



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PHD STUDENT SEMINAR

**Bidirectional Generative Modeling Using
Adversarial Gradient Estimation**

By

Ms. Xinwei SHEN

Abstract

We consider the general f -divergence formulation of bidirectional generative modeling, which includes VAE and BiGAN as special cases. We present a new optimization method for this formulation, where the gradient is computed using an adversarially learned discriminator. In our framework, we show that different divergences induce similar algorithms in terms of gradient evaluation, except with different scaling. Therefore this paper gives a general recipe for a class of principled f -divergence based generative modeling methods. Theoretical justifications and extensive empirical studies are provided to demonstrate the advantage of our approach over existing methods.

Date : 15 May 2020 (Friday)

Time : 10:30am – 11:30am

Zoom Meeting : <https://hkust.zoom.com.cn/j/96396217133>

All are Welcome!