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Security Institute Newsletter - November 2020

Welcome to the first edition of the Security Institute's newsletter. Each month we will provide updates on upcoming events, funding calls, profiles on Institute members and projects to keep you abreast of the Institute activities.

The Institute's revamped website at www.lancaster.ac.uk/security-lancaster/ provides additional updates including the archives of this newsletter.

We hope you find this newsletter to be useful! We welcome your comments and suggestions and look forward to receiving your contributions.

Kind regards

[Kathryn](#) & [Jen](#) - Editors

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interested people can
subscribe to receive it here.**

Meet Your Colleagues



Neeraj Suri holds the Distinguished Professorship and Chair in Cybersecurity at Lancaster University where he co-directs the university-wide Security Institute. Suri previously held the Chair Professorship on “Dependable Systems & Software” at TU Darmstadt, Germany. Following his PhD at UMass-Amherst, he has held positions at AlliedSignal/Honeywell Research, Boston Univ, Saab Endowed Chair Professorship, multiple sabbaticals at Microsoft Research, and visiting positions at the Univ of Texas at Austin, Academia Sincia, PolyU Hong Kong and Technion.

His research interests span the design, analysis and assessment of trustworthy (dependable & secure) systems and software. He is a passionate advocate of the data-centric system approach to Cybersecurity, and especially the quantification of security.

He recently authored the CyBOK Knowledge Base on Distributed Systems Security (www.cybok.org). His professional profile can be found at <https://www.lancaster.ac.uk/people-profiles/neeraj-suri>

Corinne May-Chahal is an applied social scientist and co-director of Security Lancaster (SL) who has been involved in interdisciplinary research for over two decades. Collaborations have included, inter alia, health and social care, computing, psychology, applied statistics, linguistics, sociology, criminology, law and economics. As a noted academic on childhood safety, she has advised the DfE, DCMS, MoJ, NICE, and is currently Chair of the National Research Centre on Privacy, Harm Reduction and Adversarial Influence Online (REPHRAIN) Ethics Committee.



Her research in SL is focused on the socio-technical aspects of human security through developing and applying new technologies and methodologies; initially in ISIS which created software to identify age and gender deception in computer mediated communication, followed by UDesignIT co-producing applications to facilitate the reporting of community concerns and iCOP (identifying child abuse image originations in peer to peer networks). Over the next three years Corinne will be working on a programme of research in SL examining the socio-technical aspects of autonomous systems and security. Alongside this, she is collaborating on an extension of iCOP to the ASEAN region, where satisfying demand (often European) for live sex screening and sex tourism are key challenges. Her full profile can be found here, <https://www.lancaster.ac.uk/sociology/people/corinne-may-chahal>

Recent Grants



Lancaster's Security Institute to lead £3M research node to examine cybersecurity in autonomous systems

A new £3 million research node will look into key issues surrounding security as new advancements in robotics and artificial intelligence-based technologies get used in an increasingly diverse range of applications.

Professor Neeraj Suri is the Principal Investigator leading the project alongside Cranfield's [Professor Weisi Guo](#). Assembling a cross-disciplinary team of internationally reputed security experts from Distributed Systems, Communications, Controls, AI, Sociology and Law, Lancaster's TAS-S security node will develop a portfolio of fundamental security techniques to provide practical and scientifically rigorous principles for secure Autonomous Systems. Working closely with Cranfield University as a partner institution, the project is supported by multiple external stakeholders including Airbus, BAE, Raytheon, Thales, UK Coast Guard, as well as a number of international bodies such as CMU-USA, CODE-Germany, RISE-Sweden, AIT/TTTech-Austria, Arthurs Legal-Holland, Academia Sinica-Taiwan and NATO.

Co-operating with the other research nodes in the TAS program, Lancaster's security node will enable a myriad of complex socio-technical security considerations to offer new insights and guidance for the scientific community, practitioners and policy makers to meaningfully realise Trustworthy Autonomous Systems (TAS).

[Read the full story here.](#)

EPSRC Fellowship Win for Peter Garraghan in SCC

Congratulations to Peter Garraghan from SCC on winning a prestigious EPSRC fellowship exploring “Reducing the Global ICT Footprint via Self-adaptive Large-scale ICT Systems”. His £1m fellowship aims to radically redefine the notion of ICT sustainably and transform how we engineer and use digital infrastructure in the face of environmental change.

A \$10 million global programme of research aiming to stop online child sexual victimisation has been launched by End Violence Against Children (EVAC).

Every half second, a child goes online for the first time, 800 million children use social media and one in three Internet users worldwide is a child. At any one time 750,000 individuals are estimated to be looking to connect with children for sexual purposes. There are currently more than 46 million unique images or videos of child sexual abuse material in EUROPOL’s repository and reports are growing of the 23.4 million reports of child sexual abuse material, 40 per cent occurred in 2017 alone. Over 50% of this material involves children under 10.



A \$10 million global programme of research aiming to stop online child sexual victimisation has been launched by End Violence Against Children (EVAC). Prof. Corinne May-Chahal (co-director of Security Lancaster) is working with Awais Rashid and Claudia Peersman at Bristol University to enhance *iCOP*, the research team's artificial intelligence software. *iCOP* was created by the team to flag new or previously unknown child sexual abuse material, and *iCOP 2.0* will extend the software's reach to Southeast Asia. The project will also work with law enforcement officers across the region to encourage use of *iCOP* and strengthen their response to online child sexual abuse cases.

For more information about EVAC see: <https://www.end-violence.org/articles/end-violence-invests-additional-10-million-keep-children-safe-online>



SANCUS Project

SL academics (Qiang Ni and Antonios Gouglidis) are part of the SANCUS consortium which has recently won an EU Horizon 2020 funding project under the call 'Building blocks for resilience in evolving ICT systems' (H2020-SU-ICT Cyber Security Research and Innovation action). This is a €5M grant in total. By involving 15 partners from 8 European countries, the SANCUS project aims to design and develop an analysis software scheme of uniform statistical sampling, audit and defence processes to enhance 5G/Cloud/IoT heterogeneous system cyber security performance through software and hardware optimisation. Innovative artificial

intelligence (AI) and game theory techniques will be investigated for the automated optimisation of the control and trust of digital services in this project.

Member Activities

Security Lancaster responds to call for evidence from the Biosecurity Inquiry on COVID

The Biosecurity Inquiry is evaluating the government's response to COVID-19, in the context of the 2015 Strategic Defence & Security Review and the 2018 Biosecurity Strategy.

Security Lancaster has co-ordinated a cross University response combining key interdisciplinary projects from CeMoRe, CASS, Maths and the Medical School.

In summary we argue for investment in ethical and local data partnerships and greater attention to data mobilities and pandemic relevant discourses.

Read our response to the call for evidence from the Biosecurity Inquiry on COVID:

https://www.lancaster.ac.uk/media/lancaster-university/content-assets/documents/security-lancaster/BiosecurityResponse_LancasterUniversity.pdf

Proposed changes to British law could prevent armed forces from taking legal action against the government

The Westminster parliament is currently considering one of the most ill-conceived and misleadingly presented pieces of legislation ever introduced. It purports to do something that it cannot while doing several things it should not.

Read more from Prof. James Sweeney and his conversation on [Proposed changes to British law could prevent armed forces from taking legal action against the government](#)

Open Positions

- [2 Tenure-track Assistant Prof positions in Cyber Security](#)
- [2 PhD positions in Secure SW/OS](#)
- [1 PhD position in Cloud Security](#)

Stay tuned: We shortly plan to open several new post-doc (PDRA) and PhD positions in System Security.

Open Funding Calls

- [Secondary Data Analysis Initiative \(SDAI\)](#) - Proposals are welcome at any time. Funding is provided for up to 24 months with an overall limit of £300,000 (100% fEC) per grant.
- [Knowledge Transfer Partnerships](#)
- [Discipline hopping in information and communication technologies](#) - No closing date.
- [Research Software Engineer Fellowships 2020](#) - Closing date 16:00 17th November 2020.
- [Review of EPSRC'S support for Doctoral Education, Call for evidence](#) - Closing date 16:00 10th December 2020.

Upcoming Events

Seminar Series

The first seminar will take place 2-3pm on 11th December - more details to follow!

[CyberASAP Project Proof of Concept](#)

[Demonstrators to be Showcased to](#)

[Industry and Investors in February 2021](#)

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