



# Sample article for Modeling, Identification and Control

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## Abstract

This is the abstract. This article contains a sample article file for Modeling, Identification and Control, based on the class file micart.cls.

*Keywords:* Choose three to five representative keywords

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## 1 Introduction

This is a sample article file for Modeling, Identification and Control, illustrating the use of the class file micart.cls. This class file is built upon the class file scrartcl.cls from the KOMA-script bundle, which replaces the standard latex classes (article, book, report), being inspired by european typographical standards.

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## 2 Figures and tables

Figures should be included in Encapsulated postscript (EPS) format or PDF format. Preferably, `includegraphics` from the `graphicx`-package should be used. Figure captions should appear below the figure. Figures (and tables) should be referenced this way, Figure 1.

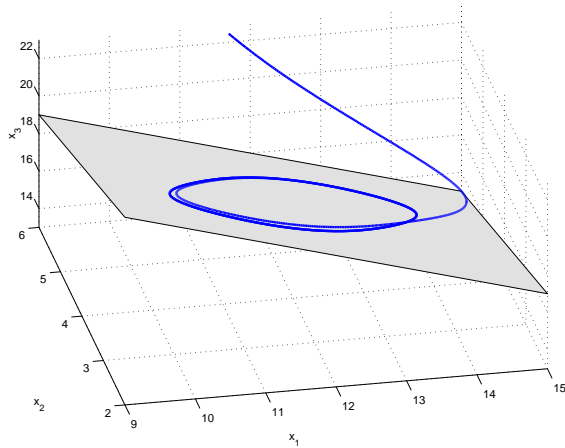


Figure 1: Test figure

For two-column figures or tables, use the star-form of the figure/table environment (such as Table 1). Often, the double column floats can be used in conjunction with the `subfig` package.

Table captions should appear above the table. For better typographical appearance, avoid vertical lines in the table. Table 1 shows an example made using the package `booktabs`.

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## 3 Mathematics and equations

For mathematics, use the package `amsmath` (and `amsymb`). Use the `align-environment` from `amsmath` instead of `eqnarray`,

$$\begin{aligned} f(x) &= e^{-x}, \\ g(y) &= \sin^{-1} y. \end{aligned} \tag{1}$$

Note the punctuation. It is also preferable to use the `align-environment` for one-line equations, instead of the `equation-environment`.

Number those equations which are referred to, such as (1).

One should try to avoid equations that are wider than one column. If unavoidable, use a float as ex-

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$$\tilde{V}(x(\infty), \eta(\infty)) - \tilde{V}(x(t_i), \eta(t_i)) \leq - \int_{t_i}^{\infty} F(x(\tau), u(\tau; \hat{x}_0)) d\tau - \int_{t_i}^{\infty} \kappa \|\eta(\tau)\| d\tau. \tag{2}$$


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Table 1: Test table

Initial condition	Cost				
	Algorithm 1	Algorithm 2	Algorithm 3	Algorithm 4	Algorithm 5 The best one
(-4,0)	832.72	831.72	677.89	609.44	609.39
(-2,.6)	378.24	374.57	234.63	204.46	204.46

plained in the `IEEEtran`<sup>1</sup> documentation, and place it on the bottom of a page (use the package `stfloats`). See (2) (bottom of page).

The equation numbering should still be consecutive, see (3). Note that `amsmath` constructs such as the `multline` environment can be used to avoid too wide equations,

$$\begin{aligned} & \tilde{V}(x(\infty), \eta(\infty)) - \tilde{V}(x(t_i), \eta(t_i)) \\ & \leq - \int_{t_i}^{\infty} F(x(\tau), u(\tau; \hat{x}_0)) d\tau - \int_{t_i}^{\infty} \kappa \|\eta(\tau)\| d\tau. \quad (3) \end{aligned}$$

## 4 Citations

You should use Harvard reference style, for example using the bibliography style file `mic.bst`. Using the package `natbib`, cite either in text as shown in Hovd and Braatz (2004) (using the `\citet`-command), or in parantheses (Hovd and Skogestad, 1992) (using the `\citep`-command). These two first citations are journal and conference citations, one can also have book chapter (Hovd and Skogestad, 2000) or book as in Balchen and Mummé (1988), or other citations.

Hovd, M. and Skogestad, S. Robust control of systems consisting of symmetrically interconnected systems. In *Proc. American Control Conference*. Chicago, Illinois, USA, pages 3021–3025, 1992.

Hovd, M. and Skogestad, S. Techniques in the control of interconnected plants. In C. T. Leondes, editor, *Mechatronic Systems Techniques and Applications. Vol. 5: Diagnostic, Reliability and Control Systems Techniques*, pages 139–200. Gordon and Breach Science Publishers, 2000.

## Acknowledgments

Add, if desired, appropriate acknowledgments here (for example, financing or any other help).

## References

- Balchen, J. G. and Mummé, K. I. *Process Control – Structures and Applications*. van Nostrand Reinhold, 1988.
- Hovd, M. and Braatz, R. D. Handling state and output constraints in MPC using time-dependent weights. *Modeling, Identification and Control*, 2004. 25(2):67–84.

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<sup>1</sup>Can be found on <http://www.ctan.org/>.