

# Jose Sanchez

## Curriculum Vitae

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 <https://github.com/jsanch2s>

### 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<sup>1</sup> Université Blaise Pascal, France

My topic is 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.

<sup>1</sup>Expected graduation date.

## PUBLICATIONS

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- 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.