



Dr. NÍCOLAS F. FIGUEROA MOSQUERA

PhD in Humanoid Robotics | Strategic Advisor |
Board Member, IEEE RAS | International
Speaker

CONTACT

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Lima, Peru

WEBS & PROJECTS

Personal Portfolio

NFM Robotics

RoboticsLab

Robotics Community Peru

AREAS OF EXPERTISE

Industrial Robotics Strategy

Humanoid Robotics & AI

Machine Learning & Deep Learning

Data Analytics and Predictive Modeling

Data and AI Strategy for Industry 4.0

PROFESSIONAL PROFILE

Pioneer and architect of robotics ecosystems, with a career dedicated to connecting cutting-edge research, industrial application, and technology policy. With a dual PhD in Humanoid Robotics, I operate at the unique intersection of business, global standards (IEEE), and government advisory, with the mission of accelerating technology adoption and cultivating the next generation of leaders in Latin America.

STRATEGIC & ADVISORY EXPERIENCE

● January 2025 - Present

Global Board Member, Industry Activities Board (IAB)

IEEE Robotics & Automation Society (RAS) |
Piscataway, NJ, USA

● March 2025 - Present

Member of the Robotics Expert Committee

Public Policy and Global Standards

Innovation Ecosystems and Startups

R&D&I Project Management

Technology Adoption

Robotic Systems Design and Prototyping

International Event Organization

LANGUAGES

Spanish (Native)

English (Intermediate - B2)

Secretariat of Government and Digital Transformation,
Presidency of the Council of Ministers of Peru (PCM)

● February 2019 - Present

Strategic Partner

Silicon Valley Robotics | Silicon Valley, CA, USA

ENTREPRENEURIAL & LEADERSHIP EXPERIENCE

● August 2015 - Present

Founder & General Manager

NFM Robotics | Callao, Peru

● January 2018 - Present

Founder & Research Director

RoboticsLab | Callao, Peru

- Initiative that has trained +200 students and has expanded to 5 locations nationwide.
- Organizer of HRFEST, the first humanoid robotics festival in LATAM.
- Technology partner for global events like IROS 2025 and official broadcaster of RoboCup 2025.

● January 2021 - December 2024

Chair (Former President, two terms)

IEEE RAS, Peru Section

EARLY PROFESSIONAL EXPERIENCE

● 2015 - 2016

Robotics Project Advisor

IBEROTEC | Lima, Peru

- 2012 - 2013

Product / Operations Manager

Zamtsu Corporación | Lima, Peru

- 2011 - 2012

Academic Project Support

Sociedad Inducontrol Ingeniería SAC | Lima, Peru

- 2010

Rocketry Intern

CONIDA (Space Agency of Peru) | Lima, Peru

SPECIALIZED TRAINING & CERTIFICATIONS

- June 2019

International Certification in Industrial Robot Programming (Levels 1 & 2)

KUKA College | Vilanova, Spain

- July 2018

Intensive Training in Machine Learning & Deep Learning

Pontifical Catholic University of Peru | Winter School

- October 2017

Machine Learning Certification

Stanford University

- Flagship course taught by Prof. Andrew Ng, global pioneer and co-founder of Google Brain.

SCIENTIFIC PRODUCTION & INTELLECTUAL PROPERTY

Scientific Articles (Scopus-Indexed)

- **Fast Autolearning for Multimodal Walking in Humanoid Robots With Variability of Experience.** *IEEE Robotics and Automation Letters.* (2025)
- **Reinforcement Learning-Based Parameter Optimization for Whole-Body Admittance Control with IS-MPC.** *IEEE International Symposium on Industrial Electronics (SII).* (2024)
- **Low-Cost Mini Humanoid Robot Mechanical Design for Mini Humanoid Robot Contest.** *IEEE 28th International Conference on Electronics, Electrical Engineering and Computing (INTERCON).* (2021)

Intellectual Property (Utility Model Patents - INDECOPI)

- **UV-C Disinfection Robot with dual illumination.** (2020)
- **Portable Smart Card Reader.** (2018)
- **Electro-Tactile Information Reception Device.** (2016)

Books and Book Chapters

- **Augmented reality applied to the sales management process of the company Shock MKT.** *Book (Thesis Published as Advisor).* (2019)
- **Monitoring, Control and YARP Communication Interface in the TEO humanoid robot.** *Book Chapter, 6th Symposium on Innovation and Technology.* (2015)

SCIENTIFIC REVIEWER ACTIVITY

- 2025

External Reviewer

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

- 2025

External Reviewer

IEEE CHILECON

- 2024

Program Committee Member (PC Member)

IEEE INTERCON & IEEE ANDESCON

- 2021 - 2023

Reviewer and Program Committee Member

IEEE INTERCON (Multiple editions) & IEEE IHTC

UNIVERSITY TEACHING EXPERIENCE

Extensive experience as a professor in the engineering departments of the most prestigious universities in Peru, imparting cutting-edge knowledge and training new generations of professionals in technology. The experience covers a main period between 2016 and 2020.

Leading Universities

- Pontifical Catholic University of Peru (PUCP)
- Peruvian University of Applied Sciences (UPC)
- ESAN University
- University of Lima
- San Ignacio de Loyola University (USIL)

Main Teaching Areas

- Artificial Intelligence and Robotics
- Machine Intelligence
- Control Systems and Automation
- Technological Innovation
- Mobile Device Programming
- Computer Architecture

- National University of Callao (UNAC)

EXPERIENCE AS THESIS JURY AND ADVISOR

- 2019

Undergraduate Thesis Advisor

"Augmented Reality Applied to the Commercial Process of the ShockMKT Company" | Univ. San Ignacio de Loyola

- 2017 - 2018

Undergraduate Thesis Jury

Multiple projects at Univ. San Ignacio de Loyola and Univ. ESAN in areas of Cybersecurity, Software Development, and Data Analytics.

ACADEMIC BACKGROUND

- 2020 - 2025

Dual PhD in Humanoid Robotics

Université de Montpellier, France & Pontifical Catholic University of Peru

- 2013 - 2015









Master's in Robotics and Automation

Charles III University of Madrid, Spain

- 2005 - 2011

B.Sc. in Electronic Engineering, Licensed Engineer (CIP)

KEY AWARDS & DISTINCTIONS

-  **Qualified Researcher, RENACYT:** Distinction awarded by CONCYTEC of the Government of Peru (Code: P0034639).
-  **IEEE SENIOR MEMBER:** Distinction awarded by the IEEE to those who have demonstrated a distinguished professional career.
-  **Pioneer of Humanoid Robotics in Peru:** Recognized for building the first humanoid robot in the country ("KIAM IV") in 2003.
-  **Founder of the UNAC Robotics Group (2008):** Established the robotics group at his alma mater, laying the foundation for a new generation of engineers.
-  **Illustrious Citizen of the Bellavista District (2023):** Recognized for his technological contributions and outreach work.
-  **Mentor, MIT COVID-19 Challenge (2020):** Selected by the Massachusetts Institute of Technology to advise LATAM startups.
-  **Winner, Triple Alliance Challenge (2020):** 3rd Place with the robotics project "Juzto".
-  **President of the Republic Scholarship (2013):** Awarded by PRONABEC for postgraduate studies abroad.