POST DOCTORAL RESEARCHER IN DATA ANALYSIS AND MACHINE LEARNING FOR SPECTROSCOPIC

Company Description

NanoGUNE is a research center devoted to conducting world-class nanoscience research for a competitive growth of the Basque Country. Nanogune is a member of the Basque Research and Technology Alliance (BRTA) and is recognized by the Spanish Research Agency as a María de Maeztu Unit of Excellence.

The position is offered in the Nanoengineering Group under the direction of Prof. Andreas Seifert (a.seifert@nanogune.eu). The Nanoengineering Group focuses on research in the fields of optics and photonics, with a special focus on new methods for medical diagnostics. We combine photonic approaches with nanotechnology and artificial intelligence to further advance technological maturity for biomedical applications.
The candidate will join a highly multidisciplinary research line that focuses on Raman spectroscopy for in vivo applications supported by chemometrics. More information can be found
at https://www.nanogune.eu/nano

Information

📅 Deadline: 2024-05-31
🗂 Category: Business
🚩 Province: Gipuzkoa
🌐 Country: Basque Country
🏛 City: Donostia-San Sebastián

Company

CIC nanoGUNE

Main functions, requisites & benefits

Main functions

The aim of the research project is to identify intrapartum physiological risks such as perinatal asphyxia. A particular focus is on data analysis using chemometric methods, the simulation of data, and the transfer of knowledge gained to hardware components. An understanding of biocompatibility and regulatory matters is a great advantage for the position.

Important tasks of the work plan: development of machine learning models for the classification of in vivo Raman spectra, applying chemometric methods; simulations and modification of data, advanced data analysis; carrying out Raman measurements in vitro and in vivo; hardware/software interface: communication with devices such as lasers and spectrometers.

Requisites

The successful candidate will preferably have a PhD in Physics, Chemometrics, Informatics, Chemistry, or related Engineering field and experience in the following skills: Machine learning and data analysis based on Chemometrics; Laboratory experience; Experience with Python and its main libraries for machine learning; Ability to create graphical user interfaces; Fluent in written and spoken English, knowledge of Spanish is desirable, knowledge of Basque is valuable. Although not compulsory, the following points will be considered: Knowledge in optics, photonics, spectroscopic techniques; Biomedical engineering; Experience in modeling languages (Simulink, Labview, Open Modelica...) and HIL tools (dSpace, Speadgoat, National Instruments ...); Experience with interdisciplinary research; Self-motivated and able to work in a team, coordination of research work.

Benefits

We promote teamwork in a diverse and inclusive environment and welcome all kinds of applicants regardless of age, disability, gender, nationality, race, religion, or sexual orientation.