

## EngD - Simulation of Traffic Congestion and Road Network Performance

4 year tax-free stipend at £17,750pa (July 2009 or as soon as possible thereafter – June 2013)

### Engineering Doctorate

This project is offered in collaboration with Transport for London (TfL) and is funded through the EngD Centre in Urban Sustainability and Resilience in the department of Civil, Environmental and Geomatic Engineering (CEGE) at University College London (UCL). The EngD is a four year programme of study with time shared between work with TfL in their London offices with the remainder at UCL. Some of the time spent at UCL will involve taking relevant MSc course units, the choice of which will be tailored to the research area and the interests of the candidate.

### Project Synopsis

Recent traffic surveys and analysis of road network performance in London show a decline in traffic flows and perversely a decline in speeds and increase in congestion. It is believed that the increases in congestion reflect travellers' responses, both temporary and longer-term, to competition for use of the road network. Analysis of road network performance is complicated because it is an open system that is used by travellers according to their various requirements. In particular, they can respond to conditions and changes in them by modifying their choices in many different ways that will affect network performance. This combination of direct effects of changes in the network together with the indirect

effects through traveller adjustments all contribute to the complexity manifest in road performance outcomes such as journey times and their reliability.

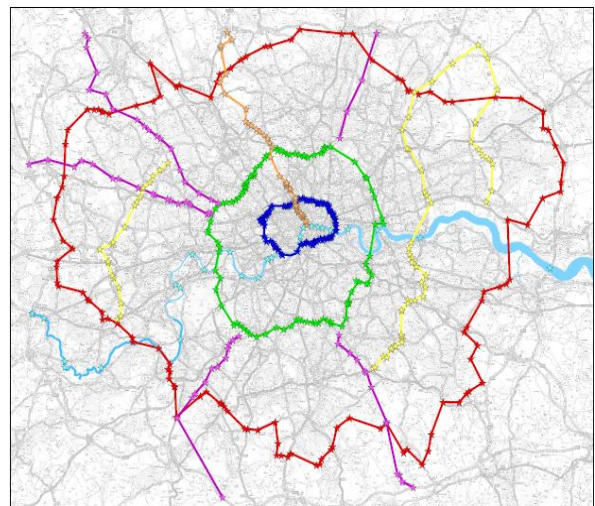


Figure 1: Traffic Data collected at cordons and screenlines in Central London.

The aim of this EngD is to stimulate the changes in traffic performance in response to the external changes and management policies in the road network. The applicant will be joining a team of 4 doctoral research students, two post-doctoral researchers and two full-time academic staff members in UCL, and the analysts in TfL, working jointly on an EPSRC-funded project.

This research studentship would suit recent graduates in a range of quantitative disciplines in the social, environmental and engineering sciences, as well as early career engineers who wish to pursue opportunities in transport studies, network research or data analysis.

**Start Date:** Provisionally July 2009 or as soon as possible thereafter

## Application

For a place on the EPSRC-funded EngD programme, applicants must meet the EPSRC eligibility requirements i.e. be a UK resident or demonstrate a relevant connection with the UK (see [www.epsrc.ac.uk/PostgraduateTraining/StudentEligibility.htm](http://www.epsrc.ac.uk/PostgraduateTraining/StudentEligibility.htm) for further information on this).

Applicants must have at least a 2.1 degree in a quantitative discipline, or an MSc or MA in a related subject. Knowledge of database management, transport planning, and programming would be an advantage.

To apply, email a CV with a covering letter by **28 May 2009** to Dr Tao Cheng ([tao.cheng@cege.ucl.ac.uk](mailto:tao.cheng@cege.ucl.ac.uk)). The covering letter should include a personal statement explaining why you think that you are a suitable candidate for this position, and what you see as the main issues that should be addressed by this project. Please also include details (name, email, address, telephone) of two academic referees. Shortlisted candidates will be invited to attend an interview, likely to be in the middle of June 2009.

Previous applicants need not re-apply.