

Abstraction refinement and plan revision for control synthesis under high level specifications



Abstraction-based synthesis



Abstraction procedure



- ▶ Define the **reachable set** for any disturbance $w \in W$: $RS(X, U) = \{f(x, u, w) | x \in X, u \in U, w \in W\}$
- Partition of the state space
- For each partition cell s and control u: compute the reachable set RS(s, {u})
- Obtain a non-deterministic transition system: each pair (s, u) may have several successors



Adaptation of the control problem upon synthesis failure



Simulation results

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