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

- Robot kinematic and dynamic analysis
- Machine learning
- Robot control algorithms
- 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)

INTERESTS

- 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

Mechanical designer of parallel robots (Internship)

IRCCyN // France // 2013 (6 months)

Development of a graphical user interface to automate the design and analysis of cable-driven robots for different industrial tasks.

Mechanical designer and manufacturing assistant

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

Design of 3D models of plastic products according to client specifications. Assistant in the manufacturing of aluminum moulds 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)