

國立清華大學數學系學術演講

NTHU MATH Colloquium

- 講題 Iteration complexity of expectation maximization in Poisson inverse problems
- 講者 李彥寰 合聘教授 (國立臺灣大學資訊工程學系與應用數學科學研究所)
- 時間 2020.10.12 (Mon.) 16:00 – 17:00
- 地點 Room 101, General Building III
- 茶會 15:30, R707

Abstract

Poisson inverse problems arise in many real-world applications, such as positron emission tomography and astronomical image deblurring. Expectation maximization (EM) is a standard---and perhaps the most popular---approach to solving a Poisson inverse problem. Vardi et al. proved EM asymptotically converges more than three decades ago; however, it was unclear how fast EM converges. In this talk, I will present a simple non-asymptotic convergence guarantee for EM. Our analysis exploits an interesting connection between EM and a portfolio selection method due to Cover.