Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Structured PhD Position in Statistics (4-years full-time)

Project title: Developing novel statistical methods for the analysis of complex multidimensional networks

Project supervisor: Dr. Silvia D'Angelo (Trinity College Dublin).

Project locations: Discipline of Statistics and Information Systems, School of Computer Science and Statistics, Trinity College Dublin.

Application deadline: 30th April 2025

Start date: 1st September 2025.

PhD structure: This is a full-time 4-year structured PhD project, based in the Discipline of Statistics and Information Systems at Trinity College Dublin. The funding for the project includes a tax-free stipend. EU fees are provided for in the funding.

PhD topic: Properties of network data have been explored in depth; however, there is lack of methodology for the analysis of many specific network data-types. A particular type of network data are multidimensional networks, which correspond either to relations evolving over time or to different relation types recorded between subjects. The research goal is to work with complex networks and multidimensional networks, developing novel methodology tailored for the analysis of such data, with particular focus on modeling the dependence between multiple networks using a latent variable construct and Bayesian inference. The purpose is to provide information on the interdependence between different types of relations among a group of subjects.

The Institution: The School of Computer Science and Statistics at Trinity College Dublin is a collegiate, friendly, and research-intensive centre for academic study and research excellence. The School has been ranked 1th in Ireland, top 25 in Europe, and top 100 Worldwide (QS Subject Rankings 2018, 2019, 2020, 2021, 2023).

Requirements: Applicants should have (or expect to attain prior to project start) at least a 2.1 honours degree or equivalent in the areas of mathematics, applied mathematics or statistics. Applicants must demonstrate proficiency in statistical modelling and have some experience with statistical computing through R, python or C. Applicants for whom English is a second language will be required to demonstrate their competence in the English language in line with Trinity College Dublin requirements as appropriate.

Funding notes: Stipend of €22,000 per year for four years. Fees for Home/EU students will be covered by the university.

Application: Applicants should email Dr. Silvia D'Angelo (dangelos@tcd.ie) to apply. The application should include a 2-page comprehensive CV, academic transcripts of the degree/ degrees, and a short cover letter/statement of purpose (2-pages max) indicating how their skills align with the project and their motivation for applying. Please include "PhD Application (Statistical Network Analysis)" followed by your name in the subject line. The application CV should, at minimum, include the applicant's name, educational institution, qualification stating overall grade/percentage (predicted grades are acceptable for those still studying) and contact details of two academic referees. Informal queries can be made to: dangelos@tcd.ie. Please include "PhD Query (Statistical Network Analysis)" followed by your name in the subject line.