

**The Hong Kong Polytechnic University  
Department of Applied Mathematics**

**Seminar**

**Statistical Learning by Stochastic Gradient Descent**

**By**

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**Abstract**

Stochastic gradient descent (SGD) has become the workhorse behind many machine learning problems. Optimization and estimation errors are two contradictory factors responsible for the prediction behavior of SGD. In this talk, we report our generalization analysis of SGD by considering simultaneously the optimization and estimation errors. We remove some restrictive assumptions in the literature and significantly improve the existing generalization bounds. Our results help to understand how to stop SGD early to get a best generalization performance.

**Date : 15 May, 2020 (Friday)**

**Time : 16:00-17:00**

**Venue: Online Talk via Zoom**

**\* The Talk will be given in English.**

**\*\*\* ALL ARE WELCOME \*\*\***

For enrolment, please send your name and email (zoom's account) to [chingching.lu@polyu.edu.hk](mailto:chingching.lu@polyu.edu.hk) on or before 14 May 2020, Thursday.