PhD Studentship in Computational Modeling of Biological Systems

A CNRS-funded PhD Studentship (3 years) is available at the Ecole Normale Supérieure de Lyon, France, to work under the supervision of Dr Yoan Coudert and Dr Christophe Godin (https://team.inria.fr/mosaic/). Branching forms are ubiquitous in nature (plants, animal organs,...) and emerge from the dynamical production, transport, accumulation and degradation of molecular cues. However, how these processes are coordinated in time and space remains poorly understood. The prospective student will investigate this fundamental question using a multiscale computational modelling approach.

For more information about our work, see also:
Coudert et al., eLIFE 2015, https://doi.org/10.7554/eLife.06808
Barbier de Reuille et al., PNAS 2006, https://doi.org/10.1073/pnas.0510130103

Expected starting date: October 2021

Work place: Our team is part of the Plant Reproduction and Development (RDP) laboratory, located on the campus of the ENS de Lyon. Our goal is to generate a multiscale and quantitative understanding of the molecular and physical basis of plant development. To this end, we exploit an interdisciplinary expertise in biophysics, mathematics, computational modeling and molecular genetics.

Required skills: We are looking for highly motivated candidates with a strong involvement in their research project and an ability to solve scientific problems, critically discuss experimental results and interact with scientists from distinct backgrounds (biologists, modelers, computer scientists). The candidate should have practical skills in computational modeling and programming (e.g. Python language), and a strong interest in biology. The working language of the laboratory and the institute is English. Excellent written and communication skills are required.

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