# JOB DESCRIPTION

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Post-Doctoral Research Fellow on Mobile Phone Forensics (EU Horizon 2020 Project F Project EXFILES)</th>
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<tbody>
<tr>
<td>Department / Unit:</td>
<td>Information Security Department</td>
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<tr>
<td>Job type</td>
<td>Post-Doctoral Research Fellow</td>
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<td>Grade:</td>
<td>RHUL 7</td>
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<td>Accountable to:</td>
<td>Prof Konstantinos Markantonakis (PI)</td>
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<td>Accountable for:</td>
<td>Head of Department</td>
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## Purpose of the Post

The Information Security Group (ISG) at Royal Holloway, University of London, is seeking a highly motivated postdoctoral research fellow for the EU Horizon2020-funded EXFILES project. The successful candidates will join the Smart Card and IoT Security Centre (SCC), of the ISG, supporting the SCC research activities related to mobile phone forensics. The position is fixed-term full-time.

EXFILES focusses on mobile forensics and specifically targets modern handheld communication devices, such as smartphones and tablet computers. The use of mobile devices in criminal and unlawful activities creates a number of challenges for Law Enforcement Agencies (LEAs), for whom data stored on such devices can be an important source of information and evidence about lawbreaking. At the same time, the general-public demand assurances (technical, legal and ethical) that their personal information will remain private. The goal of the EXFILES project is to explore modern mobile devices used in organised crime. Existing side-channel-analysis (SCA) and reverse engineering (RE) techniques will be revisited and new ones will be explored. Lessons learned from recent advances in Common Criteria Security Evaluations, Trusted Execution Environments (TEE), Firmware and Systems-on-Chip (SoC) will also enable academic partners to enhance mobile forensics science. Equally important, the project will evaluate the ethical issue of how consumers’ rights to privacy should be weighed against the requirements of LEAs in mobile and digital forensics research. EXFILES brings together the unique expertise of the project participants and the core of the EU legal frameworks in order to fulfil the project’s goals and make Europe a safer place by protecting its citizens while also safeguarding their rights. Another unique dimension of EXFILES is the clear focus on the ethical and legal aspects of research and exploitation as well as dissemination and training activities for the next generation of forensic experts.

## Key Tasks

The main responsibilities of the post are:
- Leading WP activities, in particular with respect to mobile device classification, Trusted Execution Environments, open source (white-box) attack and countermeasure modelling, Legal and Ethical aspects, dissemination and
standardisation.
  • Attending project meetings and conference calls.
  • Writing reports and software development (of the testing platform).
  • Developing novel research ideas for mobile forensics aimed at submission in relevant venues.
  • Attending conferences and giving papers.
  • Performing public dissemination of research and project outcomes (e.g. web page maintenance and social media presence).
  • Collaborate with SCC colleagues and students (UG, MSc, PhD) for innovation and commercialisation activities related to information security.
  • Lead innovative information security research and co-author relevant publications.
  • Support the SCC activities, maintaining a pool of resources in the SCC lab and provide support around the organisation of the SCC open day.
  • Any other duties as required by the line manager (PI) that are commensurate with the grade.

**Other Duties**

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the College. The post holder will be expected to undertake other duties as appropriate and as requested by his/her manager. The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.