Relating Belief Change and Reasoning about Action

The areas of Belief Change and Reasoning about Action are both preoccupied with the notion of change. In Belief Change the concern lies with changes in an agent’s belief state while in Reasoning about Action it is changes in world states. However, on an abstract level these motivating distinctions become somewhat blurred.

In the literature, a distinction is made between two processes: belief revision and belief update. Semantically, they are characterised by different underlying mechanisms. Intuitively, it is argued that the former captures change due to the gathering of new information in a static world about which an agent lacks knowledge. The latter captures change in dynamic worlds.

In this talk we examine the question of whether revision and update are indeed two fundamentally different processes or whether one can be reconciled in terms of the other.