

User

Matlab Core Framework

Backends

URDF

Behavior
Configuration

Hybrid Dynamical System Model

Continuous
Dynamics

Discrete
Dynamics

Symbolic Math
Toolbox

Mathematica
Symbolic Engine

MEX
binaries

Controller

Physical
Constraints

Visualization

System Simulation

Trajectory
Optimization

NLP solvers
e.g., ipopt, fmincon,...

