

Funding Opportunities for ECRs (Early Career Researchers)

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- All information in this talk is based on **my personal knowledge, understanding and opinions**.
- There can be errors and inaccuracies.
- Some information may be out-dated since the funding landscape is evolving fast and dynamically.
- **Always** check the **official websites of funding bodies** and **your organisation's research (and innovation) services** for the most authoritative and up-to-date information!

Some general tips

- There are **many** organisations providing funding opportunities to researchers.
- Many funding opportunities are **exclusively for or open to** ECRs (early career researchers).
- Some funding opportunities are not directly for ECRs, but they can still benefit them in one way or another.
- **Not just in the UK (and the EU)**, but also in other countries and regions
- **Not just public bodies**, but also industry, learned societies, NGOs, charities, including universities!
- **Not just about research**, but also about innovation, education, exchanges, events, travels, equipment, scholarships, awards and prizes, etc., at **all levels**

Some general tips

- There are calls with a **deadline** and open calls without a deadline.
- Some calls for pre-released with a **pre-defined (promised) deadline**, e.g., many EU calls.
- Some calls are **repeated regularly** so their future deadlines can be accurately or roughly estimated, e.g., Innovate UK open competitions.
- For calls with a deadline, it is crucial to **know the call as early as possible**.
- Some calls have a **defined scope**, especially for those with a deadline.
- Many funding bodies run **scoping events** to help them define the scope of future calls.

Some general tips

- It is important to **talk with other people**, your supervisor(s), collaborators, peer ECRs and other researchers, on funding opportunities and events.
- **Do not rely on your supervisor(s) only!**
 - They (often) do not be aware of all such opportunities and events, especially those for ECRs. (And they are often too busy!)
 - Don't wait for your supervisor(s) to involve you, instead, offer your willingness to contribute, propose ideas and bring contacts!
- Many **universities' research (and innovation) services or information officers** compile calls and disseminate them regularly. Subscribe to them and read them!
- Subscribe to **funding bodies' email alert services**.
- Visit **funding bodies' websites** and check open calls.

Selected funder:



- Probably the most important organisation in the UK which provides researchers with international funding opportunities and events
- Websites
 - Main website: <http://www.britishcouncil.org/>
 - Website for a specific country or region, e.g., for China: <https://www.britishcouncil.cn/>
- More information has been provided by our keynote speaker Jen Bardsley.

Selected funder:



- UKRI (UK Research and Innovation)

- Probably the biggest and the most important funding body in the UK, for cyber security as a topic at least
- Website: <https://www.ukri.org/>
- Nine sub-bodies
 - **EPSRC (Engineering and Physical Sciences Research Council)**
 - **ESRC (Economic and Social Research Council)**
 - **Innovate UK**
 - **AHRC (Arts and Humanities Research Council)**
 - BBSRC (Biotechnology and Biological Sciences Research Council), MRC (Medical Research Council), NERC (Natural Environment Research Council), STFC (Science and Technology Facilities Council), Research England



Engineering and
Physical Sciences
Research Council



Economic
and Social
Research Council



Innovate
UK



Arts and
Humanities
Research Council

Selected funder:



- UKRI grants are available to eligible organisations and eligible researchers only.
 - PhD students and RAs are **not normally eligible** to lead a project as a **principal investigator (PI)** or a **co-investigator (CI or Co-I)**.
 - = PhD students and RAs cannot (co-)lead/own a project.
 - PhD students and RAs can however be a researcher co-investigator (RCI or Rco-I) or a **named researcher**.
 - Full- or part-time roles; RCIs are supposed to be an active contributor of the proposal (idea forming, proposal writing, track record, etc.).
 - Special schemes (exclusively) for ECRs as the (sole) PI
 - EPSRC postdoctoral fellowships, EPSRC open fellowships, ESRC Linked education and assessment systems data research fellowship, UKRI Early Career Researcher Forum, ...

Selected funder:



- UKRI-funded [research networks](#), centres, hubs and **NetworkPluses**
 - Research networks are community building tools, mostly for supporting community-facing events and resources.
 - Research NetworkPluses are research networks + additional funding for the community to conduct commissioned research.
 - They normally manage a pot of funding awarded by the UKRI for a specific research community.
 - They regularly issue funding calls.
 - Many such bodies have cyber security at their core or cover some cyber security related topics.

Selected funder:



- UKRI-funded [research networks](#), centres, hubs and **NetworkPluses**: cyber security related
 - [SPRITE+ \(Security, Privacy, Identity and Trust Engagement NetworkPlus\)](#)
 - [REPHRAIN \(National Research Centre on Privacy, Harm Reduction and Adversarial Influence Online\)](#)
 - [Discribe \(Digital Security by Design Social Science Hub+\)](#)
 - [UKRI-funded PETRAS \(Privacy, Ethics, Trust, Reliability, Acceptability and Security\) Hub](#), National Centre of Excellence exists to ensure that technological advances in the Internet of Things (IoT)
 - [ESRC-funded CREST \(Centre for Research and Evidence on Security Threats\)](#)
 - [UKRI-funded TAS \(Trustworthy Autonomous Systems\) Hub](#)
 - [EPSRC-funded HDI \(Human Data Interaction\) NetworkPlus](#)
 - [UKRI-funded NetEqual NetworkPlus](#)
 - ...

Selected funder:



- Lead agency agreements with overseas funders in other countries
 - Such agreements enable researchers from both countries to work on joint projects, each side funded by their respective countries.
 - A single application process managed by a lead funding agency
 - Current lead agency agreements:
 - [UK-US](#): with the [US National Science Foundation \(NSF\)](#)
 - [UK-Ireland](#): with the [Science Foundation Ireland \(SFI\)](#)
 - [UK-Luxembourg](#): with the [Fonds National de la Recherche \(FNR\)](#)
 - [UK-Brazil](#): with the [São Paulo Research Foundation \(FAPESP\)](#)
 - [UK-IIASA](#): with the International Institute of Advanced Systems Analysis (IIASA)
 - More may be set up in the future (also see the [EPSRC page](#)).

Selected funders: EU

- European Commission has a very large research and innovation funding scheme, updated every 6 years.
- The current one is called [Horizon Europe](#) (2021-27).
- There are both open and themed calls.
- They offer fellowships for ECRs.
 - Example: [Marie Skłodowska-Curie Actions Fellowships](#)
- There are ITNs (incoming training networks) for ECRs.
 - ITNs are special EU projects for training ECRs.
- They support networking and community building.
 - Example: [COST Actions](#)
- ECRs can be involved in EU projects in different ways, including as a co-coordinator or a named researcher.

Selected funders: NCSC

- NCSC and GCHQ
 - PhD studentships
 - Ad hoc projects (e.g., CyBOK and fellowships)
 - Events (like this Winter School!)
 - Joint funding with other funders (often with UKRI)
- NCSC-funded research institutes
 - [Research Institute for Sociotechnical Cyber Security \(RISCS\)](#)
 - [Research Institute in Verified Trustworthy Software Systems \(VeTSS\)](#)
 - [Research Institute in Trustworthy Interconnected Cyber-physical Systems \(RITICS\)](#)
 - [Research Institute in Secure Hardware and Embedded Systems](#)
 - They all regularly organise events and issue funding calls.
- ...

Selected funders for innovation

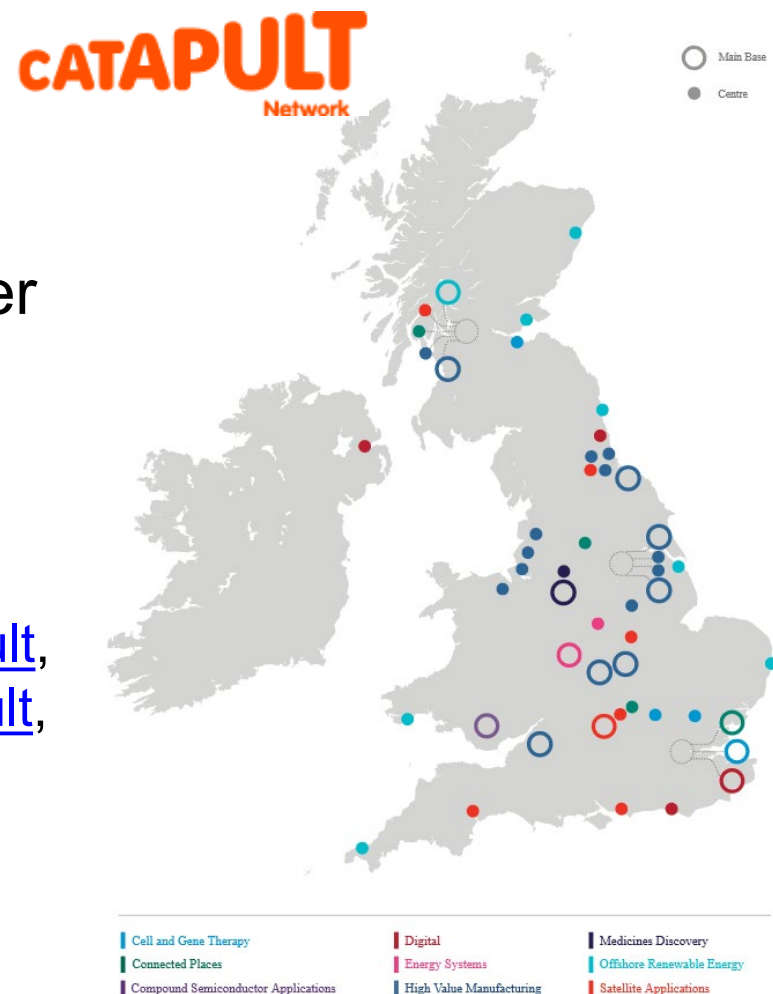
- [Innovate UK](#)
 - Must be led by a company
 - Up to 30% go to all academic partners
 - Open competitions: Smart (regular deadlines)
 - Themes competitions: ad hoc, on specific topics (one-off deadlines)
 - You cannot lead but can participate as a researcher.
- [CyberASAP \(Cyber Security Academic Startup Accelerator Programme\)](#)
 - A funding scheme for helping university researchers to transfer market-ready research into real world
 - Funded by [DCMS \(Department for Digital, Culture, Media and Sport\)](#)
 - Delivered by [KTN](#) and Innovate UK
- ...

Selected funders for innovation: Catapults

- Catapults are Innovate UK funded physical centres for promoting research and innovation activities in a number of selected priority areas.

- Current 9 such centres: [Digital Catapult](#), [Connected Places Catapult](#), [Satellite Applications Catapult](#), [Energy Systems Catapult](#), [High Value Manufacturing Catapult](#), [Offshore Renewable Energy Catapult](#), ...

- More can be found at <https://catapult.org.uk/>.



- Industrial and professional bodies
 - UK: [CII Sec](#), [UK Cyber Security Council](#), [BCS](#), [IET](#), ...
 - EU: [EC SO \(European Cyber Security Organisation\)](#), ...
- Large (especially but not limited to ICT) companies
 - Many have regular calls for research proposals: Google, Amazon, Facebook, Samsung, Microsoft, Huawei, HSBC, Santander, ...
 - Some have research arms (they seek external collaboration).
- Ad hoc funding can be negotiated directly with companies.
 - If you know someone, talk with them to find out their problems and priorities; otherwise, be brave to approach companies.
- Not just large companies
 - Cyber security innovation and incubation centres: [LOCRA](#), ...
 - SMEs can be collaborators and funders, too!
- ...

Other funders: more public bodies

- Public bodies and funding schemes in the UK
 - [Newton Fund and GCRF \(Global Challenges Research Fund\)](#), [Turing Scheme](#), [DCMS](#), [ICO](#), [Home Office](#), [Ministry of Defence](#) ([Dstl](#), [DASA](#)), [IPO](#), [FCDO](#), [ODA](#), ...
- Public bodies in other countries and regions
 - **Pan-Europe:** [European Institute of Innovation & Technology \(EIT\)](#), [CHIST-ERA](#), [CHANSE](#), [Euratom \(European Atomic Energy Community\)](#), [European Space Agency](#), [NordForsk](#), ...
 - **Israel:** [Ministry of Science and Technology](#) jointly funded research projects in cyber security with the EPSRC
 - **Singapore:** [National Research Foundation \(NRF\)](#) jointly funded research projects in cyber security with the EPSRC
 - **China:** various public bodies in China jointly funded research projects and international exchange programmes with UK funders
 - ...

- Learned societies and professional bodies
 - UK: [Royal Society](#), [Royal Academy of Engineering](#), [BCS](#), [IET](#), [CPHC](#), [EPC](#), ...
 - International: [IEEE](#) and its societies, [ACM](#) and its SIGs, ...
 - They often offer funding for exchanges and conference travels.
- Funding bodies in other countries and regions
 - Example: [JSPS \(Japan Society for the Promotion of Science\) Postdoctoral Fellowships for Research in Japan](#) accept applications from the world to do visiting research in Japan.
- Your country's embassy!
 - They often offer scholarships, travel funds, and prizes.
 - Example: [China Scholarship Council \(CSC\)](#) offers prizes to recognise outstanding PhD students who are not funded directly by the Chinese Government (国家优秀自费留学生奖学金).

- Charities
 - [Leverhulme Trust](#): PhD scholarships, early career / international / research fellowships, research project grants, ...
 - [Wellcome Trust](#) (more on health-related research): PhD studentships and fellowships, early-career awards, career development awards, springboard awards, ...
 - Many other charities in the UK and worldwide
- Your own organisation!
 - Your organisation and its units often offer **internal funding** such as **PhD studentships**, **travel funds**, public engagement, and **small grants** for enabling larger grant applications.
 - Examples: University of Kent, its four [Signature Research Themes \(SRTs\)](#) and [Institute of Cyber Security for Society \(iCSS\)](#) have internal funding schemes for or open to ECRs.
- ...

- Researcher-facing funding information portals



- Funders' information portals (can be used for intelligence and searching for partners)
 - [EU project databases: CORDIS](#) (1990-)
 - [UKRI GtR \(Gateway to Publicly Funded Research\)](#)
 - [EPSRC GoW \(Grants on the Web\)](#)
- Proposal templates and learning from others
 - The funding landscape evolves very fast! ⇒ Any templates can quickly become out-dated.
 - Talk with successful bids you can trust to get such help!

- I thank the following people for their advice on how to improve the slides.
 - [Dr Panagiotis Andriotis](#) for providing information about [JSPS \(Japan Society for the Promotion of Science\) Postdoctoral Fellowships for Research in Japan.](#)
 - [Dr Stavros Shiaeles](#) for suggesting adding additional resources such as [*Research Professional](#) and information on proposal templates and learning from others.



Please contact me for any questions and advice
(via my LinkedIn account or my personal website hooklee.com)