

Press Release

UK launches National Centre of Excellence for IoT Systems Cybersecurity

Under embargo until Thursday 28 March, 00:01 (GMT)

As part of the [UK Government's wider initiative](#) to become a world leader in tackling cyber threats, today the UK launches a National Centre to provide a step-change in research associated with the Internet of Things (IoT).

The PETRAS (privacy, ethics, trust, reliability, acceptability, and security) National Centre of Excellence for IoT Systems Cybersecurity will provide national capability enabling the UK to become a world-leader in IoT and associated systems security. Its research focus will be on the opportunities and threats that arise when Edge computing is deployed more widely in the economy and society: when Artificial Intelligence and Machine Learning technologies move from being centralised systems to being run at the periphery of the internet and local IoT networks.

Funded by [UK Research and Innovation](#) through the Engineering and Physical Sciences Research Council (EPSRC) as part of the Securing Digital Technologies at the Periphery (SDTaP) programme, this second phase of PETRAS will strengthen an already established and successful platform which, since 2016, has coordinated and convened 11 universities and 110 industrial and government User Partners in cross-disciplinary collaboration. PETRAS has created a dynamic shared research agenda that addresses social and physical science challenges in equal measure and has worked across a broad range of Technology Readiness Levels.

PETRAS will manage a series of open academic funding calls throughout its lifetime, the first of which will be announced in summer 2019.

If you would like to get in touch with the PETRAS programme or be added to the mailing list, please contact impact@petrashub.org.

Quotes

Professor Lynn Gladden, Executive Chair of the Engineering and Physical Sciences Research Council (EPSRC), said: "Funded through UKRI's Strategic Priorities Fund, this IoT Centre of National Excellence will build on our previous investment in the initial PETRAS Hub in 2016. The work of this new Centre is vital for the evolution of the interconnected technologies that will permeate our society in the coming years. We have to build trust and confidence in the security of these systems for them to work effectively and safely. The strength and variety of industry and academic partners involved is evidence of the strength of the PETRAS team and the importance of research and innovation in this field."

Professor Jeremy Watson CBE FREng, PETRAS Director & Professor of Engineering Systems at UCL STEaPP, said: *"the Centre's ultimate aim is, by creating a trustworthy and secure infrastructure for the Internet of Things, to deliver a step change in socio-economic benefit for the UK with visible improvements for citizen wellbeing and quality of life. I anticipate*

productivity improvements and cost savings across a range of sectors including healthcare, transport and construction. In bringing together academics, industry technologists and government officials our research will create accessible and relevant knowledge with clearly visible impact (economic, societal or cultural) that will help to cement the UK's position as a world leader in this area."

Professor Emil Lupu, PETRAS Deputy Director and Professor of Computer Systems at Imperial College London said: *"The combination of IoT and AI represents a revolutionary step in how our lives, and the world around us, are enhanced through a merger of the digital and physical technologies. However, we need to address numerous challenges to ensure that the newly created environments remain safe, resilient and able to protect themselves and their users from harm in the face of threats. The new centre will bring together nationwide academic and industrial expertise in AI, privacy, ethics, security, resilience, design, economics, law and many other social and technical areas to tackle these challenges. We recognise that new challenges will emerge and aim to continuously enhance the expertise and talent that the centre brings together."*

Dr Madeline Carr, Associate Professor of International Relations and Cyber Security at UCL, said: *"Ensuring that the UK leads from the front on emerging technologies will require close attention to the policy landscape that enables growth and promotes the implementation of secure, trusted systems. The UK has already exhibited real leadership through the Secure by Design Code of Practice for IoT consumer devices and we're pleased to be able to continue to support those efforts through PETRAS 2."*

[Notes to editors](#)

- PETRAS has been awarded £13,850,000 as part of the £30.6 million Security of Digital Technology at the Periphery (SDTaP) programme being delivered by UK Research and Innovation through the Strategic MA Priorities Fund. The programme aims to ensure that the Internet of Things systems are safe and secure, particularly as more critical applications emerge meaning there is increased vulnerability to broader, more sophisticated cyber-threats. Effective solutions need to combine cyber and physical safety and security with human behaviour, influence new regulatory response and validate and demonstrate novel approaches. This will build on current investments including the PETRAS Internet of Things Research Hub and other activities supported through IoT UK
- As part of the SDTaP programme, [Innovate UK](#) is to invest up to £11 million in collaborative, business led research and development (R&D) projects. These projects should result in a new product, industrial process or service: <https://apply-for-innovation-funding.service.gov.uk/competition/286/overview>
- The PETRAS IoT Centre is led by UCL and includes Imperial College London, Lancaster University, University of Oxford, University of Warwick, Cardiff University, University of Edinburgh, University of Southampton, University of Surrey, University of Bristol, Newcastle University and the University of Nottingham.

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