香港中文大學統計學系
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THE CHINESE UNIVERSITY OF HONG KONG

SEMINAR

DEPARTMENT OF STATISTICS
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On time-consistent equilibrium stopping under aggregation of diverse discount rates

INVITED SPEAKER

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TIME

September 08, 2023 (Fri) · 2:30 pm - 3:30 pm

VENUE

LT1 · Lady Shaw Building · CUHK

ABSTRACT

This work studies the central planner's decision making on behalf of a group of members with diverse discount rates. In the context of optimal stopping, we work with a smooth aggregation preference to incorporate all heterogeneous discount rates with an attitude function that reflects the aggregation rule in the same spirit of ambiguity aversion in the smooth ambiguity preference proposed in Klibanoff et al. (2005). The optimal stopping problem renders to be time inconsistent, for which we develop an iterative approach using consistent planning and characterize all time-consistent equilibria as fixed points of an operator in the setting of one-dimensional diffusion processes. We provide some sufficient conditions on both the underlying models and the attitude function such that the smallest equilibrium attains the optimal equilibrium in which the attitude function becomes equivalent to the linear aggregation rule as of diversity neutral. When the sufficient condition of the attitude function is violated, we can illustrate by various examples that the characterization of the optimal equilibrium may differ significantly from some existing results for an individual agent, which now sensitively depends on the attitude function and the diversity distribution of discount rates.