

# Automatic Tutorials



## Component

École Nationale  
Supérieure  
d'Électrotechnique  
d'Électronique  
d'Informatique  
d'Hydraulique  
et des  
Télécommunications

## In brief

- > **Ametys Code:** N7EE05D
- > **Open to exchange students:** Yes

## Presentation

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### Objectives

Be able to

solve practical problems involving linear, continuous, or discrete control, through simulation or experimentation

identify the parameters that have the greatest influence on a system

analyze performance and deviations from theory or predetermined values

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### Description

I Position Control

Study of several continuous correction structures (in p), performance and robustness analysis

II Study of control structures (double PI or PID)

III Identification and position control of a motorized butterfly valve

## IV Study of Sampled Systems

GUI – Matlab/Simulink – Analysis and Discrete Correctors (in z)

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### Pre-requisites

Closed-loop system analysis methods

Continuous or discrete PID controller synthesis methods

Influence of the sampling period

Strong signal identification methods