# Bernat Font Garcia

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## Research interests

Computational fluid dynamics, turbulence modelling, deep learning and data-driven models, high-perfomance computing.

## Education

**Ph.D.** Candidate in Computational Fluid Dynamics, *University of Southampton* 2015-2020
*Thesis*: Modelling of Flow Past Long Cylindrical Structures
*Supervisors*: Dr. G. D. Weymouth, Prof. O. R. Tutty, Dr. V.-T. Nguyen
*Visiting Researcher*: IHPC, A*STAR, Singapore. Research attachment funded by the ARAP mobility scheme

**M.Sc.** Computational Fluid Dynamics, *Cranfield University* 2014-2015
*Thesis*: High-order Shock-capturing Schemes for Micro Shock Tubes. Download
*Supervisor*: Dr. L. Könözsy
*Double Degree with Ingeniería Superior in Aeronautical Engineering*

**Ingeniería Superior** Aeronautical Engineering, *Universitat Politècnica de Catalunya* 2012-2015
*Mentor*: Prof. C.-D. Pérez-Segarra
*Equivalent to Master of Engineering*

**Ingeniería Técnica** Aeronautical Engineering, *Universitat Politècnica de Catalunya* 2009-2012
*Equivalent to Bachelor of Engineering*

## Experience

Visiting Researcher, Institute of High-Performance Computing, A*STAR, Singapore 2017-2020
Doctoral Researcher, University of Southampton, UK 2015-2020

## Peer-reviewed Articles

Font Garcia, B., Weymouth, G. D., Nguyen, V.-T. & Tutty, O. R. 2019 Span effect on the turbulence nature of flow past a circular cylinder. *Journal of Fluid Mechanics* 878, 306–323. DOI

## Conference Proceedings

Font Garcia, B., Weymouth, G. D. & Tutty, O. R. 2017 Analysis of two-dimensional and three-dimensional wakes of long circular cylinders. *OCEANS MTS/IEEE*, Aberdeen, UK. DOI

## Published Abstracts

Font Garcia, B., Weymouth, G. D. & Tutty, O. R. 2016 A two-dimensional model for three-dimensional symmetric flows. *UK Fluids Conference*, London, UK. Abstract

Font Garcia, B., Castells Elizalde, I., Weymouth, G. D., Nguyen, V.-T. & Tutty, O. R. 2019 Turbulence dynamics transition of flow past a circular cylinder and the prediction of vortex-induced forces. *European Turbulence Conference 17*, Torino, Italy. Abstract

## Invited Talks

On two-dimensional and three-dimensional turbulence of wake flows, *Fluid Structure Interactions Group seminar series*, University of Southampton, May 2017, UK.

## Funded Research

University of Southampton FEE Education Hub PhD grant (2015) GBP 28,353
A*STAR ARAP Research Mobility Programme grant (2015) SGD 74,500

## Teaching

Demonstrator, University of Southampton 2015-2017
*Aerodynamics:* Nozzle lab
*Propulsion*: Ramjet, turbojet and rocket engine labs
*Aerothermodynamics*: Marking of lab reports

Private tutor 2011-2014
*Mathematics, physics and programming tutor to High School and Undergraduate students*

## References

Gabriel D. Weymouth, Associate Professor, Fluid and Structure Interactions Group,
University of Southampton - g.d.weymouth@soton.ac.uk

Owen R. Tutty, Professor, Aerodynamics and Flight Mechanics Group,
University of Southampton - o.r.tutty@soton.ac.uk

László Könözsy, Lecturer, Centre for Computational Engineering Sciences,
Cranfield University - laszlo.konozsy@cranfield.ac.uk

Carles-David Pérez-Segarra, Professor, Heat and Mass Transfer Technological Center,
Universitat Politècnica de Catalunya - segarra@cttc-upc.net