CCIT Report No. 312

Death and Discounting

Adam Shwartz

ABSTRACT

Markov Decision Processes with discounted cost are equivalent to processes with a finite, random duration, and hence the discount factor models a (random) time horizon for the life of the process. We elaborate on this idea, but show that an objective function which is a linear combination of several discounted costs (each with a different discount factor) does not, in general, model processes with several time scales, but rather processes with partial information.