

## عنوان مقاله:

Model Predictive Control Using of Local Model Networks: A Case Study

## محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

Model predictive control (MPC) techniques have been recognized as efficient approaches to improve operating efficiency and profitability. It has become the accepted standard for complex control problems in the process industries as well. And neural networks also have good approximation capability for non-linear systems. In this paper a non-linear predictive controller is presented which combines predictive controllers with a local model network utilizing a neural-network-like gating system. In essence it avoids the time consuming quadratic optimization calculation, which is normally necessary in non-linear predictive control. The method has been applied on a Continuous Stirred Tank Reactor (CSTR) as a case study to be satisfactory both in terms of set point tracking and regulation performance over the entire operating range. Besides, the inherent integration action in the local predictive controller provides zero static offsets.

## کلمات کلیدی:

Model Predictive Control- Local Model Networks- Neural Networks- CSTR

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/46243>

