

Jose Sanchez

Curriculum Vitae

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WORK EXPERIENCE

04.2015 Research assistant
12.2015 Hochschule Bonn-Rhein-Sieg, Germany

I worked on a research project, titled [AICISS](#), which focuses on robust localization and navigation for mobile robots in crowded environments. One of the aims of the project is to perform fault diagnosis remotely. Afterwards I joined the [RoCKIn](#) project, an EU-funded project focusing in innovating robotics through competitions.

03.2014 Teaching Assistant
08.2014 Hochschule Bonn-Rhein-Sieg, Germany

Writing and grading assignments on the following subjects covering topics such as kinematics, linear algebra, signal processing and optimization.

01.2011 Process Engineer
08.2012 Rockwell Collins, Mexico

During my employment I oversaw the transition of various product lines from a US facility to a Mexican facility, reviewed technical drawings and designed plant layouts to accommodate the new products.

SOFTWARE SKILLS

ADVANCED Python, ROS

INTERMEDIATE Linux, Git, \LaTeX , MoveIt!

BASIC C++, JavaScript, MATLAB, Bash

HARDWARE EXPERIENCE

ROBOTS KUKA LWR4, KUKA youBot, Schunk SDH-2, Shadow Dexterous Hand

SENSORS BioTac, Weiss robotics WTS, ATI force/torque sensor, Hokuyo laser, Microsoft Kinect

LANGUAGES

NATIVE/FLUENT Spanish, English

ADVANCED German

INTERMEDIATE French

EDUCATION

02.2016 PhD in Robotics
05.2019 Université Blaise Pascal, France

My topic focused on the manipulation of deformable objects using the Shadow hand robot equipped with BioTac sensors.
Supervisors: Prof. Youcef Mezouar, Juan Antonio Corrales Ramón and Chedli Bouzgarrou.

03.2015 Master of Autonomous Systems
09.2012 Hochschule Bonn-Rhein-Sieg, Germany
(Grade 1.3/1.0)

The [program](#) is offered by the Computer Science faculty with a focus on robotics. Master's thesis title: 'Robust and Safe Manipulation by Sensor Fusion of Robotic Manipulators and End-Effectors'.

08.2010 Exchange program
08.2009 Technische Universität Ilmenau, Germany

DAAD scholarship awarded to study abroad two semesters of a Bachelor's degree in Mechatronics.

09.2005 Mechatronics Engineering
12.2010 Universidad Autónoma de Baja California, Mexico
(Grade 92/100)

Five-year program in Mechatronics Engineering.

EXTRACURRICULAR ACTIVITIES

07.2015 3rd place in RoboCup@Work world championship 2015 in Hefei, China (as team leader).

08.2014 2nd place in RoboCup@Work world championship 2014 in Joao Pessoa, Brazil.

06.2013 Participation in RoboCup@Home world championship 2013 in Eindhoven, Netherlands.

For the @Home competition, our team had a Care-O-bot 3 with a KUKA LWR4 arm and the Schunk SDH-2 hand; while the @Work competition had a KUKA youBot. On both robots I have focused on developing code to improve their manipulation and grasping capabilities.

RESEARCH INTERESTS

Robot manipulation, in particular grasping and contact interactions; as well as robot learning, e.g. reinforcement learning and learning from demonstration.

PUBLICATIONS

- 2018 Online Shape Tracking based on Tactile Sensing and Deformation Modeling for Robot Manipulation
Sanchez, Jose, Carlos M. Mateo, Juan-Antonio Corrales Ramón, Belhassen-Chedli Bouzgarrou, and Youcef Mezouar.
IEEE/RSJ International Conference on Intelligent Robots and Systems (accepted)
- 2018 Force-Torque Sensor Disturbance Observer using Deep Learning
Mohy El Dine*, Kamal, **Jose Sanchez***, Juan-Antonio Corrales Ramón, Youcef Mezouar and Jean-Christophe Fauroux.
International Symposium on Experimental Robotics (accepted)
- 2018 Robotic manipulation and sensing of deformable objects in domestic and industrial applications: a survey
Sanchez, Jose, Juan-Antonio Corrales Ramón, Belhassen-Chedli Bouzgarrou, and Youcef Mezouar.
The International Journal of Robotics Research
- 2016 Context-Based Adaptation of In-Hand Slip Detection for Service Robots
Sanchez, Jose, Sven Schneider, Nico Hochgeschwender, Gerhard K. Kraetzschmar, and Paul Plöger.
IFAC-PapersOnLine, 49(15), 266-271
- 2014 Safely Grasping with Complex Dexterous Hands by Tactile Feedback
Sanchez, Jose, Sven Schneider, and Paul Plöger.
Robot Soccer World Cup. Springer, Cham., 332-344

* Authors contributed equally.