PhD Fellowship at Maynooth University, Ireland

Title: Statistical Modelling of High-Dimensional Spectral and Hyperspectral data.

Start date: September 2025

Background: The PhD studentship will be part of the VistaMilk Research Ireland research centre (www.vistamilk.ie), which represents a unique collaboration between 13 Agri-Food and ICT research institutes and leading Irish/multinational food and ICT companies. The Centre is hosted by Teagasc, the national agency with responsibility for agriculture and food research. **The PhD project will focus on the development of novel statistical and machine learning methodology for the analysis of high-dimensional spectral and hyperspectral data.** The research arises from the ever-growing abundance of such datasets in the agrifood sector and the practical limitations of the state-of-the-art methods; many cannot account for the repeated measures or the spatio-temporal correlations between samples, leading to biased analyses. A successful candidate will have a chance to work in cross-disciplinary collaborations.

Qualifications: Minimum educational background: BSc (honours) or MSc degree at 2.1 grade or above (or equivalent) in Statistics/Mathematics or related discipline. Computational skills and experience with programming in R and/or Python are required. Candidates must have excellent written and verbal communication and presentation skills in English.

Award: Starting in September 2025, the successful candidate will be based in the Hamilton Institue, Maynooth university, under the co-supervision of Dr Katarina Domijan and Dr Szymon Urbas. The student will receive a tax-free stipend of €25,000 per year, full coverage of tuition fees and funds for conference travel. If desired, the student will have the opportunity to serve as tutor (Teaching Assistant), which will be paid on top of the stipend at the hourly rate.

Informal enquiries are welcome and should be made to Dr Katarina Domijan (katarina.domijan@mu.ie) or Dr Szymon Urbas (szymon.urbas@mu.ie)

Application Procedure To apply please e-mail szymon.urbas@mu.ie an electronic copy of your curriculum vitae and a letter of interest with names and emails of two academic references as a **single pdf** document. Please reference "PhD HSpec" in the subject line of the email.

Evaluation of applicants will commence on April 5, 2025, and will continue on a rolling basis until the position is filled. Only shortlisted candidates will be contacted.

Equality and diversity: Maynooth University is an equal opportunities employer. To learn more about our commitment to Equality and Diversity, please read the Maynooth University Equality and Diversity Policy (https://www.maynoothuniversity.ie/edi/edi-policies/EDpolicy), and our policy on the Employment of People with Disabilities (https://www.maynoothuniversity.ie/edi/edi-policies/disability). Additionally, as an Athena SWAN Bronze Award Institute, we are committed to advancing gender equality across the University. Applications from all suitably qualified candidates will be considered.

About MU: Maynooth University is a very distinctive university, a collegial institution focused on science and engineering, humanities, and social sciences, and equally committed to research, teaching and community engagement. Located in Ireland's only university town, its distinctive features and character owe much to its unique history and heritage. Maynooth University in 2024 ranked in the top 90 global Times Higher Education (THE) Young University rankings, placing 86th in the world.