

Title

Identification of Metabolic Networks 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 statistical methods to reconstruct the gene network regulating the polyphenol biosynthesis in Tomato. In a twin project the dynamical behavior of these networks is unraveled by applying mathematical methods. In the present project the complexity of the problem will be reduced by a number of methods. For example, it will be investigated whether the most essential processes can be detected from the information contained in the eigenvectors. Mixed models, multi-block and multi-mode techniques, Bayesian networks, and pattern recognition techniques are alternative methods to be applied. Also, so-called graphical models will be used to test hypotheses for the coherence between metabolites. 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 Statistics 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 statisticians, mathematicians, and biologists. See www.biometris.nl.

Requirements

We look for candidates with a strong quantitative background, e.g. statistics, biology, physics, or chemistry. 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. 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:

Prof.dr. Fred van Eeuwijk

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E-mail address: Fred.vanEeuwijk@wur.nl

Website

<http://www.biometris.nl>

Applications

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

Prof.dr. F.A. van Eeuwijk

E-mail address: Fred.vanEeuwijk@wur.nl

Building 116

P.O. Box 100

6700 AC Wageningen, The Netherlands

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.