ANA LUCIA CRUZ RUIZ

R&D Robotics Engineer

PROFILE

Robotics R&D engineer interested in the development of smart motion control solutions for industrial and service robots.

SKILLS

- Machine learning
- Robot control algorithms
- Robot kinematic and dynamic analysis
- Programming:
  - MATLAB
  - Python
  - C++
- Dynamic simulations:
  - Simulink
  - V-rep
- Mechanical design:
  - Autodesk Inventor
  - CATIA

LANGUAGES

- English (Bilingual - C2)
- Spanish (Native)
- French (Advanced - C1)
- Italian (Intermediate - B2)

AWARDS

Fondation Centrale Scholarship
Speech at Les Invalides, Paris

INTERESTS

- Robot control
- Popularization of technology among the general public
- Planification of interactive robotics workshops for children
- Playing piano (classical, pop/rock)

CONTACT

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France

EDUCATION

PhD in Mechanics
INRIA, ENS Rennes, France 2013-2016

Master's degree in Control Engineering, Robotics and Applied Informatics – Focus: Advanced Robotics
École Centrale de Nantes, France 2011-2013

Bachelor's degree in Mechatronics
Universidad Tecnológica Centroamericana 2007-2011

PROFESSIONAL EXPERIENCE

Robotics R&D engineer (Internship)
IRCCyN // France // 2013 (6 months)

Development of software tools to automate the design and analysis of robots (cable-driven robots for different industrial tasks) by using new performance evaluation criteria.

Mechatronics engineer
3D Solutions // Honduras // 2010 (6 months)

Design of 3D models of plastic products according to client specifications. Assistant in the manufacturing of aluminum molds for the fabrication of plastic products.

PROJECTS

Machine learning based control strategies for a redundant virtual arm
(MATLAB, Simulink, SimMechanics, V-rep, C++)

Automation of industrial task with stäubli RX90/PUMA robots
(V+, Val II)

Toolbox: Simulation of the kinematics and sensors of mobile robots
(MATLAB, Simulink)

ARACHNIS: A GUI for the design of cable-driven parallel robots
(MATLAB)

Design of a 3-DoF planar parallel robot
(MATLAB, CATIA)

PRESENTATIONS

Speaker at the "International Girls in ICT Day Event"
Inter. Telecommunications Union // Honduras // 2016

Speaker at an event by IEEE/WIE (Women in Engineering)
WIE, UNITEC // Honduras // 2016

Speaker at the event "Just like robotics, you have a great future"
École centrale de Nantes// France // 2016