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**3-year PhD position in Spatial Cognition in STEM Learning at the Department of Linguistics, School of Languages, Literatures, Linguistics and Media, Bangor University**

The Department of Linguistics at Bangor University, Wales, UK 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 program for a PhD in Linguistics at Bangor University.

**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. 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](http://sellstem.eu/).

**Thesis project:**

Examining language as a medium of representation in relation to STEM learning tasks and spatial ability

**Background and objectives of the thesis project:**

**Background:** The ESR in this project will use Cognitive Discourse Analysis (CODA; Tenbrink, 2020) to study the role of spatial ability in mental representations of STEM tasks. For example, children with low spatial abilities may struggle to understand the concept of ‘volume’. The way they talk about STEM learning tasks involving volume will reflect what exactly these difficulties are and what is being misunderstood. Such insights inform the design of classroom activities to help children overcome these difficulties.

**Objectives:** Develop a paradigm for using language analysis to investigate how spatial ability affects STEM task success. Describe systematic differences in the nature of spatial‐linguistic representation relative to spatial ability and performance. Contribute to the design of spatial ability tests developed in other projects, wherever language is concerned.

**Expected Results:** Greater understanding of the nature of linguistic representation in STEM learning and how this is related to spatial ability; a deeper understanding of what spatial ability is, related to the discourse in this domain, so that efforts to both measure and develop it can be more focused in supporting preparation for STEM learning.

**Essential criteria**

Applicants should

* have been, or are about to be, awarded a Master’s degree in Linguistics or an equivalent qualification, relevant to the scope of this project (e.g., candidates may have acquired relevant knowledge in a different degree programme such as Psychology or Social Sciences),
* have a strong background within the fields of discourse analysis, semantics, and spatial language,
* have experience of principles of research design, linguistic data collection, analysis, and dissemination,
* according to the MSCA mobility rule, have resided in The United Kingdom for less than 12 months in the 3 years immediately before the recruitment date (01 September 2021) and have not carried out their main activity (work, studies, etc.) in The United Kingdom, 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, as well as reliability and ability to complete projects on time,
* have excellent oral and written communication skills in English,
* be available to start on September 1, 2021, and
* be prepared to spend several months on secondment to Germany.

**Desirable criteria**

* A background and interest in psychology is very desirable for this position, especially in areas of cognitive psychology and spatial cognition
* Fluency in Welsh and/or another European language
* A good understanding of childhood development, and education in relation to STEM

The recruitment process will follow the European Charter & Code of Conduct for the Recruitment of Researchers.

**How to apply**

The online application form and instructions on how to apply are available on [sellstem.eu](http://sellstem.eu/). The deadline for applications is 17:00 CET, Feb 28, 2021. The code for this position is ESR04.

**Salary**

The successful candidate will be recruited by the university on an employment contract for 36 months and enrolled on a doctoral degree programme. The role carries an attractive salary based on the rate defined by MSCA ITN 2018-20 which can be seen at https://tinyurl.com/183hikf4. Note the total amount received is adjusted by a correction coefficient for each country and may vary from employer to employer, even within the same country. Country variations on net salary may arise due to employer as well as employee payroll taxes and social security costs which must be deducted from the gross salary. The exact salary will be confirmed on appointment. Costs associated with research and training are covered under a separate budget allowance.

**Contact**

For further details on this position email Thora Tenbrink <t.tenbrink@bangor.ac.uk>.