DEPARTMENT OF MATHEMATICAL SCIENCES

Financial Math Seminar

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Rational inattention and dynamic discrete choice

Abstract: We adopt the posterior-based approach to study dynamic discrete choice problems with rational inattention. We show that the optimal solution for the Shannon entropy case is characterized by a system of equations that resembles the dynamic logit rule. We propose an efficient algorithm to solve this system and apply our model to explain phenomena such as status quo bias, confirmation bias, and belief polarization. We also study the dynamics of consideration sets. Unlike the choice-based approach, our approach applies to general uniformly posterior-separable information cost functions. A key condition for our approach to work in dynamic models is the convexity of the difference between the discounted (generalized) entropy of the prior beliefs about the future states and the entropy of the current posterior.

This is a joint work with Jianjun Miao.

Tuesday, September 10, 2019
Time 4:00pm-5:00pm
Stratton Hall 203