



DISTINGUISHED LECTURE

MULTIPLIER PROCESSES IN STATISTICS: A NEW MULTIPLIER INEQUALITY AND IMPLICATIONS



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Date: 26 March 2019 (Tuesday)

Time: 2:30 pm – 3:30 pm

Venue: Room SC L2, Science Centre,
The Chinese University of Hong Kong
(Tea reception after the talk)

Abstract

Multiplier empirical processes have proved to be one of the key unifying themes in modern empirical process theory, with statistical applications including basic symmetrization methods, bootstrap and resampling theory, and analysis of empirical risk minimization procedures. At the heart of the theory of these multiplier processes, a collection of multiplier inequalities provide the basic tools which drive the theoretical developments.

In this talk I will review some of the basic multiplier empirical processes, and explain their importance for a variety of problems in statistics. I will briefly compare several multiplier inequalities old and new, and then focus on application of a new multiplier inequality, and discuss one particular statistical application concerning convergence rates of least squares estimators (LSE) in regression models with possibly “heavy-tailed” errors. Particular cases involving sparse linear regression, shape restrictions, and finite sampling empirical processes will be mentioned briefly.

(This talk is based on the University of Washington Ph.D. work of Qiyang (Roy) Han.)

★★★★★ All are welcome ★★★★★

For enquiries please contact Miss Esther TAM (Tel: 3943 7931)
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