

FERNANDO VEIGA LÓPEZ

Researcher; Aerospace Engineer; Fluid Mechanics

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EDUCATION

PhD in Fluid Mechanics [🔗](#)

Universidad Carlos III de Madrid

📅 February 2017 – June 2020 📍 Leganés, Spain

Title: *Flame propagation in narrow channels*

Extensive research on premixed flame propagation in narrow gaps. I focus on the study of flame instabilities and dynamics of innovative gaseous fuels, such as hydrogen

MSc in Aerospace Engineering [🔗](#)

Technische Universiteit Delft

📅 September 2014 – November 2016 📍 Delft, The Netherlands

Specialization in [Flight Performance](#) and [Aerospace Propulsion](#)

BSc in Aerospace Engineering [🔗](#)

Universidad Politécnica de Madrid

📅 Septiembre 2010 – July 2014 📍 Madrid, Spain

Specialization in Aerospace Propulsion

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher

Universidad Carlos III de Madrid

📅 June 2020- Ongoing 📍 Leganés, Spain

- Postdoctoral researcher on fluid mechanics focused on the study of alternative fuel's applications, combustion processes, two-phase flows, wildfires, etc.

Predoctoral Researcher and Teaching Assistant

Universidad Carlos III de Madrid

📅 February 2017- June 2020 📍 Leganés, Spain

- Predoctoral researcher focused on the study of premixed gaseous flames in microchannels
- Laboratory professor for the Fluid Mechanics course and five BSc thesis tutor

Internship period

WS Wärmeprozessestechnik GmbH (R&D) [🔗](#)

📅 August – November 2015 📍 Renningen, Germany

Experimental design, operation and analysis of Flameless (FLOX) oxidation processes

ITP (Industria de Turbopropulsores S.A.)

📅 March – July 2014 📍 Madrid, Spain

Development of defects database for different aero-engines and management of technical reports

SKILLS

Python Matlab Labview
Image Processing: Fiji Arduino
LaTeX Fortran CATIA
Microsoft Office ANSYS Fluent

High-speed photography
Experimental techniques Teamwork
Quick learner

LANGUAGES

Galizian (Native) ●●●●●

Spanish (Native) ●●●●●

English ●●●●●

Italian ●●●●●

German ●●●●●

Portuguese ●●●●●

AWARDS

🏆 Milton Van Dyke APS/DFD Award 2018
[Awarded video](#)

🏆 Outstanding Student Presentation
The Central States Section of the Combustion Institute, 2018

○ KAUST Combustion-Institute Summer School Scholarship
KAUST Clean Combustion Research Center, 2018

○ Predoctoral Researcher Scholarship (PIPF)
UC3M, 2017

PUBLICATIONS

Journal Articles

- Veiga-López, Fernando, Mike Kuznetsov, et al. (2020). “Unexpected propagation of ultra-lean hydrogen flames in narrow gaps”. In: *Physical Review Letters (Editor’s Suggestion and high impact: 20+ reviews)* 124.17, p. 174501.
- Veiga-López, Fernando, Daniel Martínez-Ruiz, Mike Kuznetsov, et al. (2020). “Thermoacoustic analysis of lean premixed hydrogen flames in narrow vertical channels”. In: *Fuel* 278, p. 118212.
- Martínez-Ruiz, Daniel et al. (2019). “The role of conductive heat losses on the formation of isolated flame cells in Hele-Shaw chambers”. In: *Combustion and Flame* 209, pp. 187–199.
- Martínez-Ruiz, Daniel, Fernando Veiga-López, and Mario Sánchez-Sanz (2019). “Premixed-flame oscillations in narrow channels”. In: *Physical Review Fluids* 4.10, p. 100503.
- Veiga-López, Fernando, Daniel Martínez-Ruiz, Eduardo Fernández-Tarrazo, et al. (2019). “Experimental analysis of oscillatory premixed flames in a Hele-Shaw cell propagating towards a closed end”. In: *Combustion and Flame* 201, pp. 1–11.


PROJECTS

PhD Thesis: *Experimental Analysis of Premixed-Flames Propagation in a Hele-Shaw Cell*

Universidad Carlos III de Madrid

 2017 – 2020

- Clean gaseous flame instabilities in a narrow channel
- Related to the spanish-financed project [E-BIOCOMB](#)

MSc Thesis: *Numerical Simulation of a Lean Premixed Hydrogen Combustor for Aero Engines* 

Technische Universiteit Delft

 2016

- CFD simulation of an hydrogen combustor for aero engines
- Related to the european project [AHEAD](#)


CONFERENCES



Participated in 11 International Conferences

Check list [here](#)

COURSES

Fundamentals of Thermo-acoustics Instabilities 

CERFACS

 May 2019

 Toulouse, France

Research Stay at KIT

Karlsruhe Institut für Technologie

 May – August 2018  Karlsruhe, Germany

KAUST – Combustion Institute Summer School

King Abdullah University of Science and Technology

 April 2018

 Jedda, Saudi Arabia