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# 2-DOF and Fuzzy Control Extensions of Symmetrical Optimum Design Method: Applications and Perspectives

- Stefan Preitl
- , Alexandra-Iulia Stînean
- , Radu-Emil Precup
- , Claudia-Adina Dragoş
- , Mircea-Bogdan Rădac

## Abstract

This chapter treats theoretical results concerning the Symmetrical Optimum method (SO-m), linear 2-DOF and fuzzy control extensions, perspectives and applications. The theoretical results are related to the Extended SO-m (ESO-m) and the double parameterization of the SO-m (2p-SO-m) introduced previously by the authors. Digital implementation aspects are given. The applications deal with speed and position control of rapid plants in mechatronic systems with focus on electrical drives with BLDC motors and variable moment of inertia.

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## Author Affiliations

- 1. Department of Automation and Applied Informatics, “Politehnica” University of Timisoara, Bd. V. Parvan 2, RO-300223, Timisoara, Romania

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