

**Part A. Personal Information**

<b>DATE</b>	19/6/2018
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Surname(s)	Romeu Garbí	
Forename	Jordi	
Social Security, Passport, ID number	77303895k	
Sex	Male	
Age	51	
Researcher codes	WoS Researcher ID (*)	
	SCOPUS Author ID(*)	55363922500
	Open Researcher and Contributor ID (ORCID)	<a href="http://orcid.org/0000-0002-9075-6877">http://orcid.org/0000-0002-9075-6877</a>

(\*) At least one of these is mandatory

**A.1. Current position**

Post/ Professional Category	Full Professor	
UNESCO Code		
Key Words		
Name of the University/Institution	Department/Centre	Ingeniería Mecánica
	Full Address	C/ Colon, 11
	Email Address	<a href="mailto:Jordi.romeu@upc.edu">Jordi.romeu@upc.edu</a>
	Phone Number	34937398061
Start date	28/4/2017	

**A.2. Education (title, institution, date)**

Year	University	Degree	Title
1991	Universitat Politècnica de Catalunya	First degree	Chemical Engineer
1994	Universitat Politècnica de Catalunya	Masters (if appropriate)	Industrial Engineer
1999	Universitat Politècnica de Catalunya	PhD	Industrial Engineer

**A.3. Indicators of Quality in Scientific Production (See the instructions)**

Number of six-year terms: 3, consecutive.  
 Date of effect of the last sexennium: 2014  
 PhD theses directed (2006-16): 9 (two co-directed)  
 Articles JCR (38) in Q1: 11; Q2: 15; Q3: 7; Q4: 5. First tercile: 20.  
 Cites: 226 (Scopus) 311 (Google)  
 Index h: 8 (Scopus) 9 (Google)  
 Annual dating rate for the last 5 years: 54 (Google)

**Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)**

Upon entering the university as a full-time associate professor, the candidate joins the line of research "Acoustic Pollution", led by his thesis supervisor and focused exclusively on environmental acoustics and which presents some technology transfer activity. In this framework, and on the proposal of the thesis supervisor, he develops the doctoral thesis on active noise control that he defends in 1999. From this moment the role of the researcher in the group is increased until in 2002, and under the responsibility of the researcher, the research group is integrated into the "Technological Innovation Network" of the Generalitat de Catalunya. This network is constituted by research groups with accredited technology transfer capacity and access through competitive call. Under the direction of the researcher, the group increases the activity and spectrum of the research in order to address more complex issues

always in the vibroacoustic environment, such as the location of noise sources and the propagation of vibrations. The candidate proposes, participates and directs these lines until the personnel in training assigned to them can assume their leadership. Also on the researcher's proposal, in 2009 the group's activity was split by focusing the transfer part on a spinoff of the group (AV Ingenieros) formed by researchers hired from the group, leaving the research group with the research and development activity. The summary of the candidate's main achievements is as follows:

Author of 38 articles in JCR magazine of which 9 are Q1. It is necessary to observe that the most impacting journals in the field of "Acoustics" come from the field of health sciences (in 2011, of a total of 30 journals, the first seven are in this field), which alters the distribution of the quartiles. If health sciences journals are excluded, the journal with the highest index is (usually) Journal of the Acoustic Society of America, in which the candidate has three articles. The researcher participates in a total of 28 research projects, of which IP is in 15 of them. Eight correspond to competitive calls to finance the research carried out by companies in collaboration with research centers, such as the old PROFIT or PETRI calls or the current ones of the CDTI and its regional equivalents (CIDEM). The researcher participates in a total of 19 research contracts (IP in eight). These contracts include the eight combined with competitive financing (this CV excludes matching projects and contracts). Participation in 55 technology transfer contracts and 60 business services.

From a qualitative perspective, the candidate's achievements are the demonstration of the feasibility of performing active noise control in openings; the conception and construction of a railway superstructure characterization system, which is expected to be used in this project and to commercialize its combined use with the model of generation and propagation of railway vibrations; and the establishment of a sampling methodology in environmental acoustics, which allows us to dimension the sample of points to be measured in an urban environment and to know the error associated with this sample. The candidate's line of research is now focused on the development of these achievements.

## Part C. Relevant accomplishments

### C.1. Publications

Arnau Clot, Robert Arcos, Jordi Romeu, efficient three-dimensional building-soil model for the prediction of ground-borne vibrations in buildings. *Journal of Structural Engineering*, 143, 04017098-1-13, 2017.

Jordi Romeu, J. Ignacio Palacios, Andreu Balastegui, Teresa Pamies, Optimization of the Active Control of Turboprop Cabin Noise, *Journal of Aircraft*, 52, 1386-1393, 2016.

Sara R. Martin, Meritxell Genesca, Jordi Romeu, Robert Arcos, Passive Acoustic Method for Aircraft States Estimation Based on the Doppler effect. *IEEE Transactions On Aerospace And Electronic Systems*, 50, 1330-1346, 2014.

T. Pàmies, J. Romeu, R. Arcos, S. Martín, 2014, Analytical simulation on active control of sound transmission through an aperture in a rectangular enclosure, *Acta Acústica united with acústica*, 100; 1610-1928.

Arnau Clot, Jordi Romeu, Robert Arcos, Sara R. Martin, 2014, A power flow analysis of a double-deck circular tunnel embedded in a full-space, *Soil Dynamics and Earthquake Engineering*, 57;1-9.

R. Arcos, J. Romeu, A. Clot, M. Genescà, 2013, Some analytical aspects of viscoelastic Lamb's problem for improving its numerical evaluation, *Wave Motion*, 50, 226–232

M. Genescà, J. Romeu, T. Pàmies and J. Solé, 2012, On the use of a linear microphone array to measure wind turbine aerodynamic noise, *Wind Energy*, 16, 65-76.

T. Pàmies, J. Romeu, M. Genescà, A. Balastegui, 2011, Sound radiation from an aperture in a rectangular enclosure under low modal conditions, Journal Acoustical Society of America, 130, 239-248.

J. Romeu, M. Genescà, T. Pàmies, S. Jiménez, 2011, Street categorization for the estimation of day levels using short-term measurements, Applied Acoustics, 72, 569-577.

M. Genescà, J. Romeu, T. Pàmies, A. Sánchez, 2009, Real time aircraft fly-over noise discrimination, Journal of Sound and Vibration, 323, 112-129.

## C.2. Research Projects and Grants

TRA2014-52718-R, Innovation solutions for railway induced vibration isolation. Ministry of Economy and Competitiveness (Call for Research Challenges). 2015- 2018. € 227,480, IP: Jordi Romeu

IDI 20130116. Development of a model to predict the impact of vibrations caused during public works. Research and Development Projects (ID) of CDTI, 1/1 / 2012-30 / 11/2014. 111206 €, IP: Robert Arcos

LIFE 10 ENV ES 514. Elastomeric "eco-friendly" material based on end-of-life tires blended with organic bind. European Union. LIFE Program of 7 PM. 01/10 / 2011- 03/30/2015, € 728128. IP: Robert Arcos

BIA2011-24633. Active window: active control of noise transmission through openings. Ministry of Science and Innovation, National Research Plan, 1/01 / 2012-30 / 12/2014, €78650, IP: Jordi Romeu.

RDITCCON07-1-0011, CATdBTrén: vibrations caused by rail in urban environments. Generalitat de Catalunya (NUCLI Program), 21/12 / 2007-21 / 12/2009, € 550892, IP: Jordi Romeu

2003-03-3.2-I-078. L'intégration environnementale des aéroports sur le territoire. Project MEDOCC-INTERREG IIIB. EU, ND, 24/03 / 2004-30 / 06/2006, €1099999, IP: Teresa Pàmies.

Development of a method for assessing the vibratory impact of state railway infrastructures. Call for grants to carry out research, development and technological innovation projects in the transport area. Ministry of Development, 1/12 / 2005-31 / 12/2007, € 120119, IP: Jordi Romeu

## C.3. Contracts

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Sound reduction project in flexo printers. Funding entity: Comexi, 05/01/2015-1 / 07/16. IP: Jordi Romeu. €9,125

Active Control for Noise Cancellation, Funding Entity: TELSTAR, IP: Jordi Romeu, 07/07 / 2014-20 / 12/2014. € 15950

Development of a 2.5D numerical modeling for underground railway infrastructures. Funding entity: IDOM-AV Engineers, IP: Robert Arcos, 01/01 / 2013-30 / 12/2013. € 49432

Reduction of aerogenerator mechanical and cooling noise emissions by means of active and passive counter-measures. Funding entity: GAMESA and SENER, IP: Teresa Pàmies, 01/01 / 2008-30 / 12/2008. € 19400

Vibratory behavior of the whole infrastructure and superstructure of Line 9. Funding entity: IFERCAT, IP: Salvador Cardona / Jordi Romeu, 04/20/2006, 10-30-2008. € 146,000

Doctoral research scholarship in noise and vibration control. Funding entity: SENER and UPC, IP: Jordi Romeu, 01/01 / 2005-01 / 01/2009. € 52824

Study of methodologies for the realization of strategic noise maps. Financing entity: Department of the Environment, Generalitat de Catalunya, IP: Jordi Romeu, 16/07 / 2002-01 / 09/2007. €52550

#### **C.4. Patents and other IPR**

Rafael Torres, Jordi Romeu, Eva Martínez, P200601521, Plant for the axial and transversal dynamic characterization of springs and vibration isolators, Spain, 8/10/2009, UPC, VIBCON.

Meritxell Genescà, Jordi Romeu, Teresa Pamies, P200803189, Method of measurement of aircraft noise in overflight and automatic elimination of noise not coming from aircraft, Spain, 10/11/2010, UPC.

Meritxell Genescà, Jordi Romeu, Teresa Pamies, P200802769, System for the measurement of noise and location of a mobile source in the presence of background noise, Spain, 06/08/2011, UPC.

#### **C.5, C.6, C.7... Other**

Director of the Department of Mechanical Engineering 2012- present. Deputy Director of the Department of Mechanical Engineering 2006-12

The research activity has been combined with a teaching activity with an average annual load of 150% compared to the teaching capacity of the occupied position.

Head of the Laboratory Research Group of Acoustic and Mechanical Engineering of the UPC, which has the mention of the Research Group Accredited by the UPC and of the Research Group Recognized by the Agency for the Management of University Aid of the Generalitat de Catalunya.

Review of 19 articles for JCR magazine and of 32 research projects for different agencies (ANEP, AIDIT, AGAUR etc.). Member of accreditation commissions for Mechanical Engineering degrees for the Portuguese agency A3ES.

Founding member and partner of the Spinoff of the UPC "AV Ingenieros", dedicated to the advanced consultancy in noise and vibration control. Without labor dedication in the company.

Participation in the following committees for the organization of congresses: organizing committee of the National Acoustics Congress that was held at the ETSII of Terrassa in 2005. scientific committee of the International conference Trends in the Development of Machinery and Associated Technology (2012-16), committee scientist of the National Congress of Mechanical Engineering 2016 and 2018, organizing committee of the Acoustic.cat 2016 and 2018 Conference, organizing committee of the Mechanical Engineering Professors Meeting 2019 (Barcelona), organizing committee of Internoise 2019 (Madrid).

Member of the Governing Board of the Spanish Acoustic Society.

Award from the Chamber of Commerce of Terrassa for the best business research project for the research contract "Design of a speaker acoustic characterization system according to the EASE procedure", carried out for AMATE Electroacoustics