School of Computing, Engineering, and the Built Environment
Edinburgh Napier University

PHD STUDENT PROJECT

Application instructions:
Detailed instructions are available at :
https://www.napier.ac.uk/research-and-innovation/doctoral-college/how-to-apply

Prospective candidates are encouraged to contact the Director of Studies (see details below) to discuss the project and their suitability for it.

Project details

Supervisory Team:
- DIRECTOR OF STUDY: Dr Andrew Smith (Email: a.smith7@napier.ac.uk)
- 2ND SUPERVISOR: Alasdair Reid

Subject Group: Built Environment

Research Areas: Built Environment/other

Project Title: Urban Facilities Management in the Smart Places Ecosystem

Project description:
Growing areas of academic and policy interest in the built environment consider the role of cities as homes to the majority of the world's population and key drivers for health and wellbeing, resilience and sustainable development. However, a range of challenges exist in relation to urban inequalities, people and places and climate change. The built environment is a major contributor to climate change, which brings research priorities in enabling cities to align with the Sustainable Development Goals (SDGs). A further priority is around resilience and the need to adapt to climate change impacts that are already being felt alongside city environments that promote physical and mental health and wellbeing, inclusion, liveability and social value.

Smart places ecosystems consider previously independent local buildings becoming increasingly linked by digitalisation, enabling interconnected efficiencies. Facilities management (FM) has an impact on the urban environment, but significant work is needed to realise the SDGs. At this stage, facilities management has an opportunity to shape the development of smart place ecosystems. Urban FM is at the interface of

smart assets, buildings, cities and portfolios and people and communities and is therefore suitably placed to make a positive contribution to mutual benefit at the neighbourhood, community and city level.

Digitalisation and urban FM bring a service focus to support the SDGs, liveability, health and wellbeing and social value to urban communities. This project will consider the implementation of a digitalised urban FM framework to enable smarter city development and operation within the smart places ecosystem.

References:

Temeljotov Salaj, A. and Lindkvist, C.M. (2021), "Urban facility management", Facilities, Vol. 39 No. 7/8, pp. 525-537. https://doi.org/10.1108/F-06-2020-0078
Wong, J.K.W., Ge, J. and He, S.X. (2018), "Digitisation in facilities management: A literature review and future research directions", Automation in Construction, Vol. 92, pp. 312-326. https://doi.org/10.1016/j.autcon.2018.04.006
'Facilities' journal special issues (https://www.emerald.com/insight/publication/issn/0263-2772): - Smart city facilities and their management, Vol. 39 (1/2), 2021 - Urban facilities management, Vol. 38 (11/12), 2020

Candidate characteristics

Education:
A first degree (at least a 2.1) ideally in real estate, facilities management, business and management, sustainable development, smart places or other built environment related discipline with a good fundamental knowledge of real estate and facilities management.

Essential attributes:

- Experience of fundamental research data analysis
- Competent in applying a range of research methodologies
- Knowledge of real estate, facilities management, sustainable development or smart places
- Good written and oral communication skills
- Strong motivation, with evidence of independent research skills relevant to the project
- Good time management

Desirable attributes:

- Ability to think critically and work as part of an academic team