HDM
HRVATSKO DRUŠTVO ZA MEHANIKU
ZAGREB – OSIJEK – RIJEKA – SL. BROD – SPLIT

**ŽIVOTOPIS predavača:**

**Antonio Javier Gil**
**Professor**


**PERSONAL DETAILS**
Zienkiewicz Centre for Computational Engineering
College of Engineering
Swansea University
Fabian Way, Swansea
SA1 8EN, United Kingdom
Phone: +44 (0) 1792 602552
e-mail: a.j.gil@swansea.ac.uk


**CURRENT POSITION**

- Full Professor in the College of Engineering, Swansea University, U.K.
- Chartered Civil Engineer in the Spanish Institution for Civil Engineers, since October 1999.
- Civil Engineering Admission Tutor at Swansea University, since October 2008.
- Programme Director of Erasmus Mundus Masters Course "Computational Mechanics", Swansea, since February 2008.
- Programme Director of Erasmus Mundus Joint Doctorate "Simulation in Engineering and Entrepreneurship Development", Swansea, since September 2012.
- Zienkiewicz Centre for Computational Engineering committee member of the REF2020 Strategy group, since October 2015.

**ACADEMIC QUALIFICATIONS**

- Senior Fellow of the Higher Education Academy (SFHEA), since June 2016.

- Doctor in Philosophy (PhD) degree awarded by Swansea University in January 2005, with the thesis entitled “Structural analysis of prestressed Saint Venant-Kirchhoff hyperelastic membranes”.
- Postgraduate Certificate of Advanced Studies (CAS), equivalent to a two-year MSc. Years 1999-2001. Awarded after completion of the two-year Postgraduate program in the Departments of Civil Engineering and Mechanics of Structures and Continuum at the University of Granada (Spain), with the thesis entitled: “Metodos num´ericos para el dise˜no de estructuras traccionadas: membranas y redes de cables”–“Numerical methods for the design of prestressed structures: membranes and cable networks”.
- Academic year at the University of Davis (California, U.S.A.), (1998-1999) under a full scholarship awarded by the University of California Education Abroad Program.
- Undergraduate Degree of Ingeniero de Caminos, Canales y Puertos (ICCP), MEng Civil Engineering equivalent, awarded by the University of Granada (Spain). Years 1994-1999

**ACADEMIC CAREER**

- [May 2013 - February 2017 ] Associate Professor in the College of Engineering, Swansea University, U.K.
- [Oct 2010 - April 2013 ] University Senior Lecturer in the College of Engineering, Swansea University, U.K.
- [Aug 2006 - Sept 2010 ] University Lecturer in the School of Engineering, Swansea University, U.K.
- [Oct 2003 - Jul 2006 ] Senior Research Assistant at the Civil and Computational Engineering Centre, Swansea University, investigating on the topic “Fluid structure interaction for medical applications”.
- [Jan 2003-Sept 2003 ] Research Assistant at the Civil and Computational Engineering Centre, Swansea University, investigating on the topic “Numerical simulation of superplastic forming of dental and medical prostheses”. This research was undertaken in collaboration with medical institutions, including Guy’s, Kings College and St Thomas’s Hospitals Dental School (GKT) in London

**HONOURS AND AWARDS**

- Doctoral Supervisor of the PhD thesis ”On a new variational and computational framework for polyconvex nonlinear continuum mechanics and convex multi-variable nonlinear electro-elasticity” by Dr. R. Ortigosa, which was awarded the UK Association of Computational Mechanics (UK-ACM) Zienkiewicz price for the best PhD thesis in the field of Computational mechanics in the UK during 2016 and the ECCOMAS prize for the best PhD thesis in the field of Computational mechanics in Europe during 2016.
- Co-author in J. Haider, C.H. Lee, A.J. Gil, J. Bonet and A. Huerta, ”Large strain solid dynamics in OpenFOAM”, awarded Student Best Research Paper Award of the 4th OpenFOAM User Conference 2016, Cologne (Germany).

- The O.C. Zienkiewicz Prize, awarded in May 2016 by the European Community on Computational Methods in Applied Sciences (ECCOMAS), for my contributions as young investigator to the field of computational mechanics.
- Doctoral co-supervisor of the PhD thesis "An hp-Finite Element computational framework for nonlinear magneto-fluid problems including magnetostriction" by Dr. D. Jin, which was awarded the best 2016 PhD thesis in the Zienkiewicz Centre for Computational Engineering.
- Co-author in K. Izian, C.H. Lee, A.J. Gil and J. Bonet, "A Two-Step Taylor-Galerkin method for explicit solid dynamics", Engineering Computations, Volume 31, Issue 3, pages 366-387, 2014, awarded 2015 Outstanding paper of the year Emerald Award of Excellence.
- Co-author in R. Ortigosa, A.J. Gil and J. Bonet, "A variational framework for large strain polyconvex dielectric elastomers", awarded SIAM prize for the Best Postgraduate Research Paper of the 23rd UK Association of Computational Mechanics in Engineering (ACME) Conference, 2015.
- Co-author in C.H. Lee, A.J. Gil, J. Bonet and R. Ortigosa, "An entropy-based stabilised PetrovGalerkin formulation for linear tetrahedral elements in compressible, nearly incompressible and truly incompressible isothermal fast dynamics", awarded Best Postdoctoral Research Paper of the 23rd UK Association of Computational Mechanics in Engineering (ACME) Conference, 2015.
- Doctoral Supervisor of the PhD thesis "A vertex centred Finite Volume Method for solid dynamics" by Dr. M. Aguirre, which was awarded the best 2014 PhD thesis in the Zienkiewicz Centre for Computational Engineering.
- The Philip Leverhulme Prize, awarded in November 2011 by the The Philip Leverhulme Trust Foundation, for my contributions as young investigator to the field of computational mechanics in the United Kingdom http://www.leverhulme.ac.uk.
- Participant in the prestigious First Welsh Crucible 2011 http://www.welshcrucible.org.uk/.
- Doctoral Supervisor of the PhD thesis "Development of a cell centred upwind finite volume algorithm for a new conservation law formulation in structural dynamics" by Dr. C. H. Lee, which was awarded the UK Association of Computational Mechanics in Engineering (ACME) Zienkiewicz price for the best PhD thesis in the field of Computational mechanics in the UK during 2012.
- Co-author in C.H. Lee, A.J. Gil and J. Bonet, "Development of a finite volume algorithm for a new conservation law formulation in structural dynamics", awarded Best Postgraduate Research Paper of the 19th UK Association of Computational Mechanics in Engineering (ACME) Conference, 2011.
- Co-author in C. Wood, A.J. Gil, O. Hassan and J. Bonet, "A Partitioned Approach for the Solution of Three-Dimensional Time-Dependent Incompressible Fluid-Structure Interaction", awarded Best postgraduate Research Paper of the 15th UK Association of Computational Mechanics in Engineering (ACME) Conference, 2007.
- Leading author in A.J. Gil, "Structural analysis of cable and strut supported pre-stressed membranes", awarded Best Postgraduate Research Paper of the 12th UK Association of Computational Mechanics in Engineering (ACME) Conference, Cardiff, 5-6 April 2004.

- Honorary Mention to the Hangai Medal in "Shell and Spatial structures: from models to realization", IASS, September 2004, Montpellier (France), with the paper "Wrinkling analysis of prestressed hyperelastic Saint Venant-Kirchhoff membranes".
- National 1st Prize awarded by the Education, Culture and Sport Ministry of Spain for the Undergraduate Degree of Ingeniero de Caminos, Canales y Puertos, throughout the years 1994-1999.
- University 1st Prize awarded by the University of Granada (Spain) for the Undergraduate Degree of Ingeniero de Caminos, Canales y Puertos, throughout the years 1994-1999.
- Full Postgraduate Scholarship awarded by the Education, Culture and Sport Ministry of Spain (of one scholarship awarded to the School of Engineering, University of Granada), years 1999-2002.

**SELECTED RECENT JOURNAL PUBLICATIONS**

- A.J. Gil and R. Ortigosa, "A new framework for large strain electromechanics based on convex multivariable strain energies: variational formulation and material characterisation", Computer Methods in Applied Mechanics and Engineering, 2016, doi: 10.1016/j.cma.2015.11.036
- A.J. Gil, C. H. Lee, J. Bonet and R. Ortigosa, "A first order hyperbolic framework for large strain computational solid dynamics. Part II: Total Lagrangian compressible, nearly incompressible and truly incompressible elasticity", Computer Methods in Applied Mechanics and Engineering, Volume 300, 2016, 146-181, doi: 10.1016/j.cma.2015.11.010
- A.J. Gil, C. H. Lee and J. Bonet, "A stabilised Petrov-Galerkin formulation for linear tetrahedral elements in compressible, nearly incompressible and truly incompressible fast dynamics", Computer Methods in Applied Mechanics and Engineering, Volume 276, 2014, pages 659-690, doi: 10.1016/j.cma.2014.04.006.
- C.H. Lee, A.J. Gil and J. Bonet, "Development of a stabilised Petrov-Galerkin Formulation for Conservation Laws in Lagrangian Fast Solid Dynamics, Computer Methods in Applied Mechanics and Engineering, Volume 268, 2014, pages 40-64, doi: 10.1016/j.cma.2013.09.004.
- C. Hesch, A.J. Gil, A. Arranz Carre˜no, J. Bonet and P. Betsch, "A mortar approach for fluid-structure interaction problems: immersed strategies for deformable and rigid bodies", Computer Methods in Applied Mechanics and Engineering, Volume 278, 2014, pages 853-882, doi: 10.1016/j.cma.2014.06.004.
- A.J. Gil, A. Arranz Carre˜no, J. Bonet and O. Hassan, "An enhanced Immersed Structural Potential Method for fluid-structure interaction", Journal of Computational Physics, Volume 250, 2013, pages 178-205, doi: 10.1016/j.jcp.2013.05.011.
- A.J. Gil and P.D. Ledger, "A coupled hp-finite element scheme for the solution of two-dimensional electrostrictive materials", International Journal for Numerical Methods in Engineering, Volume 91, Issue 11, 2012, pages 1158-1183, doi: 10.1002/nme.4308.