

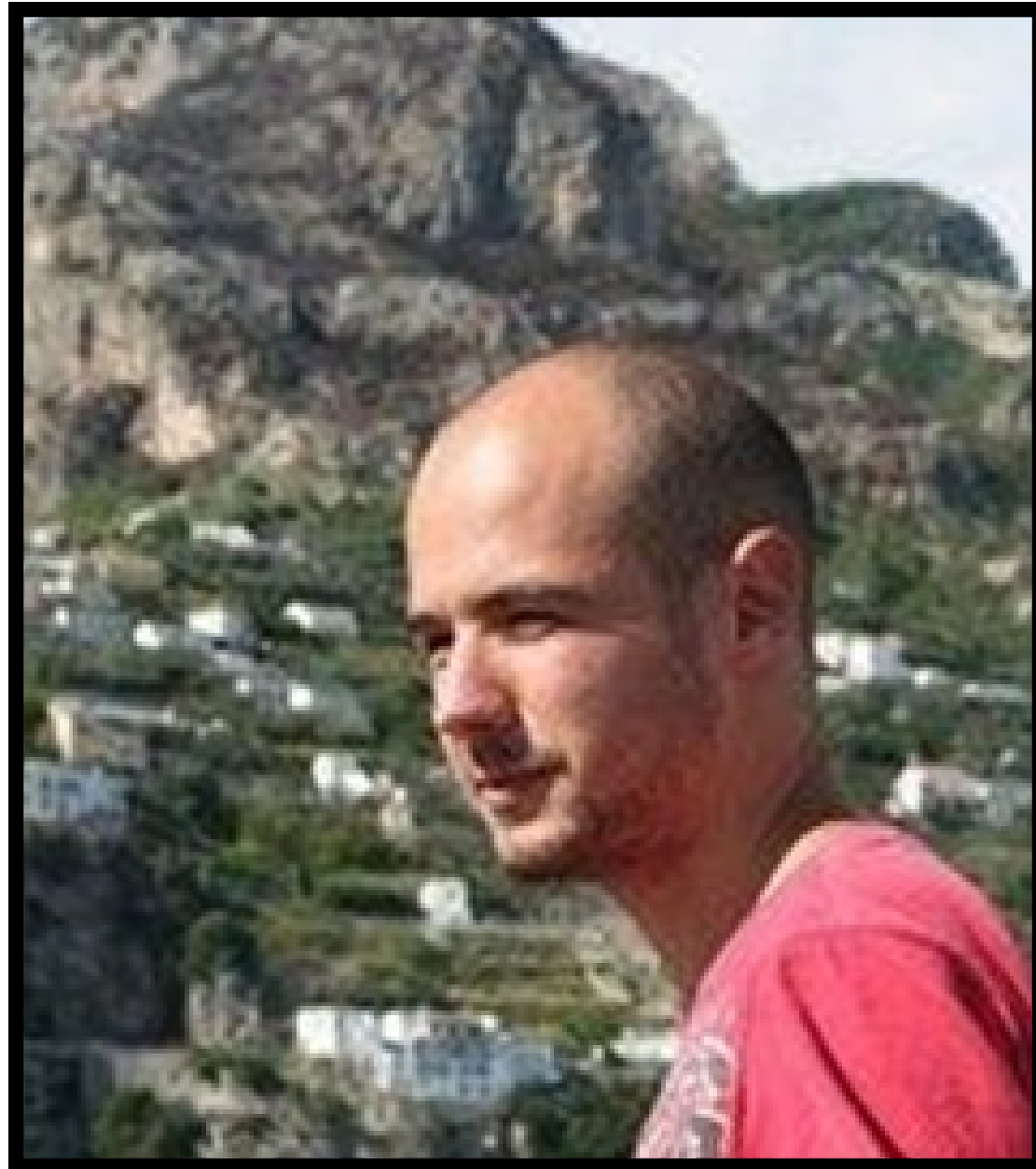
Meet Our — Team



An Invitation to
Computational
Fluid Dynamics
from
Fundamentals
to Applications

Rodolfo Ostilla Mónico

rodolfo.ostilla@uca.es



Dr. Rodolfo Ostilla Mónico is a postdoctoral researcher in Fluid Mechanics at the University of Cádiz. He graduated in Aerospace Engineering from the University of Seville in 2010 and obtained his PhD from the Physics of Fluids group at the University of Twente in 2015, under the supervision of Detlef Lohse and Roberto Verzicco.

He spent seven years in the United States, working as a postdoctoral researcher at Harvard University and later as an assistant professor at the University of Houston, before joining the University of Cádiz in 2022. His research focuses on computational fluid mechanics, with particular interest in numerical simulations of convective flows, vortex ring collisions, and turbulent systems.

Miguel Fosas de Pando



miguel.fosas@uca.es

Miguel Fosas de Pando is an Associate Professor in Fluid Mechanics at the University of Cádiz. After graduating in Aerospace Engineering at the University of Seville (2009), he obtained PhD degree in Mechanical Engineering at Ecole Polytechnique (2012), where he also held a postdoctoral position.

In 2014, he joined the School of Engineering at the University of Cádiz. He has been a David Crighton Fellow at the University of Cambridge and has been PI of a research grant from MICINN in Spain. His research interests are computational fluid dynamics, numerical optimization and their applications in aeroacoustics and hydrodynamic stability.

Marianela Machuca Macías

marianela.machuca@uca.es



Dr. Marianela Machuca Macías is a postdoctoral researcher in Fluid Mechanics at the University of Cádiz. She completed her degree in Industrial Engineering with a specialization in Energy Systems at the University of Seville (2011) and later earned a Master's degree (2016) and a PhD in Mechanical Sciences (2021) from the University of Brasília (UnB), Brazil.

Since 2021, she has been part of the teaching and research staff at the University of Cádiz, working as a Margarita Salas Postdoctoral Fellow (2022–2024). She has contributed to eight research projects at the University of Brasília, funded by national public institutions and private companies through Brazil's National Electric Energy Agency (ANEEL). Her research focuses on computational fluid dynamics, fluid-structure interaction, and renewable energy systems, particularly on the hydrodynamics of free-axis turbines, their environmental impact, and their interaction with aquatic fauna.