THE UNIVERSITY OF CHICAGO | DEPARTMENT OF STATISTICS

MASTER'S THESIS PRESENTATION

JUNGHO LEE
Department of Statistics
The University of Chicago

Extending Summability to Matrices

THURSDAY, February 16, 2023, at 3:30 PM
Zoom Meeting

ABSTRACT

Summability methods can assign a \emph{sum} to a series that is not convergent in the usual sense. Of central interest in applied mathematics are regular summability methods that sum every convergent series to their ordinary sum. In this paper, we extend regular summability methods from $\C$ to $\C^{m \times m}$ and establish their regularity in operator norm. As an example application, we show how the extended (E,q) and Borel methods give an analytic continuation of the Neumann series and further discuss other potential applications.