

Modeling and Analysis of Continuous Linear Systems

Introducing

Description

This course introduces the notion of state-space representation of dynamic systems. The link with other models (transfer function, differential equation) is particularly discussed, as is how to obtain a model by linearization. Several representation bases are discussed: modal forms, control companion and observation companion. We then look at how to analyze a linear time-invariant system in terms of time response and stability properties.

Objectives

This module focuses on the representation and analysis of continuous linear dynamic systems using the state-space formalism. Students will learn how to change the representation basis, analyze stability and calculate the time response of a linear time-invariant system.

Necessary prerequisites

- Course of 2nd year IMACS « Systèmes bouclés »

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse