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## PhD Studentship in Computer Science Verification of Cyber-Physical Systems, Newcastle University, UK

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This project will combine and extend simulation-based techniques (statistical model checking) and hybrid systems decision procedures to enable verification of complex, realistic cyber-physical systems. In particular, we will develop a concolic (combined concrete and symbolic) testing framework to complement and extend the strengths of the statistical and numerical techniques, leading to new approaches for verifying cyber-physical systems.



This project is a collaboration effort between Carnegie Mellon University, [Newcastle University](#), and Smart Information Flow Technologies. The Principal Investigator is Prof Edmund M. Clarke (Carnegie Mellon). The project investigator at Newcastle is Dr Paolo Zuliani.

### Value of the Award

The award will cover stipend and tuition fees at UK/EU or [international](#) level. The stipend is £14,790 (2012/13) per year.

### Person Specification

You should have either a First class honours degree in [Computing Science](#), [Mathematics](#), or other relevant science or [engineering](#) subject, or a or 2.1 in Computing Science, Mathematics or other relevant science or engineering subject and a distinction level Masters degree in a related subject. You should have familiarity with automated verification techniques and tools such as model checking, SAT/SMT solvers, abstract interpretation, etc.

### How to Apply

You must apply through the University's online [postgraduate application form](#) inserting the reference **CS040** and selecting 'PhD [Computer Science](#)', with programme code **8050F**, as the programme of study. Mandatory fields need to be completed and a covering letter, CV and (if English is not your first [language](#)) a copy of your English language qualifications must be attached. The covering letter must state the title of the studentship, the reference number **CS040** and describe how you satisfy the Person Specification requirements (max. 2 pages). If you already have published [research](#) papers a list of bibliographic details should be included in the covering letter.

You should also send your covering letter and CV by e-mail to Dr Zuliani at [paolo.zuliani@ncl.ac.uk](mailto:paolo.zuliani@ncl.ac.uk) and the [Postgraduate](#) Secretary at [cs.pg@ncl.ac.uk](mailto:cs.pg@ncl.ac.uk)

Name of Supervisor: [Dr. Paolo Zuliani](#)

Sponsor: [School of Computing Science](#)

Duration of the Award: 3 years

Closing Date: **31st May 2013**

### Further Information

For further details, please contact Dr. Paolo Zuliani (Lecturer)

E-mail: [paolo.zuliani@ncl.ac.uk](mailto:paolo.zuliani@ncl.ac.uk)

Telephone: 0191 222 8064

Website: <https://sites.google.com/site/zupaolo/>

For more information please visit our website: <http://scholarshipsbank.com/phd-studentship-in-computer-science-verification-of-cyber-physical-systems-newcastle-university-uk/>

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