

Research Associate Job Details

Research Assistant/Associate: Development of a Real-time Urban Flood Risk and Impacts Demonstrator SAGe

Research Job Summary

This 24 month, fixed-term post, based in the Spatial Analytics and Modelling Lab will develop an integrated urban infrastructure spatial decision support analytics and visualisation platform.

You have experience in the development of spatial data visualisation software (for example, experience in WebGL, python visualisation packages (e.g., vispy)). Experience with Virtual Reality (VR) and/or Augmented Reality (AR), and the use of gaming technology for visualisation purposes would be beneficial.

You will work as part of an interdisciplinary team in the Newcastle Spatial Analytics and Modelling Lab (SAM@Newcastle) comprising of spatial data management, big data, cloud computing, spatial and infrastructure modelling experts.

Specific Responsibilities of Position

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1. Develop an integrated urban infrastructure spatial decision support analytics and visualisation platform
2. Engage with academic and industry partners to develop a series of case-study applications of the developed platform at multiple scales (e.g., university, city and nationally).
3. Provide direction and expertise within the Spatial Analytics and Modelling lab and collaborating research initiatives at Newcastle regarding the development and application of decision support analytics and visualisation tools.
4. Engage with the DAFNI facility (Data and Analytics Facility for National Infrastructure; <https://www.dafni.ac.uk/>) regarding the development of decision support tools and visualisation methods for infrastructure systems research.
5. Actively disseminate research outcomes including preparation of manuscripts for high quality journals, preparation of posters and delivery of presentations.
6. Develop collaborative research on spatial decision support and visualisation as part of the Alan Turing Institute Urban Analytics programme.

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Person Specification

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	Qualifications	Essential or Desirable
1	A good Bachelor's or Master's degree in a relevant subject e.g. Computer Science, Engineering, Mathematics.	E
2	PhD (or close to completion, or equivalent experience) in spatial data science, decision support, visualisation, VR/AR or gaming technology.	E
	Knowledge, Skills and Experience	
1	Experience of developing, setting-up and running integrated software solutions.	E
2	Good data analytical skills, with the ability to work methodically and accurately in designing, executing and writing up research independently.	E
3	Experience of collaborative or consortium working with academic and stakeholder partners.	E
4	A developing track record of peer reviewed publications in internationally recognised journals and experience of presentation of work to the national/international research community.	E
5	Knowledge of innovative ways of presenting research outputs.	D
	Attributes/Behaviours	
1	Excellent communication skills, both written and verbal; ability and willingness to communicate your research at national and international conferences, to fellow academics in other disciplines and to stakeholders.	E
2	Excellent interpersonal skills to build trust with collaborating groups.	E
3	The ability to work well both independently and as part of a team.	E
4	Good planning, organisational and time management skills	E