



College Management Unit:	UCD College of Social Sciences and Law
School Unit:	UCD School of Information and Communication Studies
Post Title & Subject Area (if relevant)	UCD Post-doctoral Research Fellow Level 1
Project:	ADAPT & Dublin City Council Smart Dublin
Post Duration:	Temporary 24 months
Line Manager	Professor Aphra Kerr
Competition Ref. N^o	017847
HR Administrator	Yasemin Ozdemir

Position Summary:

This is an academic research role, where you will conduct a specified programme of research supported by research training and development under the supervision and direction of a Principal Investigator.

The primary purpose of the role is to further develop your research skills and competences, including the processes of publication in peer-reviewed academic publications, the development of funding proposals, the mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

The Science Foundation Ireland funded ADAPT research centre has expertise in artificial Intelligence, digital content technologies, education and public engagement, data and technology governance and technology ethics. ADAPT is collaborating with Dublin City Council on a 2-year project to develop a Digital Twin ecosystem in Dublin. The goal is to ensure that the adoption of Digital Twin technologies meets the needs both of the city, and of the citizens who interact with it, by trialling and scaling not just technology deployments, but also new processes of public engagement.

This researcher will embed with the Smart City team in Dublin City Council’s city centre offices and work alongside an existing ADAPT postdoc. They will have regular engagement with the project PI, Prof. Aphra Kerr from UCD, who will provide guidance on the research programme, outputs, and impact.

Principal Duties and Responsibilities:

- Conduct a specified programme of research and scholarship under the supervision and direction of your Principal Investigator.
- Engage in appropriate training and professional development opportunities as required by your Principal Investigator, your School or Institute, or the University.
- Engage in the dissemination of the results of the research in which you are engaged as directed by and with the support of and under the supervision of your Principal Investigator.
- Engage in the wider research and scholarly activities of your research group, School and Institute.



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- Mentor and assist, as appropriate and as directed, the research graduate students in your School and Institute.
- Carry out administrative work associated with your programme of research.

In addition to the Principal Duties and Responsibilities listed below, the successful candidate will also carry out the following duties specific to this project:

Digital Twin development

- Coordinate the development and use of state-of-the-art Digital Twin technologies in chosen thematic areas.
- Identify and explore new methods and software tools for ongoing digital twin programme objectives.
- Support the organisation of workshops and webinars for wider engagement within DCC and for knowledge sharing and capacity building.
- Identify new use cases in the programme thematic areas.
- Monitor and share best practice in data gathering, management, analysis and visualization.
- Engage with international smart city and digital twin initiatives as required.

Stakeholder Engagement

- Engage with the Digital Twin stakeholders, enterprises, organisations, researchers in ADAPT and citizens to identify opportunities for research and innovation collaboration and funding.
- Support the development of an ecosystem of relevant stakeholders and project partners including; researchers, industry partners, local communities, government and public services, including local authority staff.
- Identify, support and evaluate new projects.
- Ensure pilot applications or projects operate in line with programme vision and policies

Communication

- Contribute to communication and social media plan for Digital Twin programme.
- Support preparation and dissemination of project results and research findings.
- Collaborate on the organisation of at least two community education & outreach events annually.
- Attend relevant meetings, learning events and conferences as required.
- Other duties as assigned by PI in ADAPT and line manager in DCC Smart City.

Particular to this position:

The role is based in UCD Belfield and also Dublin city and may involve the post holder working outside of standard working hours to attend relevant community, industry or professional networking events. Some travel may be required from time to time, including internationally.

Salary Range: €44,847- €47,412 Per Annum

Appointment on the above range will be dependent on qualifications and experience

Details on eligibility to compete and pension information is available at

<https://www.ucd.ie/hr/resourcing/eligibilitytocompete/>



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UCD welcomes applications from everyone. We are committed to creating an environment where diversity is celebrated and everyone is afforded equality of opportunity. Learn more about Diversity at <https://www.ucd.ie/workatucd/diversity/>

Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

Mandatory:

- PhD in applied social science (e.g. GIS), computer science, or creative technology. Those nearing completion of their PhD may be considered.
- A strong working knowledge of digital twin technologies, esp. software used for 3D models, BIMs, and GIS such as Google Earth, ArcGIS and QGIS.
- Working knowledge of integrating multiple formats of data using spatial database management and cloud-based services to facilitate the development of digital twins.
- Skilled in quantitative analysis with strong visualization methods such as building dashboards and using rendering tools like Unreal/Unity engines to retrieve insights for wider engagement.
- Understand the functioning of IoT devices/sensors and working with APIs to integrate their data with GIS and other data visualisation technologies for real-time monitoring and analysis s.
- Experience organizing workshops and multi-stakeholder engagement.
- Understanding and knowledge of research ethics.
- Fluent in spoken English and strong writing skills in English with experience of crafting communications for different purposes, including online communications.
- Excellent IT skills including, in addition to the above, experience with spreadsheets, word processing, presentation software, collaboration tools, databases and digital communication tools.
- A demonstrated commitment to research and publications
- An understanding of the operational requirements for a successful research project
- Evidence of research activity (publications, conference presentations, awards) and future scholarly output (working papers, research proposals, and ability to outline a research project.
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- Excellent Communication Skills (Oral, Written , Presentation etc)
- Excellent Organisational and Administrative skills including a proven ability to work to deadlines
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

The PD1 position is intended for early stage researchers, either just after completion of a PhD or for someone entering a new area for the first time. If you have already completed your PD1 stage in UCD or will soon complete a PD1, or you are an external applicant whose total Postdoctoral experience, inclusive of the duration of the advertised post, would exceed 4 years, you should not apply and should refer to PD2 posts instead.

Desirable:



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- Experience working with programming languages such as R and Python.
- Knowledge of open data infrastructures, formats and management.
- Interest in learning new 3D data capture technologies such as NERF, LIDAR point clouds etc.
- Strong interest to contribute to the existing body of knowledge on digital twins using innovative methods and techniques.
- Experience of working in interdisciplinary teams
- Experience in at least one of the project’s relevant areas of research – smart cities, health, wellbeing, built environment, climate change, urban planning, and community engagement.
- Experience conducting research with non-academic stakeholders
- Experience or strong interest in the Smart city ecosystem in Ireland and/or abroad (key organisations, statutory bodies, and companies)
- Ability to identify, develop and collaborate on new funding bids, grants and opportunities.
- A Knowledge of Irish and European research funding schemes.

Supplementary information:

The University:	https://www.ucd.ie/
UCD Strategy 2020-2024: Rising to the Future	https://strategy.ucd.ie/
The College/Management Unit:	https://www.ucd.ie/socscilaw/
The School/Programme Office/Unit:	https://www.ucd.ie/ics/
Equality Diversity and Inclusion at UCD	https://www.ucd.ie/workatucd/diversity/
Other (Please specify):	The ADAPT research centre is funded by Research Ireland. https://www.researchireland.ie/about/

UCD offers a comprehensive **Research Careers Framework** in line with the Advisory Science Council Report ‘*Towards a Framework for Researcher Careers*’. This model provides a structured and supportive **Career and Skills Development** system designed to ensure that Post-docs in UCD are able to plan their careers and prepare for future opportunities in academia, industry or the public sector. For more information, please [click here](#)

Informal Enquiries ONLY to:

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