JOB DESCRIPTION

Vacancy Ref: A3285

<table>
<thead>
<tr>
<th>Job Title: PETRAS Synthesis Research Fellow</th>
<th>Grade: 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration: Fixed term 2 years from April 2021</td>
<td></td>
</tr>
<tr>
<td>Department/College: Lancaster Institute for the Contemporary Arts</td>
<td></td>
</tr>
<tr>
<td>Directly responsible to: Director of Imagination</td>
<td></td>
</tr>
<tr>
<td>Day to day line management: Director of Imagination</td>
<td></td>
</tr>
<tr>
<td>Supervisory responsibility for: N/A</td>
<td></td>
</tr>
</tbody>
</table>

Other contacts:
- **Internal**: Colleagues and students in ImaginationLancaster, Lancaster Institute for the Contemporary Arts and the Faculty of Arts and Social Sciences, colleagues in other faculties, Library, ISS, Research Support Office, central administration and other relevant university staff.
- **External**: PETRAS partner organisations, professional bodies, employers, business organisations, local and UK government organisations, community groups, academic and research networks.

Overview:
As part of the UK Government’s wider initiative to become a world leader in tackling cyber threats, UKRI has created a National Centre to provide a step-change in socio-technical 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 provides national capability enabling the UK to become a world-leader in IoT and associated systems security. Its research focus is 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 strengthens 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 national centre of excellence and a dynamic shared research agenda that addresses social and physical science challenges in equal measure, working across a broad span of Technology Readiness Levels.

To support this programme of work, the PETRAS Centre is recruiting four Senior Research Fellows, who will work collaboratively as part of the PETRAS Centre Team.

**Job Purpose:**
The main purpose of the role of the Senior Research Fellows is to synthesise the diverse elements of the PETRAS research base, in order to construct new understanding, ideas and insights.
The aim of this synthesis activity is to increase the generality and applicability of these findings, thereby ensuring that they have relevance and impact in society and the economy - particularly, but not exclusively, at a national, regional or sectoral level.

Synthesis activities can have diverse impacts on research, policy and practice including creating a new understanding of problems, establishing new networks, and contributing to changes in policy and practice. Therefore, the Synthesis Fellows will need a need to tailor their approaches for the context of intended use. Together, with oversight from the PETRAS Directors, they will design a unique programme of research synthesis for impact.

This will firstly require them to gain a holistic understanding of the research projects funded by the PETRAS Hub (2016-2019) and the PETRAS Centre (2019-2023). The details of the projects can be found at: https://petras-iot.org.

This will be supported by close working with the Head of PETRAS as well as the PETRAS Business Development Team and Communications Team, in particular, to draw upon their expert understanding of User Partner research interests and areas of existing engagement with the PETRAS research agenda.

**Major Duties:**

- Identify novel ideas and concepts, as well as future research gaps, from synthesizing the PETRAS research base

- Be responsible for successful development and delivery of projects / events from small-scale creative events to larger scale events and exhibitions working collaboratively with the PETRAS team. Using creative, interdisciplinary, and collaborative approaches

- Creating high-quality academic content (exhibitions, conferences presentations, etc.) to disseminate findings and insights derived from cross-cutting understanding of social and technical research, spanning the sectors of application.

- Map these onto the policy agendas of key industry and government partners and develop for a ‘popular science’ readership, to engage these audiences with the findings.

- Work collaboratively with designers and artists to create outputs which can engage a broad non-expert audience, including the general public, with the key concepts and ideas synthesized from the research base.

- Contribute to the overall research activities of STEaPP, and the research centres as required.

- Support for webinars and conferences run by the PETRAS Centre and participation in meetings of the SDTaP Governing Board.

- The post holder will carry out any other duties as are within the scope, spirit and purpose of the job as requested by the line manager.