



Jean-Baptiste Durand has newly joined UMR AMAP as a Cirad researcher. His main fields of expertise are statistical modelling, computational statistics and statistics on graphs. His research interests also include statistical analysis of growth, branching and flowering patterns in plants.

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6 OCT 2022
10h30 – 11h30

Plant structure analysis: some statistical approaches based on graphical hidden Markov models

presented by

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ABSTRACT

This presentation will focus on diverse contributions related to statistical analysis of growth, branching and flowering patterns in plants. In a first part, I will present the statistical challenges raised in this context and illustrate how the notions of probabilistic graphical and hidden Markov models and multivariate counts can be relevant. In a second part, I will show how nonparametric Bayesian statistics can be used to tackle problems where the number of variables is a priori unknown and unbounded, as well as their potential benefits in some projects related to LiDAR data analysis. Eventually, I will mention several ongoing or forecasted projects to be conducted with colleagues in AMAP / AGAP / Cirad.

KEY WORDS

Hidden Markov models, Probabilistic graphical models, Statistical analysis of tree-structured data, Applications to plant structure analysis, Collaborations.

Invited and animated by:

Jean-Baptiste Durand & Thierry Fourcaud (UMR AMAP)

Type:

Research results and opportunities of collaboration

Oral language:

English / français (to be debated on site)

Language of PPT Beamer :

English

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