

The Center for Computational and Stochastic Mathematics (CEMAT), Lisbon, Portugal, has opened a **call of interest** for **MSCA Postdoctoral Fellowships (EU)**: 1-2 years research grant, submission deadline 09/09/2026 (estimated start: May 2027-Sept 2028).

Conditions: PhD degree < 8 years ago, no activity in Portugal in the last 3 years.

The proposed projects are:

Strategic Investment and Innovation under Uncertainty

Supervisor: Cláudia Nunes

This project explores how technological uncertainty, strategic interaction and market dynamics shape investment decisions in innovation-driven sectors. The project combines quantitative modelling, stochastic processes and decision analysis to study optimal behaviour in competitive environments.

Statistical Methodologies for Complex and Symbolic Data

Supervisor: M. Rosário Oliveira

This project develops innovative statistical methodologies for histogram-valued data, bridging Symbolic Data Analysis, robust statistics, dimensionality reduction, and classification. Building on Wasserstein-based foundations, it introduces new tools for principal component analysis, classification, and robust inference on distributional observations. The result is a rigorous, interpretable, and openly available framework for complex, large-scale data.

Control of Differential Systems and Biomedical Applications for Blood Flow and Fluid Dynamics

Supervisor: Jorge Tiago

The project develops partial differential equations-based models to describe the dynamics and the control of vector-borne diseases. Mathematical and numerical analysis will be used to obtain an execution certificate for a control protocol to be implemented in the field. The project will run in collaboration with national health institutions and with the Sorbonne University.

Breaking the Zero Barrier: Robust Hurdle Models Meet Deep Learning

Supervisor: Conceição Amado

This project develops innovative robust general hurdle models for zero-heavy data, combining modern robust statistics with deep learning. The project moves beyond classical Poisson and negative-binomial hurdle models by using minimum distance estimation to build a unified, distribution-flexible framework that remains stable under outliers and contamination. The result is a principled class of interpretable models that can be embedded into neural architecture for complex, high-dimensional applications in health, insurance, and environmental sciences.

How to apply? Fill the [form](#) with CV.