

Call name	IKUR Postdoctoral position – New deep learning approaches for neural stochastic differential equations
Application Deadline	2023/03/31

Introduction and main description

This project is led in collaboration between researchers of the Intelligent Systems Group (ISG) of the University of the Basque Country (UPV/EHU) in San Sebastian, Spain and the Graduate Program in Computational Sciences of the State University of Rio de Janeiro, Brazil. We are looking for a motivated and experienced scientist to fill a two-year POST-DOCTORAL position in the scope of the IKUR project: "New deep learning approaches for neural stochastic differential equations". The location for the position is San Sebastian, Spain.

The project involves the conception of methods for efficient simulation of systems of differential equations based on deep learning models. To perform the analysis and interpretation of the simulations from a physical point of view. To design and implement neural network architectures that could help in the study and prediction of phase transitions in physical systems driven by stochastic differential equations.

Skills and Requirements

PhD in Physics, Mathematics, Computer Science or related areas.

Experience in the field of differential equations, statistical physics, or probability and stochastic processes.

Familiarity with concepts from machine learning, particularly deep learning and neural networks.

Advanced programming skills in scientific computing.

Work Program / Duties / Responsibilities

The main task of the job is devoted to the development of methods and algorithms in machine learning applied to statistical physics problems, phase transition analysis and general solutions of differential equations.

Application Procedure

Applicants should submit their Curriculum Vitae (CV), a motivation letter and arrange for two letters of reference to be sent on their behalf to Dr. Zochil González and Dr. Roberto Santana.

All files required for the application should be sent in PDF format to the following email addresses: processo.seletivo.ccomp@ime.uerj.br, roberto.santana@ehu.eus, with the subject line "Application – IKUR Postdoctoral Fellowship". The signed letters of reference must be sent by each referee in PDF form to the same email address; please ask him/her to include the text "Name of the candidate – Letter of Reference" in the subject line of the e-mail.

Other Relevant Information

Interview will be conducted soon after the deadline. The starting date to join is as soon as possible.