MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	SILVIA		
Family name	GONZALEZ PROLONGO		
Gender	Female	Birth date	
ID number		URL Web	
e-mail	silvia.gonzalez@urjc.es	https://gestion2.urjc.es/pdi/ver/silvia.gonzalez	
Open Researcher and Contributor ID (ORCID)		0000-0002-4438-6123	

A.1. Current position

Position	FULL PROFESSOR		
Initial date	14/12/2017		
Institution	UNIVERSITY REY JUAN CARLOS		
Department/Center	Dpt. Applied Mathematics, Materials Science and Engineering and Electronic Technology (MACIMTE)	Higher School of Experimental Sciences and Technology (ESCET)	
Country	SPAIN	Teleph. number	+34 914888292
Key words	Smart Polymer, Composites, Sensors, Nanocomposites, Recycling		

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

Period	Position/Institution/Country/Interruption cause
2000-2006	Assistant Professor/URJC/Spain
2006-2017	Associate Professor/URJC/Spain
2017-	Full Professor/URJC/Spain

A.3. Education

PhD, Licensed	University/Country	Year
Licensed: Chemistry	Univ. Complutense, Madrid / Spain	2000
PhD: Materials Science and Engineering	Univ. Carlos III de Madrid / Spain	2003

Part B. CV SUMMARY

She is Full Professor, Head of Department Applied Mathematics, Materials Science and Engineering and Electronic Technology (from 2021), and leader of a Research Group. She is included in the Ranking of the World´s Top 2% Scientist, elaborated annually by Stanford University (from last four years 2019 - 2022)

Published documents (Scopus): 127 ; h-index(Scopus): 30 ; h5-index(SciVal): 79
FWCI(SciVal): 1.23
Thesis supervised: 4 (+ 3 in process)
Leadership (PI) in competitive projects (duration: 3 - 4 years): 6 (1 European Project)
Participation as research in competitive projects (duration: 1 - 4 years): 30
Leadership (PI) in projects financed by companies (art 83): 60
Supervision of Final Degree and Master Projects: > 100

Main scientific contribution:
She leads the research team “Sustainable and Smart Polymers and Composites”, included in the URJC high performance group “Materials Science and Engineering”. She has led/leads a European Project of the Clean Sky call (JTI-CS-2012-2-GRA-01-050), four consecutive National Projects (TED2021-131102B-C21, PID2019-106703RB-I00, MAT2016-78825-C2, MAT2013-46695-C3) and one financed by Comunidad de Madrid. She also leads international collaboration agreements with Advanced Technology Center (Ciateq, Mexico), Technological Center AIMEN (Spain), Shenyang University (China) and Chongqing University (China). In 2016, she was awarded the Accesit Award for Research Excellence in Engineering, by the Social Council. She has published more than 120 international scientific JCR papers (> 85% Q1). More than 100 contributions have been presented at National and International Conferences, participating as speaker, or invited speaker. In 2016, she completed a six-month postdoctoral research stay at Stanford University (California, USA), for which he received the prestigious Fulbright grant, in the call for senior professors. She acts as evaluator of research

projects, grants, and awards, for AEI, ANEP, DNV-GL, ACERTA, URJC, Fulbright (EEUU) and Conacyt (Mexico).

Main industrial contribution:

She is/has been the leader (PI) in more than 50 projects (art 83) financed by National and International Companies (Talgo, Airbus, EADS Casa, Seiasa, Tragsa, Union Fenosa, Sarga, Ceis, Polaqua, Duko, Fidamc, Licuas, Subor, Airbus, Amiantit, Futurepipe, Delta, etc). From 2017, she is member, advisor in Materials, of "Irrigation" Work Group (CTN318 / GT7.1) of Ministry of Agriculture and Fisheries, Food and Environment of Spanish Government. She usually acts as technical advisor and judicial expert (more than 15 expert reports done) for different Institutions and Companies (Union Fenosa, Seiasa, Tragsa, Licuas, Sarga, Ricoh, Vestas Eólica, Solutec, etc). She has 4 published patents (one with PCT)
Annually, it organizes the "Adhesive Science and Technology" (2014-2017) and "Multifunctional Materials" (2018-), scientific sessions, in the International Conference on Advanced Computational Engineering and Experimenting. She has been/is also a guest editor of different JCR journals: Int. J. Adh. Adh.; Appl. Sci.; Materials.

Main social and transferring contribution:
She is Head of Department Applied Mathematics, Materials Science and Engineering and Electronic Technology (from 2021). She was Coordinator of Materials Engineering Degree; Materials and Energy Engineering double degree and Materials and industrial Engineering double degree (2009-2020).
In 2013 and 2020, she received the First and Second EDP University Challenge Award, respectively, for leading a research proposal of university students about the new materials and designs for wind blades.
She has supervised 4 Thesis (one with industrial mention). She is currently co-supervising 4 Thesis.

Part C. RELEVANT MERITS

C.1. Publications (latest)

- Tang, W., Qian, L., Prolongo, S.G., Wnag, D.Y. Dendritic copolymers from P-, N- and Si-based monomer and melamine phosphate generate thermal deformation toughening and a rapid charring flame retardant effect in polypropylene. Chemical Engineering Journal, **2023**, 471, 144716
- Zhou, M., Guang-Zhong, Y., Prolongo, S.G., Wang, D.Y. *Recent Progress son Multifunctional Thermally Conductive Epoxy Composites.* Polymers, **2023**, 15, 2818.
- Jiménez-Suárez, A., Prolongo, S.G. *Multifunctional Polymers and Composites.* Applied Sciences, **2023**, 13(3), 1880
- Tang, W., Qian, L., Prolongo, S.G., Wang, D.Y. *Small core of piperazine/silane aggregation initiate efficient charring flame retardant effect in polypropylene composites.* Polymer Degradation and Stability, **2023**, 208, 110265
- Calderón-Villajos, R, F. Sánchez-Romate, X., Jiménez-Suárez, A., Prolongo, S.G. *An Analysis of the Effect of Activation Temperature and Crack Geometry on the Healing Efficiency of Polycaprolactone (PCL)/Epoxy Blends.* Polymers, **2023**, 15(2), 336
- Sáiz, L.M., Prolongo, M.G., Bonache, V., Jiménez-Suárez, A., Prolongo, S.G. *Self-healing materials based on disulfide bond-containing acrylate networks*. Polymer Testing, **2023**, 117, 107832
- Lorero, I., Rodríguez, A., Campo, M., Prolongo, S.G. *Thermally remendable, weldable, and recyclable epoxy network crosslinked with reversible Diels-alder bonds.* Polymer, **2022**, 259, 125334
- F Sánchez-Romate, X., González, C., Jiménez-Suárez, A., Prolongo, S.G. *Novel approach for damage detection in multiscale CNT-reinforced composites via wireless Joule heating monitoring*. Composites Science and Technology, **2022**, 227, 109614
- Martinez-Diaz, D., Cortés, A., Jiménez-Suárez, A., Prolongo, S.G. *Hardener Isomerism and Content of Dynamic Disulfide Bond Effect on Chemical Recycling of Epoxy Networks.* ACS Applied Polymer Materials, **2022**, 4(7), pp. 5068–5076

- Moriche, R., Moreno-Avilés, M.A., Jiménez-Suárez, A., Prolongo, S.G., Ureña, A. *Graphene nanoplatelets electrical networks as highly efficient self-heating materials for glass fiber fabrics.* Journal of Industrial Textiles, **2022**, 51(3), pp. 4410S–4423S
- Cortés, A., Pérez-Chao, N., Jiménez-Suárez, A., Campo, M., Prolongo, S.G. *Sequential and selective shape memory by remote electrical control.* European Polymer Journal, **2022**, 164, 110888
- Lorero, I., Campo, M., Arribas, C., Prolongo, M.G., López, F.A., Prolongo. S.G. *Epoxy Composites Reinforced with ZnO from Waste Alkaline Batteries.* Materials, **2022**, 15(8), 2842
- Cortés, A., Sánchez Romate, X.F., Aguilar, J.L., Jiménez-Suárez, A., Campo M., Prolongo S.G. *Electrothermally triggered selective shape memory capabilities of CNT doped nanocomposites by Digital Light Processing.* Composites Science and Technology, **2022**, 218, 109185
- Sánchez-Romate, X.F., Gutiérrez, R., Cortés, A., Jiménez-Suárez, A., Prolongo, S.G. *Multifunctional coatings based on GNP/epoxy systems: Strain sensing mechanisms and Joule's heating capabilities for de-icing applications.* Progress in Organic Coatings, **2022**, 167, 106829

C.2. Congress (latest)

- S.G. Prolongo. Optimization of CFRP Mechanical Recycling (Opening Talk) 16th International Conference on Advanced Computational Engineering and Experimenting (ACEX2023), from 03/07/2023 to 07/07/2023.
- S. G. Prolongo. *Sustainable and multifunctional thermosets and composites.* (Opening Talk) 15th International Conference on Advanced Computational Engineering and Experimenting (ACEX2022), from 03/07/2022 to 07/07/2022.
- S.G. Prolongo. *Smart Resins and Composites: monitoring, self-heating, self-healing, thermo-conforming and recyclability* (invited talk). 1st China-Spain International Symposium on New Frontiers in Fire Safety Materials & Technologies, online, 14/10/2021

C.3. Research projects

- Title: Towards circular economy in composites: smart functional composites based on recycled short carbon fiber and sustainable bio-based and reversible polymer matrices (PID2022-138496OB-I00)
From: 01/09/2023 To: 31/08/2027 Budget: 145.000 € (URJC)
Main researcher: A. Jiménez Suárez (co-PI) and S.G. Prolongo (PI)
- Title: Nuevas técnicas de reciclado, reutilización y conformado de materiales compuestos basadas en calentamiento por radiación, efecto Joule e inducción magnética. (TED2021-131102B-C21. [URJC (coordinator) + URV]
From: 01/01/2023 To: 31/12/2024 Budget: 151.500,00 € (URJC)
Main researcher: A. Jiménez Suárez (co-PI) and S.G. Prolongo (PI)
- Title: Electrical programmable 4D-printed nanocomposites and multiscale composites with self-healing and multishape memory capabilities (PID2019-106703RB-I00)
From: 01/06/2020 To: 30/06/2023 Budget: 108.000,00 €
Main researcher: M. Campo (co-IP) and S.G. Prolongo (PI)
- Title: Fabricación aditiva de resinas termoestables nanorreforzadas. Aplicación como materiales multifuncionales (MAT2016-78825-C2-1-R). [URJC (coordinator) – UPM]
From: 30/12/2016 To: 29/12/2018 Budget: 121.000 € (URJC)
Main Researcher: A. Ureña (Co-IP) and S.G. Prolongo (PI)
- Title: Materiales multifuncionales con nanoestructuras de carbono (grafeno y nanotubos): uso como materiales compuestos, adhesivos y sensores estructurales (MAT2013-46695-C3-1-R) [URJC (coordinator) – UPM – TECNALIA]
From: 01/01/2013 To: 31/12/2015 Budget: 92.245 € + FPI (URJC)
Main Researcher: A. Ureña (Co-IP) and S.G. Prolongo (PI)
- Title: Developement of CNT doped reinforced aircraft composite parts and associated tooling, using the liquid resin infusion method (Euopean Comission JTI-CS-2012-2-GRA-01-050 [URJC + TRC]
From: 01/08/2013 To: 30/11/2014 Budget: 48.769,17 € (URJC)
Main Researcher: S.G. Prolongo (PI)

C.4. Contracts, technological or transfer merits,

C.4.A. Patents (latest)

- Patent: Procedimiento de fabricación de material polimérico, material polimérico y usos del mismo. Requested extension PCT (International patent)

Authors: S.G. Prolongo, I. Lorero, M. Campo
Registered with number: P202230584 June 2022

- Patent: Materiales Autorreparables Electro-estimulados

Authors: S. G. Prolongo, M. Campo, A. Jiménez-Suárez, G. Del Rosario, X. X. Fernández
Registered request number: 202030363 April 2020

- Patent: Reinforced resins with graphene nanoparticles or graphene/carbon nanotube combinations.

Authors: S.G. Prolongo, R. Moriche, M. Sánchez, A. Jiménez Suárez, G. del Rosario Hernández, A. Ureña.
Registered with number: ES2644347 A1 September 2018

C.4.B. Public Tenders

- Servicio de Análisis y Estudio de las causas de rotura de tuberías de riego de PRFV y PVC en diferentes obras de regadío

Company: SOCIEDAD ARAGONESA DE GESTION AGROAMBIENTAL S.L.U. (SARGA)
From: 08/01/2019 To: 09/07/2020 Budget: 65.000 €
Main Researcher: S.G. Prolongo

- Contrataciones de investigación centradas en las tuberías de PRFV fabricadas por Uralita y las causas de rotura de éstas en las obras correspondientes NQ EXP.: ND-22100101-INV-AR16; Nº EXP.: C- 461101-INV-CA-VA16; ND-25040101-1 NV-CA16; Nº EXP.: ND-22190101-INV-AR16. (4 Projects)

Company: SOCIEDAD ESTATAL DE INFRAESTRUCTURAS AGRARIAS (SEIASA)
From: 30/01/2017 To: 31/01/2018 Budget: 22.000 €/project
Main Researcher: S.G. Prolongo

C.4.C. Company contracts (art 83-art 60) (Latest)

- Title: Caracterización y análisis de material eléctrico

Company: CEIS S.L.
From: 27/04/2020 To: 27/04/2024 Budget: 106.000 €
Main Researcher: S.G. Prolongo (PI)

- Title: Control de calidad de materiales: antes y después de la instalación de las mangas de rehabilitación de tuberías

Company: LICUAS S.A.
From: 26/04/2021 To: 26/04/2024 Budget: 45.000 €
Main Researcher: S.G. Prolongo (PI)

- Title: Obtención de recubrimientos multifuncionales basados en la incorporación de material reciclado a blends con capacidad de autorreparación

Company: AIRBUS Operations SL
From: 27/01/2023 To: 15/11/2023 Budget: 14,500 €
Main Researcher: S.G. Prolongo (PI) and A. Jiménez Suárez

- Title: Asesoría en el análisis de fallos en servicio de materiales

Company: VESTAS EOLICA SAU
From: 30/02/2023 To: 30/06/2023 Budget: 10,000 €
Main Researcher: S.G. Prolongo (PI)

- Title: Estudio sobre las causas de las roturas de tuberías de PEAD y PVC en las obras correspondientes al "Proyecto de modernización del regadío de CR del Canal de Villagonzalo

Company: SOCIEDAD ESTATAL DE INFRAESTRUCTURAS AGRARIAS (SEIASA)
From: 03/03/2022 To: 03/09/2022 Budget: 14.800 €
Main Researcher: S.G. Prolongo (PI)

- Title: Diseño, fabricación e instalación de tuberías a presión de poliéster reforzado con fibra de vidrio (PRFV) Castelflorite/Blanca/La Maya/Pisuerga

Company: EMPRESA DE TRANSFROMACIÓN AGRARIA, S.A. (TRAGSA)
From: 03/05/2019 To: 03/12/2019 Budget: 58.000 €
Main Researcher: S.G. Prolongo (PI)