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Data-Driven Reference Trajectory Tracking Algorithm and Experimental Validation

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Abstract

This paper proposes a data-driven algorithm that solves the optimization problem. The new data-driven reference trajectory tracking algorithm solves the optimization problem in the framework of model predictive control. It updates the reference input sequence using an expected reference trajectory and operational constraints and employs an interior point method. The advantages of data-driven control and ILC. A case study of the control of a nonlinear servo system is included to validate the proposed algorithm results.

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