



Home/EU PhD Studentship in Software Defined Networks

A PhD studentship in Software Defined Networks (SDN) is available, supported jointly through a UCL Impact Scholarship and through the European Union FP7 Network of Excellence (NoE) FLAMINGO – Management of the Future Internet. Given that there is an award of 3 years home fees and stipend costs, we are looking to recruit a very high calibre home or EU PhD student to work in this emerging area of crucial importance. Note that overseas applicants are NOT eligible.

The Internet architecture was originally designed without in-built functionality for network management while management protocol interfaces were add-ons. As a result, automated closed loop control from external management systems has always been difficult to realise. This has led to distributed in-network approaches, termed “autonomic”, which suffer from distributed decision making, convergence, oscillations, etc. More recently, it has been proposed to separate the control and data plane through *Software Defined Networks*, in which a logically centralised controller can manipulate programmable switches protocols such as OpenFlow to enable quick management decisions. This opens new avenues for future management functionality that will be closely integrated with the network, driving it to a close to optimal operating state. The Communications and Information Systems Group at UCL EEE has always been at the forefront of developments in programmable networks, from the mid-1990s until now, and is also worldwide known for its expertise in network management.

Given the group’s involvement in the EU FLAMINGO NoE on Management of the Future Internet (<http://www.fp7-flamingo.eu/>), we are able in conjunction with the UCL Impact Scholarship Scheme to fund a very high calibre home/EU PhD student in SDN. This area involves intelligent approaches for configuration management, driven by high-level operational objectives in the form of policies and using input from scalable distributed network monitoring; these are all areas in which UCL has world-renowned expertise. The applicability target will be *content networks* on the one hand and *energy efficiency* on the other, which are both research areas of intense interest by the global research community at present. The PhD student will work in the context of an existing world-class team in this area and will benefit from the relevant ongoing research in FLAMINGO which will provide additional stimuli.

We are looking for candidates with excellent computer and/or electronic engineering background while strong analytical/mathematical skills will also be a significant advantage. Experience of design/development and evaluation of networking or management systems and also simulation, Linux, Java, C/C++ or similar would be an advantage.

The studentship is available for three years and covers tuition fees at the UK/EU rate, plus a stipend at c. £15,800 pa (tax free), increasing with inflation. We are looking for the prospective student to start in October 2013 or January 2014. As such, a selection may be made before the closing date of 31 December 2013.

Applicants must fulfil the normal academic requirements for postgraduate study. In order to accelerate the process, a detailed CV including qualifications, experience and the names of two referees to be potentially contacted together with a one page research statement should be sent by email to Prof. George Pavlou (g.pavlou@ucl.ac.uk, see also <http://www.ee.ucl.ac.uk/~gpavlou/>) and Dr Marinos Charalambides (marinos.charalambides@ucl.ac.uk) with subject “FLAMINGO PhD studentship”. The selected applicant will be instructed to apply formally through admissions.

Closing Date: first batch 30th September 2013, final deadline 31st December 2013