

Part A. PERSONAL INFORMATION

CV date	10/01/2021
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First and Family name	Gemma Ercilla Zarraga		
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0002-9709-2938	
	SCOPUS Author ID (*)	7006187546	
	WoS Researcher ID (*)	G-8180-2015	

(*) *Optional*
(**) *Mandatory*

A.1. Current position

Name of University/Institution	CSIC, Instituto de Ciencias del Mar		
Department	Marine Geoscience		
Address and Country	Paseo Marítimo de la Barceloneta 37-49, 08003-Barcelona, Spain		
Phone number	932309533	E-mail	gemma@icm.csic.es
Current position	Investigador Científico	From	20/7/2008
Key words	Marine Geology, Stratigraphy, Geomorphology, Sedimentology, Tectonics		

A.2. Education

PhD, Licensed, Graduate	University	Year
Licensed Geological Science	Universidad del País Vasco	1987
Ph.D. Marine Sciences	Universidad Politécnica Barcelona	1992

A.3. General indicators of quality of scientific production (see instructions)

Number of research periods recognized: 4 (last 2010-2015)

Recognition of Scientific Knowledge Transfer.

Oriented Ph.D. Thesis since 2010: 1; 3 in progress.

Total citations (SCI): 2410; Average last 5 year (2016-2020) citations(SCI): 208 cites/year

Publications SCI (Q1): 60 ; total publications SCI-WOS: 112; SCOPUS: 127

H (WOS): 31; H (Scopus) : 32; H (Google Scholar): 36

Part B. CV SUMMARY (max. 3500 characters, including spaces)

My scientific career has consisted in researches of geological evolution with special emphasis on sedimentary, continental margins and basins during the Pliocene and Quaternary. This trajectory has focused on three aspects: i) improve the general knowledge in the field of marine geology, ii) application of knowledge in the field of natural resources and geological hazards, and iii) support for technological development and the creation of floating infrastructures, ground laboratories as well as creation and maintenance of geological collections. The research work has been carried out within the framework of national and EU projects, as well as in the framework of agreements / contracts with private companies and the administration.

Among the main *scientific and technical achievements* would be cited: i) progress in knowledge about stratigraphic architecture, from shallow to deep environments, from the continental margins and adjacent basins, in various geological contexts of the Mediterranean, eastern and western Atlantic, and Antarctica; ii) obtaining in the aforementioned contexts, new depositional models that explain the (paleo) environments, the (paleo) oceanography and the transfer of sediment from the continent to the deep marine environment, determine the geological processes, especially the sediments related to gravitational processes and of bottom currents, and establish the factors that control sedimentary evolution, both local (tectonic and morphology) and regional and global (oceanographic circulation, glacioeustatism); iii) Transfer of knowledge to the business sector and regional administrations in the management of the seabed (Telefónica, Generalitat de Catalunya), natural resources (Norsk-Hydro, REPSOL, Generalitat de Catalunya) and natural hazards (Ministerio Fomento: Prestige; MEDGAZ); iv) Transfer of knowledge to technological development (frontal scanning sonar prototype, sediment autoclave containing gas hydrates), creation of laboratories (geotechnics, opening of witnesses in the ICM-CSIC), technological implementation in oceanographic vessels (BIO-Hesperides , Sarmiento de Gamboa, Cornide de Saavedra conceptual project); v) creation and maintenance of geological



collections in the ICM-CSIC; and vi) dissemination to the science society that I do (books, monographs in magazines, lectures in libraries and public schools and a penitentiary center). I have been a researcher responsible for 12 national and international research projects, and participation in another 36, and with a total of 175 publications (98 in SCI, and the rest in national journals, books).

The *scientific-technical interests and objectives* medium-term and long-term of my research are: i) Define sedimentary models in continental margins whose sedimentation is conditioned by the action of bottom currents, especially by the action of Mediterranean water bodies; ii) Investigate the interaction between longitudinal and transverse sedimentary processes and their influence, still scarcely known, in the construction of continental margins; iii) Address quantitative studies on the morphometry of underwater valleys and model their evolution; iv) Define and assess the geological elements that represent a potential hazard to coastal populations, especially the Mediterranean; and vi) address studies on the presence of gas in marine sediments.

Part C. RELEVANT MERITS

C.1. Publications (some relevant)

1. **Ercilla, G.**, Vázquez J. T, Alonso, B., ..Gorini C. (1/22). Seafloor Morphology and Processes in the Alboran Sea. Alboran Sea - Ecosystems and Marine Resources Editors: Baéz, J.C., Vázquez, J.-T., Camiñas, J.A., Idrissi, M.M. (Eds). Elsevier. ISBN 978-3-030-65515-0.
2. Juan, C., **Ercilla, G.**, Estrada, F., ... & El Moumni, B. (2/12). Multiple factors controlling the deep marine sedimentation of the Alboran Sea (SW Mediterranean) after the Zanclean Atlantic Megaflood. **Marine Geology**, 423, 106-138. (2020) I.F: 3.04; Q1 Oceanography.
3. Garcia-Castellanos, D., Micallef, A., Estrada, F., Camerlenghi, A., **Ercilla, G.**, Periañez, R., & Abril, J. M., The Zanclean megaflood of the Mediterranean—Searching for independent evidence. **Earth-Science Reviews**, 201, (2020). 103061.IF: 9.724. Q1 Geoscience multidisciplinary.
4. **Ercilla, G.**, Juan, C., Periañez, R., ... & El Moumni, B.(1/13)) Influence of alongslope processes on modern turbidite systems and canyons in the Alboran Sea (southwestern Mediterranean). **Deep Sea Research Part I: Oceanographic Research Papers**, 144, 1-16. (2019). IF 2.02. Oceanography Q1
5. **Ercilla, G.**, Schwenk, T., Bozzano, G., Spiess, V., Violante, R., Estrada, F., Ianniccheri, F., Spoltore, D.V., Alonso, B.. Cenozoic sedimentary history of the Bahía Blanca continental margin (northern Argentina): palaeogeodynamic and palaeoceanographic implications. **Marine Geology** 417, 106028 (2019), I: 3.04; Q1 Oceanography
6. Maldonado, M., López-Acosta, M., Sitjà, C., García-Puig, M., Galobart, C., **Ercilla, G.**, & Leynaert, A. Sponge skeletons as an important sink of silicon in the global oceans. **Nature Geoscience**, 1-8. (2019). IF: 13.56, Q1 Geoscience.
7. J. Galindo-Zaldívar, **G. Ercilla**, F. Estrada, ... A. Gil (2/17). Imaging the growth of new faults: the 2016-2017 seismic sequence sea bottom deformation in the Alboran Sea (Western Mediterranean). **Tectonics**, 37. (2018). IF: 3.98. Q1. Geophysics
8. Estrada, F., Galindo-Zaldívar, J., Vázquez, J. T., **Ercilla, G.**, D'Acremont, E., Alonso, B., & Gorini, C. Tectonic indentation in the central Alboran Sea (westernmost Mediterranean). *Terra Nova*, 30(1), 24-33 (2018). IF: 2.73. Q2 Geoscience multidisciplinary
9. **G. Ercilla**, C. Juan, FJ Hernández-Molina, ..., J. Valencia; B. (1/13) El Moumni; A. Ammar. Significance of bottom currents in deep-sea morphodynamics: an example from the Alboran Sea. **Marine Geology**, 378: 157-170. (2016). FI: 3.57.Q1 Geosciences.
10. C. Juan, C; **G. Ercilla**, FJ Hernández-Molina,.. A. Ammar (2/15). Seismic evidence of current-controlled sedimentation in the Alboran Sea during the Pliocene and Quaternary: palaeoceanographic implications. **Marine Geology**, Volume 378, 292-311. 3.57. (2016). 007 IF: 2.710, Q1 Geosciences
11. FJ Hernández-Molina, E. Llave, B. Preu, **G. Ercilla**, .., A. Arnaiz. (4/15). Contourite processes associated with the Mediterranean Outflow Water after its exit from the Strait of Gibraltar: Global and conceptual implications. **Geology**, 42 (3): 227-230 (2014). IF: 4,925, Q1, D1 Geology,

C.2. Research projects

As Principal Investigator

1. Project Title: Rasgos erosivos y depósitos arenosos asociados generados por la MOW alrededor de Iberia: Implicaciones Paleoceanográficas sedimentarias y económicas –MOWER (CTM2012-39599-CO3-02). Funding entity: MINECO. Duration: 2013-2015. Total amount: € 125,000.



2. Los sistemas deposicionales contorníticos generados por las masas de agua mediterránea alrededor de la Península Ibérica: evolución e implicaciones ambientales-CONTOURIBER (CTM2008-06399-C04-04/MAR). Financing entity: National Plan R + D + i MCINN. Duration: 2009-2012. Total amount: € 165,286.
3. EMODnet-Ingestion and Safe-keeping of Marine Data. European Commission (General for Maritime Affairs and Fisheries -DG MARE). Duration: 2016-2021. Total amount: 50,000 €

As a participant

5. Contraste de la actividad geológica entre el sector este y oeste del mar de Alborán y cordilleras adyacentes (AGORA) P18-RT-3275. Funding entity: Junta de Andalucía. Participating entities: Universidad de Granada and other institutions. Duration, from: 2020 to: 2022. Amount granted: 106.000 E. Principal Investigator: Jesús Galindo Zaldívar.
6. Deformación activa y reciente a través del sector central de las Cordilleras Bético-Rifeñas y Mar de Alborán: factores de riesgo geológico (DAMAGE; Ref: AEI/FEDER CGL2016-80687-R. Plan Nacional I+D+i. Duration: 2017- 2020. IP: Jesús Galindo Zaldivar, University of Granada
7. Factores de riesgo geológico asociado a cabeceras de cañones submarinos en los márgenes continentales Mediterráneos del sur de iberia. FAUCES (CTM2015-65461-C2-2-R). Plan Nacional I+D+i. MINEICO, 2016- 2020. Amount granted: 187,555 E. SP2 IP: B. Alonso.
8. Los montes Submarinos del Sur de Iberia: Tectónica y Sedimentación-MONTERA (REF: CTM-14157-C02-02 (MAR subprogram) Financing Entity: National Plan R + D + i MCINN Duration From: 2009 To: 2013 IP: B. Alonso Amount granted: € 123,000
9. Features of Azores and Italian Volcanic Islands -FAIVI (EUROFLEETS- call for ship-time “Regional 1” 2010. Coordinator: FL Chicci (Rome) Funding scheme (FP7): Combination of Collaborative project and Coordination and Support Actions for Integrating Activities Eurofleet Coordinator: Dr. FL Chiocci (U. La Sapienza, Rome); Principal Investigator at the ICM: G. Ercilla. 2011. Amount granted: € 21,500

C.3. Contracts, technological or transfer merits

1. Convenios de intercambio de información: perfiles sísmicos en el Golfo de Cádiz. Duration: 2011-2014. Responsible Bodies: REPSOL INVESTIGACIONES PETROLÍFERAS, SA (“REPSOL”), University of Vigo, ICM-CSIC and IGME. Responsible researchers: Gemma Ercilla (ICM-CSIC), Francisco Javier Hernández (U Vigo), Teresa Medialdea (IGME).
2. Convenio de intercambio y asesoramiento de información relacionado con la exploración de hidrocarburos, con la empresa Energía Ibérica Limited. No. 8443423, whose registered office c / New Cavendish number 64, W1G7LS, in London, United Kingdom. Responsible for the ICM-CSIC: G. Ercilla, Ferran Estrada.

C.4. Experiences in R&D management and scientific management

1. Responsible of the Continental Margins Group at ICM-CSIC. 2008 to 2020.
2. Responsible of the Geological Collections at ICM-CSIC.2000-2020.
3. Participation in the selection of Juan de la Cierva (AEI). 2020.
4. Member of the Scientific-Technical Commission for the evaluation of project requests submitted in the 2017 call, “Excellence” and “Challenges”, of the State Plan. 2018.
5. Representative of the CSIC in the Marine Cartography Working Group of the Interministerial Commission of Science and Technology of MAGRAMA. 2013-2014.
6. Head of the Consolidated Quality Group in the framework: reconeguts and amb finançament research groups (base 18 of the call, published to DOGC No. 5265 - 11/25/2008) .Generalitat de Catalunya. Department of the Presidency. Comissionat per a Universitats i Recerca. General Directorate of Research. 2008-2013.
7. Member of the Spanish Scientific Committee of IODP (Integrated Ocean Drilling Program) - Spain. 2007 to 2010.

C5. Invited conferences, member of the organizing committee

1. Organizing committee: Workshop Alboran Domain and Gibraltar arc: geological research and natural hazards. 16-18 October. IACT-CSIC Granada. 2019
2. Invited by the UPV-EHV to the Round Table Discussion: Una Facultat de Ciències y tecnologíza en el siglo XXI. Framework: 50 anniversary of the UPV-EHU. 3rd July, 2019.



3. Invited conference by the UPV-EHV to the Conference Session: 'Geología para poetas, miopes y despistados: La Geología también tiene su Física. Title of Conference: Los ecos del fondo submarino: imágenes de las estructuras geológicas',. 27th November. 20194. Invited conference.
4. Invited conference by the Al-Hoceima Foundation. Title: Les risques géologiques de la mer de d'Alboran. La champagne INCRISIS 2016. Congrès International, La sismicité de la Région d'Al Hoceima: évaluation des aléas et de la vulnérabilité. Al Hoceima 17-17 July. 2016
5. Member and co-founder of the Commission of Marine Geology. The Spanish Geological Society 2014
6. Member Organizing Committee of Symposium on Integrating New Advances in Mediterranean Oceanography and Marine Biology. November 25-29, Barcelona.2013
7. Member of the Organizing Committee of the Congress: "Deep-water Circulation: Processes & Products" Baiona (Pontevedra, Spain) on 16, 17 and 18 June, 2010.2011
8. Invited conference. Congress: 50 Scientific Session of the Geological Society of Spain. May 24-26, Vigo. Title: Recent sedimentary processes in the region of Banco de Galicia.2010

C6. Teaching Activities

1. Participation in the "Theoretical-practical course on techniques and instrumentation in the preparation of geological and paleontological samples". July 2-6. Organized by the Museum of Sciences Natural of Barcelona (MCNB) in collaboration with the University of Barcelona (UB) and the Institute of Marine Sciences (ICM-CSIC). "Preparation and conservation techniques of marine sediment samples" was given at the ICM, in Barcelona. 2018-2019.
2. Professor at the University of Cádiz, Faculty of Marine Sciences, Master in Oceanography; Course: Recent processes in continental margins and ocean basins. 2009 to 2020.

C7. Dissemination Activities

2020. Development of material for outreach activities. Topic: Seismic faults and earthquake triggering.
- 2019 ,Interview. Invited by the television programme "Orbita Laika". 6th May, 2019
2017. Preparation of the informative blog of the activities of the FAUCES 1 campaign (September-October 2017). Web: <https://faucesproject.wordpress.com/blog/>
2016. Development of a video of the INCRISIS campaign on board the BIO-Hespérides vessel. <https://www.youtube.com/watch?v=LDir4RSuGC8&t=6s>
- 2013/12/11. Conferences and practices given on "Marine Geological Risks", at the Young Penitentiary Center of the Rock of Vallés. Event name: Blue Planet Project (FECYT). The Rock of the Valleys. Granollers Organizing entity: Institute of Marine Sciences-CSIC.
2011. Invited conference. Public Library, Teià. Title: Marine geological Hazards". The Science Week. November 15.
2010. Invited conference. Public school, Teià. Title: Exploring the sea with marine geologist".5th June.
2010. Production of the comic book "Exploring the Ocean with Marine Geologists", The Marine Geological Risks. Editorial Culturalibros Organizing entity: Institute of Marine Sciences. Authors: **G. Ercilla**; B. Alonso; D. Houses; S. Domenech. 27 pp.
2009. Comic Book: Production of the comic book "Exploring the Ocean with Marine Geologists. ERGAP Expedition." Authors: **G. Ercilla**, D. Casas and S. Domenech. Edi.CSIC. Madrid, 28 pp.

C9. Summary of other merits

Description of merit: Responsible for the research training of 5 Ph. D. and 11 students and graduates.

Description of the merit: Participation in 45 marine geology campaigns, being 17 times Chief and Scientific co-chief.