

## عنوان مقاله:

Robust Speed Control of Induction Machine Using Synergetic Controller

## محل انتشار:

دومین کنفرانس بین المللی مهندسی دانش بنیان و نوآوری (سال: 1394)

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## خلاصه مقاله:

Three-phase induction motor has a high order and complex dynamics which makes the control of its parameters difficult in the presence of disturbance. Synergetic controller has been recently introduced and can be defined in such a way to guarantee the robustness of control system. In this paper, the synergetic control is used to control the speed of a fifth-order induction motor in the presence of load. Five manifolds are defined on five state space variables of induction motor. The goal is for the variables to converge to the desired values. The result shows that the synergetic control is able to control the speed when the load is suddenly applied to the motor. Adjusting the control parameters of the controller reduces the speed of convergence while decreasing the overshoot

## کلمات کلیدی:

Synergetic control; manifold; induction motor; complex dynamics; robustness

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/553303>

