

Post-doc position at Institut Curie in Systems Biology Group

Development of computational methods for multiscale modeling of tumor microenvironment

Duration: 18-36 months with possibility of extension, starting immediately

Links <http://curie.fr>, <http://u900.curie.fr> <http://sysbio.curie.fr>, <http://acsn.curie.fr>, <http://navicell.curie.fr>
<http://www.cancer-systems-biology.net>

Context

Institut Curie is one of the biggest European institutions for cancer research with strong and old interdisciplinary traditions. It also comprises a hospital specialized in cancer treatment, and therefore dispose of a continuum of expertise from fundamental research to patient care. It is located in the centre of Paris in a both cultural and scientific rich environment (<http://curie.fr>).

The "Bioinformatics and Computational Systems Biology of Cancer" Unit (U900 INSERM, Mines ParisTech, Institut Curie) involves about 90 researchers and students. It is a very active and growing interdisciplinary team of biologists, physicians, mathematicians, statisticians, physicists and computer scientists (<http://u900.curie.fr>). Our research group focuses on deciphering determinants of tumorigenesis and tumor progression and proposing new strategies to combat cancer. The domains of expertise are big data analysis; signaling network construction and mathematical modeling; study of synthetic interactions in cancer mechanisms, drug response prediction, patient stratification and many others (<http://sysbio.curie.fr>).

The group has long term experience in implementing scientific methodology of data and biological network analysis into user-friendly software packages, currently used by other researchers world-wide (the list of developed software can be found at <http://sysbio.curie.fr/software>).

Job description and skills

The mission is focused on creating and implementing a computational simulator of the processes taking place in tumoral microenvironment, integrating the levels of intracellular and intercellular signalling and biophysical interactions between cells and environment such as extracellular matrix.

We expect the candidate to have experience in mathematical modeling of biophysical and biochemical processes taking place within the cell and between the cells. The candidate must be able to participate in the development of a software tool for multi-scale simulation. The project will require programming in C++. Fluent English both spoken and written is required. Experience in systems biology projects, knowledge of the methods for modeling biological networks and knowledge of molecular and cellular biology or biophysics are an advantage.

Degree required: PhD level in computer science, bioinformatics, biophysics or systems biology

Send CV, motivation letter, and contacts details of 2-3 references to recruitment.U900-SYSBIO@curie.fr and indicate as subject the reference SB19A-MM