# Antonio Doral Rodríguez

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Driven aerospace engineer with the ability to excel under pressure and a unique specialisation in aerodynamics, motorsport engineering and industrial mathematics, eager to learn and contribute to a challenging role within Automotive and Motorsport in a high-performance, fast-paced environment.

## EDUCATION

**Oxford Brookes University, MSc Motorsport Engineering** **2025**
*Specialisation in Aerodynamics* *Grade: Distinction*

- Applied engineering expertise into specialised motorsport applications.

**Polytechnic University of Madrid, MSc Industrial Mathematics** **2024**
*Specialisation in Numerical Simulation.* *Grade: First-Class Honours*

- Advanced applied mathematics with industrial applications focused on numerical simulation techniques for complex systems, optimisation and computational modelling.

**King Juan Carlos University of Madrid, Aerospace Engineering Degree** **2023**
*Specialisation in Aerospace Vehicle design.* *Grade: First-Class Honours*

- Strong foundation across a wide range of engineering disciplines, including physics and mathematics with a specialised focus on aerodynamics, structural mechanics and vehicle performance analysis.

**Polytechnic University of Milano, Aerospace Engineering degree** **2020**
*European mobility program*

- Studied the third course of aerospace engineering in Polimi. Focused on aerodynamics and structural mechanics.

**Kimball Union Academy. NH, USA** **2015**
*10th grade (2nd high-school year)*

- Studying my second year of high school in the USA as a student from Spain showcased my boldness and adaptability to new environments since a young age.

## EXPERIENCE

**Oxford Brookes Racing** **Oxford, UK**
*Fluid dynamics and vehicle dynamics* *Sep 2024 - May 2025*

- As an aerodynamicist, I have designed several iterations of the front wing for the 2025 car, including CFD analysis and optimisation. Developed and executed CFD thermal simulations of the front motor cooling system.

**Indra Sistemas, S.A.** **Madrid, Spain**
*Aeronautical Systems Engineer* *Oct, 2023 - June, 2024*

- Development and testing of a remote air space control tower ensuring functionality and reliability. Acted as the communication link between clients and internal engineering teams and managing feedback loops.

**FI Group** **Madrid, Spain**
*Engineering Consultant* *May, 2022 - April, 2023; July, 2023 - Aug, 2025 as Freelance*

- Applied rigorous time and project management. Proficiency at technical report writing and effective communication. I worked with a variety of companies, gaining valuable insights into their project methodologies.

## TECHNICAL SKILLS

**Mathematics**: Deep understanding of advanced mathematics involved in numerical simulation and modelling gained through my studies in industrial mathematics, including numerical methods, dynamic systems and optimisation.

**Aerodynamics**: Extensive experience in the analysis of aerodynamic phenomena and aerodynamic devices design involving computational modelling and simulation techniques with traditional CFD and Lattice Boltzmann methods.

**Surface Design:** I have developed a professional CAD design methodology with a clear structure that facilitates collaboration and resilient design. My skills allow me to complete high-quality designs following Class-A surfacing standards in complex geometries (G2-G3 continuity).

**Software**:

- **CFD**: ANSYS Fluent, Star CCM+, OpenLB.
- **FEA**: Patran/Nastran, Marc/Mentat, LSDyna.
- **CAD**: 3DExperience Catia, Solidworks, Siemens NX.
- **Programming**: MATLAB, C++.

## SOFT SKILLS

**Precise Technical Communication:** Proficient in delivering impactful presentations and facilitating productive interactions between clients and technical teams developed through my role as a systems engineer ensuring alignment with project goals and efficient problem-solving.

**Team player:** Through my experiences in rugby and in both academic and professional settings, I have come to understand the true power of teamwork. Rugby taught me that the collective effort of the team achieves far greater success than the sum of individual contributions.

**Multi-Disciplinary problem-solving:** Demonstrated ability to master new technical concepts to solve complex, multi-disciplinary engineering challenges and adapt to diverse environments, consistently performing at a high level, tackling unfamiliar problems with a creative and proactive approach.

**High-Pressure Adaptability:** Proactive and adaptable in fast-paced, deadline-driven environments, with the agility to respond to unexpected challenges with a methodical approach.

**Languages:** Native in Spanish. Proficient in English (C2). Beginner level Italian (B1).

## PROJECTS

**Motorsport Master's Final Thesis** **2025**
*Oxford Brookes University* *Grade: Distinction (76%)*

- Developed a LES unsteady aerodynamic CDF simulation using novel Open-Source Lattice Boltzmann Methods and developed a workflow with aims to implementing the method to fluid-structure phenomena enabling efficient aeroelasticity simulations.

**Mathematics Master's Final Thesis** **2024**
*Polytechnic University of Madrid and Etulos Solute S.l.* *Grade: First-Class Honours (90%)*

- Developed an advanced optimal control system through a Model Predictive Controller in MATLAB and C++ for the control of an autonomous quadcopter used in the inspection of wind turbines.

**Aerospace Bachelor's Final Thesis** **2023**
*King Juan Carlos University of Madrid* *Grade: First-Class Honours (85%)*

- Designed a non-invasive vibrational and aeroelastic test methodology for aerodynamic components using high-speed cameras and image recognition.

**2026 F1 Design** **2023**
*Personal Project*

- Studied the F1 2026 technical regulations and designed a concept of the front wing in Dassault Systèmes 3DExperience following rigorous CAD methodology and applying aerodynamic knowledge to achieve the desired flowfield. Project Available at my website.

## INTERESTS AND ADDITIONAL INFORMATION

I am passionate about Karting, Formula One, Aviation, Space Exploration and Aerodynamics. Active in rugby, boxing and endurance sports (marathon runner).