

Wednesday
November 13,
2019

12:30 pm
(CET)

The **Working Group on Risk - CREAR**, with the support of the IDS dpt, Institut des Actuaire, LabEx MME-DII, and the group BFA (SFdS), has the pleasure to invite you to the seminar by:

Prof. Avner BAR-HEN

Chair of Statistics and Mass Data CNAM

“Spatial CART Classification Trees”

at ESSEC La Défense (CNIT) – Salle 202, 12:30-1:30pm

Based on links between partitions induced by CART classification trees and marked point processes, we propose a spatial variant of CART method, SpatCART, focusing on the two populations case. While usual CART tree considers marginal distribution of the response variable at each node, we propose to take into account the spatial location of the observations. We introduce a dissimilarity index based on Ripley's intertype K-function quantifying the interaction between two populations. This index used for the growing step of the CART strategy, leads to a heterogeneity function consistent with the original CART algorithm. The proposed procedure is implemented, illustrated on classical examples and compared to direct competitors. SpatCART is finally applied to a tropical forest example.

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Labex MME-DII
Modèles Mathématiques et Économiques de la
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Prof. Avner BAR-HEN

Chair of Statistics and Mass Data CNAM

Avner BAR-HEN is Professor of Statistics at CNAM, holder of the Chair of Statistics and Mass Data of CNAM. He is also director of the Data Mining and Learning Statistics Methods Team (MSDMA) of CNAM. His research activities combine theoretical and practical contributions and are mostly devoted to spatial data analysis. He is a member of the Scientific Council of the High Council of biotechnology. He was previously a member of the High Council of Public Health and President from 2008 to 2011 of the French Statistical Society.



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