

CV date	03/12/2019
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Part A. PERSONAL INFORMATION

First and Family name	David Patiño Vilas		
Social Security, Passport, ID number	36133730V	Age	36
Researcher numbers	Researcher ID	I-1583-2015	
	Orcid code	0000-0002-6129-8678	

A.1. Current position

Name of University/Institution	University of Vigo		
Department	School of Industrial Engineering		
Address and Country	r/Maxwell s/n Campus Universitario Lagoas-Marcosende		
Phone number	986 812604	E-mail	patinho@uvigo.es
Current position	Titular de Universidad	From	09/04/2014
Espec. cód. UNESCO	3313 y 3322 (02,03,04,05)		
Palabras clave	Biomass, combustión, CFD, emisiones, ingeniería térmica		

A.2. Education

PhD	University	Year
BSc Mechanical Engineering	University of Vigo	23/04/2004
MSc Industrial Engineering	University of Vigo	13/10/2006
PhD	University of Vigo	24/07/2009

A.3. JCR articles, h Index, thesis supervised...

Fuente de información (Scopus 19/06/2018). Author ID: 23091574100	
2 research terms (sexennial)	2006-2011 & 2012-2017
Number of papers	48 (more than 2/3 are Q1)
	Average 4 papers/year
Total cites	960 in more than 570 papers
	More than 80 cites yearly since 2015 (average around 95 yearly)
H_index	18 (16 without self-citations)
Thesis	Supervisor of 2 thesis in the last 5 years

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I started the BSc Mechanical Engineering studies in 2000/01. During my BSc Thesis (2003/04) I got in touch and started my collaboration with the Energetic Technology Group (GTE). Later I decided to continue my studies of 4th and 5th year to obtain the title of MSc Industrial Engineering in 2006. By that time, I was simultaneously studying and collaborating with the GTE group by means of research contracts (staff). Following this line, I completed the doctoral courses, obtaining the Diploma de Estudios Avanzados (DEA) in 2008 and presenting the PhD thesis entitled "Experimental Analysis of Biomass Combustion in a Fixed Bed Burner" in 2009. This work obtained the Cum Laude degree and in 2010 it was awarded with the extraordinary prize for technological doctorates of the University of Vigo.

As can be seen from my activity, since I was student, I have been linked to this research group (GTE/EM1). The activities carried out have been varied, but they have always focused on the analysis of biomass combustion systems or heat transfer from the experimental point of view. Derived from my MSc and PhD Thesis 5 publications were delivered. In addition, this work has

served as a source or database for the validation of different models and simulations that also ended in JCR publications (more than 12). The daily activity as well as the elaboration and discussion of these data has moved me closer to the numerical simulation world especially with CFD software.

Mainly thanks to the research merits generated during my doctoral period, in 2010 I achieved a stable position as Contratado Doctor at the University of Vigo. As a result, my teaching and management dedication increased, which made it difficult to maintain scientific production. Fortunately, thanks to the group and the work dynamics acquired in the past, the number of publications has not decreased and I have managed to maintain an acceptable research activity without deviating much from my main subject of interest. In this line, in recent years and through various by-side projects with companies we have continued to build experimental biomass combustion plants, emission reduction systems and other prototypes related with thermal machines that allow us, in my view, to maintain a good technology transfer activity and a suitable scientific dissemination.

The investigation of the last years has opened many international doors to the group. Part of the responsibility in this international projection lays on me and during the last 5 years we have established quite fruitful relationships with prestigious research groups from TU Berlin, TU Graz, TU Ostrava and ECU in Western Australia. All these relationships reinforce our conviction that we are working in an interesting field with a great future projection and we are accomplishing our work in an acceptable manner.

Part C. RELEVANT MERITS

C.1. Publications (including books)

48 JCR articles. Hereby highlighted the most important for their relevance and proximity to the topic of this application:

Título	<i>Experimental analysis of the ignition front propagation of several biomass fuels in a fixed-bed combustor (2010)</i>		
Autores	J. Porteiro, D. Patiño, J. Collazo, E. Granada, J. Morán, J.L. Míguez		
Revista	Fuel	Editorial	Elsevier
Volumen	89(1): 26-35	ISSN	0016-2361
Índice	3.604 (JCR 2010)	Citas	99

Título	<i>Study of a Fixed-Bed Biomass Combustor: Influential Parameters on Ignition Front Propagation Using Parametric Analysis (2010)</i>		
Autores	J. Porteiro, D. Patiño, J. Morán, E. Granada		
Revista	Energy & Fuels	Editorial	American Chemical Society
Volumen	24: 3890-3897	ISSN	0887-0624
Índice	2.444 (JCR 2010)	Citas	44

Título	<i>Study of the reaction front thickness in a counter-current fixed-bed combustor of a pelletised biomass (2012)</i>		
Autores	J. Porteiro, D. Patiño, J.L. Míguez, E. Granada, J. Moran, J. Collazo		
Revista	Combustion and Flame	Editorial	Elsevier
Volumen	159 (3):1296-1302	ISSN	0010-2180
Índice	3.599 (JCR 2012)	Citas	37

Título	<i>Diesel engine condition monitoring using a multi-net neural network system with nonintrusive sensors (2011)</i>		
Autores	J. Porteiro, J. Collazo, D. Patiño, J.L. Miguez		
Revista	Applied Thermal Engineering	Editorial	Elsevier
Volumen	31(17-18):4097-4105	ISSN	1359-4311
Índice	2.064 (JCR 2011)	Citas	29

Título	<i>Improving the Cofiring Process of Wood Pellet and Refuse Derived Fuel in a Small-Scale Boiler Plant (2008)</i>		
Autores	D. Patiño, J.C. Morán, J. Porteiro, J. Collazo, E. Granada, J.L. Míguez		
Revista	Energy & Fuels	Editorial	American Chemical Society
Volumen	22(3): 2121-2128	ISSN	0887-0624
Índice	2.056 (JCR 2008)	Citas	23

Título	<i>Experimental analysis of fouling rates in two small-scale domestic boilers (2016)</i>		
Autores	Patiño, D., Crespo, B., Porteiro, J., Míguez, J.L.		
Revista	Applied Thermal Engineering	Editorial	Elsevier
Volumen	100, 849-860	ISSN	1359-4311
Índice	3.444 (JCR 2016)	Citas	18

Título	<i>Numerical Modeling of a Biomass Pellet Domestic Boiler (2009)</i>		
Autores	J. Porteiro, J. Collazo, D. Patiño, E. Granada, J. C. Morán, J. L. Míguez		
Revista	Energy & Fuels	Editorial	American Chemical Society
Volumen	23(2): 1067-1075	ISSN	0887-0624
Índice	2.319 (JCR 2009)	Citas	81

Título	<i>Numerical modeling of the combustion of densified wood under fixed-bed conditions (2012)</i>		
Autores	J. Collazo, J. Porteiro, D. Patiño, E. Granada		
Revista	Fuel	Editorial	Elsevier
Volumen	93:149-159	ISSN	0016-2361
Índice	3.357 (JCR 2012)	Citas	84

C.2. Research projects and grants

Participation in more than 7 national or autonomous competitive projects and 5 international ones.

<i>Disruptive Cyclone-based technology for effective and affordable particulate matter emission reduction in biomass combustion systems (CYCLOMB)</i>	
Entidad financiadora:	European Union H2020-FTIPilot-2016-1. Project ID 760551
Entidades participantes:	University of Vigo, TAMA Aernova SRL, Solarbox Energías Renovables, KSM Stoker AS
Investigador principal:	Jens Mogensen (KSM Stoker)
Duración:	01/04/2017 - 31/05/2020
Tipo de participación:	Main researcher University of Vigo (ccordinator)
Importe subvención	310.948 €

<i>Mejora de capacidades de investigación en biomasa, para un uso energético optimizado de Biomasa No Valorizada pero de Alto Potencial en la Euroregión</i>	
Entidad financiadora:	Primera Convocatoria del Programa Interreg V-A España-Portugal (POCTEP)
Entidades participantes:	Agência de Energia do Cáv; Axencia Galega de Innovación (ES); Instituto Politécnico de Viana do Castelo (PT); GTE-Universidad de Vigo (España); Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia Industrial (PT)
Investigador principal:	EnergyLab
Duración:	01/04/2017 - 31/12/2019
Tipo de participación:	Researcher
Importe subvención	347.212 €

Consolidación unidades de investigación competitivas: GTE

Entidad financiadora:	GAIN - Agencia Galega de Innovación (ED431C 2016-032)
Entidades participantes:	University of Vigo
Investigador principal:	José L. Míguez Tabarés
Duración:	01/01/2017 - 31/12/2019
Tipo de participación:	Researcher
Importe subvención	400.000 €

Estudio de los fenómenos de fouling y slagging en lechos fijos de combustión de biomasa. Experimentación y desarrollo de submodelos

Entidad financiadora:	Ministerio de Economía y Competitividad. Retos 2013-2016 (ENE2015-67439-R)
Entidades participantes:	University of Vigo
Investigador principal:	Jacobo Porteiro Fresco y David Patiño Vilas
Duración:	01/01/2016 - 31/12/2018
Tipo de participación:	Main researcher
Importe subvención	99.000 €

C.3. Contracts

Participation in more than 10 collaborative projects with a company within the Energetic Technology Group (GTE). The most important ones:

Sistema inteligente de retención electrostática de partículas de alto valor añadido (SIREP)

Entidad financiadora:	ConectaPEme-Galicia 2016/ FEDER
Entidades participantes:	Unviersity of Vigo, DINAK, GRG, ATI Sistemas
Investigador principal:	Jose Luis Míguez Tabarés
Duración:	01/09/2016 - 31/12/2019
Tipo de participación:	Researcher
Importe subvención	152.250 €

C.4. Patents

Several software developments and 4 patents, for example:

Self-regenerative electrostatic precipitator (16EPS007)

Inventores:	Míguez Tabarés, Jose L ;Porteiro Fresco, Jacobo ;Patiño Vilas, David ;Granada Álvarez, Enrique
Fecha de registro:	23/06/2016
Nº de solicitud	EP 16382292.7
Carácter	International. Active explotation patent

C.5, C.6, C.7... (e.g., Institutional responsibilities, memberships of scientific societies...)

- Extraordinary PhD award (technological field) University of Vigo (2010).
- Supervisor of 2 PhD thesis
- Reviewer for JCR internatinoal journals: Energy & Fuels (ISSN 0887-0624), Fuel (ISSN 0016-2361) or Energy (ISSN 0360-5442) among others.
- ANEP assessor. External evaluator for Agencia Nacional de Evaluación de Proyectos since 2012.