

PhD Juan Luis Pérez Ordóñez

CURRENT PROFESSIONAL SITUATION

CATEGORY: Tenured Professor in University of A Coruña.

DEPARTMENT: Civil Engineering

CENTERS: University College of Technical Architecture and School of Civil Engineering

KEY WORDS: Evolutionary Computation, Genetic Programming, Artificial Neuron Networks, Artificial Intelligence in Civil Engineering, Building Information Modeling.

ACADEMIC EDUCATION

Computer Science Engineer (2005).

Predocctoral Research Grants – FPI (2006)

Phd (European Doctorate) by University of A Coruña (2010).

GENERAL INDICATORS OF QUALITY OF SCIENTIFIC PRODUCTION

2 six-year periods of Research (2007-2012, 2013-2018).

1 six-year period of Knowledge Transfer and Innovation (2007-2014).

Citations: 555 (Scopus)

Mean citations/year (last 5 years): 76,2 (Scopus)

Q1 paper: 16 (JCR)

h-index: 13 (Scopus)

EDUCATION

He obtained the degree in Technical Engineering in Computer Management in 2001 at the University of A Coruña (UDC), and later in 2005 he finished his studies in Computer Engineering. Among other grants obtained since 2001, a pre-doctoral grant for "*Formación Personal Investigador - Research staff training*" (FPI) on the Department of Construction Technology of the same university stands out. In 2010, he got a European PhD from the UDC.

RESEARCH

A researcher in the field of construction, he focuses his activities mainly on the application of Artificial Intelligence techniques to Structural Concrete, Building Materials and Structural Tests. Since 2001, he has participated in more than 30 research projects with official grants (national, regional or university institutions). He has collaborated on various technology transfer projects with companies or institutions in the mentioned research field.

He belongs to the research group called "Grupo de Construcción (gCONS)" of the UDC. He is a member of "Asociación Científico-Técnica del Hormigón Estructural" since 2008.

He carried out 3 research stays (10 months) and evaluated paper in scientific journals (JCR) and in national and international congresses and an international book.

He has published more than 30 papers in international journals with an impact index, 12 book chapters (5 of them international), 33 papers on international conferences and 7 software records should be highlighted

2 six-year periods of Research (2007-2012, 2013-2018) and 1 six-year period of Knowledge Transfer and Innovation (2007-2014)

UNIVERSITY MANAGEMENT

Academic Secretary at the University College of Technical Architecture from 2021 to present.
Manager of the UDC's BIM Postgraduate Degree (30 ECTS) from 2013 and Master BIM Degree (60 ECTS) from 2020 to the present.

Member of the Academic Committee of UPV Master Course in BIM from 2015 to the present.

Member of the Permanent Commission, and Academic Commission of University College of Technical Architecture

Coordinator or collaborator in the management of various conferences and events related to academic and research activity.

TEACHING

His activity begins in 2006, teaching in first cycle, third cycle, degree and master (EHEA) in five schools or faculties. At present, it focuses its teaching activity (degree and master) both University College of Technical Architecture and School of Civil Engineering.

During his teaching activity the following stand out: Carrying out different activities in the field of quality in teaching (PAT - Tutorial Action Plan, courses for teachers, design of teaching material...), Contribution to international teaching conferences. Management or co-management of more than 30 final degree and master projects. Member of degree and master degree works committee of University College of Technical Architecture from 2012 to the present.

External Lecturer (Universitat Politècnica de València -UPV) in Master Course in Building Information Modeling.

Positive evaluation 2 five-year periods of teaching and a positive evaluation of DOCENTIA Programme.

MOST RELEVANT

PAPERS:

- Martínez García, C.; et al. (/4). 2021. Assessment of mussel shells building solutions: A real-scale application. *Journal of Building Engineering*. Elsevier. 44-102635, pp.1-16. ISSN2352-7102.
- Bienvenido-Huertas, D.; et al. (/4). 2020. Automation and optimization of in-situ assessment of wall thermal transmittance using a Random Forest algorithm. *BUILDING AND ENVIRONMENT*, pp.1-15.
- Bienvenido-Huertas, D.; et al. (/4). 2019. Optimizing the evaluation of thermal transmittance with the thermometric method using multilayer perceptrons *ENERGY AND BUILDINGS*. 198, pp.395-411.
- Velay Lizancos, M.; et al. (/4). 2017, Analytical and genetic programming model of compressive strength of eco concretes by NDT according to curing temperature. *Construction and Building Materials*, Vol. 144, pp. 195-206.
- González-Taboada, I.; et al. (/4).2016, Prediction of the mechanical properties of structural recycled concrete using multivariable regression and genetic programming. *Construction and Building Materials*, Vol. 106, pp. 480-499.
- Cladera, A. ; et al.(/3). 2014, Shear strength of RC beams. Precision, accuracy, safety and simplicity using genetic programming. *Computers and Concrete*. Vol. 14 (4), pp. 479-501
- Pérez, JL.; et al.(/4). 2012, Optimization of existing equations using a new Genetic Programming algorithm. Application to the shear strength of reinforced concrete beams, *Advances in Engineering Software*, Vol.:50, pp. 82- 96
- Pérez, JL.; et al.(/4). 2010, Optimal adjustment of EC-2 shear formulation for concrete elements without web reinforcement using Genetic Programming, *Engineering Structures*, Vol.: 32 (11), pp. 3452-3466

PROJECTS:

- Diseño de prefabricados de hormigón empleando estrategias sostenibles de auto reparación para incremento de su vida útil: PREHEALING. Ministerio de Ciencia e Innovación. B. González Fonteboa y JL. Pérez Ordóñez. Duration: 01/12/2021-30/11/2023. 103.500 €, Type of participation: Principal Researcher
- Hormigones sostenibles autocompactantes de altas prestaciones mediante el uso de cementos de bajo contenido en clínker y agentes de curado interno y autsellado(HACCURACEM). Funding entity: Secretaría de Estado de Investigación, Desarrollo e Innovación (Ministerio de Economía, Industria y Competitividad-MEIC) PR: B. González Fonteboa and JL. Pérez Ordóñez (Universidade da Coruña), Duration: 2018-2020, Amount: 90.750,00 €, Type of participation: Principal Researcher
- Hormigones reciclados autocompactantes robustos: reología en estado fresco y propiedades mecánicas (HORREO). (Ref: BIA2014-58063-R) Funding entity: MINECO (Programa estatal de I+D+i Orientada a los Retos de la Sociedad), PR: B. González Fonteboa and JL. Pérez Ordóñez (Universidade da Coruña), Duration: 2015-2017, Amount: 95.000,00 €, Type of participation: Principal Researcher

CONTRACTS (Knowledge Transfer and Innovation):

- Valorización de cenizas de central térmica mediante el desarrollo de materiales y productos para la eco-construcción de obra civil y edificación(CENICIENTA). Associated contracts: (EXTRACO, SA), (Galaicontrol, SL), (INDUTEC SLU), (PREFHORVISA OUTEIRO, S.L.). Funding entity: Axencia Galega de Innovación (Programa Conecta-Peme 2016), PR: B. González Fonteboa and F. Martínez Abella, Duration: 2016-2018 Amount:147.759,83 €.
- Deseño e desenvolvemento experimental de prototipos para a xestión da seguridade en presas galegas: GESTDAM (Ref: INV852A 2014/35) Associated contracts: (Indutec Ingenieros, S.L) (Investigación y control Lugo, S.L.), (Auscultación y taller de Ingeniería, S.A) y (Ecosistemas 2000) Funding entity: Axencia Galega de Innovación. (Programa Conecta-Peme 2014) PR of contracts: JL. Pérez Ordóñez and J. Puertas Agudo. Duration: 2014-2015, Amount:144.708,00 €.
- Estudio de las posibilidades de mejora de los ajustes de las dosificaciones de mezclas bituminosas de Arias Hermanos. Funding entity: Arias Hermanos Construcciones, SA, PR: B. González Fonteboa (UDC). Duration:2011-2012 Amount: 20.768,00 €

More detailed information on the institutional website: <https://pdi.udc.es/en/File/Pdi/QN8KF>