



ΠΡΟΣΚΛΗΣΗ ΣΕ ΔΙΑΛΕΞΗ

Την Τρίτη 02/06/2015 στις 12:00 με θα πραγματοποιηθεί διάλεξη στην Αίθουσα 335, στον 3^ο όροφο του Κεντρικού Κτηρίου του Πανεπιστημίου Πειραιώς, με ομιλητή τον Καθηγητή Philippe CASTAGLIOLA, Université de Nantes, Γαλλία, με θέμα:

«ZERO-INFLATED PROCESSES: ESTIMATED PARAMETER CASE AND EXTENSIONS»

Abstract

Zero-inflated probability models like the ZIP (Zero-Inflated Poisson) or the ZIB (Zero-Inflated Binomial) are used to model count data that have an excessive number of zeros. Shewhart-type control charts have been proposed for the monitoring of zero-inflated processes. Usually their performance is evaluated under the assumption of known process parameters. However, in practice, their values are rarely known and they have to be estimated from an in-control historical Phase I sample. In this talk, we investigate the performance of Shewhart-type control charts for zero-inflated processes with estimated parameters and propose practical guidelines for the statistical design of the examined charts, when the size of the preliminary sample is predetermined. In this talk, we also propose and study general inflated probability distributions that can be used for modeling and monitoring unusual count data. The considered models extend the well-known ZIP distribution since they allow the excess of values, other than zero. Four simple upper-sided control schemes are considered for the monitoring of count data based on the proposed general inflated Poisson distributions and their performance is evaluated under various out-of-control situations. The usefulness of the considered models and techniques is illustrated via two real-data examples, while practical guidelines are provided as well.