Hugo Andrés Sánchez Ortiz

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SUMMARY

Person who continuously exceeds personal goals and believes that innovation in science and technology is the key of the progress for society. Experience in design, development and implementation of mechatronics devices and systems. With knowledge about Operations Research, Business Process Analysis, Lean Manufacturing, Lean Process Design, advanced manufacturing systems, mechanical design, project management (SCRUM, AGILE) and domotics and automation networks (KNX, X10, MODBUS, ETHERNET). Advanced use of CAD/CAM/CAE/FEA tools (*AutoCAD, Solidworks, Comsol Multiphysics, Inventor, EagleCad, Spice, Multisim, Labview, Matlab*) and embedded systems design (C++, Python) Experience in electrical, instrumentation and photovoltaic design and installation systems. Outstanding, fast learner, experience in research and in high-pressure environments, team player, team leadership and entrepreneur. With fluency in English and Spanish and basic knowledge of French. Main interests in renewable energy, system and process analysis, energy efficiency, mechanical design, advance manufacturing systems and STEM education projects. Professional ID CFIA. IMCT-29300.

EDUCATION

Anhalt University of Applied Sciences. Department of Electrical and Mechanical Engineering — Köthen, Germany
MSc. Photovoltaics Engineering Science — Apr2019-Currently

Universidad Politécnica de Valencia. Department of Electronics Engineering — Valencia, España
Training Course (Blended Learning), Photovoltaics Solar Energy — Dec2016-Dec2017

Instituto Tecnológico de Costa Rica (ITCR), Department of Mechatronics Engineering — Cartago, Costa Rica
Licentiate Degree in Mechatronics Engineering — 2010-2015

Dassault Systèmes, Professional Certification — Cartago, Costa Rica
Certified SolidWorks Mechanical Design Professional (CSWP) License C-Q289REH57B — Jan 2020

Delft University of Technology (TU Delft). EDX Platform — Cartago, Costa Rica
Certificate of Approval MOOC ET.3034TU: Solar Energy — Oct 2014-Dec 2014
(https://verify.edx.org/cert/67dc6aa966a64bbdb8bebd8c67e75291)

Massachusetts Institute of Technology (MIT). EDX Platform — Cartago, Costa Rica
Certificate of Approval MOOC Circuits and Electronics 6.002x — Feb 2012-June 2012
(https://verify.edxonline.org/cert/ba5ca5d87a204ccab47ea623bb90baf8)

JOB & ENTREPEURNISHIP EXPERIENCE

Co-Founder & Mechatronics Captain **ImagineXYZ (www.imaginexyz.com)** — San José Costa Rica
Process Analyst & Mechatronics Design — Jun2015 – Currently

Innovation and technology consulting firm, helping to other companies and people to convert ideas into real products. We are a group of designers, software developers, mechatronics, electronics and TI specialist; looking for the best innovative solutions for real and challenging projects.

ACADEMIC & RESEARCH EXPERIENCE

Speaker , **1ˢᵗ Costa Rican Symposium of Solar Energy**   San José, Costa Rica

Conference Publish as: Abr-2018

    Hugo Sánchez Ortiz. Sebastián Romero "Uso de seguidores solares para la optimización de producción energética fotovoltaica bajo condiciones del trópico."

Professor and Researcher, **Costa Rica Institute of Technology**   Cartago, Costa Rica

Electronics Engineering School (http://www.ie.tec.ac.cr/seslab/)   Jul2017-Mar2019

    Main activities:

    Research related with renewable energy system implementations. .

    Lecturer of the course: Control Signals and Systems.

Professor and Project Engineer, **Sustainable Electronics Systems Lab (SESLab)**   Cartago, Costa Rica

Costa Rica Institute of Technology (http://www.ie.tec.ac.cr/seslab/)   Mar2016-Jun2017

    Main activities:

    Management of solar education programs in Costa Rica, Honduras and Nicaragua, in partnership with GIZ

    Energy Process Analyst

Speaker , **Project OEA-FEMCIDI-UAGRM**   Santa Cruz, Bolivia

Universidad Autonóma Gabriel Rene Moreno in collaboration with OEA   May-2016

Conference Publish as:

    o   Hugo Sánchez Ortiz. "*Solar Energy in Costa Rica: Lessons Learned* "

Speaker , **Workshop: FabLabs and Makerspace for Science**   Trieste, Italy

International Center for Theoretical Physics, Abdus Salam   Oct 2015

Conference published as::

    o   Javier Carvajal Artavia, Hugo Sánchez Ortiz. "*Hardwarethon: From Maker to Startups*"

Research Assistant. **Sustainable Electronics Systems Lab**   Cartago, Costa Rica

Tecnológico de Costa Rica. (http://www.ie.tec.ac.cr/seslab/)   Jul 2015-Mar2016

Main Projects:

    o   Development of PV Systems

    o   Energy Diagnosis for the Campus of Costa Rica Tech.

Guest Intern Researcher, **Faculty of Environmental Studies/ Sustainable Energy Initiative**   Toronto, Canada

York University   Feb2015-Jun 2015

Mains Projects:

Design of monitoring system for a Photovoltaic Performance Verification Plant to be implement in conservation project Las Nubes. Degree Thesis Project.

Domotics Coordinator// Site Operation Coordinator **TEC TEAM Solar Decathlon Europe 2014**   Cartago,CR || Versailles France

Main Project: Trópika   Nov 2012 - Nov 2014

- Designed, developed and implement and prototype sustainable and energy efficiency house for elderly people called Trópika, which was built in 10 days. As part of the participation of the university in Solar Decathlon Europe 2014, Exhibition during summer 2014, in Versailles France. This project won the award for "Favorite Public Choice House".
- In charge of the domotics implementation and solar energy technologies.

Speaker , **XVI National Congress of Science, Technology and Society**   San José, Costa Rica

CIENTEC   Aug 2012

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Conference Publish as:

- o Hugo Sánchez Ortiz, Randy Céspedes Deliyore, Héctor Miranda Quesada. "*Robótica Educativa: Innovación para la Educación Científico-Tecnológica en Primaria y Secundaria*"

LEADERSHIP & OUTREACH ACTIVITIES

Startup Selected Hardware Accelerator, Hardware.co   Berlin, Germany

- Hardware.co(www.hardware.co)   Feb 2017
  Hardware.co is a business accelerator based in hardware development. It is an intensive program about business model, electronics manufacturing, communication, intellectual property and investment.

Co-Founder & Organizer Hardwarethon   Cartago, Costa Rica

- ImagineXYZ (www.hardwarethon.com)   Oct 2014- Currently
  Hardwarethon is a collaborative space, unique and innovative where participants developed real solutions to solve reals problems, in just 48 hours. In this space the people use IoT as a key in the product development process.

10th International Congress of Automation and Technology, Tecnológico de Monterrey   Monterrey, Mexico

- First Delegation of Costa Rica in this Congress   May 2014

Volunteer, Club de Talento Joven   San José, Costa Rica
Ministerio de Ciencia, Tecnología y Telecomunicaciones (MICITT)   May 2012-Jun2014

- Development and implementation of STEM programs for High School students.

Founder & President, Asociación de Estudiantes de Mecatrónica (AEMTEC)   Cartago, Costa Rica

- Costa Rica Institute of Technology   Abr 2010-Sep 2012

Project Manager, 2nd National Olympiad of Robotics.   Cartago, Costa Rica

- Costa Rica Institute of Technology   Abr 2010-Ago 2010
  Management and implementation of the Second National Robotics Olympiad where winners at the World Robotics Olympiad (WRO) in coordination with Lego®