

A two step scheme to identification and control

Citation for published version (APA):

Zhu, Y., Driessen, M. H., Damen, A. A. H., & Eykhoff, P. (1989). A two step scheme to identification and control. In *Systems and control : 1989 Benelux meeting, Brussels, Belgium, March 8-10, 1989* (pp. 209). s.n..

Document status and date:

Published: 01/01/1989

Document Version:

Publisher's PDF, also known as Version of Record (includes final page, issue and volume numbers)

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.tue.nl/taverne

Take down policy

If you believe that this document breaches copyright please contact us at:

openaccess@tue.nl

providing details and we will investigate your claim.

A TWO STEP SCHEME TO IDENTIFICATION AND CONTROL

ZHU Yu-Cai, M.H. Driessen, A. Damen and P. Eykhoff

Group Measurement and Control, Department of Electrical Engineering
Eindhoven University of Technology
P.O. Box 513, 5600 MB Eindhoven, the Netherlands

Abstract

If a process in open loop is unstable or nearly unstable, has some nonlinearities or is slightly time-variant, a straightforward approach of direct identification and control based on the estimated dynamics might be very difficult.

Therefore it is proposed to first apply a primary feedback loop, based on rough a priori knowledge for stabilizing the process, for reducing the effects of nonlinearity and/or of time variation. Next the standard identification and control strategy can be applied to the closed loop system.

The paper discusses some theoretical aspects of such an approach, compares it with the direct method and presents case study results.

Reference

Zhu, Y.C. and M.H. Driessen (1988)
A new scheme for identification and control, EUT Report, Department of Electrical Engineering, Eindhoven University of Technology, The Netherlands.