

# University College London

Academic Centre of Excellence in Cyber Security Research

Prof. Emiliano De Cristofaro, Director

<https://www.ucl.ac.uk/cybersecurity-centre-of-excellence/>

## What are ACE-CSRs?

Recognition of world-class research in the field of cyber security by NCSC and EPSRC

Scheme encouraging collaboration across 19 centres

Enhancing the UK's knowledge base providing top-quality graduate training

Supporting NCSC and driving up the level of innovation

# What we do /1

- Publications at top-tier conferences
  - UCL #10 in Europe on csrankings.org
- Contribute to standards
- Release open source code
- Serve in government advisory boards and NGOs
- Lots of collaborations with industry
  - Microsoft, Intel, Google, Cisco, HP, IBM, BT, O2, National Grid, G4S, SAS, McAfee, BAE, Thales, NortonLifeLock, Telefonica, Amazon, Nokia etc.

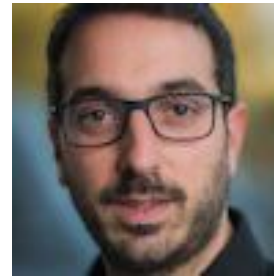
## What we do /2

- Commercialisation, Spin-offs
  - E.g., ChainSpace!
- Get research funding!
  - UKRI, EU, EPSRC, NCSC, etc.
  - Founding Partner of REPHRAIN
- Education
  - 2<sup>nd</sup> Year UG module on Security
  - MSc in Information Security (NCSC Certified)
  - Supervise PhD students and PostDocs
  - Centre for Doctoral Training in Cybersecurity

# Information Security Research Group



**Madeline Carr**  
Global Politics and  
Cyber Security



**George Danezis**  
Privacy Technologies,  
Blockchains



**Emiliano De Cristofaro**  
Privacy Technologies,  
Trustworthy ML,  
Online Harms



**Lorenzo Cavallaro**  
Systems Security,  
Trustworthy ML



**Marie Vasek**  
Security Economics,  
Cybercrime

# Information Security Research Group



**Angela Sasse**

Human and  
organisational aspects  
of security



**Philipp Jovanovic**

Cryptography, Blockchains,  
Privacy



**Steven Murdoch**

Authentication, banking  
security, anonymous  
communications



**Sarah Meiklejohn**

Cryptography, computer  
security, anonymity, and  
cryptocurrencies

# Systems and Networks Research Group



**Mark Handley**  
Secure network  
protocols, DoS,  
secure routing



**Brad Karp**  
Systems Security

# Centre for Research on Evolution, Search and Testing



**Earl Barr**  
Malware  
detection,  
deobfuscation



**David Clark**  
Flow security of software,  
malware detection, testing of  
software



**Jens Krinke**  
Program analysis,  
code provenance,  
clone detection



# Programming Principles, Logic and Verification Research Group



**Byron Cook**  
Automatic program  
verification and  
analysis



**David Pym**  
Security management,  
economics of information  
security

# Dept. of Science, Technology, Engineering and Public Policy



**Irina Brass**

Economic and social  
regulation of disruptive  
technologies, cyber security  
and data protection of IoT



**Leonie Tanczer**

Technology, security and  
gender, (in)security of  
hacking and hacktivism

# Dept. of Security and Crime Science



**Shane Johnson**  
Future Crimes



**Ingolf Becker**  
Cybercrime, Organisational  
Cyber Security



**Enrico Mariconti**  
Malware, Cybercrime

# Additional members



**Shi Zhou**

**Dept. of Computer Science**

Internet topology and routing; epidemic spreading, cloud computing classification, social media analysis, network security



**Mirco Musolesi**

**Dept. of Computer Science**

Data science, sensing, modelling, human behaviour and dynamics, cyber security and privacy

# Agenda

14:30 Trustworthy AI... for System Security  
*Prof. Lorenzo Cavallaro (UCL)*

15:15 Coffee Break

15:30 Panel: Online Safety Bill -- Challenges and Opportunities  
*Moderated by Prof. Steven Murdoch (UCL)*

16:30 Prospects and Pitfalls for Machine Learning in Software Security  
*Prof. Brendan Dolan-Govitt (New York University)*

# Housekeeping

Please wear a mask!

gcwifi / pineberry44

If you're streaming, please use sli.do for questions



<https://app.sli.do/event/pWi6SC1dygWVQSkXqKUaVN>

Event code: #3883328