

KEVIN ZOLLMAN

Bandit Problems, Social Networks, and Bounded Rationality

Although initially developed in statistics, bandit problems have been employed in wide array of fields to model everything from consumer choice to foraging behavior in animals. Learners in these problems are confronted with the difficult problem of balancing an interest in learning against an interest in exploiting the information they currently possess. Because optimal behavior in these circumstances is difficult to calculate, there has been increasing interest in considering the performance of various boundedly rational learning rules in these tasks. Traditional methods consider a single learner confronted with a bandit problem. More recent research in economics and philosophy has considered how communities of individuals fare in these problems, and what the effect of different social networks might have on the overall effectiveness of those groups. This talk will survey a number of recent results in this area.