Reference: Research scientist

Job description: A position for research scientist is available in the Computational Biophysics laboratory led by Gianni De Fabritiis at GRIB (IMIM-UPF) in Barcelona in the context of the COMPBIOMED EU project.

General description
Our Centre of Excellence will provide a focal point for the development and sustainability of software tools and services which are capable of delivering high fidelity three and four dimensional (including time) modelling and simulation of all aspects of the human body, from the genomic level to the whole human and beyond, in health and disease. Computational models are becoming very powerful at different stages in drug discovery and development from molecule design to assessment of toxicity. Computational models can also be used for repositioning and targeting therapies for precision medicine, through rapid and accurate assessment of drug efficacy in specific disease cases. They can also provide added value to medical device measurement data, for example as acquired by various imaging modalities.

Desired Skills and Expertise

Required
- University degree in informatics, medical informatics, bioinformatics or related area
- Phd in molecular simulations
- Familiarity with scripting languages (e.g. Python)
- Demonstrated strong verbal and written communication skills
- Good English communication skills
- Excellent attention to detail and organization skills

Desirable
- Knowledge/expertise on molecular simulations

Research lines

Biomedicine. We use large distributed computational resources (GPUGRID.net) with thousands of GPUs for molecular dynamics simulations, binding prediction, binding kinetics, Markov state models, online sampling methods (ACEMD, HTMD). The approach is computationally driven but we like to collaborate with experimental laboratories and industries where we work by rationalizing experimental results.

Machine Intelligence. In this new research line we develop machine learning approaches applied to the biological data. We are particularly interested in dimensionality reduction, artificial neural networks, unsupervised learning, reinforcement learning, sparse coding, deep and hierarchical learning.

To apply: Please send a CV and letter of interest by email to gianni.defabritiis@upf.edu.

Reference: COMPBIOMED before **May 30, 2017.**