

Emmanouil (Manos) Panaousis

ASSOCIATE PROFESSOR OF COMPUTER SCIENCE, UNIVERSITY OF GREENWICH

HEAD OF CYBER RISK LAB, INTERNET OF THINGS AND SECURITY CENTRE

✉ e.panaousis@greenwich.ac.uk | 🌐 www.manospanaousis.com | in manospanaousis | 📧 manospanaousis

Experience

University of Greenwich

Greenwich Maritime, London, UK

ASSOCIATE PROFESSOR OF COMPUTER SCIENCE

September 2019 - Present

- Head of the Cyber Risk Lab.
- Cyber Risk and Enterprise Lead, Internet of Things and Security Centre.
- Principal investigator (P.I.) for Greenwich Innovation Fund "SecurityBudget", P.I. NCSC/RISCS MERIT, co.I. EPSRC CHAI, P.I. H2020 CUREX, P.I. H2020 SECONDO.
- Managing 2 postdoc researchers, 6 PhD students, 3 software developers, 2 business and market analysts.
- Supervising 10 BSc projects/year and 5 MSc project/year.
- Module leader "Information Security" (level 5).

University of Surrey

Guildford, Surrey, UK

LECTURER/SENIOR LECTURER IN SECURE SYSTEMS

September 2017 - August 2019

- Principal investigator (P.I.) NCSC "Dynamic Protection Framework Against Advanced Persistent Threats in 5G Networks", P.I. H2020 CUREX, P.I. H2020 SECONDO, P.I. H2020 SPEAR.
- Managing 2 postdoc researchers, 2 PhD students, and 2 software developers; supervising 8 BSc projects/year and 2 MSc projects/year.
- Module leader "Information Security for Business and Government" (MSc) & "Web and Database Systems" (level 4).
- Member of the advisory board of the Surrey and Sussex Cyber Crime Unit.

University of Brighton

East Sussex, UK

LECTURER/SENIOR LECTURER IN CYBER SECURITY AND PRIVACY

Oct 2014 - Aug 2017

- co.I. H2020 SESAME, co.I. H2020 VISION.
- Co-managing 2 postdoc researchers and 2 PhD students.
- Co-founder MSc Cyber Security, Module leader of 6 modules (year1-year3) on Information Security, Maths, and Computer Networking.
- General Chair of the 6th Conference on Decision and Game Theory for Security (GameSec 2015), TPC Chair GameSec 2016.

Imperial College London

South Kensington, London, UK

VISITING RESEARCH FELLOW

February 2013 - June 2016

- Research and development on cyber security economics.

Queen Mary University of London

Mile End, London, UK

POSTDOCTORAL RESEARCHER IN COMPUTER SCIENCE

February 2013 - September 2014

- Funded by the EPSRC project "Games and Abstraction: The Science of Cyber Security".
- Designed and developed novel cyber investments models, methodologies, and tools.

Ubitech Technologies Ltd

Surrey Research Park, Guildford, UK

HEAD OF CYBER SECURITY RESEARCH

June 2011 - December 2012

- Principal security architect of the UBiNet distributed mobile communications software.
- Leading preparation of FP7 proposals.

Kingston University

Kingston Upon-Thames, Surrey, UK

RESEARCH ASSOCIATE

February 2009 - January 2013

- Leading cyber security research in the FP7 PEACE project.
- Designed and developed a novel mobile communications security architecture, including secure peer-to-peer overlays.

Projects

SecurityBudget: Cyber Security Budget Spending Companion for SMEs

University of Greenwich

PRINCIPAL INVESTIGATOR

January 2020 - July 2021

- Funded by Greenwich Research and Enterprise for Prototype development (Innovation Fund).
- Project Cost: £12,500.
- Designed and developed software to support SMEs on how to protect their systems subject to a limited available budget.

MERIT: A fraMEwork to Model and Incentivise Cyber Security Investment Decisions

University of Greenwich

PRINCIPAL INVESTIGATOR, RESEARCH FELLOW RISCS

April 2020 - March 2021

- Funded by the National Cyber Security Centre (NCSC) in collaboration with the Research Institute in Sociotechnical Cyber Security (RISCS).
- Project Cost: £60,000.
- Designed and developed software to compute optimal cyber controls for SMEs against adversarial strategies.

CHAI: Cyber Hygiene in AI-enabled Domestic Life

University of Greenwich

CO-INVESTIGATOR

December 2020 - Nov 2023

- Funded by the EPSRC, call: Security for all in an AI enabled society.
- Project Cost: 2.4M GBP among 4 partners (Univ. of Greenwich, UCL, Queen Mary Univ. of London, Univ. of Bristol, Univ. of Reading).
- Winning grant: £453,000.
- Designed and developed software for deriving cyber hygiene controls against AI threats in domestic environments.

DETER: Dynamic Protection Framework Against Advanced Persistent Threats in 5G Networks

University of Surrey

PRINCIPAL INVESTIGATOR

May 2019 - Apr 2022

- Funded by the National Cyber Security Centre (NCSC), PhD studentship, 2019-2022.
- Winning grant: £114,402.
- Designed and developed novel cyber risk managements models for 5G networks.

CUREX: seCure and pRivate hEalth data eXchange

Univ. of Greenwich/Univ. of Surrey

PRINCIPAL INVESTIGATOR

December 2018 - April 2022

- Funded by the European Commission (H2020, Research and Innovation Action).
- Project Cost: €4,987,825 among 16 partners (industry (7), academia (5), healthcare organisations (3), law firm (1)).
- Winning grant: €350,575.
- Designed and developed software for advising healthcare organisations with the optimisation of cyber controls subject to a limited budget.

SECONDO: a Security ECONomics service platform for smart security investments and cyber insurance pricing in the beyond 2020 netwOrking era

Univ. of Greenwich/Univ. of Surrey

PRINCIPAL INVESTIGATOR

January 2019 – December 2022

- Funded by the European Commission (H2020, Marie Curie RISE).
- Project Cost: €1,600,800 among 7 partners (industry (4), academia (4)).
- Winning grant: €255,000.
- Designed and developed cyber risk management software for smart homes / domestic environments.

SPEAR: Secure and PrivatE smArt gRid

University of Surrey

PRINCIPAL INVESTIGATOR

May 2018 – April 2021

- Funded by the European Commission (H2020, Research and Innovation Action).
- Project Cost: €2,965,597 among 17 partners (academia (5), research institutes (3), industrial (6), energy industries (3)).
- Winning grant: €283,760.

SESAME: Small cElls coordinAtion for Multi-tenancy and Edge services

University of Brighton

CO-INVESTIGATOR

July 2015 – January 2018

- Funded by the European Commission (H2020, Research and Innovation Action).
- Project Cost: €7,488,434.
- Winning grant: €331,639.

VISION: Visual Privacy Management in User Centric Open Environments

University of Brighton

CO-INVESTIGATOR

July 2015 – July 2017

- Funded by the European Commission (H2020, Innovation Action).
- Project Cost: €2,748,913.
- Winning grant: €392,000.

GAME-ABLING: Platform of Games for People with Cerebral Palsy to Enhance Living Adjustment

Ubitech Ltd

PRINCIPAL INVESTIGATOR

December 2012 – November 2014

- Funded by the European Commission (FP7).
- Project Cost: €1,507,767.
- Winning grant: €205,083.

Games and Abstraction: The Science of Cyber Security

Queen Mary University of London

POSTDOCTORAL RESEARCHER

February 2013 – August 2014

- Academic Research Institute in The Science of Cyber Security, funded by EPSRC, GCHQ and BIS, Topic: Fundamentals of Computing.
- Project Cost: €1,507,767.

- Funded by the European Commission (FP7, Collaborative project).
- Project Cost: €3,777,900.

Mentorship and Supervision

Researchers

- 2019-Present, Caxton Okoh, Cyber Risk Management for Healthcare Organisations (CUREX).
- 2018-2019, Nadia Boumkheld, Game Theoretic Approaches to Cyber Deception (SPEAR).
- 2018-2019, Muhammad Usman, Intrusion Detection for Smart Grid Infrastructures (SPEAR). Moved to senior lecturer position at Univ. of South Wales.
- 2015-16, Babangida Albaba, 5G Security Requirements Analysis (SESAME). Moved to rector position at the Katsina State Institute of Technology and Management.
- 2015-16, Vasileios Vasilakis, 5G Security Requirements Analysis (SESAME). Moved to lecturer position at the Univ. of West London and then Univ. of York.

Software Developers

- 2020-Present, Claire Stretch, Development of a cyber investment dashboard for SMEs and cyber risk auditors (CUREX, MERIT).
- 2019-Present, Kokulan Natkunam, Scientific Coding for a novel Cyber Risk Mitigation Framework (CUREX, MERIT).
- 2018-19, Adrian Coutsoftides, Game Theoretic Framework for Optimisation of Cyber Controls (CUREX). Moved to Data Scientist at Enteromics.
- 2018-19, Dmitry Fedorenko, Trust Management for Intrusion Detection in Smart Grid infrastructures (SPEAR). Moved to Software Developer at Hawk-Eye Innovations Ltd
- 2017-18, Adrian Coutsoftides, Blockchain-based Reputation Management for Smart Grids (SPEAR).

PhD Students

- 2020-Present, Aris Farao, Cyber Defences for Domestic Environments (SECONDO).
- 2020-Present, George Paparis, Applications of Blockchain to Cyber Insurance (SECONDO).
- 2019-Present, Robert Pell, A Cyber Risk Management Framework for 5G Infrastructures (DETER).
- 2019-Present, Emily Parsons, A Cyber Risk Management Framework for IoT-powered Domestic Environments (self-funded).
- 2019-Present, Antonia Nisioti, Data-Driven Decision Making for Cyber Forensics (self-funded).
- 2018-Present, Sakshyam Panda, Optimal Strategies for Cyber Security Decision-Making (funded by Univ. of Surrey).
- 2015-2018, Orestis Mavropoulos, A Framework for Security Analysis in Internet of Things Systems (funded by EPSRC). Moved to head of engineering position at Cyberlens Ltd.
- 2015-2018, Adeyinka Adedoyin, Case-based Reasoning, Business Intelligence (self-funded). Moved to lecturer position at Univ. of Ilorin, Nigeria.

Service and memberships

Editorial

- IET Information Security, Associate Editor
- Games, ISSN2073-4336, MDPI, Guest Editor for Special Issue “Game Theory for Security”
- Wireless Communications and Mobile Computing, Guest Editor for Special Issue “Multi-Objective Optimization Algorithms for Wireless Sensor Networks”

Memberships

- SPRITE Expect Fellow, Academic Expert Fellow, “The Security, Privacy, Identity and Trust Engagement NetworkPlus SPRITE+ HUB”.
- Gamesec, Advisory Committee Member for the Conference on Decision and Game Theory for Security.
- EPSRC, Member of the Peer Review College and Grants evaluator for the Engineering and Physical Sciences Research Council.
- RISCS, Member and Fellow of the Research Institute in Science of Cyber Security and funded Fellow (April 2020 - March 2021).
- REPHRAIN, Member of the College of Peer Reviewers of the National Research Centre on Privacy, Harm Reduction and Adversarial Influence Online, Bristol Cyber Security Research Group, University of Bristol.
- IEEE, Senior Member.

General Chair

- Gamesec 2015 (6th Conference on Decision and Game Theory for Security, London, UK, November 2015)

Program Chair

- Gamesec 2016 (7th Conference on Decision and Game Theory for Security, New York, NY, USA, November 2-4, 2016)

Program Chair

- Gamesec 2021 (12th Conference on Decision and Game Theory for Security, fully online conference, October 25-27, 2021).
- Inscrypt 2021 (17th International Conference on Information Security and Cryptology).
- ESORICS 2020 (25th European Symposium on Research in Computer Security, Guildford, UK, September 14-18, 2020).
- Gamesec 2020 (11th Conference on Decision and Game Theory for Security, University of Maryland - College Park, October 26-30, 2020).
- Gamesec 2019 (10th Conference on Decision and Game Theory for Security, Stockholm, Sweden, October 30 - November 1, 2019).
- Gamesec 2018 (9th Conference on Decision and Game Theory for Security, Seattle, WA, USA, October 29 - 31, 2018).
- Gamesec 2017 (8th Conference on Decision and Game Theory for Security, Vienna, Austria, October 23-25, 2017).
- Gamesec 2016 (7th Conference on Decision and Game Theory for Security, New York, NY, USA, November 2-4, 2016).
- Gamesets 2016 (6th International Conference on Game Theory for Networks, Kelowna, BC, Canada, May 2016).
- Gamesec 2015 (6th Conference on Decision and Game Theory for Security, London, UK, November 2015).
- CRiSIS 2015 (10th International Conference on Risks and Security of Internet and Systems, Mytilene, Lesbos Island, Greece, July 2015).
- FiCloud 2015 (3rd International Conference on Future Internet of Things and Cloud, Rome, Italy, August 2015).
- ICC 2015 (First Workshop on Security and Privacy for Internet of Things and Cyber-Physical Systems, London, UK, June 2015).
- Gamesec 2014 (7th Conference on Decision and Game Theory for Security, Los Angeles, CA, USA, November 2014).

Teaching

- Fall 2020, Information Security (level 5) (University of Greenwich).
- Fall 2019, Information Security (level 5) (University of Greenwich).
- Spring 2018, Information Security for Business and Government (level 7) (University of Surrey).
- Fall 2018, Web and Database Systems (level 4) (University of Surrey).
- Fall 2017, Web Publishing and Databases (level 4) (University of Surrey).
- Spring 2017, System and Network Security (level 7) (University of Brighton).
- Spring 2017, Network Management and Security (level 6) (University of Brighton).
- Spring 2017, Mathematics (level 4) (University of Brighton).
- Fall 2016, Security and Dependability (level 7) (University of Brighton).
- Fall 2016, Network Management and Security (level 6) (University of Brighton).
- Fall 2016, Network Technologies (level 5) (University of Brighton).
- Spring 2016, Mathematics (level 4) (University of Brighton).
- Fall 2015 and Spring 2016, Network Management and Security (level 6) (University of Brighton).
- Fall 2015, Network Technologies (level 5) (University of Brighton).
- Spring 2015, Mathematics (level 4) (University of Brighton).
- Fall 2014 and Spring 2015, Network Design and Technologies (level 5) (University of Brighton).
- Fall 2013, Distributed Systems and Security (level 6) (Queen Mary University of London).
- Fall 2013, Program Specifications (level 7) (Queen Mary University of London).

Education

National & Kapodistrian University of Athens

BACHELOR OF SCIENCE (HONS) IN INFORMATICS & TELECOMMUNICATIONS

BSc Project on "Techno-economics of ADSL technologies".

Athens, Greece

2002 - 2006

Athens University of Economics & Business

MSc (DISTINCTION) IN COMPUTER SCIENCE

MSc Project on "Optimising the Performance of IEEE 802.11 WLANs".

Athens, Greece

2006 - 2008

Kingston University

PHD IN COMPUTER SCIENCE

PhD in "Security for Mobile Ad Hoc Networks".

London, UK

2009 - 2012

University of Brighton

PG CERT IN LEARNING AND TEACHING IN HIGHER EDUCATION

Brighton, UK

2015 - 2016