

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Cesar		
Family name	Rodriguez Ranero		
Gender	M	Birth date	07/01/63
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A.1. Current position

Position	Research Professor and Group Leader		
Initial date	2005		
Institution	ICREA at CSIC		
Department/Center	Marine Geosciences	Instituto de Ciencias del Mar	
Country	Spain	Teleph. number	932309619
Key words	Earth Sciences, continental margins, tectonics, earthquakes		

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

2000-2005	Senior Staff Scientist at GEOMAR, Kiel, Germany
1993-1999	Postdoc at GEOMAR, Kiel, Germany
1988-1992	PhD student at Earth Sciences Institute Barcelona - CSIC

A.3. Education

PhD	Barcelona University	1993
Geology degree	Basque Country University	1987

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

Research interest and strategy

My scientific goal is to conceptually advance our understanding of large-scale fundamental active processes of rifting and continental passive margins, seafloor spreading, and subduction systems. For this end, I strive to obtain the best quality observations by personally leading the acquisition, analysis, and processing of marine seismic data. I specialise in complex, multi-disciplinary experiments, coordinating teams of multi-national scientists to acquire data during numerous cruises that have produced major breakthroughs. Based on our seismic images, I have been leading several IODP projects to ground-truth and constrain models with drilling. After being awarded an ICREA Research Professor in 2005, I worked towards the creation and consolidation of the Barcelona Center for Subsurface Imaging (Barcelona-CSI) in 2007. I coordinate the development of novel technologies for travel-time tomography and full-waveform inversion, integrated with pre-stack depth migration, to estimate physical properties and subsurface structure at the highest possible resolution. The exceeding data quality, methods and interpretation of the Barcelona-CSI - our Know-how - have permitted to obtain continuous funding from Spanish, EU and international agencies, and significantly from industry sources in projects of technological transfer.

Leadership



- Since 2007 head of the Barcelona Center for Subsurface Imaging group currently formed by 8 senior scientists and typically ~6-8 postdoc, ~6-8 PhD, and ~1-2 MSc students.
- Co-lead an IODP proposal that drilled the Pacific Costa Rica in 2 legs.
- Co-lead proponent in IODP proposal TIME to drill the Tyrrhenian in February 2024.
- Supervised 5 MSc, 11 PhD (1 underway), and over 25 postdocs.

Field Work Chief or Co-chief scientists of 16 geophysical and geological cruises in Pacific and Atlantic Oceans and Mediterranean Sea. Team leader in another 8 cruises

Honours and Awards

- Elected member of the Academia Europaea 2020
- Award “Ciudad de Barcelona” in Environmental and Earth Sciences 2019
- Elected Fellow of the American Geophysical Union (AGU) 2018
- Individual Marie Curie fellowship from EU (24 months, 1993-1995)
- Individual grant from the Generalitat de Catalunya (48 months, 1989-1992)
- Individual grant from the Spanish Ministry of Economy (12 months, 1988)

Invited seminars and talks. More than 60 including WoodsHoleOI, Cornell Un., Tokyo, Jamstec, Berlin, Potsdam, Copenhagen, GEOMAR-Kiel, Granada, Oviedo, Houston, San Jose (Costa Rica), Durham, UPMC-Paris, IPGP-Paris, Nice, Montpellier, Royal Holloway, IFREMER, and >20 invited talks at meetings at EGU, AGU, Deep Seismix, RCMNS, TopoEurope-ESF and other symposia.

Selected work at societies and committees

2004-2005 Member of Steering Committee of Euromargins Programme.

2004 Secretary of Tectonics & Structural Geology (TS) Division of the European Geosciences Union (EGU)

2005-2009 President of the TS Division of the EGU

2006-2009 Chair of the Program Committee of TS Division of the EGU

2009-2012 Chair of the Stephan Mueller Medal Committee of the EGU

2009-2012 Vice-president of TS Division of the EGU.

2009-2013 Spanish alternate chair at European Consortium for Ocean Research Drilling (ECORD) for the Integrated Ocean Drilling Program.

2013-2017 Member Natural Resources Committee Spanish Evaluation Agency.

2016-2018 Panel member to Institut Universitaire de France (IUF).

2016-2018 Member of Stephan Mueller Medal Committee of the EGU.

2016-2019 Evaluation of “LaCaixa” Foundation grants.

Reviewer - for EU, NSF, NERC-UK, RC-Norway, CONICYT-Chile, Ifremer, ANEP-Spain.

Evaluation for Tenure and Professorship at US, UK and Germany research centres.

Reviewer for journals Nature, Nature Geoscience, Science, JGR, GRL, Tectonics, GJI, G-cubed, Geology, Geophysics, EPSL, Basin Res., Tectonophysics, Terra Nova.

Journal Editorial Boards

2015-2016 Guest editor Tectonophysics

2016-2019 Guest editor Geosphere & Guest editor Lithos

Part C. RELEVANT MERITS

C.1. Publications

I have published >140 peer-reviewed papers, with >130 in the SCI Web of Science, with >8000 citations (<http://www.researcherid.com/rid/B-9165-2009>) and h-index=50 (highest in Spain in Geophysics) and Fhm index 1.56 (i.e. h index respect to research field) is the highest in Earth Sciences in Spain (<https://grupodih.info/>). A selection of 15 papers:

Ranero, C. R.; Banda, E. Buhl, P. The crustal structure of the Canary Basin: Accretion processes at slow spreading centers. **J. Geophys. Res.** (1997)

Ranero, C. R., Reston, T. J. Detachment faulting at Inside Corners. **Geology**, (1999)

Ranero, C. R.; von Huene, R.; Flueh, E., Duarte, M. and Baca, D. A cross section of the forearc Sandino Basin, Pacific Margin of Nicaragua. **Tectonics**, (2000)

Ranero, C. R., von Huene, R. Subduction erosion along the Middle America convergent margin. **Nature** (2000)

Ranero, C. R., Phipps Morgan, J., McIntosh, K., Reichert, C., Bending-related faulting and mantle serpentization at the Middle America Trench, **Nature** (2003)

Ranero, C. R. & Sallares, V., Geophysical evidence for alteration of the crust and mantle of the Nazca Plate during bending at the north Chile trench. **Geology** 32, (2004)



Ranero, C.R., Villaseñor, A., Phipps Morgan, J., Weinrebe, W. Relationship between bend-faulting at trenches and intraslab seismicity. *G-cubed* (2005)

Ranero, C.R., et al., The hydrogeological system of erosional convergent margins and its influence on tectonics and interplate seismogenesis *G-cubed* (2008)

Ranero C. R. and Perez-Gussinye, M. Sequential faulting explains the asymmetry and extension discrepancy of conjugate margins. *Nature*, (2010)

Geersen, J., C R. Ranero, U. Barckhausen & C. Reichert. Subducting seamounts control interplate coupling and seismic rupture in the 2014 Iquique earthquake area. *Nature Comm.* (2015)

Booth-Rea, G. Ranero, C. R. & Grevemeyer, I. The Alboran volcanic-arc modulated the Messinian faunal exchange and salinity crisis. *Scientific Reports* (2018)

Gràcia E., et al., and Ranero C.R., Earthquake crisis unveils the growth of an incipient continental fault system. *Nature Comm.* (2019)

Sallares, V. & Ranero, C. R., Upper plate rigidity controls megathrust earthquake rupture characteristics, *Nature*. (2019)

Gómez de la Peña, L., Ranero, C.R., et al. Evidence for a developing plate boundary in the western Mediterranean. *Nature Comm.* 13. 4786. 10.1038/s41467-022-31895-z. (most downloaded in Earth Sciences in 2022)

Pérez-Gussinyé, M., J. Collier, J Armitage, J R. Hopper, Z. Sun & C. R. Ranero. Towards a process-based understanding of rifted continental margins. *Nature Rev. Earth. Env.* (2023)

C.2. Congress

Organizer of a Penrose and AAPG Topical conferences, a Seismix symposia, and two Magellan Workshops, Program Committee member of the European Geosciences Union (EGU) Assembly from 2005 to 2010. Convener of sessions in >20 international scientific meetings, including 9 AGU sessions and 22 EGU sessions. >300 contributions to international congresses.

C.3. Research projects

2007-2023 as Head of the Barcelona-CSI:

Project: ATLANTIS **Funding:** Spanish Plan Nacional **Duration:** 01/06/2020 to 31/05/2023 **Funds:** 163k€ + 1 PhD + 2 cruises **PI:** A. Ugalde & C. R. Ranero

Project: FRAME **Funding:** Spanish Plan Nacional **Duration:** 01-01-2016 to 31-12-2018 **Funds:** 208k€ + 1 PhD + 2 cruises **PI:** C. R. Ranero & V. Sallares

Project: Collaboration with NSF-PIRE “ExTerra Field Institute and Research Endeavor” (E-FIRE) **Funding:** Spanish Ministerio de Economía y Cooperación **Duration:** 01-01-2013 to 31-12-2018 **Funds:** 200k€ **PI:** C. Garrido (CSIC) C. R. Ranero (ICREA at CSIC)

Project : Zooming in Between the Plates **Funding:** FP7 **Duration:** 01-01-2013 to 31-10-2017 **Funds:** 740k€ + 1 cruise **PI:** Ranero (for CSIC) coordinador P. Agard (UPMC, Paris)

Project: Hazards in the Aegean **Funding:** Spanish Plan Nacional **Funds:** 378k€ + 1PhD + 1 cruise **Duration:** 01-01-2012 to 31-12-2014 **PI:** C. R. Ranero

Project: TopoMed Collaborative Research Programme of ESF Eurocores TopoEurope **Funding:** Spanish Ministerio de Ciencia e Innovación **Duration:** 01-01-2009 to 31-12-2011 **Funds:** 50k€ + 1 cruise **PI:** M. Fernández Spanish WP. C. R. Ranero PI Seismic cruise.

Project : Grup de Recerca Barcelona CSI **Funding:** AGAUR **Duration:** 01-01-2009-Present **Funds:** 43k€ **PI:** Ranero

Project: Las cuencas del Mediterráneo Occidental: un laboratorio natural de los procesos de formación de márgenes continentales de extensión **Funding:** Spanish Plan Nacional **Duration:** Nov 2007 to Nov 2010 **Funds:** 200k€ + 1 PhD + 1 cruise **PI:** C. R. Ranero

2002-2005 as staff scientist GEOMAR (Germany):

PI or CO-PI of projects for ca. 4.5 Mill. € from: German BMBF, DFG and EU projects. These projects integrate 4 ship cruises.

Project: TIPTEQ: How the Temperature of the Incoming Plate influences interplate MegaThrust EarthQuakes **Funding:** German BMBF **Duration:** 2004-2006 **Funds:** 3.4 Mill. € **PI:** Coordinators: C. R. Ranero (GEOMAR), O. Oncken (GFZ-Potsdam)



Project: Research Vessel SONNE cruise 181 **Funding:** German BMBF **Duration:** 2004-2005 **Funds:** 182.4k € + 1 cruise **PI:** C. R. Ranero & W. Weinrebe (GEOMAR).

Project: SFB574 subproject A1. Tectonics and fluid flow revealed with imaging techniques **Funding:** German DFG **Duration:** 2004-2008 **Funds:** 402k € **PI:** C. R. Ranero & W. Weinrebe (GEOMAR).

Project: R/V METEOR cruise 69/2 in the Alborán Basin **Funding:** German DFG **Duration:** 2006-2006 **Funds:** 33k € + 1 cruise **PI:** C. R. Ranero & (GEOMAR).

Project: Formation of Western Mediterranean Basins: project within the Collaborative Research Programme WESTMED of Eurocores “Continental Margins” of the European Science Foundation **Funding:** German DFG **Duration:** 2005-2006 **Funds:** 93k € **PI:** C. R. Ranero (GEOMAR).

Project: SWATHSEIS: project within the Collaborative Research Programme WESTMED of Eurocores “Continental Margins” of the European Science Foundation **Funding:** German DFG **Duration:** 2004-2005 **Funds:** 184k € **PI:** C. R. Ranero & (GEOMAR).

Project: Constraining the seismotectonics, crustal, and uppermost mantle structure beneath an actively propagating segment of the Northern Mid-Atlantic Ridge **Funding:** German DFG **Duration:** 2004-2005 **Funds:** 184k € + 1 cruise of R/V Meteor. **PI:** J. Phipps-Morgan & C. R. Ranero & (GEOMAR).

C.4. Contracts, technological or transfer merits

PI of technological transfer contracts for > 10Million€, as Head of Barcelona-CSI:

Project: Medusa-2 **Funding:** AFR-IX **Duration:** 16-01-2024 to 15-01-2025 **Funds:** 85k€

Project: SISMO-5 **Funding:** Repsol **Duration:** 01-01-2024 to 31-12-2024 **Funds:** 80k€

Project: Medusa-1 **Funding:** AFR-IX **Duration:** 15-01-2022 to 15-01-2024 **Funds:** 215k€

Project: SISMO-3 **Funding:** Repsol **Duration:** 15-01-2022 to 28-07-2023 **Funds:** 120k€

Project: SISMO-2 **Funding:** Repsol **Duration:** 31-09-2021 to 19-04-2023 **Funds:** 120k€

Project: SISMO-1 **Funding:** Repsol **Duration:** 19-07-2021 to 19-02-2023 **Funds:** 120k€

Project: SOUND2019 **Funding:** Repsol **Duration:** 15-12-2018 to 14-12-2019 **Funds:** 200k€

Project: ISURI **Funding:** Euskontrol **Duration:** 15-12-2018 to 14-12-2019 **Funds:** 60k€

Project: SOUND2018 **Funding:** Repsol **Duration:** 15-12-2017 to 14-12-2018 **Funds:** 200k€

Project: Geomargen-4 **Funding:** Naturgy **Duration:** 1-09-2017 to 31-08-2019 **Funds:** 150k€

Project: CODOSFase2 **Funding:** Repsol **Duration:** 1-09-2015 to 31-08-2016 **Funds:**700k€

Project: Geomargen-3 **Funding:** Repsol **Duration:** 25-07-2014 to 24-06-2016 **Funds:**702k€

Project: Geomargen-2 **Funding:** Repsol **Duration:** 11-04-2013 to 10-04-2015 **Funds:** 1.37 Million€

Project: Geomargen-1 **Funding:** Repsol **Duration:** 08-07-2011 to 20-09-2014 **Funds:** 1.42 Million€

Project: JANUS **Funding :** Repsol **Duration:** 01-09-2009 to 01-09-2010 **Funds:** 100k€

Project: CO-DOS **Funding :** Repsol **Duration:** 1-09-2010 to 31-08-2013 **Funds:** 2.1 Million€

Project: Kaleidoscope **Funding :** Repsol **Duration:** 01-10-2007 to 31-08-2010 **Funds:** 950k€