



CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	23/06/2022
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First name	Aguasanta		
Family name	Miguel Sarmiento		
Gender (*)	Female	Birth date (dd/mm/yyyy)	02/02/1971
Social Security, Passport, ID number	24271520B		
e-mail	amsarmiento@uhu.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-8496-3124		

(*) Mandatory

A.1. Current position

Position	Associate Professor (PTU)		
Initial date	06/02/2020		
Institution	University of Huelva		
Department/Center	Mining, mechanical, energy and construction engineering	Higher technical school of engineering	
Country	Huelva	Teleph. number	34651884346
Key words	Environmental hydrochemistry, Acid mine drainage, material degradation		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
24/10/2001-27/12/2003	Research Assistant / University of Huelva / Spain
01/05/2004-30/06/2006	Predocctoral Fellow / University of Huelva / Spain
01/07/2007-30/04/2008	Postdoctoral Fellow / Université of Montpellier / France
01/05/2008-20/08/2011	Juan de la Cierva Postdoctoral Fellow / University of Cádiz / Spain
26/09/2011-30/09/2013	Associate Professor (PSI) / University of Huelva / Spain
01/06/2014-01/10/2017	Research Assistant / University of Huelva / Spain
02/10/2017-12/11/2018	Associate Professor (AD) / University of Huelva / Spain
13/11/2018-05/02/2020	Associate Professor (CD) / University of Huelva / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Degree in Chemistry	University of Granada	1999
PhD in Sciences	University of Huelva	2007

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

Aguasanta Miguel Sarmiento is an Associate Professor (PTU) in the area of Mechanical Engineering and head of the Department of Mining, mechanical, energy and construction engineering at the university of Huelva. Degree in Chemistry (1999) from the University of Granada and PhD in Sciences (2007) from the University of Huelva (Outstanding Cum Laude



for Unanimity, European Doctorate). Predoctoral Stays: (1) several stays (1 month) at the Laboratoire Hydrosiences, UMR 5569, CNRS Université de Montpellier II (France); (2) three months at the Institute for Research on the Environment and Sustainability (Newcastle, UK). Postdoctoral experience: (1) 12 months at the Laboratoire Hydrosiences, UMR 5569, CNRS Université de Montpellier II (France); (2) 40 months at the University of Cadiz as researcher Juan de la Cierva; (3) 28 months as Interim Substitute Professor in the Department of Geodynamics and Paleontology of the University of Huelva; (4) 6 months as Contracted Researcher in the Department of Geology of the University of Huelva; (5) 6 months as Postdoctoral Researcher in the public call: "Programme for the Strengthening of R&D&I Capacities at the University of Huelva. Main line of research: Mobility and fate of contaminants of mining origin and industrial waste and degradation of mechanical and structural materials by acid mine drainage. Participation in projects: 1 LIFE project, 2 European INTERREG projects, 5 projects of the Ministry of Science, 3 projects of the Junta de Andalucía, 1 Innterconecta project, 1 project of the CNRS-France, and 1 project of the AECID Spain-Argentina. Principal researcher in projects: 1 FEDER project and 1 project for junior researchers. Participation in 20 research contracts with companies, one of which is a Principal Investigator. Publications: More than 190 publications, of which 57 are works in international journals included in the SCI-JCR. Of these, 42 are included in the first quartile (Q1) of their area, and 12 in the second quartile. The total number of citations is 1876 (according to ISI WOK), with works that add up to more than 180 citations. Index h=23. In addition, 18 works in journals not included in the SCI, 10 book chapters, 3 books (one of them as editor), 36 Congress proceedings; 77 presentations to congresses (53 of them international). Thesis Direction: 3 Doctoral Theses and 6 Master Theses already defended, and another Thesis in progress. Other merits: (1) External Evaluator of Research Projects of ANPCYT (Ministry of Science and Technology of Argentina); (2) Member of the Organizing and Scientific Committee of several national and international congresses.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

C.1.1. Chacon-Baca E., Santos A., Sarmiento A.M., Grande J.A. (3/9). 2021. Acid Mine Drainage as energizing microbial niches for the formation of clastic iron stromatolites: The Tintillo river in SW Spain. *Astrobiology*. 21(4):1-21.

C.1.2. Davila, J.M., Sarmiento A.M., Fortes J.C., Grande J.A. (2/8). 2020. Determination of the extreme reduction of concrete strength due to Acid Mine Drainage by laboratory tests on specimens located in a real environment. *Construction and Building Materials*. DOI: <https://doi.org/10.1016/j.conbuildmat.2020.121817>.

C.1.3. Fortes J.C., Sarmiento A.M., Luís A.T., Santisteban M., Davila J.M., Córdoba F., Grande J.A. 2021. Wasted Critical Raw Materials: a polluted environmental scenario as potential source of economic interest elements in the Spanish part of the Iberian Pyrite Belt. *Water Air and Soil Pollution* 232:88.

C.1.4. Dávila J.M., Sarmiento A.M., Aroba J., Luís A.T. (2/9). 2021. Application of a Fuzzy Logic Based Methodology to Validate the Hydrochemical Characterization and Determining Seasonal Influence of a Watershed Affected by Acid Mine Drainage. *International Journal of Environmental Research and Public Health*, <https://doi.org/10.3390/ijerph18094693>.

C.1.5. AM Sarmiento, JA Grande, AT Luís, E Ferreira da Silva. (1/9). 2018. Negative pH values in an open-air radical environment affected by acid mine drainage. Characterization and proposal of a hydrogeochemical model. *Sci total Environ*, 644, 1244–1253.

C.1.6. Fortes J.C., Dávila J.M., Sarmiento A.M., Grande J.A. (3/8). 2020. Corrosion of metallic and structural elements exposed to Acid Mine Drainage effects: A review. *Mine Water and the Environment*

C.1.7. E Bonnail, AM Sarmiento, TA DelValls, JM Nieto, I Riba. 2016. Assessment of metal contamination, bioavailability, toxicity and bioaccumulation in extreme metallic environments (Iberian Pyrite Belt) using *Corbicula fluminea*. *Sci total Environ*, 544, 1031-1044



C.1.8. MR De Orte, AM Sarmiento, MD Basallote, A Rodriguez-Romero, I Riba, A DeIValls. 2014. Effects on the mobility of metals from acidification caused by possible CO₂ leakage from sub-seabed geological formations. *Sci Total Environ*, 470-471: 356-373.

C.1.9. AM Sarmiento, MA Caraballo, D Sánchez-Rodas, JM Nieto, A Parviainen. 2012. Dissolved and particulate metals and arsenic species mobility along a stream affected by Acid Mine Drainage in the Iberian Pyrite Belt (SW Spain). *Applied Geochemistry*, 27, 1944-1952

C.1.10. AM Sarmiento, A DeIValls, JM Nieto, MJ Salamanca, MA Caraballo. 2011. Toxicity and potential risk assessment of a river polluted by acid mine drainage in the Iberian Pyrite Belt (SW Spain). *Science of the Total Environment* 409: 4763-4771.

C.2. Congress

C.2.1. KL Lecomte, AM Sarmiento, J Borrego, JM Nieto (2014). Movilidad de metales a partir de extracción secuencial en un estuario afectado por drenaje ácido de mina: Estuario de Huelva (SO España). III Reunión Argentina de Geoquímica de la superficie. Vol. 1, 96-101. Ed. Universidad Nacional de Mar del Plata (ISBN: 978-987-544-598-7)

C.2.2. E Bonnail, AM Sarmiento, A DeIValls, JM Nieto (2015). Metal bioconcentration skills of *Corbicula fluminea* in extreme polymetallic environments: short exposure under laboratory conditions. Proceedings of the 5th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE2015) & SECOTOX Conference. Vol. 1, 148-157. Ed. Grafima Publ, (ISBN: 978-960-6865-87-9)

C.2.3. E Bonnail, AM Sarmiento, A DeIValls, I Riba, JM Nieto (2015). Metal bioconcentration skills of *Corbicula fluminea* in extreme polymetallic environments: short exposure under laboratory conditions. Proceeding of the Fifth International Conference on Environmental Management, Engineering, Planning and Economics (ISBN: 978-960-6865-87-9). 148-157.

C.2.4. J Castilla, JC Fortes, JM Dávila, S Melgar, AM Sarmiento (2018). Predictive maintenance of mining machinery based on vibrational analysis. *Science and Technologies in Geology, Exploration and Mining*, Ed. SGEM2018 (ISBN: 978-619-7408-37-9), 18, 663-668.

C.2.5. JC Fortes, JM Dávila, M Santisteban, AM Sarmiento, JA Grande, F Córdoba, AT Luís (2019). Caracterización hidrogeoquímica de un río en los Andes Peruanos. XII Congreso Ibérico de Geoquímica, 387-390. (ISBN: 978-972-778-121-8). Ed. P Nogueira, N Moreira, J Roseiro, M Maia, Portugal.

C.2.6. E Chacón-Baca, A Santos, M Santisteban, JM Dávila, AM Sarmiento, JC Fortes, D Córdoba, J Curiel, JA Grande (2019). Los estromatolitos singulares del río Tintillo (Huelva, España) como resultado de la interacción entre microorganismos extremófilos y los materiales propios de un río afectado por AMD (Huelva, España). XII Congreso Ibérico de Geoquímica, 399-402. (ISBN: 978-972-778-121-8). Ed. P Nogueira, N Moreira, J Roseiro, M Maia.

C.2.7. AM Sarmiento, JC Fortes, JM Dávila, F Córdoba, M Santisteban, AT Luís (2019). Evaluación del grado de afección por drenajes ácidos de mina (AMD) en materiales mecánicos de las instalaciones mineras de la Faja Pirítica Ibérica (FPI). XII Congreso Ibérico de Geoquímica, 473-476. (ISBN: 978-972-778-121-8). Ed. P Nogueira, N Moreira, J Roseiro, M Maia.

C.3. Research projects

C.3.1. EFECTOS SOBRE LA DURABILIDAD DE LOS MATERIALES MECÁNICOS Y ESTRUCTURALES AFECTADOS POR DRENAJE ÁCIDO DE MINA. Proyectos de I+D+i en el marco del Programa Operativo FEDER Andalucía 2014-2020. Ref. UHU-202053. (01/07/2021 – 30/06/2023) 29.018,46 € IP: Aguasanta Miguel Sarmiento

C.3.2. EFECTOS DE LA BIODEGRADACIÓN DE MATERIALES ESTRUCTURALES Y MECÁNICOS EN MEDIOS CONTAMINADOS POR DRENAJES ÁCIDOS DE MINA. Proyectos para Investigadores Principales Noveles. Estrategia de Política de Investigación y de Transferencia de la Universidad de Huelva. Ref. UHUPJ00006. (01/08/2020 – 31/07/2021) 7.068,37 €. IP: Aguasanta Miguel Sarmiento

C.3.3. PROJECT'S REFERENCE PENDING. MINE TAILINGS REPROCESSING, REVALORIZATION AND RISK REDUCTION CONNECTING INNOVATIONS IN METAL RECOVERY, GEOPOLYMERIZATION, CERAMICS & SEALING LAYERS. European Union's



Horizon 2020, ERA-MIN3 No. 101003575. Manuel A. Caraballo, University of Huelva. 01/05/2022-30/04/2024. 932,755€. PI, Coordinator of European project.

C.3.4. ESTABILIDAD DE METALES EN PRECIPITADOS DE DRENAJES ÁCIDOS DE MINA: USO SOSTENIBLE E IMPLICACIONES AMBIENTALES. Ministerio de Economía y Competitividad, Ref. CGL2013-48460-C2-1-R. Universidad de Huelva. 01/01/2014 – 31/12/2016. 122.210,00 €. Manuel Olías Álvarez.

C.3.5. ECOLOGICAL TREATMENT OF ACID DRAINAGE (LIFE-ETAD). European Commission, LIFE+ Programme, Environment & Climate (Ref. LIFE12 ENV/ES/000250). Universidad de Huelva, Sacyr Construcción y Agencia de Medioambiente y Agua de Andalucía. 01/07/2013 to 31/12/2017. 2.650.738,00 €. Antonio Ramirez (Coord. Sacyr), Jose Miguel Nieto Liñán (UHU). <http://www.life-etad.com/index.php/es/>

C.3.6. EL CICLO DE LOS METALES Y SU IMPACTO EN LA CALIDAD DEL AGUA DE LA CUENCA DEL RÍO ODIEL. Ministerio de Ciencia e Innovación, Ref. CGL2010-21956-C02-02. Universidad de Huelva, CSIC. 01/01/2011 to 31/12/2013. 105.270,00 €. José Miguel Nieto Liñán (UHU)

C.3.7. ANÁLISIS Y MODELADO DEL COMPORTAMIENTO DE LIXIVIACIÓN EN CONDICIONES DE EQUILIBRIO DE LA MOVILIDAD DE METALES DE SEDIMENTOS MARINOS EN CONTACTO CON FUGAS DE CO₂ DE PROCESOS CS-SSGS. Ministerio de Ciencia e Innovación, Ref. CTM2008-06344-C03-03. Universidad de Cádiz. 01/01/2009 to 31/12/2011. Tomás Ángel del Valls Casillas (Universidad de Cádiz)

C.3.8. DO MINÉRIO AO SUB-PRODUTO; UM ESTUDO DE MONITORAMENTO AMBIENTAL E APROVEITAMENTO DE RESÍDUOS E REJEITOS. EDITAL nº 01/2010 FAPEMIG/FAPESPA/VALE S.A. (Ref. ICAAF nº 033/2011). Universidad de Huelva, Universidade Federal do Pará (Brasil). 29/11/2010 to 30/08/2015. Marco Antonio Galarza Toro (Universidade Federal do Pará)

C.4. Contracts, technological or transfer merits

C.4.1. ESTUDIO COMPARATIVO DEL RUIDO, ENTRE UCIS NEONATALES DE HOSPITALES DE LA EUORREGIÓN. Secretaría General de Acción Exterior de la Junta de Andalucía. Ref. 08/2018. D. Juan Carlos Fortes Garrido. Desde el 15-10-2018 hasta 31-05-2019.

C.4.3. EVALUACIÓN DE LA CALIDAD DEL AGUA DEL EMBALSE DEL OLIVARGAS. Minas de Aguas Teñidas, S.A. OTR-2012-081. 01/07/2012-30/09/2012. Aguasanta Miguel Sarmiento. 4.000,00 €.

C.4.4. EJECUCIÓN DE CAMPAÑAS DE TRABAJO EN EL RÍO SAN FRANCISCO (TRES MARÍAS, BRASIL) PARA DETERMINAR LA CALIDAD DE SUS SEDIMENTOS. Votorantim Metais Zinco S/A. OT2010/149. 01/10/2010-31/12/2012. Tomás Ángel del Valls Casillas, Universidad de Cádiz. 116.000,00 €.

C.4.5. ESTABLECIMIENTO DE LOS NIVELES DE REFERENCIA Y PROGRAMA DE MEDIDAS PARA LOS RÍOS TINTO Y OIDEL. Junta de Andalucía, Consejería de Medio Ambiente, Agencia Andaluza del Agua. 15/11/2010-15/11/2012. Manuel Olías Álvarez (UHU). 154.550,50 €.

C.4.6. DETERMINACIÓN DE LA CALIDAD DEL SISTEMA ACUÁTICO DEL RÍO SAN FRANCISCO EN LAS PROXIMIDADES A LA FACTORÍA DE LA EMPRESA VOTORANTIM METAIS ZINCO S/A. EN TRES MARÍAS, BRASIL. Votorantim Metais Zinco S/A. OT2009/113. 01/07/2009-31/12/2011. Tomás Ángel del Valls Casillas, Universidad de Cádiz. 152.500,00 €