Energy Büchi Problems

Abstract :

We show how to efficiently solve energy Büchi problems in finite weighted automata and in one-clock weighted timed automata. Solving the former problem is our main contribution and is handled by a modified version of Bellman-Ford interleaved with Couvreur's algorithm. The latter problem is handled via a reduction to the former relying on the corner-point abstraction. All our algorithms are implemented in a tool based on TChecker and Spot.

See https://arxiv.org/abs/2205.04392 for the associated paper.