



Roma, 22 gennaio 2025

AVVISO DI SEMINARIO

Dipartimento di Metodi e Modelli per l'Economia, il Territorio e la Finanza  
Facoltà di Economia, Sapienza Università di Roma

**giovedì 6 febbraio 2025**  
**Ore 12.30, Aula Di Fresco - IV piano**

Il prof. Stefano Favaro, Università degli Studi di Torino e Collegio Carlo Alberto, terrà un seminario dal titolo

**Quasi-Bayes empirical Bayes:  
a sequential approach to the Poisson compound decision problem.**

Abstract. The Poisson compound decision problem is a classical problem in statistics, for which parametric and nonparametric empirical Bayes methodologies are available to estimate Poisson's means in static or batch domains. We study the Poisson compound decision problem in a streaming or online domain, where a timely analysis can enhance decision-making and responsiveness to new information, especially for data arriving at high-velocity. By relying on a quasi-Bayesian sequential (learning) model for the data, often referred to as Newton's algorithm, we obtain sequential Poisson's mean estimates that are of easy evaluation, computationally efficient and with a constant computational cost as data increase, which is desirable for streaming data. Large sample asymptotic properties of the proposed estimates are investigated, also providing frequentist guarantees in terms of a regret analysis. We validate empirically our methodology, both on synthetic and real data, comparing against the most popular alternatives.

Joint work with Sandra Fortini (Bocconi University).

Tutti gli interessati sono invitati a partecipare.

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