

Real Results

Torque-limited Simple Pendulum



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Noisy Dynamics

Disturbance amplitude: 2 Nm



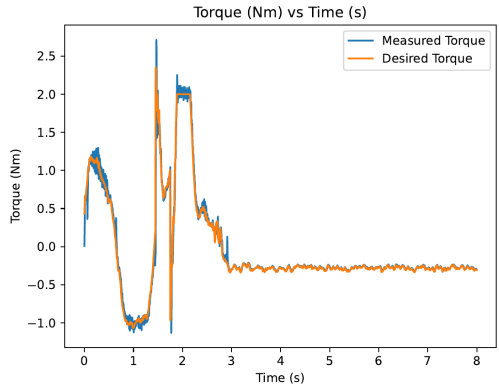
Noisy Dynamics

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Different Initial Conditions

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- Initial condition for TVLQR control:
 $x = [0, 0]$
- Disturbance action:
 $t \in [1.5, 1.7]$
- Result swing-up: Successful

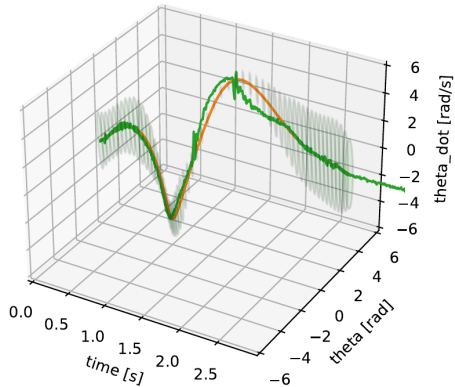


Real Results

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3d resulting Funnel



Disturbance amplitude: 2 Nm



Noisy Dynamics

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Different Initial Conditions

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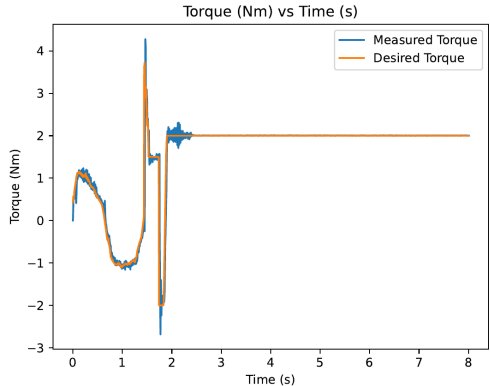


Real Results

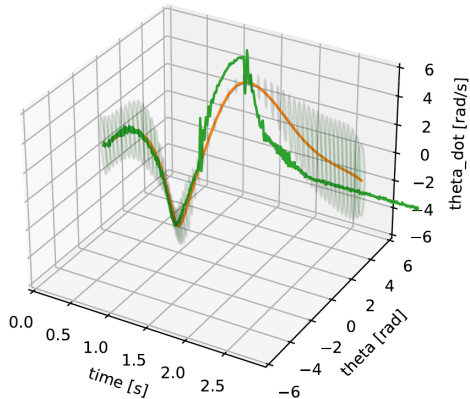
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- Initial condition for TVLQR control:
 $x = [0, 0]$
- Disturbance action:
 $t \in [1.5, 1.7]$
- Result swing-up: Failure
 $x_f = [2.1, 5.5e-03]$



3d resulting Funnel



Disturbance amplitude: 3.5 Nm



Noisy Dynamics

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Different Initial Conditions

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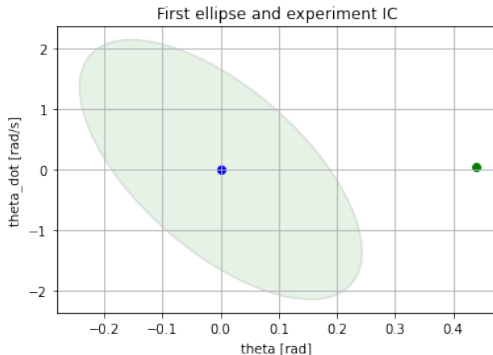
Real Results

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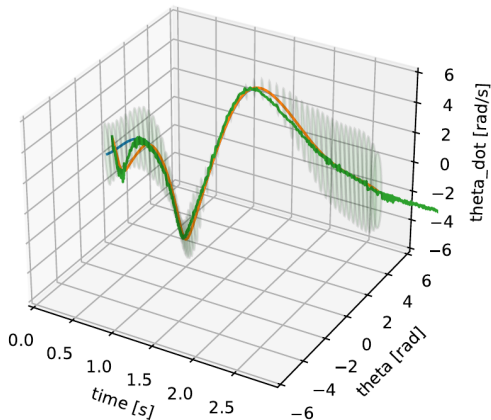
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Different Initial Conditions

- Initial condition for TVLQR control:
 $x = [4.4\text{e-}01, 3.8\text{e-}02]$
- Disturbance action:
None
- Result swing-up: Successful



3d resulting Funnel



IC near $x = [0,0]$



Noisy Dynamics

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Different Initial Conditions

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Real Results

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