Timing Decisions under Model Uncertainty

Sarah Auster and Christian Kellner

<u>Abstract</u> :

We study the effect of ambiguity on timing decisions. An agent faces a stopping problem with an uncertain stopping payoff and a stochastic deadline. The agent is unsure about the correct model quantifying the uncertainty and seeks to maximize her payoff guarantee over all plausible models. If model uncertainty only concerns the deadline, the DM optimally stops as soon as this is optimal under one of the models. If there is also uncertainty about the stopping payoff, the DM often has incentives to continue at the point in time where she originally intends to stop. To prevent this from happening, a forward-looking agent may then opt to stop prematurely.