香港中文大學統計學系
Department of Statistics
THE CHINESE UNIVERSITY OF HONG KONG

DISTINGUISHED LECTURE

Optimal Sparse Regression Learning and Model Compression

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School of Statistics
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Fellow of Institute of Mathematical Statistics, 2010
NSF CAREER Award 2001
ISU LAS 2002 Award for Early Excellence in Research
** He is in the list of top 2% of the world's most cited scientists by Stanford University*

Date: 30 May 2023 (Tuesday)
Time: 2:30 pm — 3:30 pm
Venue: LT3, Lady Shaw Building,
The Chinese University of Hong Kong

Abstract

Minimax-rate optimality plays a foundational role in theory of statistical/machine learning. In the context of regression, some key questions are: i) What determines the minimax-rate of convergence for regression estimation? ii) Is it possible to construct estimators that are simultaneously minimax optimal for a countable list of function classes? iii) In high-dimensional linear regression, how does different kinds of sparsity affect the rate of convergence? iv) How do we know if a pre-trained deep neural network model is compressible? If so, by how much?

In this talk, we will address the above questions. After reviewing on the determination of minimax rate of convergence, we will present on minimax optimal adaptive estimation for high-dimensional regression learning under both hard and soft sparsity setups, taking advantage of sharp sparse linear approximation bounds. An application on model compression in neural network learning will be given.

☆☆☆☆☆ All are welcome ☆☆☆☆☆

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