

Rafael Ferrín

Curriculum Vitae

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Summary

Outstanding on geometric analysis, mechanical design and creative solutions.

Creative person, motivated by challenges.

My goal is to work on challenging projects where my skills make the difference.

Professional Experience

Not updated

September 2019	present	Robot School teacher
December 2017	April 2020	Researcher at Iwate University (2 patents)
October 2014	September 2016	Vice President of Engineering at 16Lab Inc. (5 patents)
January 2013	February 2014	Design Engineer at FACC
July 2008	January 2013	R&D Engineer at GRVC (1 Patent)
2003	2008	Several internships

Robot School teacher at Human Academy

- Guiding students to understand and enjoy mechanical design with Lego-like construction blocks.
- Custom designs for advanced students.
- Over 30 students, from 5 to 14 years old.

Mechanical research at Iwate University.

- Research and prototyping of forestry tools for felling trees, including hydraulic technology, light weight prototypes, mini-chainsaw prototypes, etc.
- Research about current technologies, power requirements and power sources, etc.
- Development of my own robotic designs for snake arms and robotics joints (**2 patents in process**).

Vice President of Engineering at 16Lab Inc.

- Development of methods and procedures for interaction with wearable devices. (**3 patents**).
- General and proprietary algorithms for orientation, gesture recognition and activity tracking.
- Proprietary algorithms for cooperating/coordinating with other devices. (**2 patents**).
- Advice and support related to mechanical design, including stress analysis and conceptual designs.
- We won several prizes, including **CEATEC 2015 Innovation Awards**, Home Entertainment category.

Design Engineer at FACC

- Problem-solving oriented **design of furniture** (mechanisms), focused on conceptual design.
- **More than 9 designs** considered novelty inventions (hinges, overhead bins turning systems, etc.).
- Advice and conceptual contributions solving a variety of mechanical design issues.
- General advice about sensors, motors, power consumption, usability, human factors, etc.

GRVC (Robotic, Vision and Control Group)

- Main researcher for the ROBOCA project for **IBERDROLA**: **design of an inspection robot** to inspect possible cracks or leaks in a power plant (dark-wet-hot-small places in a corrosive atmosphere).
- Design and construction of the prototype for this robot (Mechanics, optics, computer vision...).
- Results deemed better than expected by the company; they decided to commercialise our product.
- **INSROCA project**: further development of the prototype for commercial use. (**1st patent**).

Education

2005 2011

[Master of Automatic and Electronic Systems Engineering.](#)

2001 2005

Bachelor of Industrial Engineering

My thesis: “**Analysis and design of a vision system for inspection robots**” obtained the highest qualification (**Outstanding, A**).

Patents & Projects

■ Patents

- [Inspection robot](#)
- [Algorithm for wearables \(1\)](#)
- [Algorithm for wearables \(2\)](#)
- [Algorithm for wearables \(3\)](#)
- [Algorithm for wearables \(4\)](#)
- [Algorithm for wearables \(5\)](#)
- [Inspection arm \(cancelled\)](#)

■ Other Designs

- [Research on forestry drilling tools](#)
- High ratio gearbox
- [Human-Friendly Robotic Joint](#)
- Inspection arm
- [Former aerospace designs](#)

Skills

■ Engineering skills

- CATIA
- Matlab
- Multidisciplinary analysis
- Geometry, maths & physics
- Creative solutions

■ Languages skills

- Spanish (Native)
- English (Business level)
- Japanese (beginner)

■ Soft skills

- **Common sense**
- **Proactive**
- [Thinking outside the box](#)
- [Lateral thinking](#)
- Sharp mind under pressure
- Synergetic
- Business ethics
- Natural leadership
- Multiculturalism

Personal Experience and Hobbies

- Founder of [ESTIEM](#) Seville
- Founder of [ESIbot](#) (Robotics)
- Founder of TIR (IT workshop)
- Member of IEEEsb
- Founder of [Sevilla Intercambio](#) (Language meeting)

- Theatre and Musical theatre
 - Actor (14 years, 20+ projects)
 - Scenography (10+ projects)
 - Managing Director (10+ projects)
- Food enthusiast
- Salsa dance aficionado
- Furniture design

References

www.ferrin.org
[LinkedIn Profile](#)