Engineering and Innovation Research Studentship 2024/2025

Project title:	**Designing and Planning for Urban Artificial Intelligences and Robotics**
Discipline	Design; Smart and Sustainable Built Environment
Key words:	Cities, Artificial Intelligences; Robotics, Planning; Design.
Supervisory team:	Professor Matthew Cook, Dr Miguel Valdez
URL for lead supervisor's OU profile	https://www.open.ac.uk/people/mc22226

Project Highlights:

- Urban networks of multiple intelligences and associated knowledge politics.
- Mobilities, accessibility and socially uneven urban development patterns.
- Atmospheres of technological 'progress' in urban environments.

Overview:

No longer confined to structured environments such as factories, urban artificial intelligences (AIs) and robotic systems can now be found in many cities. Technologies such as the autonomous robots in Milton Keynes (Figure 1) are beginning to transform thinking about the future infrastructure, design and planning of cities.

Figure 1. [Autonomous robot in segregated footpath. Credit: Stephen Potter, OU].

However, to realise the potentialities and avoid unintended consequences of deploying these technologies in urban environments, decision makers need to know more about how to plan and design cities for AI enabled robotics. This studentship will help address such challenges through inter disciplinary research working with designers and planners on the co-production of AI enabled robotic systems in urban public spaces. The research will focus on human-machine interfaces associated with new technologies and provide a platform of knowledge to inform effective urban planning and design policy for urban AI and robotics.

Methodology:

A case study methodology will be pursued with partners. Qualitative data will be collected and analysed to investigate salient aspects of urban AI and robotic developments including their interplay in urban networks of multiple intelligences and associated knowledge politics; their effects on mobilities, accessibility and socially uneven urban development patterns; their affects such as atmospheres of technological 'progress' in urban environments. It is likely that concepts and approaches from Science and Technology Studies, Urban Studies and Design will be used to inform data analysis and develop policy relevant insights.

References & Further reading:

1. Cugurullo, F., Caprotti, F., Cook, M., Karvonen, A., McGuirk, P, Marvin, S. (2023) The rise of AI urbanism in post smart cities: A critical commentary on urban artificial intelligence, *Urban Studies* (in press)

2. Valdez, A., Cook, M. (2023) Humans, robots and artificial intelligences reconfiguring urban life in a crisis. *Frontiers in Sustainable Cities* 33

Further details:

Candidates should have qualifications and experience in geography, urban planning and design, and significant interests in digital urban technologies

associated with smart cities, AI and robotics. Strong evidence of working with professional bodies, technology developers and firms would be welcomed. The studentship is not suitable for candidates from technical disciplines such as engineering that favour quantitative methods and associated epistemologies.

Applications should include:

- A 1000 word cover letter outlining why the project is of interest to you and how your skills match those required
- an academic CV containing contact details of three academic references
- an Open University application form, downloadable from: http://www.open.ac.uk/postgraduate/research-degrees/how-to-apply/mphil-and-phd-application-process
- IELTS test scores where English is an additional language

Applications should be sent to **STEM-EI-PhD@open.ac.uk** **by 16.02.2024**