

CPC370 - Principal Technologist

Location	London or Milton Keynes
Reporting to	Modelling Team Lead
Working hours	37.5 hours
Contract type/duration	FTC – until 14/12/2021
Equal Opportunities	CPC is committed to ensuring it recognises equal opportunities
Date written	January 2021

Purpose of the role

The Connected Places Catapult accelerates smarter living and travelling in and between the places of tomorrow. We focus on growing businesses with innovations in mobility services and the built environment that enable new levels of physical, digital and social connectedness. We operate at the intersection between public and private sectors and between local government and transport authorities. We convene the disparate parts of the market to help innovators navigate the complexity of doing business, creating new commercial opportunities and improving productivity, socio-economic and environmental benefits for places.

We are seeking a highly technical / specialist professional with detailed knowledge and experience of transport modelling and operational planning to join our Modelling Team. This team supports projects across the whole Connected Places Catapult and as such you will typically be working on multi-disciplinary projects with engineers, data scientists, planners, economists, software developers, environmental specialists, social researchers, designers and a diverse range of external stakeholders.

The role will support our ongoing programmes of work in relation to new mobility services, connected (and autonomous) vehicles, urban air mobility, transport decarbonisation and the development and use of advanced modelling techniques. Reporting to the Modelling Team Leader, you will be responsible for leading the development of innovative new modelling tools and methodologies to enable the potential impact of future mobility services to be assessed and appraised. This is likely to include the use of conventional modelling packages (VISIM, PARAMICS etc.) as well as innovative new platforms that will be developed in conjunction with key partners and stakeholders. Key focus areas of this role will be in the development and use of models to support the safe and efficient operation of transport networks and systems.

Your input will define the technical scope of the project work that we will be undertaking with partners and stakeholders. You will also provide technical leadership and assurance throughout the project delivery phase, providing clear support to the team undertaking the technical work and ongoing engagement and liaison with project partners and stakeholders.

You will often be developing projects from first principles for 'First of a Kind' feasibility studies or demonstrators. This often requires working through ambiguity to identify a clear project scope – you will need to be comfortable with this exciting, challenging and essential part of this role. You will also be expected to contribute to the dissemination of our project results via the production of case studies and presentations at conferences and seminars.

Key Responsibilities

- Undertaking bespoke analysis to support the enhancement of modelling methods and development of new modelling techniques
- Undertaking the development of new models, as well as the calibration and validation of existing models, or new models developed within CPC
- Undertaking travel behaviour, data analysis and new methodology research to support the development of models and techniques to enable new and novel transport modes/services to be assessed and appraised
- Work collaboratively to solve complex transport modelling problems
- Apply best practice in the process of model development and use, and support the development of new standards and guidance for advanced modelling techniques
- Providing technical leadership into projects involving transport modelling
- Providing advice on specific modelling issues to CPC teams, clients, stakeholders and the external transport modelling profession
- Providing analytical assurance and modelling review for work undertaken within CPC or externally
- Liaise with clients and other project stakeholders to enable modelling requirements and specifications to be developed and agreed
- Keep abreast of opportunities, challenges and new developments in the field of transport modelling
- Management of own workload to time and quality
- Following internal processes for QA, project and budget control in the delivery of your work
- Assist in business development activity and the preparation of bids and proposals
- Contribute to the dissemination of our research output.

Required skills and experience

- Relevant numerate undergraduate degree and post qualification experience
- Significant experience of operational transport modelling using VISSIM, PARAMICS and other operational modelling platforms
- Significant experience of modelling for highway, public transport and active travel scheme assessments
- Significant experience of calibrating, validating and auditing transport models
- Significant experience of specifying, developing and building transport models
- Significant in-depth experience of using, applying and understanding the DfT's

- TAG and other industry best practice
- Significant experience of writing and presenting technical reports and liaising with clients
- Numerate with excellent data analysis skills
- Knowledge of UK transport policies, organisation and governance
- Experience of working on traffic models for UK organisations such as DfT, Transport Scotland, Highways England, local authorities and TfL
- Excellent interpersonal, written and verbal communication skills
- Ability to work both independently and as part of a team
- Proven ability to learn new software and/or analytical techniques rapidly, becoming competent to a high degree of autonomy.

Desirable:

- Competency in data analysis packages, such as 'R', Excel/Access and basic software development skills
- Knowledge and experience of GIS software e.g. MapInfo, ArcView, QGIS
- Software development skills (VBA / Python / Java / C++)

To apply for this role please email us on jobs@cp.catapult.org.uk with your CV and covering letter attached quoting the ref: CPC370