

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

Optimization and Machine Learning Seminar

Learning Theory of Stochastic Gradient Methods

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Abstract

Stochastic gradient methods (SGM) have become the workhorse behind many machine learning problems. An important problem regarding SGM is how the models produced by SGM would generalize to testing examples. In this talk, I will present our recent results on the generalization analysis of SGM from the perspective of algorithmic stability. We introduce a new algorithmic stability concept to relax the existing restrictive assumptions and to improve the existing generalization bounds. Our results show how the implicit regularization can be achieved by tuning the step size and the number of passes.

Date:	March 28, 2023 (Tuesday)
Time:	4:30 - 5:30pm (Hong Kong Time)
Venue:	Room 210, Run Run Shaw Bldg., HKU

All are welcome