CALL FOR APPLICATIONS - February 2023

PhD Student Position

Donostia International Physics Center (DIPC) is currently accepting applications for PhD Student positions. This is a unique opportunity for junior researchers to join one of DIPC's high-profile research teams. A description of each of the available openings, contact information and deadlines can be found on the following pages.

Although candidates are welcome to contact the project supervisors to know further details about the proposed research activity, please be aware that the application will be evaluated only if it is submitted directly to the email address listed as "application email".

Applications received by the deadline will be evaluated by a Committee designed by the DIPC board on the basis of the following criteria:

- CV of the candidate (60%)

- Adequacy of the candidate's scientific background to the project (20%)

- Reference letters (10%)

- Other: Diversity in gender, race, nationality, etc. (10%)

Evaluation results will be communicated to the candidates soon after. Positions will only be filled if qualified candidates are found.

The DIPC may revoke its decision if the candidate fails to join by the appointed time, in which case the position will be awarded to the candidate with the next highest score, provided it is above 50 (out of 100).

However, the selected candidate may keep the position if, in the opinion of the Selection Committee, the candidate duly justifies the reasons why he or she cannot join before the specified deadline, and as long as the project allows it.

Complex networks methods applied to cultural analytics

Supervisor(s):
Gustavo Ariel Schwartz (gustavo.schwartz@csic.es)
Juan Luis Suárez (jsuarez@uwo.ca)

Duration*: *3 years*

Application Deadline: *16/02/2023*   ***Application Email:*** *jobs.research@dipc.org*

The PhD will be developed at the Donostia International Physics Center (San Sebastián - Spain) and at the CulturePlex Lab (London - Canada), half of the time at each institute. The objective of the work is to explore numerical routes based on data mining, complex networks analysis and machine learning to understand the emergence of genius, revolutionary ideas, and the collective imaginary.

Is genius a result of nature or nurture? How much chance and context are involved in the emergence of revolutionary ideas? Can we predict the appearance of the next Mozart? Artists, writers, and scientists develop their ideas in a specific historical, social, and economic context that conditions how they look at the world. In the last decades, new approaches based on big data, complex networks and natural language processing have been shown to analyse different cultural complexities successfully. From quantifying reputation and success in art [Fraiberger, 2018] to the study of emergent processes driving cultural history [Schich, 2014] to understand the complexity of Baroque [Suárez, 2007, 2012]. More recently, a new method has been developed for mining Wikipedia to map and understand how different disciplines, like art, science and literature, are related to and interact with each other [Schwartz, 2021; Miccio, 2022]. This research project aims to analyse further and understand the complex cultural networks around iconic people and revolutionary ideas to characterise the structure and dynamics of the networks that allow their emergence.

The contract is for three years and the tentative starting date is the first trimester of 2023. We are looking for highly motivated candidates, from the fields of science or digital humanities, with solid programming skills (Matlab and/or Python) and a good level of English (written and oral). A general knowledge on complex networks and natural language processing will be positively pondered. Candidates must have completed their master's (or Licenciatura) studies before the starting date of the contract.

Interested candidates should submit an updated CV, a brief statement of interest and two reference letters to the application email listed above. The reference of the specific opening to which the candidate is applying should also be stated in the subject line.

*Openings with a duration of more than one year are for a 1-year contract, renewable based on performance and availability of funding.