ASHWIN NAYAK, University of Waterloo
Optimal lower bounds for Quantum Learning via Information Theory

We revisit two problems in learning theory, in which the goal is to learn some property given copies ("samples") of the same quantum state. We derive optimal lower bounds on the number of samples required to solve these problems, using a combination of algebraic and information-theoretic techniques. The resulting proofs are both simpler and shorter than those given before.

(Based on work with Shima Bab Hadiashar and Pulkit Sinha.)