

Speaker: Sinho CHHEWI

Title: Theory for diffusion models

Abstract: Diffusion models are a family of generative models which are based on learning the score function (typically via deep learning) along a stochastic process. Although it is currently unclear how well the score functions can be learned, we can at least build a theory for how well these models can generate samples given accurate score estimates. I will discuss theoretical guarantees for the stochastic implementation of diffusion models, as well as for the more challenging deterministic implementation (the probability flow ODE) and for a predictor-corrector framework.