

Robotics: Modeling and Control



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- **Amety's Code:** N9EE19C
- **Open to exchange students:** Yes

Presentation

Objectives

Understand the different modeling elements for controlling robotic structures

Description

Homogeneous 3D coordinate transformation matrices for mobile robots or manipulators

Kinematic and dynamic models for control

Conventional, dynamic, and hybrid position-force control structures

BE: implementation of modeling and control blocks in Matlab-Simulink

Pre-requisites

Point mechanics. Linear algebra (vector and matrix). Control architecture.