



ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ

ΤΜΗΜΑ ΜΑΘΗΜΑΤΙΚΩΝ



Εβδομαδιαίο Σεμινάριο

# UNIVARIATE SELF-STARTING SHIRYAEV ( $U_3S$ ): A BAYESIAN ONLINE CHANGE POINT MODEL FOR SHORT RUNS

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*Τμήμα Μαθηματικών, Πανεπιστήμιο Ιωαννίνων*

In this work, we propose a self-starting Bayesian change point detection scheme, which does not require any preliminary parameter estimate. The detection rule is based on the cumulative posterior probability that a change point has been occurred. We will focus our attention on univariate Normal data, aiming to detect persistent shifts for the mean or the variance. The proposed methodology is a generalization of Shiryaev's process, as it allows both the parameters and shift magnitude to be unknown. Furthermore, the Shiryaev's assumption that the prior probability on the location of the change point is constant will be relaxed. Posterior inference for the unknown parameters and the location of a (potential) change point will be provided.

Τετάρτη 13 Απριλίου 2022, 18:00

Αίθουσα 001 Τμήματος Μαθηματικών

Μετά την ομιλία ακολουθεί καφές και συζήτηση στο εντευκτήριο του Τμήματος