

Part A. PERSONAL INFORMATION		CV date	September 2022
First and Family name	Víctor Revilla-Cuesta		
Passport, ID number	XXXXXXXXXXXX	Date of birth	XXXXXXXXXX
Researcher codes	Open Researcher and Contributor ID (ORCID)	0000-0003-3337-6250	
	SCOPUS Author ID	57211515349	
	WoS Researcher ID	AAC-7133-2019	

A.1. Current position

University/Institution	University of Burgos		
Department	Civil Engineering Department/Higher Polytechnic School		
Address and Country	XXXXXXXXXXXX		
Phone number	XXXXXXXXXXXXXXXX	E-mail	vrevilla@ubu.es
Current position	Profesor Ayudante Doctor (Assistant Professor)	From	01/09/2022
Keywords	Civil Engineering; Concrete; Waste; Recycling		

A.2. Education

PhD, Licensed, Graduate	University	Year
Civil Engineer (Degree)	University of Burgos (Spain)	2016
Civil Engineer (Master)	University of Burgos (Spain)	2018
PhD. in Civil and Industrial Engineering	University of Burgos (Spain)	2021

A.3. General indicators of quality of scientific production

- Assistant Professor at the Department of Civil Engineering of the University of Burgos
- 4 Degree Thesis supervised and several in progress
- Total citations: 310 citations according to Scopus
- 29 articles indexed in JCR: 22Q1, 6Q2, 1Q4
- h-index: 11

Part B. CV SUMMARY

I hold a Ph.D. in Civil Engineering (concrete technology) that obtained an International PhD Mention, in 2021, within the doctoral program of Civil and Industrial Engineering at the University of Burgos. Previously, I have also obtained other awards such as the Extraordinary Bachelor's Degree and Master's Degree Awards as the best student of my graduating class. Since I finished my Master's Degree in Civil Engineering I have been dedicated to research and teaching at the University of Burgos.

My career at the University started in 2018 as a pre-doctoral researcher thanks to a competitive University Faculty Training Grant (FPU) funded by the Government of Spain. After the successful completion of my PhD Thesis in September 2021, in which Prof. Faleschini from the University of Padova was a member of the jury, I was hired for one year as a post-doctoral researcher. Recently, since 01/09/2022, I am Assistant Professor at the Department of Civil Engineering of the University of Burgos. During these four years I have taught more than 300 hours of classes and supervised several Degree's Thesis. In the teaching field, I also belong to the Teaching Innovation Group "Transition from High School to the University", having also published three JCR teaching articles on the improvement of teaching in engineering courses.

I am a member of the Research Group SUCONS of the UBU, member of the Consolidated Research Unit UIC-231 of the Junta de Castilla y León (Regional Government). The main research topic of the SUCONS group is the re-use of by-products in building and civil engineering applications. The SUCONS group is a member of the national excellence network BIA2017-90838-REDT (Recycled concrete based on alternative raw materials for a circular economy) and a corporate member of the International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM), where SUCONS researchers form part of some technical committees related with hydraulic and asphalt concretes.

I have co-authored 29 articles indexed in JCR (WoS) between 2019 and 2022 (22 of them Q1), and I am a co-author of four book chapters, 3 teaching-innovation articles, and 5 patents. I have supervised two research Master's Degree Thesis from international students from the University of Padova, Italy, and the

University of Costa Rica. I am currently supervising a PhD Thesis related to the use of ladle furnace slag in concrete.

In relation to the internationalization of my research, I have shared publications with the University of Oulu (Finland), the University of Karachi (Pakistan), the Central South University, (Changsha, China), the University of Lisbon (Portugal) and the University of Padova (Italy). I maintain close collaboration with professors from the Department of Civil, Environmental and Architectural Engineering (ICEA), who have already co-authored some conference proceedings and shared articles. In addition, I have spent four months at the Instituto Superior Técnico of the University of Lisbon, Portugal.

I have participated in 8 research projects/contracts, mostly projects related to investigations in new materials, structures, and the reuse of waste in construction. I have likewise presented oral communications at several international conferences and I have over 25 publications in conference proceedings.

Part C. RELEVANT MERITS

C.1. Scientific articles

1. **Víctor Revilla-Cuesta**, Francisco Fiol, Priyadharshini Perumal, Vanesa Ortega-López, Juan M. Manso. *Using recycled aggregate concrete at a precast-concrete plant: A multi-criteria company-oriented feasibility study*. Journal of Cleaner Production. 2022;373:133873.
2. **Víctor Revilla-Cuesta**, Vanesa Ortega-López, Flora Faleschini, Ana B. Espinosa, Roberto Serrano-López. *Hammer rebound index as an overall-mechanical-quality indicator of self-compacting concrete containing recycled concrete aggregate*. Construction and Building Materials. 2022;347:128549.
3. Vanesa Ortega-López; **Víctor Revilla-Cuesta**; Amaia Santamaría; Aimar Orbe; Marta Skaf. *Microstructure and dimensional stability of slag-based high-workability concrete with steelmaking slag aggregate and fibers*. Journal of Materials in Civil Engineering. 2022;34(9):04022224.
4. Zhi-hai He, Ya-qian Ni, Yu Zhang, Jin-yan Shi, **Víctor Revilla-Cuesta**, Yun-jin Hu, Jun Lu. *Mechanical properties, nanoscale characteristics, and environmental analysis of high-volume waste coral powder mortar (HVCm)*. Powder Technology. 2022;407:117613.
5. **Víctor Revilla-Cuesta**, Marta Skaf, Amaia Santamaría, Ana B. Espinosa, Vanesa Ortega-López. *Self-compacting concrete with recycled concrete aggregate subjected to alternating-sign temperature variations: Thermal strain and damage*. Case Studies in Construction Materials. 2022;17:e01204.
6. **Víctor Revilla-Cuesta**, Vanesa Ortega-López, Marta Skaf, Asad-ur-Rehman Khan, Juan M. Manso. *Deformational behavior of self-compacting concrete containing recycled aggregate, slag cement and green powders under compression and bending: Description and prediction adjustment*. Journal of Building Engineering. 2022;54:104611.
7. **Víctor Revilla-Cuesta**, Flora Faleschini, Carlo Pellegrino, Marta Skaf, Vanesa Ortega-López. *Simultaneous addition of slag binder, recycled concrete aggregate and sustainable powders to self-compacting concrete: A synergistic mechanical-property approach*. Journal of Materials Research and Technology. 2022;18:1886-1908.
8. **Víctor Revilla-Cuesta**, Luís Evangelista, Jorge de Brito, Marta Skaf, Juan M. Manso. *Shrinkage prediction of recycled aggregate structural concrete with alternative binders through partial correction coefficients*. Cement & Concrete Composites. 2022;129:104506.
9. **Víctor Revilla-Cuesta**, Marta Skaf, Amaia Santamaría, Jesús M. Romera, Vanesa Ortega-López. *Elastic stiffness estimation of aggregate-ITZ system of concrete through matrix porosity and volumetric considerations: explanation and exemplification*. Archives of Civil and Mechanical Engineering. 2022;22(2):59.
10. Vanesa Ortega-López, Flora Faleschini, Carlo Pellegrino, **Víctor Revilla-Cuesta**, Juan M. Manso. *Validation of slag-binder fiber-reinforced self-compacting concrete with slag aggregate under field conditions: durability and real strength development*. Construction and Building Materials. 2022;320:126280.
11. Amaia Santamaría, Jesús M. Romera, Ignacio Marcos, **Víctor Revilla-Cuesta**, Vanesa Ortega-López. *Shear strength assessment of reinforced concrete components containing EAF steel slag aggregates*. Journal of Building Engineering. 2022;46:103730.
12. **Víctor Revilla-Cuesta**, Luís Evangelista, Jorge de Brito, Marta Skaf, Vanesa Ortega-López. *Mechanical performance and autogenous and drying shrinkage of MgO-based recycled aggregate high-performance concrete*. Construction and Building Materials. 2022;314:125726.

13. **Víctor Revilla-Cuesta**, Marta Skaf, Milagros Navarro-González, Vanesa Ortega-López. *Reflections throughout the COVID-19 lockdown: What do I need for successful learning of engineering?* International Journal of Environmental Research and Public Health. 2021;18(21):11527.
14. **Víctor Revilla-Cuesta**, Marta Skaf, Ana B. Espinosa, Vanesa Ortega-López. *Multi-criteria feasibility of real use of self-compacting concrete with sustainable aggregate, binder and powder.* Journal of Cleaner Production. 2021;325:129327.
15. **Víctor Revilla-Cuesta**, Flora Faleschini, Mariano A. Zanini, Marta Skaf, Vanesa Ortega-López. *Porosity-based models for estimating the mechanical properties of self-compacting concrete with coarse and fine recycled concrete aggregate.* Journal of Building Engineering. 2021;44:103425.
16. **Víctor Revilla-Cuesta**, Luís Evangelista, Jorge de Brito, Vanesa Ortega-López, Juan M. Manso. *Effect of the maturity of recycled aggregates on the mechanical properties and autogenous and drying shrinkage of high-performance concrete.* Construction and Building Materials. 2021;299:124001.
17. **Víctor Revilla-Cuesta**, Marta Skaf, Amaia Santamaría, Vanesa Ortega-López, Juan M. Manso. *Assessment of longitudinal and transversal plastic behavior of recycled aggregate self-compacting concrete: A two-way study.* Construction and Building Materials. 2021;292:123426.
18. Vanesa Ortega-López, Aratz García-Llona, **Víctor Revilla-Cuesta**, Amaia Santamaría, José T. San-José. *Fiber-reinforcement and its effects on the mechanical properties of high-workability concretes manufactured with slag as aggregate and binder.* Journal of Building Engineering. 2021;43:102548.
19. Amaia Santamaría, Aratz García-Llona, **Víctor Revilla-Cuesta**, Ignacio Piñero, Vanesa Ortega-López. *Bending tests on building beams containing electric arc furnace slag and alternative binders and manufactured with energy-saving placement techniques.* Structures. 2021;32:1921-33.
20. **Víctor Revilla-Cuesta**, Marta Skaf, Amaia Santamaría, Jorge J. Hernández-Bagaces, Vanesa Ortega-López. *Temporal flowability evolution of slag-based self-compacting concrete with recycled concrete aggregate.* Journal of Cleaner Production. 2021;299:126890.
21. **Víctor Revilla-Cuesta**, Marta Skaf, Juan M. Varona, Vanesa Ortega-López. *The outbreak of the COVID-19 pandemic and its social impact on education: Were engineering teachers ready to teach online?* International Journal of Environmental Research and Public Health. 2021;18(4):2127.
22. **Víctor Revilla-Cuesta**, Marta Skaf, Roberto Serrano-López, Vanesa Ortega-López. *Models for compressive strength estimation through non-destructive testing of highly self-compacting concrete containing recycled concrete aggregate and slag-based binder.* Construction and Building Materials. 2021;280:122454.
23. **Víctor Revilla-Cuesta**, Marta Skaf, Ana B. Espinosa, Amaia Santamaría, Vanesa Ortega-López. *Statistical approach for the design of structural self-compacting concrete with fine recycled concrete aggregate.* Mathematics. 2020;8(12):2190.
24. **Víctor Revilla-Cuesta**, Vanesa Ortega-López, Marta Skaf, Juan M. Manso. *Effect of fine recycled concrete aggregate on the mechanical behavior of self-compacting concrete.* Construction and Building Materials. 2020;263:120671.
25. **Víctor Revilla-Cuesta**, Marta Skaf, Juan M. Manso, Vanesa Ortega-López. *Student perceptions of formative assessment and cooperative work on a technical engineering course.* Sustainability. 2020;12(11):4569.
26. **Víctor Revilla-Cuesta**, Marta Skaf, José A. Chica, José A. Fuente-Alonso, Vanesa Ortega-López. *Thermal deformability of recycled self-compacting concrete under cyclical temperature variations.* Materials Letters. 2020;278:128417.
27. **Víctor Revilla-Cuesta**, Marta Skaf, Flora Faleschini, Juan M. Manso, Vanesa Ortega-López. *Self-compacting concrete manufactured with recycled concrete aggregate: An overview.* Journal of Cleaner Production. 2020;262:121362.
28. Marta Skaf, Emiliano Pasquini, **Víctor Revilla-Cuesta**, Vanesa Ortega-López. *Performance and durability of porous asphalt mixtures manufactured exclusively with electric steel slags.* Materials. 2019;12(20):3306.

C.2. Research projects

1. Reference: PID2020-113837RB-I00

Project Title: Estudio a escala real de hormigones sostenibles, hidráulicos y bituminosos, de altas prestaciones, fabricados con residuos siderúrgicos y de construcción (FULLSCALE)

Funds: €45,000

Period (duration): 01/09/2021-01/09/2024 (36 months). Lead Researcher: Vanesa Ortega-López, Juan M. Manso

2. Reference: VIIIIPC_05_DemoSUCONS

Project Title: Demostrador piloto de mezcla bituminosa sostenible y drenante, con incorporación de escoria blanca, para la capa de rodadura de una carretera

Funds: €10,000

Period (duration): 15/03/2021-30/09/2021 (6 months). Lead Researcher: Vanesa Ortega-López

C.3. Contracts, technological or transfer merits

1. Project Title: Estudio del comportamiento a tracción de piezas de elevación en posición desfavorable de trabajo.

Source of funding: INCOMIMEX S.L.

Period: 21/06/2022-03/08/2022. Lead Researcher: Roberto Serrano-López, Víctor Revilla-Cuesta

Funds: €1,573

2. Project Title: Investigación del comportamiento de perfiles tubulares frente a cargas de compresión elevadas.

Source of funding: AR RACKING S.A.

Period: 9/7/2021-16/07/2021. Lead Researcher: Vanesa Ortega-López, Roberto Serrano-López

Funds: €2,100

3. Project Title: Asistencia técnica sobre ensayos en morteros/hormigones: 30 muestras ensayadas a flexotracción en probetas entalladas.

Source of funding: Fundación Tecnalia Research & Innovation

Period: 1/09/2020 - 9/10/2020. Lead Researcher: Vanesa Ortega-López, Marta Skaf

Funds: €4,356

4. Project Title: Estudio de patologías constructivas en obra de adecuación de parcela dotacional para espacio libre fase I de Aranda de Duero (Burgos).

Source of funding: EYPO INGENIERÍA, S.L.

Period: 15/07/2020-23/10/2020. Lead Researcher: Juan M. Manso

Funds: €3,630

5. Project Title: Asistencia técnica en el diseño y ensayo de hormigones siderúrgicos para el grupo CLIM-ADAPT (financiado por la UPV/EHU bajo referencia PPGA 20/26 de orgánica 314920NVAZ).

Source of funding: Universidad del País Vasco-UPV/EHU

Period: 29/07/2020-22/09/2020. Lead Researcher: Vanesa Ortega-López, Marta Skaf

Funds: €6,231.50

6. Project Title: Asistencia técnica en diseño y ensayo de vigas de edificación fabricadas con hormigones siderúrgicos (DESCLIMA: RTI2018-097079-B-C31 MCIU/AEI/FEDER, EU).

Source of funding: Universidad del País Vasco-UPV/EHU

Funds: €3,448.50

Period: 22/07//2019-12/11/2019. Lead Researcher: Vanesa Ortega-López.

C.4. Patents

1. Patent number: ES2891677_B2 (P202030746)

Authors: Vanesa Ortega-López; Marta Skaf; José A. Fuente-Alonso; **Víctor Revilla-Cuesta**; Juan M. Manso

Title: Hormigón autocompactante con árido reciclado de hormigón y su procedimiento de elaboración

Grant date: 17/06/2022. Holder: University of Burgos

2. Patent number: ES2895754_B2 (P202030878)

Authors: Vanesa Ortega-López; Marta Skaf; Juan M. Manso; **Víctor Revilla-Cuesta**; Amaia Santamaría

Title: Hormigón siderúrgico de consistencia seca y su procedimiento de elaboración

Grant date: 17/06/2022. Holder: University of Burgos

3. Patent number: ES2891675_B2 (P202030748)

Authors: Vanesa Ortega-López; Francisco Fiol; Marta Skaf; Juan M. Manso; Víctor Revilla-Cuesta

Title: Hormigón autocompactante con árido reciclado de hormigón y de baja retracción y su procedimiento de elaboración

Grant date: 08/06/2022. Holder: University of Burgos

4. Patent number: ES2895755_B2 (P202030881)

Authors: Vanesa Ortega-López; Marta Skaf; Juan M. Manso; **Víctor Revilla-Cuesta**; Aimar Orbe

Title: Hormigón sostenible de consistencia seca y su procedimiento de elaboración

Grant date: 20/06/2022. Holder: University of Burgos

5. Patent number: ES2891699_B2 (P202030750)

Authors: Vanesa Ortega-López; Víctor Revilla-Cuesta; Marta Skaf; Roberto Serrano-López; Juan M. Manso

Title: Hormigón autocompactante siderúrgico de alta resistencia y su procedimiento de elaboración

Grant date: 01/06/2022. Holder: University of Burgos

C.5. Relevant contributions to International Conferences

1. Authors: **Víctor Revilla-Cuesta**, Amaia Santamaría, Ana B. Espinosa, José A. Chica, Juan M. Manso, Vanesa Ortega-López
Title: Validation of ultrasonic pulse to quality control of recycled aggregate self-compacting concrete
Conference: *Euro-American Congress on Construction, Pathology, Rehabilitation, Technology and Heritage Management (REHABEND2022)*
Place/date: Granada, Spain. September 2022
2. Authors: **Víctor Revilla-Cuesta**, Marta Skaf, José A. Chica, Roberto Serrano-López, Vanesa Ortega-López
Title: Recycled self-compacting concrete: Mechanical behavior and durability
Conference: *Fifteenth International Conference on Recent Advances in Concrete Technology and Sustainability Issues (RACTSI2022)*
Place/date: Milan, Italy. July 2022
3. Authors: **Víctor Revilla-Cuesta**, José A. Chica-Páez, José A. Fuente-Alonso, Estibaliz Briz, Jorge J. Hernández-Bagaces, Vanesa Ortega-López
Title: Evaluación del comportamiento de un hormigón autocompactante con árido reciclado grueso y fino
Conference: *VIII Congreso Internacional de Estructuras de la Asociación Española de Ingeniería Estructural*
Place/date: Santander, Spain. June 2022
4. Authors: **Víctor Revilla-Cuesta**, Vanesa Ortega-López, Flora Faleschini, Amaia Santamaría, Marta Skaf
Title: Compressive-strength evaluation of recycled aggregate self-compacting concrete through hammer rebound index
Conference: *I Conference of the European Association on Quality Control of Bridges and Structures (EUROSTRUCT2021)*
Place/date: Padova, Spain. August-September 2021
5. Authors: **Víctor Revilla-Cuesta**, Marta Skaf, Aratz García-Llona, Ignacio Piñero, Juan M. Manso, Vanesa Ortega-López
Title: Self-compacting concrete with recycled concrete aggregate: Resistance against aggressive external agents
Conference: *XV International Conference on Durability of Building Materials and Components (DBMC2020)*
Place/date: Barcelona, Spain. October 2021