

Joint CQSE and CASTS Seminar

2020
Apr. 17, Friday

TIME Apr. 17, 2020, 2:30~3:30pm
TITLE Optimization issues in maximum-likelihood quantum state tomography.
SPEAKER Prof. Yen-Huan Li (Dept. of Computer Science and Information Engineering, NTU)
PLACE Rm716, CCMS & New Physics Building, NTU

Abstract

Maximum-likelihood (ML) estimation is a popular approach to quantum state tomography (QST) in practice. To obtain an estimate of the unknown quantum state, the ML approach requires one to solve an optimization problem. The optimization problem is indeed convex but violates standard assumptions in optimization literature. Therefore, existing convex optimization methods either lack convergence guarantees or converge very slowly for ML QST. In this talk, I will introduce some recent advances towards reliable and efficient ML QST and address the relationship between ML QST and some classical problems in machine learning theory.

- ▲防疫期間僅限本校人員參與 Open for members of National Taiwan University.
- ▲拒絕有發燒或呼吸道症狀者入場 Individuals with fever or respiratory symptoms are prohibited from participating in the event.
- ▲全員須全程戴口罩並與鄰座參與者保持間隔 Both faculty members and participants are required to wear sanitary masks all the time and keep gaps between each other.
- ▲場地備有酒精供雙手消毒使用 We provide alcohol sanitizer to keep your hands clean.

