



Karlstad Applied Analysis Seminar (2024)

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Location privacy and random walk.

Abstract

By constructing a super-regular random walk, we design a special noise to be added to each individual's location (e.g., mobile phone location) in order to protect the privacy of each individual when these locations are being sold to other companies. Here we adopt the rigorous notion of differential privacy which we will briefly introduce. This amount of noise added is optimal, up to a log factor, under the constraint of differential privacy.