Automatic Tutorials

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

In brief

- **Ametys Code:** N8EE16D
- **Open to exchange students:** Yes

Presentation

Objectives

· Understand the fundamental concepts and terminology of Petri nets.

· Identify and model discrete event systems

· Analyse the structural and behavioural properties of Petri nets.

· Understand the limitations of the classical model and the principle of extensions

· Learn how to use graphical modelling, editing and analysis software such as TINA with application to concurrent and distributed systems

Description

This course examines Petri nets used to solve problems in concurrent and distributed systems, where multiple processes or events occur simultaneously and interact in complex ways. They enable the modelling and analysis of scenarios such as task

synchronisation, shared resource management, deadlock detection, and the verification of safety and liveness properties in dynamic and unpredictable environments.

Pre-requisites

- Linear algebra
- Graphs