

Research Internship

Development of a simulator for human-robot interaction



Context:

LINEACT¹ research laboratory, from CESI² institute, is actually developing research works on theme of “Engineering and digital tools”. Two main applications are considered: “city of the future” and “industry of the future”.

In the context of the “industry of the future” application, research works that aim to develop autonomous robot platform allowing human and robots to work conjointly in a same work environment, are in progress.

Mission:

Goal of this work is to set up and configure a simulator allowing the simulation of robot behaviors in a defined environment.

This work should start with a state of the art that list and compare the existing or actually used simulators.

The simulator should contain a 3D representation of a common human-robot environment. The simulator should allow studying different possibilities of human-robot interaction in the environment.

Skills:

A 4th year student, with major in Computer Science, Embedded Development and/or Robotics is required.

Pre-requisites:

- Good skills in programming.
- Preferably experience with robot programming.
- Self-motivated, accurate and well organized student.
- Working language is English. Basic knowledge of French is advantageous.

Location: CESI - LINEACT Toulouse

Duration: 6 months

Starting date: January 2018

Scientific supervisor: Madeleine EL ZAHER

¹ <https://recherche.cesi.fr/>

² <http://www.cesi.fr/>