CURRICULUM VITAE ABREVIADO (CVA)

CV date	25/01/2023

Part A. PERSONAL INFORMATION

First name	Luis		
Family name	Rodríguez de Tembleque Solano		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
ID number			
e-mail	luisroteso@us.es		
URL Web	https://investigacion.us.es/sisius/sis_showpub.php?idpers=9772		
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-2993-8361	

(*) Mandatory

A.1. Current position

Position	Profesor Titular de Universidad		
Initial date	15/12/2017		
Institution	Universidad de Sevilla		
Department/Center	Mecánica de Medios Continuos y Teoría de Estructuras	Escuela Técnica Superior de Ingeniería	
Country	Spain	Teleph. number	
Key words	Computational Mechanics, Contact Mechanics, Rolling-Contact, Wear, **Fracture Mechanics**, **Damage Mechanics**. Composite Materials, **Multfield Materials**, **Piezoelectric Materials**, **Lead-free Piezocomposites**, **Multiscale modelling**, Fluid-Structure Interaction, Boundary Element Method, Finite Element Method		

A.2. Previous positions

Period	Position/ Institution/ Country
01/05/2004 - 18/10/2006	Becario FPI / Escuela Técnica Superior de Ingeniería (E.T.S.I), Universidad de Sevilla (US) / Spain
19/10/2006 - 05/05/2010	Profesor Ayudante / E.T.S.I., US / Spain
06/05/2010 -10/07/2011	Profesor Ayudante Doctor / E.T.S.I., US / Spain
11/07/2011 -14/12/2017	Profesor Contratado Doctor / E.T.S.I., US / Spain
15/12/2017	Profesor Titular de Universidad / E.T.S.I., US / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Doctor Ingeniero Industrial	E.T.S. de Ingeniería, Universidad de Sevilla PhD supervisor: Ramón Abascal García Mark: Sobresaliente Cum-laude por unanimidad y mención de Doctorado Europeo.	2009
Máster en Diseño Avanzado en Ingeniería Mecánica	E.T.S. de Ingeniería, Universidad de Sevilla (*Número 1 de mi promoción*)	2007
Ingeniero Industrial	E.T.S. de Ingenieros, Universidad de Málaga	2003

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

B.S., **Superior Mechanical Engineering (5-year program) -*Ingeniero Industrial*-** at the *E.T.S de Ingenieros Industriales* of the University of Malaga (2003). Then, I moved to Seville to start my PhD studies (2004) in the *E.T.S de Ingeniería* of the University of Seville, with the support of a **FPI grant** from the Ministry of Education and Science. In 2007, I completed the ***Master in Advanced Design in Mechanical Engineering*** ***-1st class with distinction-*** (2007) and later I completed my **PhD *Cum-laude*** (2009) **- under the supervision of Prof. Ramón Abascal**- and *European Doctorate* mention. Nowadays, I am tenured Associate Professor (15/Dic/2017) in the Department of Mechanics of Continuums and Theory of Structures of the University of Seville.

During all this time, my scientific career has being focused on the development of numerical and computational tools (based on the Boundary Element Method –BEM– and the Finite Element Method –FEM–) in the field of Mechanical Engineering, Theory of Structures and the Mechanics of Continuum Media, with special interest in **Contact Mechanics**, Rolling, **Wear** or Fluid-Structure Interaction, in the first years of my research stage, and later on, it has been expanded/oriented towards the study of the integrity of **Composite Materials** and **Advanced Multifield and/or Multifunctional Materials** (Piezoelectric, Magneto-electroelastic, Thermoelastic, etc.) in conditions of adherence, contact, damage and/or superficial wear (see projects) as well as **Carbon Nanotubes reinforced Composites**. Finally, due to the last projects, in which I have participated as Principal Investigator (PI), my research is more focused on multi-scale modelling oriented towards the study of **Lead-free Piezoelectric Composites**.

All this research work (https://orcid.org/0000-0003-2993-8361) has been possible thanks to the participation in **11 R+D+i projects** financed in competitive public calls - being **PI principal investigator in 3** of them-, to the participation in **2 R+D+i contracts with companies** and, specially, to several international stays carried out in prestigious centres like: *Aerospace Department - University of Colorado at Boulder* (in 2006) or in the *Department of Aeronautics - Imperial College London* (in 2007, 2015, 2021). These stays have allowed me to establish very active research collaboration with international groups (see publications). Thanks to this, I have **2 six-year research terms** (**2006-2011 and 2012-2017)** and several publications, i.e., **46 articles in JCR journals**, **17 articles in non-JCR journals**, **5 book chapters** and **more than 50 conference contributions**. In addition, I have **edited 7 books** (978-3-03835-159-7, 978-3-03835-745-2, 978-0-9576731-5-1, 978-3-0357-1350-3, 978-1-78634-477-9 y 978-0-7354-4045-6 y 978-1-80061-068-2) in publishers of recognized international prestige (i.e., *World Scientific Publishing Co Pte Ltd*, *Trans Tech Publications Ltd* or *American Institute of Physics- AIP*) and co-**edited of several special issues in scientific journals** (Now in the prestigious journal TAFMEC: https://www.sciencedirect.com/journal/theoretical-and-applied-fracture-mechanics/about/call-for-papers#advances-in-computational-and-experimental-fracture-mechanics-of-composites).

Regarding the training of young researchers, I have completed **1 doctoral thesis direction** (https://idus.us.es/handle/11441/48484) and I am currently **supervising 2 doctoral theses**, whose completion is scheduled to be in January 2024. Moreover, I has also been a supervisor of the *PEJUS-3 Youth Employment contract* (2019 call), from May/16/2019 to May/15/2020.

Finally, I want to point out that I am a member (individual partner and co-founder) of the *Spanish Society of Theoretical and Applied Mechanics* (SEMTA) and a member (member1593) of the *Spanish Society of Numerical Methods in Engineering* (SEMNI). I am also a regular reviewer of journals indexed in JCR (I have reviewed more than 30, since 2014) and I belong to the "International Editorial Board" of the indexed journal: **Journal of Multiscale Modeling** (ISSN (print): 1756-9737 | ISSN (online): 1756 -9745).

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(JCR - Journal Citation Reports)*

1. F.J. Cañamero, F.C. Buroni, M.H. Aliabadi, **L. Rodríguez-Tembleque**. Piezoelectric performance of lead-free PDMS/CNT/BaTiO3 piezocomposites with imperfect interphases and CNT agglomerations. *Smart Materials and Structures*. (2023). (DOI: https://doi.org/10.1088/1361-665X/acafb8; JCR Quartile: Q2; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 4/4; Citations: 0)
2. **L. Rodríguez-Tembleque**, J. Vargas, E. García-Macías, F.C. Buroni, A. Sáez. XFEM crack growth virtual monitoring in self-sensing CNT reinforced polymer nanocomposite plates using ANSYS. *Computational Mechanics*. Vol. 284, p. 115137 (2022). (DOI: https://doi.org/10.1016/j.compstruct.2021.115137; JCR Quartile: Q1; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 1/5; Citations: 2)

3. **L. Rodríguez-Tembleque**, F. García-Sánchez, E. García-Macías, F.C. Buroni, A. Sáez. Crack-induced electrical resistivity changes in cracked CNT-reinforced composites. *Computational Mechanics*. Vol. 106, p. 102470 (2020). (DOI: https://doi.org/10.1016/j.tafmec.2019.102470; JCR Quartile: Q1; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 1/5; Citations: 5)
4. J.A. Krishnaswamy, F.C. Buroni, R. Melnik, **L. Rodríguez-Tembleque**, A. Sáez. Multiscale design of nanoengineered matrices for lead-free piezocomposites: Improved performance via controlling auxeticity and anisotropy. *Composite Structures*. Vol. 255, p. 112909 (2021). (DOI: https://doi.org/10.1016/j.compstruct.2020.112909; JCR Quartile: Q1; CA: J.A. Krishnaswamy; Posición / N. Authors: 4/5; Citations: 3)
5. J.A. Krishnaswamy, F.C. Buroni, E. García-Macías, R. Melnik, **L. Rodríguez-Tembleque**, A. Sáez. Design of lead-free PVDF/CNT/BaTiO3 piezocomposites for sensing and energy harvesting: the role of polycrystallinity, nanoadditives, and anisotropy. *Smart Materials and Structures*. Vol. 29, p. 015021(2020). (DOI: https://doi.org/10.1088/1361-665x/ab547d; JCR Quartile: Q1; CA: J.A. Krishnaswamy; Posición / N. Authors: 5/6; Citations: 15)
6. J.A. Krishnaswamy, F.C. Buroni, F. García-Sánchez, R. Melnik, **L. Rodríguez-Tembleque**, A. Sáez. Improving the performance of lead-free piezoelectric composites by using polycrystalline inclusions and tuning the dielectric matrix environment. *Smart Materials and Structures*. Vol. 28, p. 075032 (2019). (DOI: https://doi.org/10.1088/1361-665X/ab1f14; JCR Quartile: Q1; CA: J.A. Krishnaswamy; Posición / N. Authors: 5/6; Citations: 13)
7. E. García-Macías, **L. Rodríguez-Tembleque**, A. Sáez. Bending and free vibration analysis of functionally graded graphene vs. carbon nanotube reinforced composite plates. *Composite Structures*. Vol 186, p. 123–138 (2018). (DOI: https://doi.org/10.1016/j.compstruct.2017.11.076; JCR Quartile: Q1; CA: E. García-Macías; Posición / N. Authors: 2/3; Citations: 116)
8. **L. Rodríguez-Tembleque**, A. Sáez, M.H. Aliabadi. Indentation response of piezoelectric films under frictional contact. *International Journal of Engineering Science*. Vol. 107, pp. 36-53 (2016). (DOI: https://doi.org/10.1016/j.ijengsci.2016.07.005; JCR Quartile: Q1; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 1/3; Citations: 24)
9. **L. Rodríguez-Tembleque**, F.C. Buroni, A. Sáez, M. H. Aliabadi. 3D coupled multifield magneto-electro-elastic contact modelling. *International Journal of Mechanical Sciences*. Vol. 114, pp. 35-51 (2016). (DOI: https://doi.org/10.1016/j.ijmecsci.2016.05.011; JCR Quartile: Q1; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 1/4; Citations: 17)
10. **L. Rodríguez-Tembleque**, F.C. Buroni, A. Sáez. 3D BEM for orthotropic frictional contact of piezoelectric bodies. *Computational Mechanics*. Vol. 56, pp. 491-502 (2015). (DOI: https://doi.org/10.1007/s00466-015-1183-9; JCR Quartile: Q1; CA: L. Rodríguez-Tembleque; Posición / N. Authors: 1/3; Citations: 17)

C.2. Conferences, indicating participation-modality (invited, oral presentation and poster)

1. Presentations in Congresses: 52 (most of them were 'oral' in international conferences)
2. Internacional Conferences co-Organizer: International Conference on Boundary Element and Meshless Techniques XX (**BETEQ 2018**: Málaga, Spain, 9-11 Julio, 2019), International Conference on Fracture and Damage Mechanics (**FDM2018**: Sevilla, Spain, 4-6 September, 2018), (**FDM2020**: Online, 15-17 September, 2020) and , (**FDM2022**: Málaga, Spain, 5-7 September, 2022).
3. Scientific Committee Member: International Conference on Fracture and Damage Mechanics (**FDM2016**: Alicante, Spain, 14-16 September, 2016), (**FDM2017**: Florence, Italy, 18-20 July, 2017), **FDM2018**, (**FDM2019**: Rodas, Grecia, 16-18 September, 2019), (**FDM2020**: Online, 15-17 September, 2020) and **FDM2022**. Also in the conference: International Conference on Mechanical Models in Structural Engineering (**CMMoST2015**: Seville, Spain, 24-26 June, 2015), (**CMMoST2017**: Madrid, Spain, 29Nov-1Dic, 2017) y (**CMMoST2021**: Valladolid, Spain, 1-3Dic, 2021).

C.3. Research projects, indicating your personal contribution.

1. Project: **Geometría, jerarquía y (meta)elasticidad para la integridad y eficiencia de materiales piezocompuestos y piezocelulares** (P18-RT-3128);
   Financed by: Junta de Andalucía (Consejería de Economía y Conocimiento);
   Period: 01/01/2020 to 31/12/2022; Funding: 102280 euros; N. researchers: 8
   Principal investigators: Federico C. Buroni y Luis Rodríguez de Tembleque Solano
2. Project: **Exploración computacional para el diseño de materiales compuestos con acoplamiento electromecánico en una economía sostenible** (DPI2017-89162-R)
   Financed by: Ministerio de Economía, Industria y Competitividad.
   Period: 01/01/2010 to 01/31/2023; Funding: 102850 euros; N. researchers: 11
   Principal investigators: Federico C. Buroni y Luis Rodríguez de Tembleque Solano
3. Project: **Integridad de Materiales Avanzados en Condiciones de Interacción Superficial Multicampo** (DPI2013-43267-P)
   Financed by: Ministerio de Economía y Competitividad, Gobierno de España
   Period: 01/01/2014 to 30/09/2017; Funding: 39930 euros; N. researchers: 5
   Principal investigator: Luis Rodríguez de Tembleque Solano
4. Project: **Simulación Numérica y Desarrollo de Técnicas Experimentales para la Detección de Daño en Materiales y Estructuras Aeroespaciales (SEDEA)** (P12-TEP-2546)
   Financed by: Consejería de Innovación, Ciencia y Empresa, Junta de Andalucía
   Period: 30/01/2014 to 29/01/2018; Funding: 187324 euros; N. researchers: 12
   Principal investigator: Andrés Sáez Pérez
5. Project: **Integración de Subestructuras Mediante Acoplamientos Complejos y Formulación Particionada** (DPI2010-19331)
   Financed by: Ministerio de Educación y Ciencia, Gobierno de España
   Period: 31/12/2010 to 31/12/2013; Funding: 54450 euros; N. researchers: 4
   Principal investigator: Ramón Abascal García
6. Project: **Formulaciones Particionadas para Problemas Dinámicos y de Contacto** (P08-TEP-03804)
   Financed by: Consejería de Innovación, Ciencia y Empresa, Junta de Andalucía
   Period: 05/01/2009 to 06/01/2012; Funding: 144283.68 euros; N. researchers: 4
   Principal investigator: José Ángel González Pérez
7. Project: **Análisis de elementos mecánicos mediante subestructuras** (DPI2006-04598)
   Financed by: Ministerio de Educación y Ciencia, Gobierno de España
   Period: 01/10/2006 to 30/06/2010; Funding: 80600 euros; N. researchers: 4
   Principal investigator: Ramón Abascal García
8. Project: **Sub-estructuración y acoplamientos en mecánica de sólidos** (EXC/2005/TEP-882)
   Financed by: Consejería de Innovación, Ciencia y Empresa, Junta de Andalucía
   Period: 01/03/2006 to 28/02/2009; Funding: 126200 euros; N. researchers: 4
   Principal investigator: Ramón Abascal García
9. Project: **Contacto y rodadura en problemas 3D usando el método de los elementos de contorno** (DPI2003-00487)
   Financed by: Ministerio de Educación y Ciencia, Gobierno de España
   Period: 01/05/2004 to 18/10/2006; Funding: 78300 euros; N. researchers: 4
   Principal investigator: Ramón Abascal García

C.4. Contracts, technological or transfer merits

(1) Contract/project: Design of a deflecting barrier for the protection of the solar collectors of a solar thermal power plant. Company: ABENGOA; Duration: 04/01/2009 - 07/01/2009. Principal Investigator: Ramón Abascal García. Participants: 3. **(2)** Contract/project: Calculation Project for a metallic chimney in a bioethanol plant. Company: Abener energy (ABENGOA). Duration: 05/01/2004-07/15/2004. Principal Investigator: Ramón Abascal García. Participants: 2.