQ-certified ACE-CSR (Academic Centre of Excellence in Cyber-security Research)– Surrey Centre for Cyber Security, the Deputy Director of Surrey's GCHQ-certified ACE-CSE (Academic Centre of Excellence in Cyber-security Education), and Programme Lead for the GCHQ-certified InfoSec MSc. Ioana has over 12 years of experience in cyber-security, both in academia and industry, in technical and management roles, ranging from professor to security architect, in international teams across Europe.

Highest Academic Degree

PhD in Computing,
Imperial College London, UK, 2011

Areas of Expertise

- *Cyber Security (research, teaching, consultancy)*
  - **Authentication, Authorisation & Accountability:** authentication, key-establishment;
  - **Software Security:** payment & web-application firewall
  - **Formal Methods:** formal security verification, provable security
  - **Cryptography:** design of cryptographic schemes
- *Business & Transferable Skills*
  - Business analysis & consultancy (business cases, support for product pre-sales, proof of concepts)
  - Management and coaching (e.g., deputy director of a lab in EPFL; trainer at Akamai University)

Relevant Work Experience

Year	Role	Organisation	Key responsibilities and achievements
2019 – now	Senior Lecturer (from 01/2021) Lecturer (06/2017 – 01/2019)	Univ. of Surrey	**Research:** (1) Leading and partaking in research projects and in bids, in cyber security; (2) Supervising PhD students
			Teaching, Transferable Skills & Management: (1) Lead of the Information Security MSc + former lead of the Computing and Information Technology (CIT) BSc; (2) Designer and module-lead for "System Verification", module-lead for "Computer Security" (year-3 UG); (3) University-wide mentoring of ECR
			Outreach: (1) Cyber-security and career talks to A-level and GCSE students (2018, 2019); (2) Working with Satro charity to take in A/GCSE-level summer interns (2017, 2018)
06/2015 – 06/2017	H2020 Marie Sklodowska-Curie Fellow	Univ. of Surrey (2016 – 2017) Imperial College London (2015 – 2017)	**Research:** as above **Teaching, Transferable Skills & Management:** (1) Guest lecturer for "Systems Verification" at Imperial College London (3 times); (2) Organiser of Imperial's weekly seminar "Logic & Verification"

Year	Role	Organisation	Key responsibilities and achievements
03/2014 – 06/2015	Security solutions architect	Akamai Technologies Limited	**Security Consultancy &Transferable Skills** Assessing & enforcing cryptographic measures, offering consultancy and cyber-security training to many institutions in EMEA, e.g.: in the UK – HMRC, Sky, JD Sports, Arcadia Group; in Spain – El Corte Ingles, Desigual; etc.
08/2013 – 03/2014	Professor of Information Security	Univ. of Applied Sciences, Western Switzerland (HEIG-VD)	**Research**: as above **Teaching & Management:** (1) Co-designed the curriculum for a BEng programme in computing; (2) Module-lead for the 3rd-UG "Information Security"; (3) Designer of the full support for 2 modules: "Operating systems' security" & "Wireless Security"
01/2011 – 08/2013	Lecturer (09/2012-08/2013) Deputy Director of LASEC (2012 – 08/2013) Researcher (2011 –2012)	Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland, in Security and Cryptography Laboratory (LASEC)	**Research**: as above **Teaching, Transferable Skills & Management:** (1) Member of teaching/examination committees in the Uni ; (2) Module-lead, co-designer and co-lecturer for the MSc core module "Cryptography and security" (2012/2013); (3) Coordinator of a MSc module "IT security" (2011 --2013); (4) Supervisor/tutor of MSc students (2011 --2013) (5) Guest lecturer for the MSc modules "Advanced Cryptography" and "Cryptography and security" (7 times) **Outreach**: Giving interviews for Swiss radio and television on contactless authentication (2013, 2014)

Academic & Professional Achievements

Academic Metrics

Publications	38 conference papers, 3 journal papers, 1 book chapters
Phd Main Supervisions	3 current PhD students, 2 completed ones (3 completed as second advisor)
Committees	(1) General/programme chair of ACNS 2014; (2) Steering committee of CrossFyre; (3) PC member of numerous A* conferences (e.g. IEEE S&P 2020, 2021, Euro IEEE S&P 2019 –2012, AAAI IJCAI, AAMAS 2017 --2021)
Industrial Partnerships	VISA, Mastercard, Thales, BT, Consult Hyperion, NCC Group

Selected Recent Publications:

- A. Radu, T. Chothia, C. Newton, L. Chen, "Practical EMV Relay Protection", at the 2022 IEEE Symposium on Security and Privacy, IEEE S & P, 2022, to appear
- I. Boureanu, C. Dragan, F. Dupressoir, D. Gerault, P. Lafourcade, "Precise and Mechanised Models and Proofs for Distance-Bounding", at the 34th IEEE Computer Security Foundations Symposium (CSF 2021)
- I. Boureanu, T. Chothia, A. Debant, S. Delaune, "Security Analysis and Implementation of Relay-Resistant Contactless Payments", at ACM CCS 2020
- F. Belardinelli, I. Boureanu, C. Dima, V. Malvone, "Verifying Strategic Abilities in Multi-agent Systems with Private Data-Sharing", at AAMAS 2019
- K. Bhargavan, I. Boureanu, P.A. Fouque, C. Onete and A. Delignat-Lavaud, "A Formal Treatment of Accountable Proxying over TLS", IEEE S&P 2018

Professional Achievements

PDC	Completed award-winning women's development and leadership programmes: Aurora and Springboard (2019, 2016)
Relevant Awards	Best security trainer for EMEA in Akamai (2014); Dean's prize for research and teaching, EPFL (2013)