

## AVVISO DI SEMINARIO

# **From data to design: identification of models and robust controller synthesis**

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30 Maggio 2000

Ore 15.00, Aula 1A

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### Abstract

The bridge to gap between identification and control is the model uncertainty, which will be addressed by a robust controller. After identification, we are typically left with a nominal model and a real parametric uncertainty, bounded by an ellipsoid (using for example the unknown-but-bounded approach for a linear parametrization of orthonormal basis functions as model class). Recent works by Bombois and Gevers study validation issues for a given controller. We apply robustness results on real parametric uncertainties (Rantzer and Megretski, IEEE TAC 1994) in order to obtain a robust controller fulfilling some additional (nominal) performance requirements. Due to a certain gap between performance and robustness requirements, the problem might not have a solution. Our framework, however, allows to examine this gap in relation to the quality of the estimated model.

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Web: <http://www-dii.dii.unisi.it/control/events/events.html>