

Postdoctoral Position on Gene Regulatory Circuits in Systems Biology at ENS de Lyon, France

<http://www.ens-lyon.fr/LBMC/gisv/>

A position funded by the ERC is open for 2 or more years to recruit a highly motivated postdoc to work on the dynamical properties of a gene regulatory circuit.

Our group studies the fundamentals of intra-species genetic variations, using yeast as a powerful experimental system. We perform experiments designed to address specific questions, and we develop the necessary codes to analyze data, as well as numerical models to draw interpretations and predictions. The group is located at ENS de Lyon, with access to all necessary facilities and equipment (single-cell acquisitions, computer cluster, etc...).

Lyon offers a wonderful living environment: it is the second-in-size French city after Paris, located at only 2 hours from Paris downtown, from the Alps mountains, and from the Mediterranean sea.

The project is much more than a description of network properties: it is designed to achieve a precise association between the parameter space and the genotypic space, in a predictive way. The work involves cycles of high-throughput data acquisitions in a way inspired by experimental physics. The aim is to classify the effect of natural genetic variation on network dynamics. The project will combine 1) Mathematical modeling and simulations of a gene network with 2) High-throughput acquisitions of single-cell values using automated culturing methods and 3) Yeast forward and reverse genetics to manipulate genotypes. The postdoc fellow will be supported by a computer scientist for code developments and by a biologist technician for data production. Hiring date can be as early as February 2012, or later if necessary.

Applicants should have a solid training in applied mathematics or physics, preferentially with an experience in deterministic or stochastic models of dynamical systems. **No previous experience in biology is required.**

Please send CV and letter to Gael.Yvert@ens-lyon.fr, together with names of previous supervisors/colleagues who could be contacted for reference.

