Generalization Guarantees for Data-Driven Mechanism Design

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—— Abstract ——
Many mechanisms including pricing mechanisms and auctions typically come with a variety of tunable parameters which impact significantly their desired performance guarantees. Data-driven mechanism design is a powerful approach for designing mechanisms, where these parameters are tuned via machine learning based on data. In this talk I will discuss how techniques from machine learning theory can be adapted and extended to analyze generalization guarantees of data-driven mechanism design.