

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

Date of the CVA 24/04/2023

First name	Pedro		
Family name	Galvín		
Gender (*)	Male	Birth date (dd/mm/yyyy)	Confidential
ID number	Confidential		
e-mail	pedrogalvin@us.es	URL Web	https://personal.us.es/pedrogalvin/
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-8981-1413		

(*) Mandatory

A.1. Current position

Position	Professor		
Initial date	29/03/2019		
Institution	Universidad de Sevilla		
Department/Center	Continuum Mechanics and Structural Analysis / Faculty of Engineering		
Country	Spain	Teleph. number	+34 954487293
Key words	Railway traffic; Structural dynamics; Structural health monitoring; Wave propagation; Numerical methods; Measurements; Energy harvesting		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country
15/02/2018 to 30/09/2018	Cheney Fellowship/University of Leeds/UK
04/11/2011 to 28/03/2019	Associate Professor/Universidad de Sevilla/Spain
27/03/2010 to 26/05/2010	Postdoctoral researcher/KU Leuven/Belgium
23/06/2008 to 28/02/2009	Postdoctoral researcher/KU Leuven/Belgium
16/05/2008 to 03/11/2011	Associate Professor/Universidad de Sevilla/Spain
19/10/2006 to 15/05/2008	Assistant Professor/Universidad de Sevilla/Spain
01/05/2003 to 18/10/2006	Researcher/Universidad de Sevilla/Spain

A.3. Education

Bachelor/Master/PhD	University	Year
PhD	Universidad de Sevilla	2007
Engineer's degree, Mechanical Engineering	Universidad de Sevilla	2002

A.4. Scientific production

6-year period of accredited research: 3 (2003-2008, 2009-2014 and 2015-2020)

6-year period of accredited knowledge transfer and innovation: 1 (2005-2012)

5-year period of accredited teaching: 3 (2003-2008, 2008-2013 and 2013-2018)

Promotor of PhD thesis: 3 completed and 3 in progress.

Total Citations: 1550 (Web of Science Author ID E-6293-2010), 2009 (Scopus Author ID: 16028384700), 2627 (Google Scholar)

Average citations / year over the last 5 years (2018-2022): 173 (Web of Science Author ID E-6293-2010), 222 (Scopus Author ID: 16028384700), 280 (Google Scholar)

Publications Q1 rank (Journal Citation Report): 36

Publications Q2 rank (Journal Citation Report): 19
Publications Q3 rank (Journal Citation Report): 2
Publications Q4 rank (Journal Citation Report): 2
Index h: 19 (Web of Science Author ID E-6293-2010), 21 (Scopus Author ID: 16028384700),
24 (Google Scholar)

Part B. CV SUMMARY

Pedro Galvín received the Ph.D. degree with honours from the University of Seville in 2007. Currently, he is a Professor of Continuum Mechanics and Theory of Structures at the Faculty of Engineering of the University of Seville. His research interest includes structural dynamics, structural health monitoring, energy harvesting, wave propagation, and railway traffic. He belongs to the Engineering Structures (TEP245) at University of Seville and to the inter-university research group USUJI with University Jaume I, devoted to improving the safety, functionality, and sustainability of railway infrastructures based on prediction and experimentation in noise and vibrations. His research has resulted so far in 60 JCR-indexed papers, 12 book chapters, and more than 100 publications in recognised conferences. These works have been cited more than 2500 times. Pedro Galvín maintains important research international collaborations after completing 18-month research internships at Katholieke Universiteit Leuven and the University of Leeds. He has three validated research, and one knowledge transfer and innovation 6-year term by CNEAI. It is also worth mentioning her participation as principal investigator in five national projects and more than twenty engineering projects for companies for over one million euros. He has transmitted the results to society through research projects and technical assistance to leading companies such as ADIF, SNCF, Abengoa, Acciona, Ayesa, IAPH, Ineco, and Prointec. He is a member of the Spanish Association of Theoretical and Applied Mechanical, the Society for Experimental Mechanics, the European Association for Structural Dynamics, and the International Association for Bridge Maintenance and Safety. He received the COMSA railways research award (2009), the Agustín de Betancourt secondary award of the Royal Academy of Engineering of Spain (2015), and the Cheney Fellowship from the University of Leeds (2017). Pedro Galvín has taught more than 3000 hours of structural engineering related subjects and has tutored over 40 doctoral, master, and bachelor's theses. He is currently tutoring 3 Ph.D. theses.

Part C. RELEVANT MERITS

C.1. Publications (10)

1. J.C. Sánchez-Quesada, A. Romero, P. Galvín, E. Moliner, M.D. Martínez-Rodrigo (3/5). 3D analysis of railway induced vibrations on skew girder bridges including ballast track-bridge interaction effects. *Engineering Structures*, vol. 279, 2023; 115546. <https://doi.org/10.1016/j.engstruct.2022.115546>
2. J. Chordà-Monsonís, A. Romero, E. Moliner, P. Galvín, M.D. Martínez-Rodrigo (4/5). Ballast shear effects on the dynamic response of railway bridges. *Engineering Structures*, vol. 271, 2022; 114957. <https://doi.org/10.1016/j.engstruct.2022.114957>
3. R. Velázquez-Mata, A. Romero, J. Domínguez, A. Tadeu, P. Galvín (5/5). A novel high-performance quadrature rule for BEM formulations. *Engineering Analysis with Boundary Elements*, vol. 140, 2022; 607-617. <https://doi.org/10.1016/j.enganabound.2022.04.036>
4. P. Galvín, A. Romero, E. Moliner, D.P. Connolly, M.D. Martínez-Rodrigo (CA 1/5). Fast simulation of railway bridge dynamics accounting for soil-structure interaction. *Bulletin of Earthquake Engineering*, 2021. <http://dx.doi.org/10.1007/s10518-021-01191-0>
5. A. Romero, J.C. Cámara-Molina, E. Moliner, P. Galvín, M.D. Martínez-Rodrigo (4/5). Energy harvesting analysis in railway bridges: An approach based on modal decomposition. *Mechanical Systems and Signal Processing*, vol. 160, 2021; 107848. <http://doi.org/10.1016/j.ymssp.2021.107848>
6. P. Galvín, A. Romero, E. Moliner, G. De Roeck, M.D. Martínez-Rodrigo (CA 1/5). On the dynamic characterisation of railway bridges through experimental testing. *Engineering Structures*, vol. 226, 2021; 111261. <http://dx.doi.org/10.1016/j.engstruct.2020.111261>
7. P. Galvín, A. Romero, E. Moliner, M.D. Martínez-Rodrigo (CA 1/4). Two FE models to analyse the dynamic response of short span simply-supported oblique High-Speed railway bridges: comparison and experimental validation. *Engineering Structures*, vol. 167, 2018; 48-64. <http://dx.doi.org/10.1016/j.engstruct.2018.03.052>

8. D. López-Mendoza, D.P. Connolly, A. Romero, G. Kouroussis, P. Galvín (CA 5/5). A transfer function method to predict building vibration and its application to railway defect. *Construction and Building Materials*, vol. 232, 2020; 117217. <http://dx.doi.org/10.1016/j.conbuildmat.2019.117217>
9. A. Doménech, M.D. Martínez-Rodrigo, A. Romero, P. Galvín (4/4). On the basic phenomenon of soil-structure interaction on the free vibration response of beams: application to railway bridges. *Engineering Structures*, vol. 125, 2016; 254-265. <http://dx.doi.org/10.1016/j.engstruct.2016.06.052>
10. D.P. Connolly, P. Alves Costa, G. Kouroussis, P. Galvín, P.K. Woodward, O. Laghrouche (4/6). Large scale international testing of railway ground vibrations across Europe. *Soil Dynamics and Earthquake Engineering*, vol. 71, 2015; 1–12. <http://dx.doi.org/10.1016/j.soildyn.2015.01.001>

C.2. Congress (5)

1. R. Velazquez-Mata, A. Romero (invited lecture), P. Galvín. Quadrature rule for singular integrals in common engineering problems. BEM/MRM 45. 2022, Online.
2. M.D. Martínez-Rodrigo, J. C. Sánchez-Quesada, P. Galvín, A. Romero, E. Moliner. Coupling effects of the ballast track infrastructure on the dynamic response of structurally independent railway bridges. Ponencia en Congreso. International Conference on Computational & Experimental Engineering and Sciences. Dubái, Emiratos Árabes Unidos. 2022
3. M.D. Martínez-Rodrigo, A. Romero, E. Moliner, J. Chordà, and P. Galvín. Influence of Ballast Track on Vertical Response of Multi-span Simply Supported Bridges Under Railway Traffic. Ponencia en Congreso. The 26th International Conference on Computational & Experimental Engineering and Sciences. Budva, Montenegro. 2021
4. A. Romero, P. Galvín, A. Tadeu. Accurate treatment of boundary conditions for the solution of Helmholtz equation with BEM. BEM/MRM 44. 2021, Online.
5. A. Romero, J.C. Cámara-Molina, E. Moliner, P. Galvín, M.D. Martínez-Rodrigo. Colector piezoeléctrico para la microgeneración de energía en puentes ferroviarios: diseño conceptual, validación teórico-experimental y prototipo desarrollado. Ponencia en Jornada. I+D+i en Materiales y Tecnologías de Construcción y Mantenimiento para la Infraestructura Ferroviaria. Granada, España. 2021

C.3. Research projects (7)

1. InBridge4EU, Enhanced Interfaces and train categories FOR dynamic compatibility assessment of European railway BRIDGES. Call: HORIZON-ER-JU-2022-02. Proposal number: 101121765. Funded. Researcher.
2. PROYEXCEL-00659, New sensor technologies and advanced analysis methodologies for Autonomous Monitoring in railway InfrastructureS (MATISSE). Research projects funded by Junta de Andalucía 2022. From 02/12/2022 to 31/12/2025. Researcher.
3. PID2019-109622RB-C21, Improved SAFety, funcTionality and sUstainability of Railway infrastructures based on prediction and experimentation in Noise and vibrations (SATURN). Spanish National Plan for Scientific and Technical Research and Innovation. From 01/06/2020 to 31/05/2023. Principal Investigator.
4. Energy harvesting from environmental vibrations for the development of autonomous monitoring systems (MEVA). Research projects funded by Junta de Andalucía 2018. From 01/01/2020 to 31/12/2021. Researcher.
5. BIA2016-75042-C2-1-R, Quantification and solutions development for the railway induced noise and vibration problem. Spanish National Plan for Scientific and Technical Research and Innovation 2016. From 30/12/2016 to 29/12/2020. Principal Investigator.
6. BIA2013-43085-P, Prediction, experimental measurement and assessment of train induced vibration and other dynamic loads. Mitigation systems. Spanish National Plan for Scientific and Technical Research and Innovation 2013. From 01/01/2014 to 31/12/2017. Principal Investigator.
7. BIA2010-14843, Numerical and experimental analysis of induced vibrations by high speed trains passage. Spanish National Plan for Scientific and Technical Research and Innovation 2010. From 01/12/2010 to 31/03/2014. Principal Investigator.

C.4. Contracts, technological or transfer merits (10)

1. Study and design of the internal structure and assembly methods of the Roman bronzes of the Ephebes from Pedro Abad. Supported by IAPH. 2022.
2. Analysis of the dynamic behavior of the suspended footbridge 516 Arouca. Supported by Itecons. 2020.
3. Vibration study of Madrid-Barcelona High-Speed Line at Vilafranca del Penedés. Supported by Ineco, S.A. 2018.
4. Evaluation of the effectiveness of a stiff barrier as a measure of attenuation of the level of vibrations close to a hospital. Supported by Acciona Construcción, S.A. 2017.
5. Vibration study of Pedralba de Pradería-Ourense High-Speed Line. Supported by Prointec, S.A. 2016.
6. Dynamic study of the west platform at KaXu Solar One (South Africa). Supported by Abengoa Research, S.A. 2014.
7. Vibration study of Zamora-Pedralba de Pradería High-Speed Line. Supported by Prointec, S.A. 2014.
8. Dynamic testing of pile foundations during construction of Javalambre Astrophysical Observatory (AE-0988/2012). Supported by TorresCámara y Cía de Obras, S.A. 2012.
9. Vibration study of Palencia-León High-Speed Line. Supported by Prointec, S.A. 2012.
10. Collection of wind load data across solar arrays. Supported by Abengoa Solar, S.A. 2011.

C.5. Awards (5)

1. Cheney Fellowship High Speed Rail area 2017 (United Kingdom).
2. Agustín de Betancourt secondary award of the Royal Academy of Engineering of Spain 2015.
3. COMSA railway research award 2009.
4. ECCOMAS PhD secondary award of European Congress on Computational Methods in Applied Sciences and Engineering 2008.
5. Honours from Universidad de Sevilla for the PhD thesis 2008.

C.6. Reviewer (5)

1. American Association for the Advancement of Science (AAAS).
2. Spanish State Research Agency.
3. Czech Science Foundation (Czech Republic).
4. Le Studium Loire Valley Institute for Advanced Studies (France).
5. Research Foundation - Flanders (FWO) (Belgium).

C.6. Scientific societies (3)

1. Member of Society for Experimental Mechanics.
2. Member of European Association for Structural Dynamics.
3. Member of Spanish Society of Theoretical and Applied Mechanics.