Dr. Francisco J. Huera-Huarte

Contact Information

Department of Mechanical Engineering
Universitat Rovira i Virgili
Av. Paisos Catalans, 26
43007 Tarragona, SPAIN

Voice: +34 977559602
Fax: +34 977 559691
francisco.huera@urv.cat
http://lifeurv.wordpress.com/

Research Interests

Fluid-structure interactions (FSI), Flow-Induced Vibrations (FIV).
Aero/hydro-elasticity
Fluid mechanics of bluff bodies, wakes and vortex flows.
Fluid mechanics of flying and swimming, bio-inspired design.
Hydrodynamic forces on offshore structures. Slamming loads. Dynamics of offshore structures.
Renewable energy. Cross-flow turbines / Vertical Axis Wind Turbines.
Mechanical Testing: Structural dynamics, modal analysis.
Optical Measurement techniques for solid and fluid dynamics.
Computational Mechanics. Computational modal analysis.

Education

PhD in Aeronautics **07/2006**
DIC (Diploma of Imperial College) **01/2007**
PhD supervisor: Prof. Peter W. Bearman
Department of Aeronautics
Imperial College London, UK

Ingeniero Industrial (5 years degree) **02/2003**
Final Grade: 7.85/10. Thesis Grade: A with Honours 10/10
Escola Tècnica Superior Enginyeria Industrial de Barcelona (ETSEIB)
Technical University of Catalonia (UPC), Spain

Research Highlights

- "Agustín de Betancourt y Molina 2014" Young Investigator Award, Real Academia de Ingeniería.
- Over 1.25 M€in competitive funding as PI.
- Associate Editor: JFS and ASME JOMAE
- 34 publications in top journals (22 as first author, 8 of which as single author).
- Over 1300 citations, h-index 15.
- Over 60 presentations in International Conferences (2 plenary invited talks).
- 1 European Patent.
- Overall co-Organizer and co-Chair of ASME OMAE 2018 (>1250 attendees)
- Organizer of a Symposia at EuroMech Fluid Mechanics Conference EFMC12, Vienna, Austria.

Research, Teaching & Professional Experience

Head of the Undergraduate Program in Mechanical Engineering **since 05/2019**
Department of Mechanical Engineering
Universitat Rovira i Virgili (URV)

Visiting Associate in Aerospace **07/2018 - 08/2018**
Graduate Aerospace Laboratories, GALCIT
California Institute of Technology, CALTECH (Host: Prof. M. Gharib)

Visiting Scholar **08/2016 - 08/2016**
Department of Mechanical and Industrial Engineering
University of Massachusetts, UMass Amherst (Host: Prof. Y. Modarres-Sadeghi)

Visiting Associate in Aerospace **05/2015 - 07/2015**
Graduate Aerospace Laboratories, GALCIT
California Institute of Technology, CALTECH (Host: Prof. M. Gharib)

Guest Faculty **03/2015 - 04/2015**
Université Paris 7 - Diderot & PMMH CNRS, Paris
(Hosts: Profs. B. Thiria & R. Godoy-Diana)

Visiting Associate in Aerospace **04/2014 - 07/2014**
Graduate Aerospace Laboratories, GALCIT
California Institute of Technology, CALTECH (Host: Prof. M. Gharib)

Coordinator Inter-University PhD Programme in Fluid Mechanics **since 09/2013**
(Doctoral programme involving 6 Spanish Universities.
General Coordinator: Prof. Martinez-Bazán at Universidad Jaén)
Universitat Rovira i Virgili (URV)

Associate Professor (Prof. Titular Universidad) **since 08/2011**
Department of Mechanical Engineering
Universitat Rovira i Virgili (URV)

Assistant Professor **01/2011 - 07/2011**
Department of Mechanical Engineering
Universitat Rovira i Virgili (URV)

EC Marie Curie IOF Postdoctoral Research Fellow **01/2010 - 12/2010**
Dept. Mechanical Engineering
Universitat Rovira i Virgili (URV)

EC Marie Curie IOF Postdoctoral Research Fellow **08/2008 - 12/2009**
Graduate Aerospace Laboratories, GALCIT
California Institute of Technology, CALTECH (Host: Prof. Mory Gharib)

Visiting researcher **04/2009**
William B. Morgan Large Cavitation Channel (LCC)
Naval Surface Warfare Center, Carderock Division, US Navy

Assistant Professor **09/2006 - 07/2008**
Department of Mechanical Engineering
Universitat Rovira i Virgili (URV)

Visiting researcher **09/2007**
Department of Aeronautics
Imperial College London, UK

Postdoctoral Researcher **05/2006 - 08/2006**
Department of Fluid Mechanics, ETSEIB
Universitat Politècnica de Catalunya UPC)

PhD researcher **05/2003**
Delft Hydraulics Water Laboratories, The Netherlands

PhD student and Teaching assistant **03/2003 - 04/2006**
Department of Aeronautics
Imperial College London, UK

Project Manager & Research engineer **01/2001 - 02/2003**
Systems and Components department
IDIADA Automotive Technology, Spain

Fellowships & Awards

Prize "Isabel de P. Trabal" 2015, Fundación Caja de Ingenieros **12/2015**
Young Investigator Award (<40 years old) given by the Foundation of the Spanish Association of Mechanical Engineers. More than 260 applicants in 2015.

Prize "Agustin de Betancourt y Molina", Real Academia de Ingeniería **11/2014**
Award for the best Young Researcher in Engineering (<40 years old). All disciplines in engineering in Spain.
With the mention: "Por su brillante carrera académica en la que destacan sus aportaciones a campos tales como el diseño bio-inspirado y la biomecánica, la velocimetría por imagen de partículas 3D basada en desenfoque (DDPIV) y sus contribuciones al campo de la interacción fluido-estructura."

EC Marie Curie IOF Postdoctoral Research Fellow **08/2008 - 12/2010**
Only 11 IOF grants were awarded by the Engineering and Physical Sciences Panel in 2007.

National Agency for University Quality (ANECA) habilitations
Prof. Titular Universidad (05/2010), Prof. Contratado Doctor (02/2010), Prof. Ayudante Doctor (11/2006)

Catalan Agency for University Quality (AQU) habilitations
Prof. Agregado (3/2010), Prof. Lector (11/2006)

Ministerio de Ciencia y Tecnología **07/2006**
Juan de la Cierva Postdoctoral Research Fellowship (Candidate number 1 for the Mechanical, Naval and Aerospace panel)

Britain's Top Younger Engineers Competition, finalist **12/2005**
Poster presentations for British Members of the Parliament (MPs) at the House of Commons.

Engineering and Physical Sciences Research Council (EPSRC) **03/2003 - 03/2006**
PhD studentship, Department of Aeronautics, Imperial College London, UK

1st Prize Col.legi Enginyers Industrials de Catalunya **05/2004**
Best Final Year Thesis in 2003 (All engineering schools in Catalonia)

Professional service & Conference organization

Symposium Chair and Organizer (with Megan Leftwitch, George Washington U.)
Biomechanics of swimming and flying and bioinspired propulsion
EuroMech Fluid Mechanics Conference EFMC12, 2018, Austria 09/2018

Conference co-Chair (with A. Souto-Iglesias, UPM and R. Guanche, IH Cantabria)
37th ASME International Conference on Ocean, Offshore and Arctic Engineering
OMAE2018 in Madrid, Spain 06/2018

co-Chair and co-Organizer (with J. Rosell-Llompart, URV)
2017 Workshop in Fluid Mechanics, Tarragona, Spain 07/2017

Editorial Board:
Journal of Fluids and Structures 2019 - 2021
ASME Journal Offshore Mechanics and Arctic Engineering 2018 - 2021

Reviewer for top Journals:
Journal of Fluids and Structures, Journal of Fluid Mechanics, Physical Review Fluids, Physical Review E, Journal of Sound and Vibration, Physics of Fluids, Applied Energy, Scientific Reports Nature, Journal Marine Science and Technology, Fluid Dynamics Research, Marine Structures, Journal of Wind engineering and Industrial Aerodynamics, Ocean Engineering, Experimental Thermal and Fluid Science, Journal of Fluids Engineering, Journal of Vibration and Acoustics, Experiments in Fluids, ...

Evaluator for Spanish National Calls:
Ministerio Economia y Competitividad (MINECO) 2017
Evaluation expert and committe member for Ramon y Cajal and Juan de la Cierva grants.

Ministerio Economia y Competitividad (MINECO) 2010 and 2016
Evaluation expert and committe member for research proposals and grants: Plan Nacional I+D+I

Agencia Nacional de Evaluación y Prospectiva (ANEP) since 2010
Evaluation expert for research proposals and grants: Plan Nacional I+D+I; Infraestructuras científico-tecnológica cofinanciadas FEDER

External consultant:
European Wind Energy Association (EWEA) 2011 - 2013
Offshore Wind Industry Advisory Group (OWIG), Task Force "Deep Offshore & new foundations".

Competitive Funding as Principal Investigator (**over 1.1 M€ since 2006**)

Ministerio de Economia y Competititividad **01/2019 - 12/2021**
Plan Nacional I+D+I, Proyectos de Excelencia
Number of researchers: 1
Funding ≃60000€.
Reference: PGC2018-097766-B-I00

AGAUR **01/2017 - 12/2019**
Excellence Research Groups (Grupo Reconocido y financiado)
Number of researchers: 1
Funding ≃20000€.
Reference:2017-SGR-1263

Ministerio de Economia y Competititividad **01/2016 - 12/2018**
Plan Nacional I+D+I, Proyectos de Excelencia
Number of researchers: 1
Funding ≃131000€.
Reference: DPI2015-71645-P

Ministerio de Economia y Competititividad **01/2017 - 12/2019**
PhD grant for hiring 1 student (Formación Personal Investigador - FPI)
Plan Nacional I+D+I
Funding ≃70000€.

Ministerio de Economia y Competititividad **01/2013 - 12/2015**
Plan Nacional I+D+I, Proyectos de Investigación Fundamental no Orientada
Number of researchers: 3
Funding ≃145000€.
Reference: DPI2012-37904

Ministerio de Economia y Competititividad **01/2014 - 12/2017**
PhD grant for hiring 1 student (Formación Personal Investigador - FPI)
Plan Nacional I+D+I
Funding ≃68000€.

Ministerio de Ciencia e Innovación **01/2012**
Proyectos de infraestructuras científico-tecnológica cofinanciadas (FEDER 2010)
Number of researchers: 1
Funding ≃142000€.
Reference: UNRV10-4E-1138

Ministerio de Ciencia e Innovación **01/2010 - 12/2012**
Plan Nacional I+D+I, Proyectos de Investigación Fundamental no Orientada (tipo A)
Number of researchers: 3
Funding ≃290000€.
Reference: DPI2012-37904

Ministerio de Ciencia e Innovación **10/2010 - 09/2014**
PhD grant for hiring 1 student (Formación Personal Investigador - FPI)
Plan Nacional I+D+I
Funding ≃65000€.

European Commission **12/2007**
Marie Curie International Outgoing Fellowship (IOF)
Number of researchers: 1
Funding ≃182000€.
Reference: IOF-219429

Universitat Rovira i Virgili **2007-2008**
Programa ACCES: Funding ≃3000€.
Programa AIRE: Funding ≃6000€.
Number of researchers: 1

Projects for Companies as Principal Investigator (**over 100 k€ since 2010**)

ASICS **2019**
Experimental characterisation of sports equipment.

IDIADA Automotive Technology, SA **2019-2021**
Aerodynamics of a commercial vehicle using DPIV.

ASICS **2018**
Experimental characterisation of sports equipment.

Essity **2018**
Computational mechanics (structural dynamics and modal)of industrial machinery.

IKEA **2017-2018**
Remote wind monitoring and alert system for distribution warehouses.

IDIADA Automotive Technology, SA **2013**
Large area DPIV measurements of the internal aerodynamics of a commercial vehicle cabin.

Institut de Recerca en Energia de Catalunya (IREC) **2012**
Wave tank measurements of the dynamic response of an offshore wind turbine spar buoy system.

Institut de Recerca en Energia de Catalunya (IREC) **2011**
Modal analysis of the tendons of a generic TLP for supporting a floating wind turbine.

Institut de Recerca en Energia de Catalunya (IREC) **2010**
Future challenges for deep waters floating wind turbines.

Indexed Publications (**h-index 15 citations ≈1330**)

1. S. Satheesh, **F.J. Huera-Huarte**. (2019) *On the drag reconfiguration of plates near the free surface.* **Physics of Fluids**, 31 (6), 067106. [doi.org/10.1063/1.5094845]
2. HR Díaz-Ojeda, LM González, **F.J. Huera-Huarte**. (2019) *On the influence of the free surface on a stationary circular cylinder with a flexible splitter plate in laminar regime.* **J Fluid Struct**, 87, 102–123. [doi.org/10.1016/j.jfluidstructs.2019.03.009]
3. **F.J. Huera-Huarte**, JI Jiménez-González. (2019) *Effect of diameter ratio on the flow-induced vibrations of two rigidly coupled circular cylinders in tandem.* **J Fluid Struct**, in press. [doi.org/10.1016/j.jfluidstructs.2019.04.006]
4. S. Satheesh, **F.J. Huera-Huarte**. (2019) *Effect of free surface on a flat plate translating normal to the flow.* **Ocean Eng.**, 171, 458–468. [doi.org/10.1016/j.oceaneng.2018.11.015]
5. **F.J. Huera-Huarte**. (2018) *Dynamics and excitation in a low mass-damping cylinder in cross-flow with side-by-side interference.* **J Fluid Mech.**, 850, 370–400. [doi.org/10.1017/jfm.2018.469]
6. M.Somoano, **F.J.Huera-Huarte**. (2018) *The dead band in the performance of cross-flow turbines: Effects of Reynolds number and blade pitch.* **Energy Convers. Manag.**, 172, 277–284. [doi.org/10.1016/j.enconman.2018.06.087]
7. **F.J. Huera-Huarte**. (2018) *Propulsive performance of a pair of pitching foils in staggered configurations.* **J Fluid Struct**, 81, 1–13. [doi.org/10.1016/j.jfluidstructs.2018.04.024]
8. M.Somoano, **F.J.Huera-Huarte**. (2018) *The effect of blade pitch on the flow dynamics inside the rotor of a three-straight-bladed cross-flow turbine.* **Proc. Inst. Mech. Eng. M.**. [doi.org/10.1177/1475090218792331]

9. J.I. Jiménez-González, **F.J. Huera-Huarte**. (2018) *Vortex-induced vibrations of a circular cylinder with a pair of control rods of varying size.* **J Sound Vibration**, 431, 163–176. [doi.org/10.1016/j.jsv.2018.06.002]
10. **F.J. Huera-Huarte**. (2018) *On the impulse produced by chord-wise flexible pitching foils in a quiescent fluid.* **ASME J Fluids Eng.**, 104 (4), 041206. [doi: 10.1115/1.4038168]
11. M.Somoano, **F.J.Huera-Huarte**. (2017) *Flow dynamics inside the rotor of a three straight bladed cross-flow turbine.* **Applied Ocean Research**, 69, 138–147. [doi.org/10.1016/j.apor.2017.10.007]
12. J.I. Jiménez-González, **F.J. Huera-Huarte**. (2017) *Experimental sensitivity of vortex-induced vibrations to localized wake perturbations.* **J Fluid Struct**, 74, 53–63. [doi:10.1016/j.jfluidstructs.2017.07.010]
13. **F.J. Huera-Huarte**. (2017) *Suppression of vortex-induced vibration in low mass-damping circular cylinders using wire meshes.* **Marine Struct**, 55, 200–213. [doi:10.1016/j.marstruc.2017.05.008]
14. **F.J. Huera-Huarte**, M. Gharib. (2017) *On the effects of tip deflection in flapping propulsion.* **J Fluid Struct**, 71,217–233.[doi:10.1016/j.jfluidstructs.2017.04.003]
15. **F.J. Huera-Huarte**, Z.A. Bangash, L.M. González. *Multi-mode vortex and wake-induced vibrations of a flexible cylinder in a tandem arrangement.* **J Fluid Struct**, 66, 571-588. [doi:10.1016/j.jfluidstructs.2016.07.019]
16. **F.J. Huera-Huarte**. (2016) (**Invited contribution**) *Aquatic flapping propulsion: Review and recent developments.* **DYNA**, 91 (5), 560-565. [doi:10.6036/7870]
17. Z.A. Bangash, **F.J. Huera-Huarte**. (2015) *On the flow around the node to anti-node transition of a flexible cylinder undergoing vortex induced vibrations.* **Physics of Fluids**, 27, 065112. [doi:10.1063/1.4922816]
18. R. Fernandez-Prats, V. Raspa, B. Thiria, **F.J. Huera-Huarte**, R. Godoy-Diana. (2015) *Large-amplitude undulatory swimming close to a wall.* **Bioinspiration & Biomimetics**, 10,016003 [doi:10.1088/1748-3190/10/1/016003]
19. **F.J. Huera-Huarte**. (2014) *On splitter plate coverage for suppression of vortex-induced vibrations of flexible cylinders.* **Applied Ocean Research**, 48, 244-249 [doi:10.1016/j.apor.2014.09.002]
20. **F.J. Huera-Huarte**, Z.A. Bangash, L.M. González. (2014) *Towing tank experiments of the vortex-induced vibrations of a low mass ratio long flexible cylinder.* **J Fluid Struct**, 48, 81-92. [doi:10.1016/j.jfluidstructs.2014.02.006]
21. **F.J. Huera-Huarte**. (2014) *An optical instrument based on defocusing for dynamic response model testing in water or wind tunnels.* **Ocean Eng.**, 79, 92-100. [doi:10.1016/j.oceaneng.2014.01.002]
22. **F.J. Huera-Huarte**. (2013) *Some observations on the flow physics of paddle racquets.* **J Sports Eng. Tech.**, 228(1), 40-48. [doi:10.1177/1754337113499324]
23. **F.J. Huera-Huarte**, L.M. González. (2012) *Numerical prediction of the modal response of flexible cylinders in cross-flow with a current dependent form of damping.* **J Mar Sci Tech.**, 18 (3), 370-380. [doi:10.1007/s00773-013-0214-5]
24. **F.J. Huera-Huarte**, D. Jeon, M. Gharib. (2011) *Experimental investigation of water slamming loads on panels.* **Ocean Eng.**, 38, (11-12), 1347-1355. [doi:10.1016/j.oceaneng.2011.06.004]
25. **F.J. Huera-Huarte**, M. Gharib. (2011) *Vortex and wake-induced vibrations of a tandem arrangement of two flexible circular cylinders with far wake interference.* **J Fluid Struct**, 27 (5-6), 824-828. [doi:10.1016/j.jfluidstructs.2011.02.006]

26. **F.J. Huera-Huarte**, M. Gharib. (2011) *Flow-induced vibrations and wake interference of a side-by-side arrangement of two flexible circular cylinders.* **J Fluid Struct**, 27(3) 354-366. [doi:10.1016/j.jfluidstructs.2011.01.001]
27. **F.J. Huera-Huarte**, P.W. Bearman. (2010) *Vortex and wake-induced vibrations of a tandem arrangement of two flexible circular cylinders with near wake interference.* **J Fluid Struct**, 27(2) 193-211. [doi:10.1016/j.jfluidstructs.2010.11.004]
28. **F.J. Huera-Huarte**, P.W. Bearman. (2010) *DPIV in the wake of a tandem arrangement of two high aspect ratio and low mass ratio circular cylinders in cross-flow.* **J Visual-Japan**, 13-3, 195-202. [doi:10.1007/s12650-010-0024-3]
29. **F.J. Huera-Huarte**, A. Vernet. (2010) *Vortex modes in the wake of an oscillating long flexible cylinder combining POD and Fuzzy Clustering.* **Exp Fluids**, 48-6, 999-1013. [doi:10.1007/s00348-009-0786-3]
30. **F.J. Huera-Huarte**, P.W. Bearman. (2009) *Wake structures and vortex-induced vibrations of a long flexible cylinder - Part 2: Drag coefficients and vortex modes.* **J Fluid Struct**, 25, 991-1006. [doi:10.1016/j.jfluidstructs.2009.03.006]
31. **F.J. Huera-Huarte**, P.W. Bearman. (2009) *Wake structures and vortex-induced vibrations of a long flexible cylinder - Part 1: Dynamic response.* **J Fluid Struct**, 25, 969-990. [doi:10.1016/j.jfluidstructs.2009.03.007]
32. **F.J. Huera-Huarte**, P.W. Bearman, J.R. Chaplin. (2006) *On the Force Distribution along the Axis of a Flexible Circular Cylinder Undergoing Multi-mode Vortex-Induced Vibrations.* **J Fluid Struct**, 22, 897-903. [doi:10.1016/j.jfluidstructs.2006.04.014]
33. J.R. Chaplin, P.W. Bearman, Y. Cheng, E. Fontaine, J.M.R. Graham, K. Herfjord, **F.J. Huera-Huarte**, M. Isherwood, K. Lambrakos, C.M. Larsen, J.R. Meneghini, G. Moe, R.J. Pattenden, M.S. Triantafyllou, R.H.J. Willden. (2005) *Blind predictions of laboratory measurements of Vortex Induced Vibrations of a tension riser.* **J Fluid Struct**, 21, 25-40. [doi:10.1016/j.jfluidstructs.2005.05.016]
34. J.R. Chaplin, P.W. Bearman, **F.J. Huera-Huarte**, R.J. Pattenden. (2005) *Laboratory measurements of vortex-induced vibrations of a vertical tension riser in a stepped current.* **J Fluid Struct**, 21, 3-24. [doi:10.1016/j.jfluidstructs.2005.04.010]

Patents

1. **F.J. Huera-Huarte**. *DEVICE FOR PASSIVE SUPPRESSION OF VORTEX-INDUCED VIBRATIONS (VIV) IN STRUCTURES.* European Patent: EP17382302.2

Conferences (indexed and Peer reviewed)

1. **F.J. Huera-Huarte**, J.I. Jimenez-Gonzalez. *Flow-induced vibrations of two rigidly coupled circular cylinders in tandem.* IUTAM Conference on Bluff Body Wakes and Vortex-Induced Vibrations, **BBVIV7**, 2018, Carry-le-Rouet, France.
2. M. Somoano, **F.J. Huera-Huarte**. *The effect of blade pitch and Reynolds number on the performance of cross-flow turbines.* Proceedings of ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2018, Madrid, Spain.
3. S. Satheesh, C. Haeck, **F.J. Huera-Huarte**. *Effect of free surface on the drag forces on a a flat plate translating normal to the flow.* Proceedings of ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2018, Madrid, Spain.
4. H. Diaz-Ojeda, L.M. González, **F.J. Huera-Huarte**. *Fluid-structure simulations involving free surface.* Proceedings of ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2018, Madrid, Spain.

5. **F.J. Huera-Huarte**, J.I. Jimenez-Gonzalez. *Vortex-induced vibrations of a cylinder with a control rod in its wake.* Proceedings of ASME 36th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2017, Trondheim, Norway.
6. L M. Gonzalez-Gutiérrez, A. Rodriguez, C. Garrido, **F.J. Huera-Huarte** J. C. Suarez *CFD Simulations on the Vortex-Induced Vibrations of a Flexible Cylinder with Wake Interference.* Proceedings of ASME 34th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2015, St John's, Newfoundland and Labrador, Canada.
7. **F.J. Huera-Huarte**, X. Cort, E. Aramburu et al., *DPIV Measurements of the HVAC Aerodynamics Inside a Passenger Car.* **SAE Technical Paper** 2014-36-0214, 2014. [doi:10.4271/2014-36-0214]
8. R. Fernandez-Prats, **F.J. Huera-Huarte**. *Hydrodynamic forces and DPIV in a pitching foil.* Proceedings of ASME 4th Joint US-European Fluids Engineering Summer Meeting **FEDSM2014**, 2014, Chicago, USA
9. **F.J. Huera-Huarte**, Z.A. Bangash, L.M. Gonzalez. *Towing tank experiments on the vortex-induced vibrations of a long flexible cylinder with wake interference.* Proceedings of ASME 33th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2014, San Francisco, CA, USA.
10. **F.J. Huera-Huarte**, Z.A. Bangash, L.M. Gonzalez. *Towing tank experiments on the vortex-induced vibrations of a long flexible cylinder in a stepped current.* Proceedings of ASME 32th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2013, Nantes, France.
11. **F.J. Huera-Huarte**, L.M. González. *Numerical predictions of the natural frequencies of long flexible cylinders with a form of damping that includes the effect of the current.* Proceedings of 10th International Conference on Flow-Induced Vibration & Flow-Induced Noise **FIV2012**, 2012 Dublin, Ireland.
12. **F.J. Huera-Huarte**. *An optical tool for measuring Vortex-Induced Vibrations of long flexible cylinders.* Proceedings of ASME 31th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2012, Rio de Janeiro, Brazil.
13. **F.J. Huera-Huarte**, Z.A. Bangash. *DPIV around a flexible circular cylinder undergoing cross-flow forced oscillations.* Proceedings of PVP2012 ASME Pressure Vessels & Piping Conference, **ASME PVP**, 2012, Toronto, Canada.
14. **F.J. Huera-Huarte**, M. Gharib. *Vortex and wake-induced vibrations of two flexible circular cylinders in tandem arrangement showing independent wakes.* IUTAM Conference on Bluff Body Wakes and Vortex-Induced Vibrations, **BBVIV6**, 2010, Capri, Italy.
15. **F.J. Huera-Huarte**. *Drag coefficients of a long flexible circular cylinder with wake interference.* Proceedings of ASME 28th International Conference on Ocean, Offshore and Arctic Engineering, **ASME OMAE**, 2009, pp. 277-284, Honolulu, Hawaii, USA. ISBN: 978-0-7918-4345-1.
[doi:10.1115/OMAE2009-79099]
16. **F.J. Huera-Huarte**, P.W. Bearman. *Wake structures and dynamic response of one and two long flexible cylinders undergoing vortex-induced vibrations.* 9th International Conference on Flow Induced Vibrations, **FIV 2008**, 2008, Prague, Czech Republic. ISBN: 80-87012-12-7
17. P.W.Bearman, **F.J. Huera-Huarte**, J.R.Chaplin. *The Hydrodynamic Forces Acting on a Long Flexible Circular Cylinder Responding to VIV.* ASME 6th International Symposium On Fluid-Structure Interactions, Aeroelasticity, Flow-Induced Vibration & Noise at the PVP-Division Summer Meeting **FSI, AE & FIV+N**, 2006, Vancouver, BC, Canada. PVP2006-ICPVT-11-9389, pp. 611-619. ISBN: 0-7918-47888.
[doi:10.1115/PVP2006-ICPVT-11-93896]

18. **F.J. Huera-Huarte**, P.W.Bearman, J.R.Chaplin. *On the Force Distribution along the Axis of a Flexible Circular Cylinder Undergoing Multi-mode Vortex-Induced Vibrations.* 4^{th} Conference on Bluff Body Wakes and Vortex-Induced Vibrations, **BBVIV4**, 2005, Santorini, Greece.
19. J.R.Chaplin, P.W.Bearman, **F.J. Huera-Huarte**, R.J.Pattenden. *Laboratory measurements of vortex-induced vibrations of a vertical tension riser in a stepped current.* Proc. 8th Int. Conf on Flow-Induced Vibration, **FIV2004**, 279-284, 2004, Paris. ISBN: 2-7302-1142-X

CONFERENCES (INVITED)

1. **F.J. Huera-Huarte**, S. Satheesh, H. Díaz-Ojeda, L.M. González. *Flow features of rigid plates towed in cross-flow near the free-surface.* Workshop in Fluid Mechanics **WFM**, 2019, Granada, Spain.
2. **F.J. Huera-Huarte**, M. Gharib. *Propulsive efficiency of a pitching foil with trailing edge control.* 71st American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2018, Atlanta, GA, USA.
3. **F.J. Huera-Huarte**. *Vortex-induced vibrations in the vicinity of a stationary cylinder.* 55th Annual Technical Meeting of the Society of Engineering Science, **SES2018**, 2018, Madrid, Spain.
4. S. Satheesh, **F.J. Huera-Huarte**. *The effect of the free surface on the thrust production of a flexible pitching foil.* 12th European Fluid Mechanics Conference. **EFMC11**, 2018, Vienna, Austria.
5. M.Somoano, **F.J. Huera-Huarte**. *The effect of blade pitch on the performance and the flow dynamics of cross-flow turbines.* Workshop in Fluid Mechanics **WFM**, 2018, Málaga, Spain.
6. S. Satheesh, **F.J. Huera-Huarte**. *Effect of free surface on a flat plate translating normal to the flow.* Workshop in Fluid Mechanics **WFM**, 2018, Málaga, Spain.
7. **F.J. Huera-Huarte**. *Efficiency of a flapping propulsion system based on two side-by-side pitching foils.* 70th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2017, Denver, CO, USA.
8. **F.J. Huera-Huarte**. *Supresión pasiva de vibraciones inducidas por flujo cruzado en estructuras marinas.* 13^{o} Congreso Iberoamericano de Ingeniería Mecánica, **CIBEM13**, 2017, Lisboa, Portugal.
9. **F.J. Huera-Huarte**. *Suppression of vortex-induced vibrations using wire meshes.* Workshop on Fluid Mechanics, **WFM2017**, 2017, Tarragona, Spain.
10. **F.J. Huera-Huarte**. *Flapping propulsion with side-by-side pitching foils.* 69th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2016, Portland, OR, USA.
11. M. Somoano, **F.J. Huera-Huarte**. *The effect of blade pitch in the rotor hydrodynamics of a cross-flow turbine.* 69th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2016, Portland, OR, USA.
12. **F.J. Huera-Huarte**, M. Gharib. *The impulse generated by rorating plates with deflections at their tip.* 11th European Fluid Mechanics Conference. **EFMC11**, 2016, Sevilla, Spain.
13. **F.J. Huera-Huarte** *On the impulse produced by flexible pitching foils.* Workshop in Fluid Mechanics **WFM**, 2016, Cádiz, Spain.
14. M.Somoano, **F.J. Huera-Huarte**. *Two-dimensional flow field downstream of a cross-flow turbine.* Workshop in Fluid Mechanics **WFM**, 2016, Cádiz, Spain.
15. **F.J. Huera-Huarte**, M. Gharib. *The role of tip deflection on the thrust produced by rigid flapping fins.* 68th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2015, Boston, MA, USA.

16. **F.J. Huera-Huarte**, V. Raspa, B. Thiria, R. Godoy-Diana. *Three-dimensional volumetric velocimetry in the wake of an undulatory swimmer.* 68th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2015, Boston, MA, USA.
17. M. Somoano, **F.J. Huera-Huarte**. *Planar velocimetry in the wake of a cross-flow turbine.* 68th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2015, Boston, MA, USA.
18. **F.J. Huera-Huarte**, M. Gharib. *Flapping propulsion with tip pitch control.* 67th American Physical Society - Division of Fluid Dynamics, **APS DFD**, 2014, San Francisco, CA, USA.
19. **F.J. Huera-Huarte**. *Bio-inpired flapping foil propulsion.* 2nd International Workshop on the Swimming Physiology of Fish, **FitFish**, 2014, Barcelona, Spain
20. **F.J. Huera-Huarte**. *Large scale PIV measurements of the HVAC aerodynamics of a commerical car.* 10th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements **ETMM10**, 2014, Marbella, Spain.
21. Z. A. Bangash, **F.J. Huera-Huarte**. *Vortex structures in the node to anti-node transition of an oscillating flexible cylinder.* 10th European Fluid Mechanics Conference. **EFMC10**, 2014, Copenhagen, Denmark.
22. R. Fernandez-Prats, V. Raspa, B. Thiria, **F.J. Huera-Huarte**, R. Godoy-Diana. *Undulatory swimming close to a wall.* 10th European Fluid Mechanics Conference. **EFMC10**, 2014, Copenhagen, Denmark.
23. R. Fernandez-Prats, **F.J. Huera-Huarte**. *Hydrodynamics in the wake of a pitching foil.* (Video Session) 66th American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2013, Pittsburgh, PA, USA.
24. **F.J. Huera-Huarte**. *Suppression of vortex-induced vibrations in a flexible cylinder with elastic splitter plates.* 66th American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2013, Pittsburgh, PA, USA.
25. D. Tomas-Verges, **F.J. Huera-Huarte**, D. Matha, T. Duarte, C. Vidal-Martínez-Illescas *Dynamics of a wind turbine spar model: A Benchmarking of preciction tools against experimental data.* EWEA Offshore Conference, **EWEA Offshore**, 2013, Messe Frankfurt, Germany.
26. **F.J. Huera-Huarte**. *Wake dynamics and hydrodynamic forces on a perforated circular plate in cross-flow.* 65th American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2012, San Diego, CA, USA.
27. R. Fernandez-Prats, **F.J. Huera-Huarte**. *Forces and vorticity in the wake of an oscillating foil.* (Poster Session) 65th American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2012, San Diego, CA, USA.
28. **F.J. Huera-Huarte**, Z. Bangash. *Vortex dynamics at the node to anti-node transition of a forced oscillating flexible circular cylinder.* Fluid & Elasticity **FE**, 2012, San Diego, CA, USA.
29. **F.J. Huera-Huarte**, Z. Bangash. *The flow around the node to anti-node transition of an oscillating flexible cylinder.* 64th American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2011, Baltimore, MD, USA.
30. D. Jeon, **F.J. Huera-Huarte**, M. Fu , M. Gharib. *Experimental Investigation of Slamming Loads on a Flat Plate.* 63rd American Physical Society - Division of Fluid Dynamics, APS DFD, **APS DFD**, 2010, Long Beach, CA, USA.
31. **F.J. Huera-Huarte**, A. Vernet. *POD and Fuzzy clustering as an alternative to phase averaging: Vortex modes in the wake of an oscillating cylinder.* ERCOFTAC 5th Workshop on Research in Turbulence and Transition, **ERCOFTAC IEPC 2010**, 2010, Tarragona, Spain.
32. **F.J. Huera-Huarte**. *On the dynamic response and the interaction of pairs of circular cylinders in cross-flow.* A One-Day Workshop on Fluid-Structure Interactions, **FSI 2010**, April 2010, Dept. Mechanical and Industrial Engineering, University of Massachusetts, Amherst, USA.

33. **F.J. Huera-Huarte**, D. Jeon, M. Gharib. *Three dimensional flow around a flexible circular cylinder in cross-flow.* 62nd American Physical Society - Division of Fluid Dynamics, **APS DFD**, November 2009, Minneapolis, MN, USA.
34. **F.J. Huera-Huarte**. *Vortex modes in the wake of flexible circular cylinders with POD and Fuzzy clustering.* **Fluid and Elasticity**, June 2009, Carry-le-Rouet,France.
35. **F.J. Huera-Huarte**, A. Vernet. *Structures in the wake of a long flexible cylinder undergoing vortex-induced vibrations.* 61st American Physical Society - Division of Fluid Dynamics, **APS DFD**, November 2008, San Antonio, TX, USA.
36. **F.J. Huera-Huarte**, P.W. Bearman. *Wake interaction between two long, tandem, flexible cylinders in a stepped current.* 7th Euromech Fluid Mechanics conference, **EFMC7**, September 2008, Manchester, UK.
37. **F.J. Huera-Huarte**, P.W.Bearman, J.R.Chaplin. *The effects of vortex shedding in flexible circular cylinders.* IAHR International Meeting of the Working Group on Cavitation and Dynamic Problems in Hydraulic Machinery and Systems, **IAHR**, June 2006, Barcelona, Spain.

Books & Book chapters

1. Arapogianni, A.; Genachte, A.; Manzanas, R.; Pascual, J.; Castell, D.; Tsouroukdissian, A. R.; Korbijn, J.; Bolleman, N. C.; **Huera-Huarte, F. J.**; Schuon, F.; Ugarte, A.; Sandberg, J.; de Laleu, V.; Maciel, J.; Tunbjer, A.; Roth, R.; de la Gueriviere, P.; Coulombeau, P.; Jedrec, S.; Philippe, C.; Voutsinas, S.; Weinstein, A.; Vita, L.; Byklum, E.; Hurley, W. L. & Grubel A. *Deep Water: The next step for offshore wind energy.* European Wind Energy Association, 2013. ISBN: 978-2-930670-04-1

Teaching (**240 hours/year since 2006**)

Dynamics of Mechanical Systems (Mech. Eng.) Fall 2013 to 2018.
Experimental Methods in Mechanics (Mech. Eng.) Fall 2010 to 2018.
Mechanics (MEng Industrial Eng.) Fall 2013 to 2015
Mechanical Design (Mech. Eng.) Spring 2013
Strength of Materials lab. (Mech. Eng.) Spring 2006 and 2007
Mechanics lab.(Mech. Eng.) Spring 2006 and 2007