



THE UNIVERSITY OF
CHICAGO

DEPARTMENT OF STATISTICS

Master's Thesis Presentation

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“FDR Control in ep-BH Procedure with Dependent P-values
and E-values”

Tuesday, April 23, 2024, at 2:30 PM, **via Zoom**
Zoom information provided in email announcement.

Abstract

In this project, the focus is on an enhanced multiple testing approach named ep-BH, which integrates both p-values and e-values for each hypothesis within the Benjamini-Hochberg Procedure (BH) framework. This work extends beyond prior studies by investigating the potential dependencies between p-values and e-values, offering solid theoretical evidence that demonstrates the maintenance of False Discovery Rate (FDR) control under specific conditions. Additionally, through numerical experiments, this research illustrates the ep-BH procedure's ability to enhance power while verifying the validity of the dependence assumptions and the FDR control.