ΟΙΚΟΝΟΜΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

ΣΧΟΛΗ ΕΠΙΣΤΗΜΩΝ & ΤΕΧΝΟΛΟΓΙΑΣ ΤΗΣ ΠΛΗΡΟΦΟΡΙΑΣ
SCHOOL OF INFORMATION SCIENCES & TECHNOLOGY

ΤΜΗΜΑ ΣΤΑΤΙΣΤΙΚΗΣ
DEPARTMENT OF STATISTICS

ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ ΣΤΑΤΙΣΤΙΚΗΣ ΣΕΠΤΕΜΒΡΙΟΣ 2022

Nikolaos Ignatiadis

Columbia University, Department of Statistics

Confidence Intervals for Nonparametric Empirical Bayes Analysis

Παρασκευή 7/10/2022, 14:00

Teams Meeting Link

ΠΕΡΙΛΗΨΗ

In an empirical Bayes analysis, we use data from repeated sampling to imitate inferences made by an oracle Bayesian with extensive knowledge of the data-generating distribution. Existing results provide a comprehensive characterization of when and why empirical Bayes point estimates accurately recover oracle Bayes behavior. In this work, we construct flexible and practical nonparametric confidence intervals that provide asymptotic frequentist coverage of empirical Bayes estimands, such as the posterior mean and the local false sign rate. From a methodological perspective we build upon results on affine minimax estimation, and our coverage statements hold even when estimands are only partially identified or when empirical Bayes point estimates converge very slowly.

This is joint work with Stefan Wager.

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AUEB STATISTICS SEMINAR SERIES SEPTEMBER 2022

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ABSTRACT

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