

Differential Privacy and Mechanism Design

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ABSTRACT

Differential privacy is a mathematical model for data privacy that has been the subject of a large body of work in theoretical computer science over the past decade. While its main motivation comes from the analysis of privacy-sensitive datasets, differential privacy also has interesting applications to mechanism design. In particular, it suggests an approach to modeling the privacy concerns of economic agents and designing mechanisms that are incentive-compatible for such agents.

This Privacy Workshop talk will partly be a general survey of the connections between differential privacy and mechanism design, and will partly describe the paper “Truthful mechanisms for agents that value privacy” (joint work with Yiling Chen, Stephen Chong, Ian Kash, and Tal Moran, available at <http://arxiv.org/abs/1111.5472>).