Inverse Dynamics vs. Forward Dynamics in Direct Transcription Formulations for Trajectory Optimization

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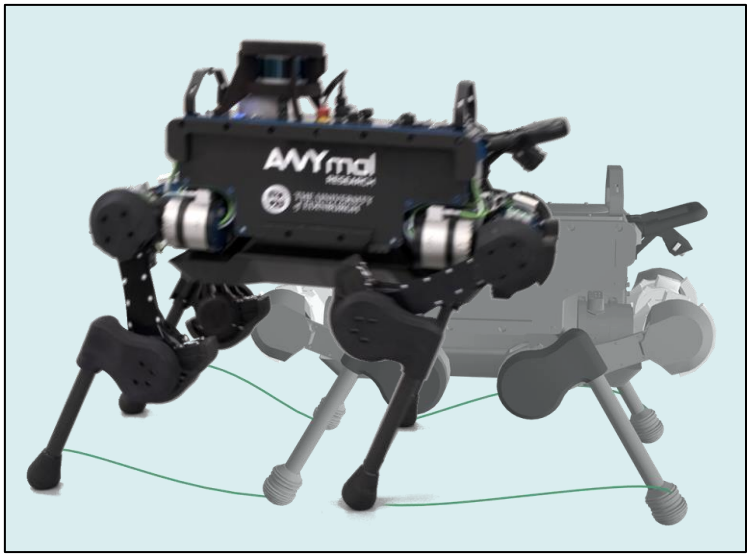
- We compared forward dynamics with inverse dynamics for enforcing physical realism in direct transcription.
- Using inverse dynamics was faster, required less iterations, and was more robust to coarser discretizations.
- Planned trajectories were validated in simulation and hardware experiments.
- We demonstrated dynamic jumps on a quadruped and a full-size humanoid.



‘ANYmal B’ jumping forward.