

短文

## 目标规划法在预测控制滚动优化及在线辨识中的应用

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摘要

针对有约束多目标多自由度预测控制问题, 应用目标规划方法, 提出了一种既适合于参数模型又适合于非参数模型的在线滚动优化策略, 并且通过计算机仿真研究, 验证了该方法的有效性. 然后, 对于参数模型预测控制问题, 提出了一种抗扰动的最小绝对值辨识算法. 由于该辨识算法可用目标规划快速求解, 因此可作为慢时变工业过程控制的在线辨识算法.

关键词 [有约束多目标多自由度预测控制](#) [在线滚动优化](#) [目标规划法](#) [抗扰动最小绝对值辨识算法](#)

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## Applications of Goal Programming in Receding-Horizon Optimization and Online Identification of Predictive Control

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Abstract

An online receding-horizon optimal strategy for constrained predictive control with multi-goals and multi-degrees of freedom is proposed in terms of goal programming principles, which is adaptable to parameteric predictive control as well as non-parameteric predictive control. The effectiveness and performance of the approach are demonstrated by a computer simulation example. Then, based on the least absolute errors between referential outputs and predictive ones, a disturbance-rejection identification algorithm is presented for parameterized predictive control. Since the identification algorithm can be efficiently solved by employing a goal programming, it is suitable for online identification of slow time-varying industrial process.

Key words [Constrained predictive control with multi-goals and multi-degrees of freedom](#) [online receding-horizon optimization](#) [goal programming](#) [disturbance-rejecting](#) [identification algorithm based on the least absolute error](#)

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