CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Ivone		
Family name	Jiménez Munt		
Gender (*)	female	Birth date	26/05/1970
ID number	38098333Y		
e-mail	ivone@geo3bcn.csic.es	https://ivone.geo3bcn.csic.es/	
Researcher numbers	Researcher ID	B-7073-2009	
	Orcid code	0000-0003-4178-3585	

A.1. Current position

Position	Científica Titular		
Initial date	16/03/2011		
Institution	Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Geociencias Barcelona (Geo3BCN)		
Country	Spain	Teleph. number	+34 934095410
Key words	Geodynamics, numerical modelling, lithosphere deformation, potential fields, lithosphere structure, geothermal		

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

Period	Position/Institution/Country/Interruption cause
01/1995 - 10/1999	PhD student in the Institute of Earth Sciences Jaume Almera, ICTJA-CSIC, Barcelona
12/1998 – 3/1999	PhD stage, *Department of Earth Sciences* from the *University of California Los Angeles* (UCLA). USA
11/1999 – 04/2003	PostDoc contract in *Dipartimento di Scienze della Terra* from *Università degli Studi di Milano*, Milan, Italy
05/2003 – 10/2004	Research Fellow in *Department of Earth Sciences* from *University College London (UCL),* London, UK
11/2004 – 02/2011	Research Program “Ramón y Cajal” in the Institute of Earth Sciences Jaume Almera, ICTJA-CSIC, Barcelona
07/2008 – 11/2008 03/2010 – 07/2010 05/2013 – 10/2013	Maternity leaves

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Graduate in Physics	University of Barcelona, Spain	1994
M Sci. in Physics	University of Barcelona, Spain	1997
PhD in Physics	University of Barcelona, Spain	1999

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

My research is focused on the field of numerical modeling applied to the study of large-scale lithospheric deformation processes. Much of my work has focused on the programming and development of thermomechanical models with the aim of understanding the interaction between lithosphere-asthenosphere and its response in the variations on the elevation, temperature, and stress and strain distribution. I have also implemented the surface processes, erosion and fluvial sedimentation in the models, which allows a more realistic quantification of the relationship between depth processes (lithosphere-asthenosphere) and surface processes (topography and erosion / sedimentation). This code has been applied for neotectonics studies and long-term geodynamic processes. I am also interested in subduction and delamination processes, their dynamic evolution and response on surface topography. I study the topography as a combination of isostatic equilibrium and dynamic due to some mantle processes. I am interested to find the thermal and compositional distribution of the crust

and upper mantle using an integrated geophysical-petrological modeling, that simultaneously fit all available geophysical data (e.g. Bouguer and Geoid anomaly, elevation, surface heat flow, seismic velocities) and the petrophysics of the mantle. I am also interested in the integration of geophysical data with numerical modeling for geothermal purposes. Active research regions are the Mediterranean, the Iberian Peninsula and its margins, the Alpine-Himalayan System and the Betic-Gibraltar-Rif System.
Between 2019-2022, I was the **coordinator of Global Geodynamics**, one of the three challengers from Geo3BCN (geo3bcn.csic.es). Since 2017 I am the **scientific director of the Laboratory of Geodynamic Modeling** (https://geo3bcn.csic.es/index.php/services-and-facilities/laboratory-of-geodynamic-modeling). I am **coordinator from the BSC-RES Panel 'Astronomy, Space and Earth Sciences'**, who is assigning the access to computing time to the Red Española de Supercomputación (www.bsc.es). I have participated in more than 35 national, European and/or international projects. Participation in several funded by European Union (3 of them MSCA-ITN-ETN, and advisor of 2 PhD). P.I of 4 national (SISAT, ATIZA, MITE, GeoCAM) and 2 international projects.
I have been involved in teaching at MSc level during the last 15 years in the University of Barcelona and Autonomous University of Barcelona, and supervising Master thesis (5). I was teaching at BSc level in the University College of London, training in different programs within the several European MSCA-ITN-ETN Programs and participating three years in the Summer School 'Diversity in the cultures of Physics' organized by the Faculty of Physics from the University of Barcelona. I regularly participate in outreach and dissemination activities, in Secondary Schools, talks to general public, videos creations. I supervised 5 PhD thesis and presently supervising 1 PhD.
I have been member of the pool of reviewers of the ANEP (Agencia Nacional de Evaluación y Prospectiva) from the Spanish Government (MINECO) and member of the selection panel of research-permanent positions at Spanish Research Centres.
I am author and coauthor of 53 publications: 2 books chapters, 43 articles in SCI journals (25% of them from D1 and 73% from Q1), and they have been cited more than 2400 times, resulting in an h-index of 22. I have more than 150 presentations in international congresses.

Part C. RELEVANT MERITS

C.1. Publications

1. Zhang, W., **Jiménez-Munt, I**., Torne, M., Vergés, J., Bravo-Gutiérrez, E., Negredo, A. M., et al., 2022, Geophysical-petrological model for bidirectional mantle delamination of the Adria microplate beneath the northern Apennines and Dinarides orogenic systems. J. Geophys. Res., 127, e2022JB024800. https://doi.org/10.1029/2022JB024800. Rango cuartil: 22/88, Q1

2. Kumar, A, M Fernàndez, J Vergés, M Torne, **I Jiménez-Munt**, 2021, Opposite symmetry in the lithospheric structure of the Alboran and Algerian basins and their margins (Western Mediterranean): Geodynamic implications, J. Geophys. Res., 126 (7), e2020JB021388. Factor: 3.848. Rango cuartil: 22/88, Q1.

3. **Jiménez-Munt I**., M. Torne, M. Fernàndez, J. Vergés, A. Kumar, A. Carballo, D. Garcia-Castellanos, 2019, Deep Seated Density Anomalies Across the Iberia-Africa Plate Boundary and Its Topographic Response, Journal of Geophysical Research: Solid Earth, 124. https://doi.org/10.1029/2019JB018445. Open Access. Factor: 3.64. Rango cuartil: 16/85, Q1

4. Carballo, A., M. Fernandez, M. Torne, I. Jiménez-Munt, A. Villaseñor, 2015, Thermal and petrophysical characterization of the lithospheric mantle along the northeastern Iberia geo-transect, Gondwana Research, 27, 4, 1430-1445. doi:10.1016/j.gr.2013.12.012. Impact Factor: 8,743. Rango cuartil: Q1, D1

5. **Jiménez-Munt I**., M. Fernàndez, J. Vergés, D. García-Castellanos, J. Fullea, M. Pérez-Gussinyé and J.C. Afonso, 2011, Decoupled crust-mantle accomodation of Africa-Eurasia convergence in the NW-Moroccan margin, J. Geophys. Res., vol. 116, B08403, doi:10.1029/2010JB008105. Impact Factor: 3,021. Rango cuartil: 21/170, Q1

6. Garcia-Castellanos D., F. Estrada, **I. Jiménez-Munt**, C. Gorini, M. Fernàndez, J. Vergés, R. De Vicente, 2009, Catastrophic flood of the Mediterranean after the Messinian salinity crisis,

Nature, Vol 462, 10 December 2009. doi:10.1038/nature08555. Impact Factor: 34,480. Rango cuartil: 1/42, Q1, D1

7. **Jiménez-Munt I.**, M. Fernandez, J. Vergés, J.P. Platt, 2008, Lithosphere structure underneath the Tibetan Plateau inferred from elevation, gravity and geoid anomalies, Earth. Planet. Sci. Lett, 267, 276-289. doi:10.1016/j.epsl.2007.11.045. Impact Factor: 3,955. Rango cuartil: 4/64, Q1, D1
8. **Jiménez-Munt I.**, J.P. Platt, 2006, Influence of mantle dynamics on the topographic evolution of the Tibetan Plateau: Results from numerical modelling, Tectonics, 25, TC6002, doi:101029/2006TC001963. Impact Factor: 3,143. Rango cuartil: 6/59, Q1, D1
9. **Jiménez-Munt I.**, R. Sabadini, A. Gardi, G. Bianco, 2003, Active deformation in the Mediterranean from Gibraltar to Anatolia inferred from numerical modeling, geodetic and seismological data, J. Geophys. Res., 108 (B1) 2006, doi:10.1029/2001JB001544. Impact Factor: 2,992. Rango cuartil: 7/128, Q1, D1
10. **Jiménez-Munt I.**, M. Fernandez, M. Torne, P. Bird, 2001, The transition from linear to diffuse plate boundary in the Azores-Gibraltar region: results from a thin-sheet model, Earth. Planet. Sci. Lett., 192, 175-189. Impact Factor: 2,7. Rango cuartil: 3/47, Q1, D1

C.2. Congress

I. Jiménez-Munt, K. Boonma, D. Garcia-Castellanos, T. Gerya, “Geodynamic modelling of lithospheric slab tearing and its topographic response. Application to the Gibraltar Arc”, Geomod 2021, Doorn-Netherland, 19-23 September 2021. Oral.

I. Jiménez-Munt, M. Torné, M. Fernàndez, J. Vergés, A. Carballo, A. Kumar, D. García-Castellanos, A lithosphere geotransect from the Iberia Variscan domain to the Alpine North Africa ranges crossing the Gibraltar Arc System, TopoEurope, May 2019, Granada, Spain. Poster

I. Jiménez-Munt, A. Kumar, M. Fernandez, M. Torne, J. Vergés, New improvements on LitMod2D package: A tool for integrated geophysical-petrological modelling of the lithosphere and upper mantle, T43H-0520, AGU Fall Meeting, 10-14 Dec 2018, Washington D.C. Poster

I. Jiménez-Munt, M. Torne, A. Carballo, M. Fernàndez, A. Kumar, J. Vergés, D. Garcia-Castellanos, Lithospheric transition from the stable Iberia Variscan domain to the Alpine deformed Gibraltar Arc and Atlas Mountains, Geophysical Research Abstracts, Vol. 20, EGU2018-8976-1, EGU General Assembly 2018. Oral.

I. Jiménez-Munt, L. Tunini, M. Fernàndez, J. Vergés, The Alpine-Himalayan Belt: Atlas, Zagros and Tibet. Lithosphere structure, mantle characterization and influence of mantle dynamics on surface topography, TopoEurope 2015 Meeting, October 5-8, 2015, Antibes-France. Oral

I. Jiménez-Munt, L. Tunini, M. Fernàndez, J. Vergés, Looking at the roots of the highest mountains: the lithospheric structure of the Himalaya-Tibetan orogeny from a geophysical-petrological study, 26th International Union of Geodesy and Geophysics (IUGG), June 22-July 2, 2015. Prague-Czech Republic. Oral.

I. Jiménez-Munt, D. Garcia-Castellanos, Topographic evolution and climate aridification during continental collision: insights from numerical modeling, 29th Himalaya-Karakoram-Tibet Workshop, Lucca, Italy, September 2-4, 2014. Oral.

I. Jiménez-Munt, M. Fernàndez, S. Zlotnik, Coupled lithospheric mantle thickening in the NW - Moroccan margin and mantle thinning beneath the Atlas Mountains, 34th International Geological Congress, Brisbane-Australia, 5-10 Agost 2012. Oral

I. Jiménez-Munt, Lithospheric-mantle thinning beneath the Alpine-Himalayan Belt. Influence of mantle dynamics on tectonic evolution from geodynamic modelling, DefLAB: Defining the Lithosphere-Asthenosphere Boundary Beneath Continents, ESF Exploratory Workshop, 2009, Dublin, Ireland. Invited Oral.

I. Jiménez-Munt, Lithospheric-mantle thinning beneath the Alpine-Himalayan Belt. Influence of mantle dynamics on tectonic evolution, Joint Assembly, American Geophysical Union (AGU), 2009, Toronto, Canada. Invited Oral

C.3. Research projects

- 2022 – 2025 “A Digital Twin for GEOphysical extremes, DT-GEO”. Funding: Horizon **Europe** (GA No 101058129). 01/09/2022 - 31/08/2025. PI: Arnau Folch. Budget: 15,168,598 €

- 2022 - 2024 “Multiscale Geophysical and Geochemical Imaging of La Palma Island Geothermal System GEOTHERPAL-GEOPH”, Funding: Spanish Government (Proyectos de Transición Ecológica y Transición Digital 2021). PI: F. Martín Hernández

- 2019 – 2022 “Geodynamics of the Central Alpine Mediterranean Orogenic System: Mantle characterization and vertical motions, GeoCAM”. Funding: Spanish Government (Plan Nacional I+D). Ref: PGC2018-095154-B-I00. PI: **I. Jiménez-Munt** and D. Garcia-Castellanos. Budget: 114.950 €.

- 2020 – 2021 “European Deep Geothermal – Géothermie profonde européenne”. Funding: Programme MRSE, Agence Nationale de la Recherche (ANR), France. Coordinator: Stéphanie Duchene. Budget: 29.484,00 €. Spanish coordinator: **I. Jiménez-Munt**

- 2018 – 2022 “Understanding the Mediterranean Salt Giant, SALTGIANT”. **European** Training Network, H2020-MSCA-ITN-2017, ref.765256. Coordinator: Vanni Aloisi. Budget: 3.893.088 €

- 2016 – 2019 “Understanding subduction zone topography through modelling of coupled shallow and deep Processes, SUBITOP”. **European** Training Network, H2020-MSCA-ITN-2015, ref. 674899. Coordinator: Niels Hovius. Budget: 3.919.099 €, 495.745 (our group)

- 2015-2017 “Modeling the Topographic Evolution of Iberia. MITE”. Funding: Spanish Government (Plan Nacional I+D). Ref. CGL2014-59516-P. PI: D. Garcia-Castellanos and **I. Jiménez-Munt**. Budget: 142.780 €

- 2010 – 2013 “Caracterización del manto litosférico debajo de la cadena orogénica Alpina a partir de métodos numéricos. Comparación entre Atlas, Tíbet y Zagros. ATIZA”. Funding: Spanish Government (Plan Nacional I+D). Ref. CGL2009-09662/BTE. PI: **I. Jiménez-Munt**. Budget: 65.945 €

- 2009 – 2012 “Caracterización sísmica de la corteza y manto litosférico del Alto Atlas. SISAT”. Funding: Spanish Government. Ref. CGL2008-01124-E/BTE. PI: **I. Jiménez-Munt**. Budget: 18.000 €

- 2006 – 2009. “TOPO-IBERIA - Geociencias en Iberia: Estudios integrados de topografía y evolución 4D”. the Spanish Ministry Ref. **Consolider-Ingenio** CSD2006-00041. PI Josep Gallart. Participants: 10 institutions, 110 researchers. Budget: 5.400.000 €

C.4. Contracts, technological or transfer merits,

2007 – 2009. “Shortening and uplift evolution in NW Zagros”. Hydro Oil and Energy, Norway. PI: Jaume Vergés, ICTJA-CSIC. Budget: 252.800 €

2005 – 2008. “The Global Structure of the Lithosphere”. NORSK-HYDRO (Oil Division). PI: Manel Fernández, ICTJA-CSIC. Budget: 112.530 €

2001 – 2003. “Deformazioni attive al margine settentrionale dell’Adria”. Agenzia Spaziale Italiana (ASI). PI: Roberto Sabadini, University Milan. Budget: 104.841 €

1998 – 2000. “Dinamica della litosfera: sismicità e deformazione in aree attive dell’Italia centrale”. Agenzia Spaziale Italiana (ASI). PI: Roberto Sabadini, University Milan. Budget: 351.240 €