

## ISMMA

### « INSTITUTUL DE STATISTICA MATEMATICA SI MATEMATICA APLICATA al ACADEMIEI ROMANE »



SOCIEDATEA DE PROBABILITĂȚI  
ȘI STATISTICĂ DIN ROMÂNIA

### *SEMINAR de « TEORIA PROBABILITATILOR, STATISTICA si APLICATII »*

MARTI 18 FEBRUARIE 2020, ora 11:00

**Cristian Preda (Universite de Lille, France)**

### «Categorical functional data analysis : the cfda R package»

**Abstract:** Functional data analysis deals with curves representing some real random variable observed continuously over time. In this presentation, we consider that the observed variable is categorical. After a review of literature, we present some basic descriptive statistics, the optimal encoding (a similar property as Karhunen-Loeve expansion) and regression with this kind of data. The R package "cfda" implements these statistics aspects and some applications on medical data are presented.

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