

Title

Dynamical Behaviour of Gene Network Models in Tomato.

Project Description

This project aims at deducing the structure of networks regulating Tomato flavor from measured data. The focus is on developing and applying mathematical methods to analyze the dynamical behavior of gene networks regulating the polyphenol biosynthesis in Tomato. In a twin project the structure of these networks is unraveled by applying statistical methods to extensive data sets. The present project deals with the analysis of networks in terms of differential equations or Boolean networks in order to establish their predictive properties. Comparison of the in-silico predictions with observed behavior will be used to estimate the character of the interactions between network nodes and the values of parameters and lead to suggestions for additional measurements. The project will be performed in close cooperation with experimental groups at Wageningen UR measuring Tomato seedling properties.

Location

The location is Wageningen UR, The Netherlands.

Systems Biology is one of the focal points of Wageningen UR. This PhD project will be performed within the Applied Mathematics Chair of Wageningen University. This chair belongs to Biometris, the expertise center of Wageningen UR for mathematical and statistical research, consultancy, and teaching. Within Biometris the PhD student will work in a stimulating environment consisting of mathematicians, statisticians, and biologists. See www.biometris.nl.

Requirements

We look for candidates with a strong quantitative background, e.g. mathematics, theoretical physics or theoretical biology. Knowledge of (systems) biology will be very helpful. The candidates should have a strong interest in the biological processes underlying cell behavior and willing to communicate with experimentalists. The work will be done within a team of Good communicative skills are required. It is assumed that the candidate is fluent in English speaking and writing.

Conditions of Employment

Gross salary per month €2000,- in the first year rising to €2558,- per month in the fourth year.

Duration of the contract: Four years. Maximum hours per week: 38. After one year the project progress is evaluated in view of continuation.

Contact

Additional information about the vacancy can be obtained from:

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Website

<http://www.biometris.nl>

Applications

You can apply for this job by sending your application (preferably by e-mail) to:

Prof.dr. Jaap Molenaar,
E-mail address: Jaap.Molenaar@wur.nl
Building 116
P.O. Box 100
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Applicants should send a CV, list of publications and the names and addresses of at least two persons that can be approached to obtain further information. Please, mention the vacancy number: DPW 08-25.