PhD Studentship
Identifying Trigger Conditions for Malicious Software Behaviours

University College London, Department of Computer Science

Supervisor: David Clark

Applications are invited for a PhD position at the Software Systems Engineering Group of the UCL Department of Computer Science, funded by HM Government. *The studentship is open only to UK nationals because of the funder's eligibility requirements.*

The successful candidate will research methods of identifying trigger conditions for malware behaviours. Initial focus will be a survey on the state of the art, especially on the use of symbolic execution and bit vector based approaches. Alongside these the student will survey Monte Carlo methods and study Importance Sampling. The ultimate goal will be novel applications of advanced Monte Carlo methods to the malware trigger problem. This may also require the student to study reverse engineering of binaries and the use of virtual machines such as Qemu in the case of analysing Windows binaries.

The studentship will be funded for a period of 3.5 years. HM Government will cover the costs of UCL's fees (currently £4,962 per annum) and will provide a total tax-free stipend of £23,500 in the first year, increasing by £500 per annum. A generous travel budget is also provided to enable attendance at international conferences and workshops.

The start-date for the studentship will any time before October 2017.

We expect a candidate to have at least a strong 2:1 degree in Mathematics, Computer Science, Engineering, or a related MSc course, and good experience in programming. Some prior knowledge of assembly languages and empirical methods in data collection and analysis would be advantageous.

Applications should be submitted to University College London. Please follow the link here

http://www.ucl.ac.uk/prospective-students/graduate/research/degrees/computer-science-mphil-phd

 to the online application.

You should specify on your application that you would like to be supervised by Dr David Clark and make it clear in your personal statement you are applying for the **'Trigger Conditions for Malicious Software Behaviours'** studentship. Informal

enquiries can be made directly to David Clark by email at david.clark@ucl.ac.uk

If you have any queries about submitting an application, please email Sarah Turnbull at sarah.turnbull@ucl.ac.uk

Your application must reach the Department by 4 January 2017.