



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 956124

1-year fully funded PhD position as a MSCA Early Stage Researcher in SellSTEM, 'Spatially Enhanced Learning Linked to STEM', a MSCA ITN in Spatial Cognition in STEM Learning at the School of Electrical & Electronic Engineering/CREATE Research Group, Technological University Dublin

The School of Electrical & Electronic Engineering/CREATE Research Group, Technological University Dublin, Ireland and the Marie Skłodowska-Curie Innovative Training Network (MSCA-ITN) project SellSTEM offers an Early Stage Researcher (ESR and PhD Student) position within the doctoral programme at TU Dublin (ESR11).

About SellSTEM

Spatially Enhanced Learning Linked to Science, Technology, Engineering, and Mathematics (SellSTEM) is an international research and training network funded by MSCA-ITN under H2020, Project No. 956124. It aims to find new ways to raise the spatial ability levels of boys and especially girls across Europe so they are better prepared for the cognitive demands of STEM education. SellSTEM has 15 ESR positions spread across three work packages. The SellSTEM network consists of 10 universities and 8 non-academic partners in Europe. SellSTEM will implement best practice in doctoral training through a carefully developed and comprehensive training programme and secondment of ESRs to different SellSTEM partners. For more details visit sellstem.eu. SellSTEM currently has a vacancy for 12 months for the position of ESR11.

Thesis project:

Teacher professional development to foster the development spatial ability of school children beyond existing levels.

(Note: the successful candidate will be expected to independently steer the direction of the thesis and the research questions while remaining within this theme).

Twelve (12) months of funding will allow a student who is starting their PhD to make substantial progress as they will be joining an established research group and network. It would also allow an existing PhD student to bring their studies to completion, or close to that point, provided they can remain within the above theme. Funding for PhD fees and research costs will be provided.

Background and objectives of the thesis project:

The literature contains many examples of interventions in teaching practice designed from a spatial cognition perspective that have led to notable improvements in STEM learning but less is known about how to organize professional development for teachers so they embrace these new ideas in a way that is sustainable into the future. The objectives of this study are to examine barriers and enablers to the teaching and development of spatial ability in classrooms by working with and collecting data from teachers in Ireland and other countries in Europe using both qualitative and quantitative methods so that professional development in this area can be effectively developed. The successful candidate will also be expected to contribute significantly to completing the SellSTEM deliverables, including a guide to training teachers to raise spatial ability levels of children in the classroom.

Essential criteria

Applicants should

- have been, or are about to be, awarded a Master's degree in Teaching or Education or in a STEM (science, technology, engineering or mathematics) discipline with a strong element of preparation for teaching school children,

- have a strong background in education research,
- according to the MSCA mobility rule, have resided in Ireland for less than 12 months in the 3 years immediately before the recruitment date (01 September 2023) and have not carried out their main activity (work, studies, etc.) in Ireland, unless as part of a procedure for obtaining refugee status under the Geneva Convention,
- be in the early stage of their research career, defined as having spent less than 4 years (full time equivalent) in a research position since graduating from a degree required for entry to doctoral education, and have not been awarded a PhD,
- have the ability to work independently and in collaboration with others,
- have excellent oral and written communication skills in English
- be available to start on September 1, 2023.

Desirable criteria

- experience of teaching at primary or secondary (K12) level
- experience of teacher training or teacher professional development.
- have experience of conducting research on spatial ability in STEM learning,

How to apply

To apply for the position, please email the following to gavin.duffy@tudublin.ie with 'ESR11 application' in the subject header:

1. A letter of motivation explaining why you would like to apply for this position
2. A CV including publication list (if applicable)
3. Names and contact details of two referees willing to write confidential letters of recommendation
4. Copies of relevant diplomas including explanation of international grades.
5. Copy of English language proficiency certificate if not a native English speaker

The deadline for applications is midnight, July 31, 2023. The recruitment process follows the European Charter & Code of Conduct for the Recruitment of Researchers.

Salary

The successful candidate will be recruited by the university on an employment contract for 12 months and enrolled on a doctoral degree programme. The role carries an attractive salary based on the gross rate defined by MSCA ITN 2018-20 which can be seen at <https://tinyurl.com/183hikf4>. Note the gross amount is adjusted by a correction coefficient for Ireland and employer as well as employee payroll taxes and social security costs will be deducted to provide the net salary or take home pay. Costs associated with research and training are covered under a separate budget allowance.

Contact

For further details on this position email gavin.duffy@tudublin.ie, the coordinator of SellSTEM