

**Naughton REU FSTEM Application 2023: OFFER OF TRAINING FORM SUMMER 2023**

<b>Proposer details:</b>	
Title:	Assistant Professor
Name:	Sarah Cotterill
Email:	<a href="mailto:sarah.cotterill@ucd.ie">sarah.cotterill@ucd.ie</a>
Website:	<a href="https://www.ucd.ie/civileng/">https://www.ucd.ie/civileng/</a>
If your grade does not allow you to supervise students, please supply the name of support PI:	N/A

<b>Student required:</b>	
Specify any previous training / experience the student should have:	
Study level (3rd year, 4th year)	Either
Any other requirements:	

<b>Traineeship offered:</b>
Brief job description: (please include (1) type of work, (2) what student should hope to achieve at end of the process, (3) who will supervise student on daily basis (post-doc etc.))
<p><b>Raingarden Monitoring Project in Stoneybatter, Dublin:</b> Raingardens are a nature-based sustainable drainage system that seek to reduce the flow into the drainage network and reduce the likelihood of the combined sewer network becoming overloaded, leading to associated flooding. They also offer multiple benefits beyond diverting rainwater including providing a habitat for urban pollinators, horticultural opportunities, and increased wellbeing. One hundred (100) raised raingardens - also known as rainwater planters - are being installed in household gardens in Stoneybatter, in Dublin's north inner city, by a social enterprise, Bi Urban in collaboration with the Local Authority Waters Programme (LAWPRO). Five (5) of these will be monitored by UCD's School of Civil Engineering for a period of 12 months during 2023. Sensors will record a range of specific measurements including volumetric flow rate in and out of the planter and soil moisture at 2-minute intervals. A weather station will also be installed to collect real-time data on temperature, relative humidity, precipitation, and wind speed to contextualise the flow measurements. This desk- and field-based project will take place at the midpoint of data collection and will form the basis of a preliminary report to the project partners. It will involve calculating the peak flow reduction achieved by the rainwater planters, as well as quantifying how the raingarden performs under various real-world rainfall scenarios, both throughout the duration of the Naughton Fellowship and through analysing the data gathered prior to the student's arrival in Ireland. This project will require an understanding of civil/environmental engineering principles. (Including hydrology) as well as excellent data analysis skills.</p>

Link to research group or supervisor webpage:	<a href="https://people.ucd.ie/sarah.cotterill">https://people.ucd.ie/sarah.cotterill</a>
Location of lab:	UCD Belfield, Dublin

<b>Working hours:</b>	
Number of Weeks offered:	10-weeks
Hours per week:	TBC
Earliest Start Date possible:	Tuesday, 30 May
Latest End Date possible:	Friday, 04 August