Verification with Reachability Analysis

Hybrid Automata for ADAS Applications

Constant Adaptive Emergency
Cruising Braking

Reachable Sets Computation

Normal Behaviors

Behaviors with
Cybersecurity Threats

Falsification with Dynamic Programming

Falsifying Region Determination

Intersected

Region

Safe Region

Reachable Sets >

dp[i][j]: min. dr

Target

Sets

Dynamic Programming for Cyberattacks

Optimization
Problem

i: moment
j: attack cost