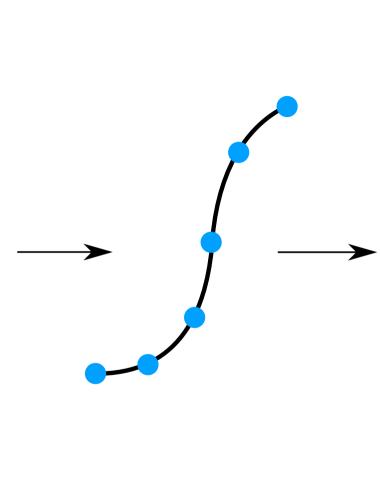
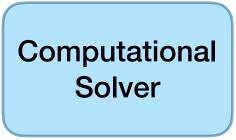


Task of Moving Hip From Sit to Stand In Natural Motion

Representation Suitable for Solvers



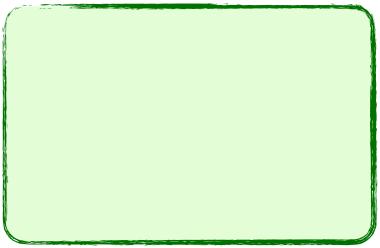
Requires Understanding the task and solver needs



Mechanism Design

Most Prior Research Focused on

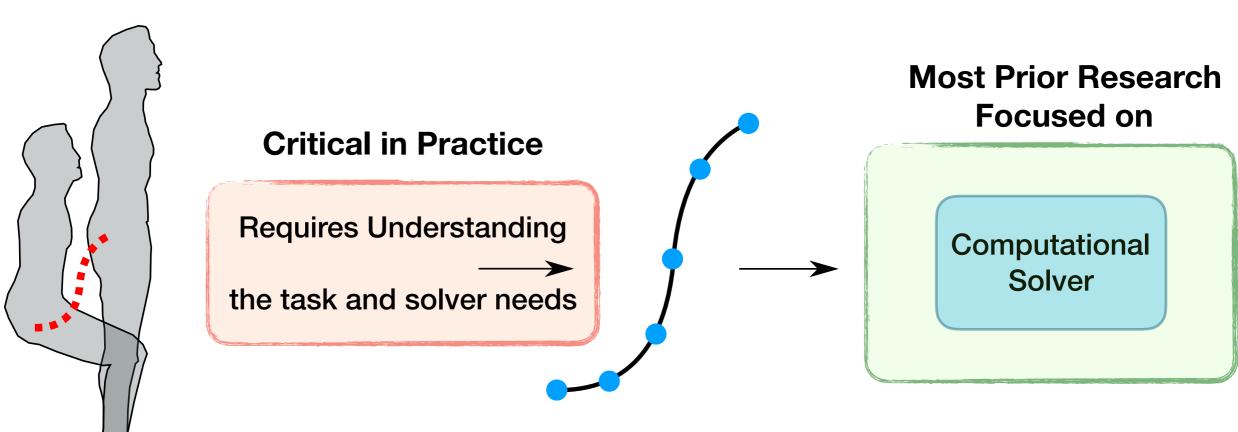
Critical in Practice



1. Precision Points 2. Fourier Curve Fitting* 3. Geometric Constraints

- 1. Global Optimization • Genetic Sim. Annealing PSO
- Homotopy
 Algebraic Fitting

Mechanism Design

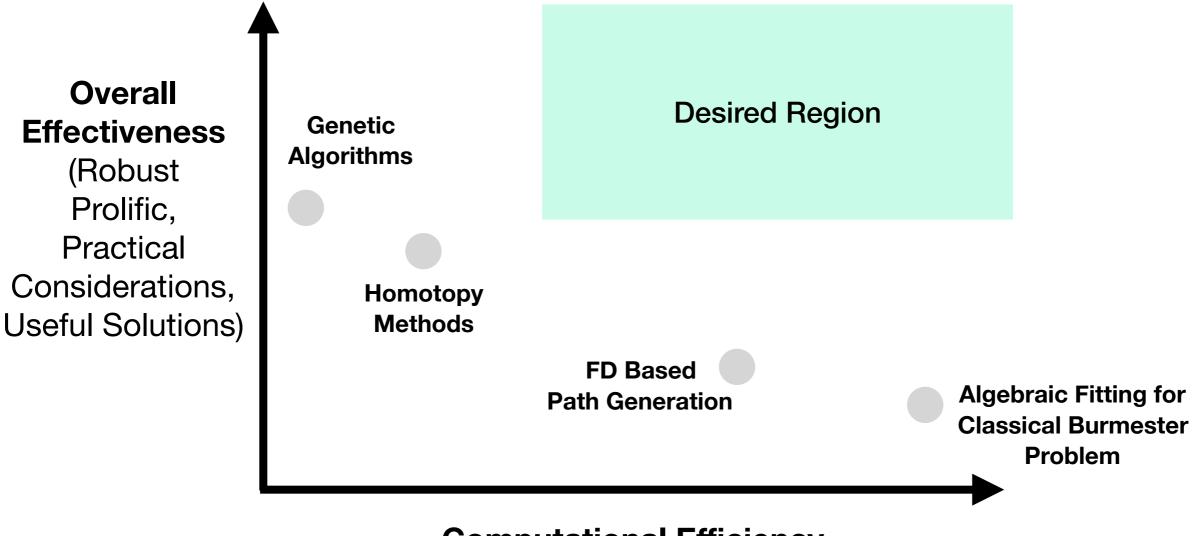


Task of Moving Hip From Sit to Stand In Natural Motion Representation
Suitable for Solvers

- 1. Precision Points
- 2. Fourier Curve Fitting*
- 3. Geometric Constraints

- 1. Global Optimization
 - Genetic
 - Sim. Annealing
 - PSO
- 2. Homotopy
- 3. Algebraic Fitting

Synthesis Frameworks



Computational Efficiency