Prof. Dr. César R. Ranero

Birth date: January 7, 1963
Place of Birth: Getxo, Bizkaia, Spain
Nationality: Spanish

Work Address:

Instituto de Ciencias del Mar

Pg. Marítim de la Barceloneta 37-49,

08003 Barcelona, Spain

Email: cranero@icm.csic.es

Current Position

ICREA Research Professor

Head. Barcelona Center for Subsurface Imaging (Barcelona-CSI)

Marine Sciences Institute, Severo Ochoa Award 2020

Consejo Superior de Investigaciones Científicas (CSIC)

https://www.icrea.cat/Web/ScientificStaff/cesar-rodriguez-ranero-337

http://orcid.org/0000-0002-5204-545X

http://www.researcherid.com/rid/B-9165-2009

http://www.scopus.com/inward/authorDetails.url?authorID=7004552588&partnerID=MN8TOARS

Professional Experience

Since 10/07	Head Barcelona Center for Subsurface Imaging
Since 03/05	ICREA Research Professor
1/00 to 03/05	Senior staff scientist at GEOMAR
6/97 to 12/99	Researcher at GEOMAR funded by the European Union
3/95 to 6/97	Postdoctoral researcher at GEOMAR financed by the German BMBF
3/93 to 3/95.	Postdoctoral scientist at GEOMAR funded by the European Union
1/89 to 2/93.	PhD student at the Earth Science Institute Barcelona CSIC
1/88 to 12/88.	Research assistant at the Earth Science Institute Barcelona CSIC

Academic Qualifications

Ph.D**.** Geology, Institute of Earth Sciences C.S.I.C., Barcelona, Spain. Awarded at Barcelona University (February 1993).

Thesis: *Multichannel Seismic Reflection Study of the Ocean Crust in the eastern Central Atlantic*.

Thesis advisor: Prof. E. Banda.

Degree Geology, Basque Country University (Bilbao), Spain. Awarded July 1987.

Awards

1989-1990	Personal grant Spanish Ministry of Industry
1990-1993	Personal doctoral grant Generalitat de Catalunya
1993-1995	Personal postdoctoral grant Marie Curie (Human Capital & Mobility Program)
2004	CNRS Poste Rouge at Villefranche sur Mer Laboratory, France
2018	Fellow of the American Geophysical Union (AGU)
2019	Award “Cuidat de Barcelona” in Environmental and Earth Sciences
2020	Elected Member of Academia Europaea

Research Projects as (co-)PI

Public Funding

Project Title: ATLANTIS: Estudio Tomográfico Tridimensional de la Litosfera Atlántico-Norteafricana
Funding Agency: Spanish Ministerio de Ciencia e Innovación
Duration: From: 01/06/2020 To: 31/05/2023
Funding:163k€ + 1 PhD + 1 ship cruise
Principal Investigator: A. Ugalde (ICM, CSIC) & C. R. Ranero (ICM, CSIC)

Project Title: Grup de Recerca Consolidat Barcelona Center for Subsurface Imaging
Funding Agency: AGAUR (Catalan Government)
Duration: From: 01/01/2018 To: 31/12/2020
Funding: Excellence Research Quality Label
Principal Investigator: C. R. Ranero

Project Title: FRAME
Funding Agency: Spanish Ministerio de Economía y Cooperación (MINECO)
Duration: From: 01-01-2016 To: 31-12-2020
Funding: 208k€ + 1 PhD + 2 ship cruises
Principal Investigator: C. R. Ranero & V. Sallares (ICM, CSIC)

Project Title: Collaboration with NSF-PIRE "ExTerra Field Institute and Research Endeavor" (E-FIRE)
Funding Agency: Spanish Ministerio de Economía y Cooperación (MINECO)
Duration: From: 01-01-2013 To: 31-12-2018
Funding: 200k€
Principal Investigator: C. Garrido (CSIC-Granada) and C. R. Ranero (CSIC-Barcelona)

Project Title: Study of Al-Idrissi seismic crisis
Funding Agency: Spanish Ministerio de Economía y Cooperación (MINECO)
Duration: From: 01/09/2016 To: 16/12/2016
Funding: Two cruises for OBS deployment and recovery
Principal Investigator: C. R. Ranero

Project Title: Zooming in Between the Plates (ZIP)
Funding Agency: FP7 (EU)
Duration: From: 01-01-2013 To: 31-10-2017
Funding: 740k€ + 1 cruise
Principal Investigator: C. R. Ranero (for CSIC) coordinador ZIP P. Agard (UPMC, Paris)

Project Title: Grup de Recerca Consolidat Barcelona Center for Subsurface Imaging
Funding Agency: AGAUR (Catalan Government)
Duration: From: 01/01/2015 To: 31/12/2017
Funding: 43k€ Excellence Research Quality Label
Principal Investigator: C. R. Ranero

Project Title: Hazards in the Aegean (Hades)
Funding Agency: Spanish Ministerio de Ciencia e Innovación (MICINN)
Funding: 378k€ + 1PhD + 1 cruise
Duration: From: 01-01-2012 To: 31-12-2014
Principal Investigator: C. R. Ranero

Project Title: Grup de Recerca Emergent Barcelona Center for Subsurface Imaging

Funding Agency: AGAUR (Catalan Government)
Duration: From: 01/01/2009 To: 31/12/2013
Funding: Excellence Research Quality Label
Principal Investigator: C. R. Ranero

Project Title: TopoMed Collaborative Research Programme of ESF Eurocores TopoEurope
Funding Agency: Spanish Ministerio de Ciencia e Innovación (MICINN)
Duration: From: 01-01-2009 To: 31-12-2011
Funding: 50k€ + 1 cruise
Principal Investigator: M. Fernández Spanish WP. C. R. Ranero PI Seismic cruise.

Project Title: Medoc 2 Buques CTM2009-07772-E/MAR
Funding Agency: MICINN - Plan Nacional
Duration: From: 01-01-2010 To: 31-Nov2010
Funding: 20k€
Principal Investigator: C. R. Ranero

Project Title: Las cuencas del Mediterráneo Occidental: un laboratorio natural de los procesos de formación de márgenes continentales de extensión (MEDOC)
Funding Agency: MICINN - Plan Nacional
Duration: From: Nov 2007 To: Nov 2010
Funding: 200k€ + 1 PhD + 1 cruise
Principal Investigator: C. R. Ranero

---

*Project Title: TIPTEQ: How the **T**emperature of the **I**ncoming **P**late influences interplate Mega**T**hrust **E**arth**Q**uakes*
Funding Agency: German Ministery of Education and Science
Participants: Geomar, GFZ Potsdam, Free Uni. Berlin
Duration, From: 2004 To: 2006
Funding: 3.4 Millon euro
Coordinators :C. R. Ranero (GEOMAR, Kiel, Germany), O. Oncken (Potsdam)

Project Title: Research Vessel SONNE campaña 181.
Funding Agency: German Ministery of Education and Science
Participants: Geomar, Uni. Kiel
Duration, From: 2004 To: 2005
Funding: 182.4k euro
Principal Investigator: C. R. Ranero

Project Title: SFB574 subproject A1. Tectonics and fluid flow revealed with imaging techniques.
Funding Agency: German National Science Society DFG
Participants: Geomar, Uni. Kiel
Duration, From: 2004 To: 2008
Funding: 402k Euro
Principal Investigator: C. R. Ranero, and W. Weinrebe (GEOMAR)

Project Title: R/V METEOR cruise 69/2 in the Alborán Basin.
Funding Agency: German National Science Society DFG.
Participants: Geomar, Uni. Kiel
Duration, From: 2005 To: 2006
Funding: 33k euro

Principal Investigator: C. R. Ranero, (GEOMAR)

Project Title: Formation of Western Mediterranean Basins: project within the Collaborative Research Programme WESTMED of Eurocores "Continental Margins" of the European Science Foundation.
Funding Agency: German National Science Society DFG.
Participants: Geomar, Uni. Kiel
Duration, From: 2005 To: 2006 Funding: 93k euro
Principal Investigator: C. R. Ranero, (GEOMAR)

Project Title: SWATHSEIS: project within the Collaborative Research Programme WESTMED of Eurocores "Continental Margins" of the European Science Foundation.
Funding Agency: German National Science Society DFG.
Participants: Geomar, Uni. Bergen, Uni. Birmingham.
Duration, From: 2004 To: 2006 Funding: 184k euro
Principal Investigator: C. R. Ranero, (GEOMAR)

Project Title: Constraining the seismotectonics, crustal, and uppermost mantle structure beneath an actively propagating segment of the Northern Mid-Atlantic Ridge (and 1 cruise with R/V Meteor).
Funding Agency: German National Science Society DFG.
Participants: Geomar
Duration, From: 2004 To: 2006 Funding: 31k euro
Principal Investigator: J. Morgan and C. R. Ranero, (GEOMAR)

Project Title: Chilebath: Multibeam bathymetry study of the Chile margin
Funding Agency: German National Science Society DFG
Participants: Geomar
Duration, From: 2002 To: 2004 Funding:
Principal Investigator: W. Weinrebe (GEOMAR, Kiel, Germany), C. R. Ranero

Technological Transfer Funding (PI)

Project Title: Medusa-2
Funding : AFR-IX Telekom
Duration: From: 16-01-2024 *To: 15-01-2025*
Funding: 85k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: SISMO-5 LOPIN
Funding : AFR-IX Telekom
Duration: From: 01-01-2024 *To: 31-12-2024*
Funding: 80k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Medusa-1_extension
Funding : AFR-IX Telekom
Duration: From: 16-01-2023 *To: 15-01-2024*
Funding: 85k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Medusa-1
Funding : AFR-IX Telekom
Duration: From: 25-02-2022 *To: 15-01-2023*
Funding: 130k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Sismo-3
Funding : Repsol
Duration: From: 15-11-2021 *To: 28-02-2023*
Funding: 120k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Sismo-2
Funding : Repsol
Duration: From: 31-09-2021 *To: 19-04-2023*
Funding: 120k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Sismo-1
Funding : Repsol
Duration: From: 19-07-2021 *To: 19-02-2023*
Funding: 120k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen 6 Eastern Mediterranean
Funding : Repsol
Duration: From: 29-11-2019 *To: 29-10-2021*
Funding: 225k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen 5 SE Asia
Funding : Repsol
Duration: From: 31-10-2019 *To: 01-09-2021*
Funding: 225k€ (+ VAT)

Principal Investigator: C. R. Ranero

Project Title: Seismic Modelling Using Natural Source Data (ISURI)
Funding : Euskontrol
Duration: From: 15-12-2018 To: 14-12-2019
Funding: 60k€ (+ VAT)
Principal Investigator: C. R. Ranero & A. Ugalde

Project Title: Seismic Modelling Using Natural Source Data (SOUND 2019)
Funding : Repsol
Duration: From: 15-12-2018 To: 14-12-2019
Funding: 200k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Seismic Modelling Using Natural Source Data (SOUND 2018)
Funding : Repsol
Duration: From: 15-12-2017 To: 14-12-2018
Funding: 200k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen-4
Funding : Naturgy
Duration: From: 1-09-2017 To: 31-08-2019
Funding: 150k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: CODOS-Fase 2
Funding : Repsol
Duration: From: 1-09.2015 To: 31-08-2016
Funding: 700k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen-3
Funding : Repsol
Duration: From: 25-07-2014 To: 24-06-2016
Funding: 702k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Codos-Extension 1-5
Funding : Repsol
Duration: From: 01-09-2013 To: 31-08-2016
Funding: 355k€ (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen-2
Funding : Repsol
Duration: From: 11-04-2013 To: 10-04-2015
Funding: 1.37 Mill. € (+ VAT)
Principal Investigator: C. R. Ranero

Project Title: Geomargen-1
Funding : Repsol
Duration: From: 08-07-2011 To: 20-09-2014

Funding: 1,42 Mill. € (+ VAT)

Principal Investigator: C. R. Ranero

Project Title: CO-DOS
Funding : Repsol
Duration: From: 1-09-2010 *To: 31-08-2013*
Funding: 2.1 Mill. € (+ VAT)

Principal Investigator: C. R. Ranero

Project Title: Janus-2
Funding : Repsol
Duration: From: 01-09-2010 *To: 31-08-2011*
Funding: 50k € (+ VAT)

Principal Investigator: C. R. Ranero

Project Title: Janus
Funding : Repsol
Duration: From: 01-09-2009 *To: 31-08-2010*
Funding: 50k € (+ VAT)

Principal Investigator: C. R. Ranero

Project Title: Kaleidoscope Subsurface Imaging
Funding : Repsol
Duration: From: 01-10-2007 *To: 31-08-2010*
Funding: 950k€ (+ VAT)

Principal Investigator: C. R. Ranero

Research cruises as PI and/or (co-)Chief Scientist (last 15 years)

Research Vessel, Methods and PIs	Date
2 weeks streamer seismic work in the Ionian with Italian R/V Laura Bassi. PI. C. R. Ranero,. Project POSEIDON funded by Eurofleets+.	June 2023
3 weeks seismics with Spanish R/V Sarmiento de Gamboa West Iberia Margin. PI. C. R. Ranero and A. Ugalde. Project ATLANTIS.	June-July 2022
1 week seismics with Spanish R/V Sarmiento de Gamboa Afric-Iberia Plate boundary. PI. Marta Neres. Chief Scientists M. Neres and C. R. Ranero. Project LISA.	June 2022
4 weeks Wide-Angle seismics with Spanish R/V Sarmiento de Gamboa in Gulf of Cadiz and West Portugal. PI. C. R. Ranero and V. Sallarès. Project FRAME.	September 2018
3 weeks Multichannel seismics with Spanish R/V Sarmiento de Gamboa in Gulf of Cadiz and West Portugal. PI. C. R. Ranero and V. Sallares. Project FRAME.	July 2018
Two cruises for deployment and recovery of OBS along Al-Idrissi Fault System in Alboran Sea with R/V Sarmiento de Gamboa and R/V Garcia del Cid.	11-15/09/2016 & 12-16/12/2016
Two cruises ~1 week each for deployment and recovery of OBS off Canary Islands with R/V Garcia del Cid.	11-2014/01-2015
3 weeks Wide-Angle seismics with Spanish R/V Sarmiento de Gamboa in Ionian and Tyrrhenian PI. C. R. Ranero and V. Sallarès. Project Hades.	July-August 2015
2weeks 2D Multichannel Reflection off Calabria with R/V S. de Gamboa. PI. C. R. Ranero and V. Sallares. Project HADES	August 2015
3D Multichannel Reflection off Galicia with US R/V Marcus G. Langseth Project Galicia 3D. Co-chief	01/06-30/06-2013
Seafloor mapping and sediment coring with Spanish R/V Angeles Alvariño offshore Tunissia. PI. C. R. Ranero. Project Geomargen-2.	2 months 2012
Seafloor mapping and sediment coring with Spanish R/V Garcia del Cid offshore Tunissia. PI. C. R. Ranero. Project Geomargen-2	1 month 2012
3 weeks working days in the Moroccan Atlantic margin multichannel seismic acquisition with Spanish R/V Sarmiento de Gamboa.. PI. C. R. Ranero. Project Geomargen-1.	Nov-Oct 2011
3 weeks multichannel seismic acquisition Spanish R/V Sarmiento de Gamboa in Alborán and Moroccan Atlantic Margin. Chief Scientist C. R. Ranero. Project TopoMed.	Sept-Oct 2011
2 weeks Multichannel seismic work and wide-angle seismic acquisition with Spanish R/V Sarmiento de Gamboa. PI. C. R. Ranero, V. Sallarès. Project Medoc.	May 2010

2 weeks Wide-angle seismic cruise with Spanish R/V Sarmiento de Gamboa and Italian R/V Urania. PI. C. R. Ranero, V. Sallarès. Project Medoc.	April-May 2010

Papers, Proceedings and book-series chapters (included in SCI)

1. Banda, E.; **Ranero**, C. R.; Dañobeitia, J. J.; Rivero, A. Seismic boundaries of the eastern Central Atlantic Mesozoic crust from multichannel seismic data. ***Geological Society of America Bulletin*** vol. 104, 1340-1349 (1992).
2. **Ranero**, C. R. and Banda, E., Estudio geofísico de la corteza oceánica de la Cuenca Canaria en el Atlántico Central Oriental. Special INTERIDGE volume Oceanic Ridges. ***Acta Geológica Hispánica***. vol. 27, N34, 51-79, (1994).
3. **Ranero**, C. R. Torne, M. and Banda, E. Gravity and Multichannel Seismic Reflection Constraints on the Lithospheric Structure of the Canary Swell. ***Marine Geophysical Research***, vol.17, 519-534 (1995).
4. Hinz, K.; von Huene, R.; **Ranero**, C. R. and the PACOMAR working group. Tectonic structure of the convergent Pacific Margin offshore Costa Rica from multichannel seismic reflection data. ***Tectonics*** 15, 54-66 (1996).
5. Reston, T. J.; Ruoff, O.; McBride, J. H. **Ranero**, C. R. and White, R. S. Detachment and steep normal faulting in Atlantic oceanic crust west of Africa. vol. ***Geology*** 24, n 9, 811-814, (1996).
6. Pecher, I.; von Huene, R.; **Ranero**, C. R.; Kukowski, N.; Minshull, T. and Singh, S. C. Formation mechanisms of free gas beneath the hydrate stability zone at the convergent margins - geophysical evidence from bottom simulating reflector at the Peruvian and Pacific Costa Rican margins. ***Proceedings*** *of the 2sd International conference on natural gas hydrates*, 593-600, (1996).
7. **Ranero**, C. R.; Banda, E. Buhl, P. The crustal structure of the Canary Basin: Accretion processes at slow spreading centers. ***Journal of Geophysical Research*** 102, 10185-10201, (1997).
8. **Ranero**, C. R.; Reston, T. J.; Belykh, I.; Gnibidenko, H. Reflective oceanic crust formed at a fast-spreading center in the Pacific. ***Geology***, vol. 25, 499-502, (1997).
9. von Huene, R.; Corvalán, J.; Flueh, E. R.; Hinz, K.; Korstgard, J.; **Ranero**, C. R.; Weinrebe, W. and CONDOR Scientists. Tectonic control of the subducting Juan Fernández Ridge on the Andean margin near Valparaiso, Chile. ***Tectonics***, vol. 16, 474-488, (1997).
10. Flueh, E. R.; Vidal; N.; **Ranero**, C. R.; Hojka, A.; von Huene, R., Bialas, J.; Hinz, K.; Cordoba, D.; Dañobeitia, J.J. and Zelt, C. Seismic investigation of the continental margin off and onshore Valparaiso, Chile ***Tectonophysics***, vol. 288, 251-263 (1998).
11. Pecher, I.; **Ranero**, C. R.; von Huene, R.; Minshull, T. A. and Singh, S. C. The nature and distribution of bottom simulating reflectors at the Costa Rican convergent margin. ***Geophysical Journal International***, 133, 219-229 (1998).
12. Reston, T. J.; **Ranero**, C. R. and Belyhk, I. The structure of Ocean Crust at fast spreading rates: constraints from the Cretaceous of the NW Pacific. ***Journal of Geophysical Research***, vol. 104, 629-644 (1999).
13. Werner, R.; Hoernle, K.; van der Bogaard, P; **Ranero**, C. R.; von Huene, R.; Korich, D. A drowned 14 Ma old Galápagos Archipelago off the coast of Costa Rica: implications for evolutionary and plate tectonic models. ***Geology***, vol.27, 49-452 (1999).
14. **Ranero**, C. R., Reston, T. J. Detachment faulting at Inside Corners. ***Geology***, vol 27, 983-986 (1999).
15. **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***, vol.19, 335-357 (2000).

16. von Huene, R. **Ranero**, C. R., Weinrebe, W. and Hinz, K. Quaternary convergent margin tectonics of Costa Rica, segmentation of the Cocos Plate, and Central American volcanism. ***Tectonics*** *19, 314-334* (2000).
17. **Ranero**, C. R., von Huene, R. Subduction erosion along the Middle America convergent margin. ***Nature*** 404, 748-752 (2000).
18. Walther, C. H.; Flueh, E.; **Ranero**, C. R., von Huene, R.; Strauch, W. An unusual crustal structure across the Pacific Margin of Nicaragua. ***Geophysical Journal International*** 141, 759-777 (2000).
19. Pecher, I., Kukowski, N., **Ranero**., C. R., von Huene, R. Gas Hydrates Along the Peru and Middle America Trench systems. In: Natural Gas Hydrates: Occurrence, Distribution, and Detection. ***Geophysical Monograph*** 124, American Geophysical Union. 257-271 (2001).
20. Yáñez, G. A.; **Ranero**, C. R.; von Huene, R. and Díaz, J. A tectonic interpretation of magnetic anomalies across a segment of the convergent margin of the Southern Central Andes (32°-34°S). ***Journal of Geophysical. Research*** 106, 6325-6345 (2001).
21. Barckhausen, U.; **Ranero**, C. R.; von Huene, R.; Cande, S.; Roeser, H. Revised Tectonic boundaries in the Cocos Plate off Costa Rica: Implications for the Segmentation of the Convergent Margin and for Plate Tectonic Models. ***Journal of Geophysical Research*** 106, 19207-19220 (2001).
22. Yañez, G.; Cembrano, J.; Pardo, M.; **Ranero**, C. R.; Selles, D. The Challenger-Juan Fernández-Maipo major tectonic transition of the Nazca-Andean subduction system at 33°-34°S: geodynamic evidences and implications. ***Journal of South American Earth Sciences*** 15, 23-38 (2002).
23. Garcia-Viejo, G.; Laigle, M.; **Ranero**, C. R. Pre-Permian sedimentary basins in the North Sea: images from reprocessed and pre-stack depth migrated MONA LISA data. ***Marine and Petroleum Geology*** 19, 519-526 (2002).
24. von Huene, R.; **Ranero**, C. R. Subduction erosion and basal friction along the sediment starved convergent margin off Antofagasta Chile. ***Journal of Geophysical Research*** 108, 2079, doi10.1029/2001JB001569 (2003).
25. Pérez-Gussinyé, M., **Ranero**, C. R., Reston, T. J., Sawyer, D. Structure and mechanisms of extension at the Galicia Interior Basin off West Iberia. ***Journal of Geophysical Research*** 108, doi10.1029/2001JB000901 (2003).
26. Grevemeyer, I.; Diaz-Naveas, J., **Ranero**, C. R.; Villinger, H.; ODP Leg 202 Scientific Party. Heat flow over the descending Nazca plate in Central Chile, 32˚S to 41˚S: evidence from the ODP leg 202 and the occurrence of natural gas hydrates. ***Earth Plat. Sci. Let.*** 213, 285-298 (2003).
27. **Ranero**, C. R., Phipps Morgan, J., McIntosh, K., Reichert, C., Bending-related faulting and mantle serpentinization at the Middle America Trench, ***Nature*** 425, 367-373 (2003).
28. Vannucchi, P., **Ranero**, C. R., Galeotti, S., Straub, S. M., Scholl, D.W., McDougall-Ried. Fast rates of subduction erosion along the Costa Rica Pacific margin: implications for non-steady rates of crustal recycling at subduction zones. ***Journal of Geophysical Research*** 108, 2511, 10.1029/2002JB002207 (2003).
29. von Huene, R., **Ranero**, C. R. and Watts, P. Tsunamigenic slope failure along the Middle America Trench in two tectonic settings. ***Marine Geology*** 3415, 1-15 (2003).

30. Phipps Morgan, J., Reston, T. J., **Ranero**, C. R., Mass extinctions, continental flood basalts, and 'impact signals': Are mantle plume-induced 'Verneshots' the causal link. ***Earth and Planetary Science Lettters*** 217, 263-284 (2004).
31. Hensen, C., Wallmann, K., Schmidt, M., **Ranero**, C. R., Suess, E., Fluid expulsion related to mud extrusion off Costa Rica –a window to the subducting slab. ***Geology*** 32, 201-204 (2004).
32. **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, 549–552; (2004)
33. Vannucchi, P., Galeotti, S., Clift, P., **Ranero**, C. R.,. von Huene, R. Long term subduction erosion along the Middle America Trench offshore Guatemala. ***Geology*** 32, 617–620, (2004)
34. Rovere, M.; **Ranero**, C. R., Sartori, R., Torelli, L., Zitellini, N., Seismic images and magnetic signature of the Late Jurassic to Early Cretaceous Africa–Eurasia plate boundary off SW Iberia. ***Geophysical Journal International***, 158, 554–568 (2004)
35. Reston, T. J., **Ranero**, C. R., Ruoff, O., Dañobeitia, J. J., Pérez-Gussinyé, M., Geometry of extensional faults developed at slow-spreading centres from seismic reflection data in the Central Atlantic (Canary Basin). ***Geophysical Journal International***, 158, 1-15 (2004).
36. von Huene, R.; **Ranero**, C. R.; Vannucchi, P., A model for subduction erosion, ***Geology*** 32, 913–916; doi: 10.1130/G20563.1 (2004).
37. Sallares, V., **Ranero**, C. R., Structure of the convergent erosional margin off Antofagasta, north Chile. ***Journal of Geophysical Research***. 110, doi:10.1029/2004JB003418, (2005).
38. Grevemeyer, I, Kaul, K., Diaz-Naveas, J.L., Villinger, H.W., **Ranero**, C.R., Reichert, C. Heat flow and bending-related faulting at subduction trenches: Case studies offshore Nicaragua and Central Chile. ***Earth and Planetary Science Lettters***. 236, 238-248 (2005).
39. Mörz, T., Fekete, N., Kopf, A., Brückmann, W., Kreiter, S., Hünerbach, V., Masson, D.G., Hepp, D.A., Schmidt, M., Kutterolf, S., Sahling, H., Abegg, F., Spieß, V., Suess, E., and **Ranero**, C.R., Styles and productivity of mud diapirism along the Middle American margin, part II: Mound Culebra and Mounds 11, and 12. In Martinelli, G., and Panahi, B. (Eds.), Mud volcanoes, geodynamics and seismicity. **NATO Sci. Ser.** IV: Dordrecht (Springer), 49-76.(2005).
40. **Ranero**, C.R, Villaseñor, A,. Phipps Morgan, J., Weinrebe, W. Relationship between bend-faulting at trenches and intraslab seismicity. ***Geosystems, Geophysics, Geochemistry*** Q12002 doi:10.1029/2005GC000997 (2005).
41. Perez-Gussinye, M., Phipps Morgan, J., Reston, T, & **Ranero**, C. R. From rifting to spreading at non-volcanic margins: insights from numerical modeling, ***Earth and Planetary Science Letters***. 244, 458-473 (2006).
42. **Ranero**, C. R.; von Huene, R.; Weinrebe, W. and Reichert, C. Tectonic Processes along the Chile Convergent Margin. In: Oncken, O., Chong, G., Franz, G., Giese, P., Götze, H.-J., Ramos, V., Strecker, M., Wigger, P. (eds): *The Andes - Active Subduction Orogeny*. ***Frontiers in Earth Sciences,*** vol. 1, XXII, pp. 91-121, Springer, Berlin, Heidelberg, (2006).
43. Sage, F., Collot, J.Y., **Ranero**, C.R., Interplate patchiness and subduction-erosion mechanisms: Evidence from depth-migrated seismic images at the central Ecuador convergent margin. ***Geology*** 34, no. 12; 997–1000; doi: 10.1130/G22790A.1 (2006).
44. Loreto, M.F., Tinivella, U., **Ranero**, C.R. Evidence for fluid circulation, overpressure and

tectonic style along the southern Chile margin. ***Tectonophysics*** 429, 183-200, doi :10.1016/ J.TECTO.2006.09.016 (2007).

45. Grevemeyer, I, **Ranero**, C.R., Flueh, E., Kläschen, D. Bialas J., Passive and active seismological study of bending-related faulting and mantle serpentinization at the Middle America trench ***Earth and Planetary Science Letters*** 258, 528–542, doi:10.1016/ j.epsl.2007.04.013 (2007).

46. Booth-Rea, G., **Ranero**, C.R., Martínez-Martínez, J.M., Grevemeyer, I, Seismic images of the Middle to Late Miocene Alborán magmatic arc. ***Geochemistry, Geophysics, Geosystems*** 8, Q10005, doi:10.1029/2007GC001639 (2007).

47. **Ranero**, C.R., Grevemeyer, I.; Sahling, H., Barckhausen, U., Hensen, C., Wallmann, K., Weinrebe, W., Vannucchi, P., von Huene, R., McIntosh, K., The hydrogeological system of erosional convergent margins and its influence on tectonics and interplate seismogenesis ***Geochemistry, Geophysics, Geosystems*** 9, Q03S04, doi:10.1029/2007GC001679 (2008).

48. Calahorrano, A., Sallarès, V., Sage, F., Collot, J-Y., **Ranero**, C.R., Nonlinear variations of the physical properties along the Southern Ecuador subduction channel: Results from depth-migrated seismic data. ***Earth and Planetary Science Letters*** 267, 453–467, doi:10.1016/ j.epsl.2007.11.061 (2008).

49. Klaucke, I., Masson, D.G., Petersen, C.J., Weinrebe, W., C.R. **Ranero**. Multi-frequency geoacoustic imaging of fluid escape structures offshore Costa Rica: implications for seep processes. ***Geochemistry, Geophysics, Geosystems*** 9, Q04010, doi:10.1029/2007GC001708 (2008).

50. Sahling, H., Masson, D.G., C.R. **Ranero**, Hühnerbach, V., Weinrebe, W., Klaucke, I., Bürk, D., Brückmann, W., Suess, E. Fluid seepage at the continental margin offshore Costa Rica and southern Nicaragua. ***Geochemistry, Geophysics, Geosystems*** 9, Q05S05, doi:10.1029/2008GC001978 (2008).

51. Barckhausen, U., C.R. **Ranero**, S.C. Cande, M. Engels, W. Weinrebe, Birth of an intra-oceanic spreading center, ***Geology***, v. 36; no. 10; p. 767–770; doi: 10.1130/G25056A.1 (2008).

52. Phipps Morgan, J., **Ranero**, C.R., & P. Vannucchi, Intra-Arc extension in Central America: Links between plate motions, tectonics, volcanism, and geochemistry, ***Earth and Planetary Science Letters*** 267, 453–467, doi: 10.1016/j.epsl.2008.05.004 (2008).

53. von Huene, R.; C.R. **Ranero**, and D. W. Scholl, Convergent margin structure in high quality geophysical images and current kinematic and dynamic models, in: *Subduction Zones Geodynamics*, S. Lallemand and F. Funiciello Eds., ***Frontiers in Earth Sciences***, vol. 2, XXII, pp. 137-157, Springer, Berlin, Heidelberg, (2009).

54. Petersen, C.J I. Klaucke, W. Weinrebe, C. R. **Ranero**, Fluid seepage and mound formation offshore Costa Rica revealed by deep-towed sidescan sonar and sub-bottom profiler data, ***Marine Geology***, , ISSN 0025-3227, DOI: 10.1016/j.margeo.2009.08.004 (2009).

55. von Huene, R. and C.R. **Ranero**, Neogene collision and deformation of convergent margins along the Americas backbone, in: Kay, S.M., Ramos, V.A., and Dickinson, W.R., eds., Backbone of the Americas: Shallow Subduction, Plateau Uplift, and Ridge and Terrane Collision: ***Geological Society of America Memoir*** 204, p. 67–83, doi:10.1130/2009.1204(03 Boulder, Colorado (2009).

56. Dannowski, A., I. Grevemeyer, C. R. **Ranero**, G. Ceuleneer, M. Maia, J. P. Morgan, and P. Gente. Seismic structure of an oceanic core complex at the Mid-Atlantic Ridge, 22º19' N. ***J.***

Geophys. Res., doi:10.1029/2009JB006943, (2010)

57. Harris, R. N., I. Grevemeyer, C. R. **Ranero**, H. Villinger, U. Barckhausen, T. Henke, C. Mueller, and S. Neben, Thermal regime of the Costa Rican convergent margin: 1. Along-strike variations in heat flow from probe measurements and estimated from bottom-simulating reflectors. ***Geochem. Geophys. Geosyst.,*** 11, Q12S28, doi:10.1029/2010GC003272, 2010
58. Harris, R. N. , G. Spinelli, C. R. **Ranero**, I. Grevemeyer, H. Villinger, and U. Barckhausen, Thermal regime of the Costa Rican convergent margin: 2. Thermal models of the shallow Middle America subduction zone offshore Costa Rica. ***Geochem. Geophys. Geosyst.,*** 11, Q12S29, doi:10.1029/2010GC003273, 2010
59. **Ranero** C. R. and Perez-Gussinye, M. Sequential faulting explains the asymmetry and extension discrepancy of conjugate margins. ***Nature***, 294-299, doi:10.1038/nature09520 (2010).
60. Geersen, J., J. H. Behrmann, D. Völker, S. Krastel, C. R. **Ranero**, J. Diaz-Naveas, and W. Weinrebe , Active tectonics of the South Chilean marine fore arc (35°S–40°S), ***Tectonics***, 30, TC3006, doi:10.1029/2010TC002777. (2011).
61. Harders, R., C. R. **Ranero**, W. Weinrebe, and J. H. Behrmann, Submarine slope failures along the convergent continental margin of the Middle America Trench, ***Geochem. Geophys. Geosyst***., 12, Q05S32, doi:10.1029/2010GC003401. (2011).
62. Reston, T. J., and C. R. **Ranero**, The 3-D geometry of detachment faulting at mid-ocean ridges, ***Geochem. Geophys Geosyst***., 12, Q0AG05, doi:10.1029/2011GC003666. (2011).
63. Dannowski, A., I. Grevemeyer, J. Phipps Morgan, C. R. **Ranero**, M. Maia, and G. Klein, Crustal structure of the propagating TAMMAR ridge segment on the Mid-Atlantic Ridge, 21.5°N, ***Geochem. Geophys. Geosyst***., 12, Q07012, doi:10.1029/2011GC003534. (2011).
64. Harders, R., C. R. **Ranero**, W. Weinrebe, An overview of the role of long-term tectonics and incoming plate structure on segmentation of submarine mass wasting phenomena along the Middle America Trench. chapter 35 in: Y. Yamada et al. (eds.), Submarine Mass Movements and Their Consequences, ***Advances in Natural and Technological Hazards Research 31***, doi: 10.1007/978-94-007-2162-3_35, Springer Science+Business Media B.V. (2012).
65. Lefeldt, M.; **Ranero**, C. R.; Grevemeyer, I., Seismic evidence of tectonic control on the depth of water influx into incoming oceanic plates at subduction trenches. ***Geochem. Geophys. Geosyst***., Vol. 13, Q05013. doi:10.1029/2012GC004043. (2012)
66. Sallares, V.; Martinez-Loriente, S, Prada, M.; Gracia, E.; **Ranero**, C.R.; Gutscher, MA.; Bartolome, R.; Gailler, A.; Danobeitia, J.J.; Zitellini, N. Seismic evidence of exhumed mantle rock basement at the Gorringe Bank and the adjacent Horseshoe and Tagus abyssal plains (SW Iberia) ***Earth and Planetary Science Letters*** 365 120–131, (2013).
67. Kluesner, J. W.; Silver, E.; Gibson, J.; Bangs, N.L.; McIntosh, K.D.; Orange, D.; **Ranero**, C.R.; von Huene, R. High density of structurally controlled, shallow to deep water fluid seep indicators imaged offshore Costa Rica. ***Geochem. Geophys. Geosyst***., 14, 519-539, doi: 10.1002/ggge.20058. (2013)
68. Moeller, S., I. Grevemeyer, C. R. **Ranero**, C. Berndt, D. Klaeschen, V. Sallares, N. Zitellini, R. de Franco, Early-stage rifting of the northern Tyrrhenian Sea Basin: Results from a combined wide-angle and multichannel seismic study, ***Geochem. Geophys. Geosyst***., 14, 3032–3052, doi:10.1002/ggge.20180. (2013)

69. Sallares, V., A. Melendez, M. Prada, C. R. **Ranero**, K. McIntosh, and I. Grevemeyer, Overriding plate structure of the Nicaragua convergent margin: Relationship to the seismogenic zone of the 1992 tsunami earthquake, ***Geochem. Geophys. Geosyst.***, 14, 3436–3461, doi:10.1002/ggge.20214 (2013)
70. Melendez, A.; J. Korenaga , V. Sallares; C.R. **Ranero**. TOMO3D - A New 3-D Joint Refraction and Reflection Travel-time Tomography Code for Active-source Seismic Data. ***Proceedings 5th EAGE*** Conference & Exhibition incorporating SPE EUROPEC 2013. London, UK, 10-13 June 2013.
71. Dagnino, D; V. Sallares, C. R. **Ranero***,* Scale- and parameter-adaptive power model-based gradient preconditioner for multi-shooting elastic full-waveform inversion. ***Proceedings SEG*** International Exposition and 83rd Annual Meeting, Houston, USA. 22-27 September 2013.
72. Melendez, A.; Sallares, V.; **Ranero** C. R. ; Kormann J. Origin of water layer multiple phases with anomalously high amplitude in near-seafloor wide-angle seismic recordings. doi: 10.1093/gji/ggt391 ***Geophys. J. Int.*** (2014).
73. Lo Iacono, C.; Gracia, E.; **Ranero** C. R.; Emelianov M.; Huvenne V.; Bartolome R.; Booth-Rea, G.; Prades, J. & the MELCOR Cruise Party, The West Melilla cold water coral mounds, Eastern Alboran Sea: Morphological characterization and environmental context. **Deep-Sea Res. II**, http://dx.doi.org/10.1016/j.dsr2.2013.07.006. Vol. 99, pp 316–326 (2014)
74. Harders, R., C. R. **Ranero**, W. Weinrebe; Characterization of Submarine Landslide Complexes Offshore Costa Rica: An Evolutionary Model Related to Seamount Subduction. S. Krastel et al. (eds.), *Submarine Mass Movements and Their Consequences,* ***Advances in Natural and Technological Hazards Research 37***, DOI 10.1007/978-3-319-00972-8_34, (2014)
75. Prada, M., V. Sallares, C. R. **Ranero**, M. G. Vendrell, I. Grevemeyer, N. Zitellini, and R. de Franco, Seismic structure of the Central Tyrrhenian basin: Geophysical constraints on the nature of the main crustal domains, ***J. Geophys. Res.*** Solid Earth, 119, doi:10.1002/2013JB010527. (2014)
76. Moeller, S. I. Grevemeyer, C. R. **Ranero**, C. Berndt , D. Klaeschen V. Sallares, N. Zitellini, and R. de Franco. Crustal thinning in the northern Tyrrhenian Rift: Insights from multichannel and wide-angle seismic data across the basin. doi:10.1002/ 2013JB010431 ***J. Geophys. Res.*** Solid Earth. (2014)
77. Dagnino, D., Sallarès, V., and C. R. **Ranero**, Scale- and parameter-adaptive model-based gradient pre-conditioner for elastic full-waveform inversión. ***Geophys. J. Int.*** 198 (2): 1130-1142 doi:10.1093/gji/ggu175 (2014)
78. Arroyo, I. G., I. Grevemeyer, C. R. **Ranero**, and R. von Huene, Interplate seismicity at the CRISP drilling site: The 2002 Mw 6.4 Osa Earthquake at the southeastern end of the Middle America Trench, ***Geochem. Geophys. Geosyst.***, 15, 3035–3050, doi:10.1002/2014GC005359, (2014)
79. Tejero, CEJ, Dagnino, D., Sallarès, V., C **Ranero**, Comparison of Objective Functionals in Seismic Full Waveform Inversion. ***Proceedings 6th EAGE*** Conference & Exhibition, doi: 10.3997/2214-4609.20140851. (2014)
80. Giaconia, F., G. Booth-Rea, C.R. **Ranero**, E. Gràcia, R. Bartolome, A. Calahorrano, C. Lo Iacono, M.G. Vendrell, A.L. Cameselle, S. Costa, L. Gómez de la Peña, S. Martínez-Loriente, H. Perea, M. Viñas Compressional tectonic inversion of the Algero-Balearic basin:

latemost Miocene to present oblique convergence at the Palomares margin (western Mediterranean). ***Tectonics,*** 34, doi: 10.1002/2015TC003861. (2015)

81. Melendez, A., Korenaga, J., Sallares, V., Miniussi, A. & **Ranero**, C.R. TOMO3D: 3-D joint refraction and reflection travel-time tomography parallel code for active-source seismic data - Synthetic test, ***Geophys. J. International***, 203: 158-174, doi:10.1093/gji/ggv292, (2015)
82. Prada, M., V. Sallares, C. R. **Ranero**, M. G. Vendrell, I. Grevemeyer, N. Zitellini, and R. de Franco, The complex 3D transition from continental crust to back-arc magmatism and exhumed mantle in the Central Tyrrhenian rifted basin. 203(1):63-78 DOI: 10.1093/gji/ggv271 ***Geophys. J. International*** (2015)
83. Jimenez-Tejero, C. E., D. Dagnino, V. Sallares and C. R. **Ranero**. Comparative study of objective functions to overcome noise and bandwidth limitations in Full Waveform Inversion ***Geophys. J. International*** 203 (1): 632-645 doi: 10.1093/gji/ggv288 (2015)
84. Geersen, J., C R. **Ranero**, U. Barckhausen & C. Reichert. Subducting seamounts control interplate coupling and seismic rupture in the 2014 Iquique earthquake area. ***Nature Communications***. 1-6, doi: 10.1038/ncomms9267, (2015).
85. Bangs, N. L., K. D. McIntosh, E. A. Silver, J. W. Kluesner, and C. R. **Ranero**, Fluid accumulation along the Costa Rica subduction thrust and development of the seismogenic zone, ***J. Geophys. Res.*** Solid Earth, 120, 67–86, doi:10.1002/2014JB011265. 2015.
86. Garcia, X., Seillé, H., Elsenbeck, J., Evans, R.L., Jegen, M., Ledo, J., Lovatini, A., Marti, A., Marcuello, A., Queralt, P., **Ranero**, C.R. and Ungarelli, C., Structure of the mantle beneath the Alboran Basin from Magnetotelluric Soundings. ***Geochemistry Geophysics Geosystems*** 16([12]) 4261–4274. DOI: 10.1002/2015GC006100. 2015
87. Prada, M.; C.R. **Ranero**, V. Sallarès, N. Zitellini, I. Grevemeyer, Mantle exhumation and sequence of magmatic events in the Magnaghi–Vavilov Basin (Central Tyrrhenian, Italy): New constraints from geological and geophysical observations, ***Tectonophysics***, Vol. 689, 133-142, ISSN 0040-1951, https://doi.org/10.1016/j.tecto.2016.01.041. 2016
88. Bayrakci, G., Minshull, T.A., Sawyer, D.S., Reston, T.J., Klaeschen, D., Papenberg, C., **Ranero**, C.R., Bull, J.M., Davy, R.G., Shillington, D.J., Perez-Gussinye, M. and Morgan, J.K., 2016. Fault-controlled hydration of the upper mantle during continental rifting. ***Nature Geoscience*** 9,384–388 doi:10.1038/ngeo2671. 2016.
89. Dagnino, D., V. Sallarès, B. Biescas, and C. R. **Ranero**, Fine-scale thermohaline ocean structure retrieved with 2-D prestack full-waveform inversion of multichannel seismic data: Application to the Gulf of Cadiz (SW Iberia), ***J. Geophys. Res.*** Oceans, 121, 5452–5469, doi:10.1002/2016JC011844. 2016
90. Bangs, N. L., McIntosh, K. D. Silver, E. A., Kluesner, J. W., **Ranero**, C. R., A recent phase of accretion along the southern Costa Rican subduction zone, ***Earth and Planetary Science Letters***, Vol. 443, 204-215, https://doi.org/10.1016/j.epsl.2016.03.008. 2016
91. Gómez de la Peña, L. Gràcia, E., Muñoz, A., Acosta, J., Gómez-Ballesteros, M., **Ranero**, C. R. Uchupi, E., Geomorphology and Neogene tectonic evolution of the Palomares continental margin (Western Mediterranean), ***Tectonophysics***, Vol. 689, 25-39, https://doi.org/10.1016/j.tecto.2016.03.009. 2016.
92. Carbonell, R., Sallares, V., **Ranero**, C. R., Booth-Rea, G., Preface to the "Deep Seismix-2014" special issue, ***Tectonophysics***, Vol. 689, 1-3, https://doi.org/10.1016/j.tecto.2016.10.008. 2016
93. Ruh, J. B., V. Sallarès, C. R. **Ranero**, and T. Gerya, Crustal deformation dynamics and

stress evolution during seamount subduction: High-resolution 3-D numerical modeling, **J. Geophys. Res.** Solid Earth, 121, 6880–6902, https://doi:10.1002/2016JB013250. 2016

94. Cameselle, A. L., **Ranero**, C. R., Franke, D., & Barckhausen, U. The continent-ocean transition on the northwestern South China Sea. ***Basin Research***. https://doi.org/10.1111/bre.12137, 2017.
95. Gutscher, M.A. Kopp, H., Krastel, S., Bohrmann, G. Garlan, T. Zaragosi, S., Klaucke, I., Wintersteller, P., Loubrieu, B., Le Faou, Y., San Pedro, L., Dominguez, S., Rovere, M., Mercier de Lepinay, B., **Ranero**, C., Sallares, V., Active tectonics of the Calabrian subduction revealed by new multi-beam bathymetric data and high-resolution seismic profiles in the Ionian Sea (Central Mediterranean), ***Earth and Planetary Science Letters***, Vol. 461, 61-72, ISSN 0012-821X, https://doi.org/10.1016/j.epsl.2016.12.020. 2017
96. Silva, S. Terrinha, P.; Matias, L.; Duarte, J.C.; Roque C.; **Ranero**, C.R; Geissler, W.H; Zitellini N., Micro-seismicity in the Gulf of Cadiz: Is there a link between micro-seismicity, high magnitude earthquakes and active faults? ***Tectonophysics***, 217, 226-241 (2017)
97. Buffett, G. G.; Krahmann, G.; Klaeschen, D.; Schroeder, K.; Sallares, V.; Papenberg, C.; **Ranero**, C. R.; Zitellini, N. 2017, 'Seismic Oceanography in the Tyrrhenian Sea: Thermohaline Staircases, Eddies, and Internal Waves', ***Journal Of Geophysical Research-oceans***, 122, 11, 8503 – 8523, 2017
98. Dagnino, D.; Sallarès, V.; **Ranero**, C. R. Waveform-Preserving Processing Flow of Multichannel Seismic Reflection Data for Adjoint-State Full-Waveform Inversion of Ocean Thermohaline Structure. ***IEEE Transactions on Geoscience and Remote Sensing***. Vol.: 56, Issue: 3, Pages: 1615 - 1625, doi: 10.1109/TGRS.2017.2765747 2017.
99. Grevemeyer, I., **Ranero**, C.R., and Ivandic, M., Structure of oceanic crust and serpentinization at subduction trenches: ***Geosphere***, doi:10.1130/GES01537.1. 2018
100. Prada, M., Sallares, V., **Ranero**, C. R., Vendrell, M. G., Grevemeyer, I., Zitellini, N. and de Franco, R., Spatial variations of magmatic crustal accretion during the opening of the Tyrrhenian back-arc from wide-angle seismic velocity models and seismic reflection images. ***Basin Research*** doi:10.1111/bre.12211. 2018
101. Dannowski, A., Morgan, J. P., Grevemeyer, I., & **Ranero**, C. R. Enhanced mantle upwelling/melting caused segment propagation, oceanic core complex die off, and the death of a transform fault: The Mid-Atlantic Ridge at 21.5°N. ***Journal of Geophysical Research***: Solid Earth, 123. https://doi.org/10.1002/2017JB014273 (2018).
102. Jimenez-Tejero, C. E., V. Sallares and C. R. **Ranero**. Appraisal of Instantaneous Phase-Based Functions in Adjoint Waveform Inversion. ***IEEE Transactions on Geoscience and Remote Sensing***. (2018).
103. Booth-Rea, G. **Ranero**, C. R. & Grevemeyer, I. The Alboran volcanic-arc modulated the Messinian faunal exchange and salinity crisis. **Scientific Reports** v. 8, Article number: 13015. 10.1038/s41598-018-31307-7 (2018)
104. Gómez de la Peña, L., **Ranero**, C. R., & Gràcia, E. The Crustal Domains of the Alboran Basin (Western Mediterranean). **Tectonics**, 37 https://doi.org/10.1029/2017TC004946 2018.
105. Geersen, J., **Ranero**, C.R., Kopp, H., Behrmann, J.H., D. Lange, I. Klaucke, S. Barrientos, J. Diaz-Naveas, U. Barckhausen, C. Reichert, Does permanent extensional deformation in lower forearc slopes indicate shallow plate-boundary rupture?, **Earth and Planetary Science Letters**, Volume 489. Pages 17-27 https://doi.org/10.1016/j.epsl.2018.02.030 2018
106. Geersen, J., **Ranero**, C.R., I. Klaucke, Behrmann, J.H., Kopp, H., Trehu, A. M. Contreras-

Reyes, E., Barckhausen, U., Reichert, C. Active tectonics of the North Chilean marine forearc and adjacent oceanic Nazca Plate. **Tectonics**, 37 https://doi.org/10.1029/2018TC005087 2018.

107. Kohn, M. J., Castro, A. E., Kerswell, B. C., **Ranero**, C. R., Spear F. S., Shear heating reconciles thermal models with the metamorphic rock record of subduction, **Proceedings of the National Academy of Sciences**, 201809962; DOI: 10.1073/pnas.1809962115 2018

108. Ugalde, A. Gaite, B., Ruiz, M., Villaseñor, A. and **Ranero**, C. R.; Seismicity and Noise Recorded by Passive Seismic Monitoring of Drilling Operations Offshore the Eastern Canary Islands. ***Seismological Research Letters*** doi: https://doi.org/10.1785/0220180353 2019

109. Gràcia E., Grevemeyer, I, Bartolomé, R., Perea, H., Martínez-Loriente, S., Gómez de la Peña, L., Villaseñor, A., Klinger, Y., Lo Iacono, C., Diez, S., Calahorrano, A., Camafort, M., Costa, S., d'Acremont, E., Rabaute, A., and **Ranero** C.R., Earthquake crisis unveils the growth of an incipient continental fault system. **Nature Communications** doi.org/10.1038/s41467-019-11064-5 2019

110. Peron-Pinvidic G, Manatschal G and the "IMAGinING RIFTING" Workshop Participants (2019) Rifted Margins: State of the Art and Future Challenges. **Front. Earth Sci.** 7:218. doi: 10.3389/feart.2019.00218 2019

111. Meléndez, A., Jiménez, C.E., Sallarès, V., and **Ranero**, C.R. Anisotropic P-wave traveltime tomography implementing Thomsen's weak approximation in TOMO3D. **Solid Earth**. 10, 1857–1876, https://doi.org/10.5194/se-10-1857-2019 2019

112. Gras, C., Sallarès, V., Dagnino, D., Jiménez, C. E., Meléndez, A., and **Ranero**, C. R.: Full waveform inversion of short-offset, band-limited seismic data in the Alboran basin (SE Iberia), **Solid Earth**,10, 1833–1855, https://doi.org/10.5194/se-10-1833-2019 2019

113. Sallares V. & **Ranero** C.R., Depth-varying elastic properties of the upper plate determine mega-thrust earthquake rupture characteristics. **Nature**. https://doi.org/10.1038/s41586-019-1784-0 2019

114. Martínez-Loriente, S., Sallarès, V., R. Ranero, C., B. Ruh, J., Barckhausen, U., Grevemeyer, I., & Bangs, N. Influence of incoming plate relief on overriding plate deformation and earthquake nucleation: Cocos Ridge subduction (Costa Rica). **Tectonics**, 38. https://doi.org/10.1029/2019TC005586 2019

115. Zitellini, N., C. R. **Ranero**, M. F. Loreto, M. Ligi, M. Pastore, F. Doriano, V. Sallares, I. Grevemeyer, S. Moeller, M. Prada Recent inversion of the Tyrrhenian Basin. **Geology**, v. 48, p. 123–127, https://doi.org/10.1130/G46774.1 2020

116. Camafort M., J.V. Pérez-Peña, G. Booth-Rea, F. Melki, E. Gràcia, J.M. Azañón, J.P. Galve, W. Marzougui, S. Gaidi, C.R. **Ranero**, Active tectonics and drainage evolution in the Tunisian Atlas driven by interaction between crustal shortening and mantle dynamics. **Geomorphology**, 351, https://doi.org/10.1016/j.geomorph.2019.106954 2020

117. Prada, M., **Ranero**, C.R., Sallares, V., Grevemeyer, I., de Franco, R., Gervasi, A., Zitellini, N., The structure of Mediterranean arcs: New insights from the Calabrian Arc subduction system, **Earth and Planetary Science Letters**, vol.548, 116480, https://doi.org/10.1016/j.epsl.2020.116480. 2020

118. Gómez de la Peña, L., Grevemeyer, I., Kopp, H., Díaz, J., Gallart, J., Booth-Rea, G., Gracia, E. **Ranero**, C.R. The lithospheric structure of the Gibraltar Arc System from wide-angle seismic data. ***Journal Geophysical Research***, 125, e2020JB019854. https://doi.org/

10.1029/2020JB019854 (2020).

119. Camafort, M., Gràcia E., C. R. **Ranero**, Quaternary seismo-stratigraphy and tectono-sedimentary evolution of the north Tunisian continental margin ***Tectonics*** https://doi.org/10.1029/2020TC006243 (2020).

120. Cameselle, A. L., **Ranero**, C. R., & Barckhausen, U., Understanding the 3D formation of a wide rift: The central South China Sea rift system. ***Tectonics***, 39, e2019TC006040. https://doi.org/10.1029/2019TC006040 (2020)

121. Loreto, MF, Zitellini, N, **Ranero**, CR, Palmiotto, C, Prada, M. Extensional tectonics during the Tyrrhenian back-arc basin formation and a new morpho-tectonic map. ***Basin Res***. 00: 1–21. https://doi.org/10.1111/bre.12458 (2021)

122. Gómez de la Peña, L., **Ranero**, CR, Gràcia, E., Booth-Rea, G. The evolution of the westernmost Mediterranean basins, ***Earth-Science Reviews***, 03445, (2021)

123. Ugalde, A., Egozcue, J.J., **Ranero**, C.R. A new autoregressive moving average modeling of H/V spectral ratios to estimate the ground resonance frequency, ***Engineering Geology***, Volume 280, https://doi.org/10.1016/j.enggeo.2020.105957. (2021)

124. Sallarès, V, Prada, M., Riquelme, S., Meléndez, A., Calahorrano, A., Grevemeyer, I. and **Ranero**, C. R. Large slip, long duration, and moderate shaking of the Nicaragua 1992 tsunami earthquake caused by low near-trench rock rigidity. ***Science Advances***, 7 (32). eabg8659. DOI 10.1126/sciadv.abg8659. (2021)

125. Merino, I., Prada, M., **Ranero**, C.R., Sallarès, V., & Calahorrano, A. The structure of the continent- ocean transition in the Gulf of Lions from joint refraction and reflection traveltime tomography. ***Journal of Geophysical Research***: *Solid Earth*, *126*, e2021JB021711. https://doi. org/10.1029/2021JB021711 (2021)

126. Merino, I., **Ranero**, C. R., Prada, M., Sallarès, V., & Grevemeyer, I. The rift and continent-ocean transition structure under the Tagus Abyssal Plain West of the Iberia. ***Journal of Geophysical Research: Solid Earth***, *126*, e2021JB022629. https://doi. org/10.1029/2021JB022629 (2021)

127. Gómez de la Peña, L., E Gràcia, F. Emanuele Maesano, R. Basili, H. Kopp, C. Sánchez-Serra, A. Scala, F. Romano, M. Volpe, A. Piatanesi, C R. **Ranero**,. A first appraisal of the seismogenic and tsunamigenic potential of the largest fault systems in the westernmost Mediterranean. ***Marine Geology***, ISSN: 0025-3227, Vol: 445, Page: 106749, (2022)

128. Jimenez-Tejero, C.E., C. R **Ranero**, V. Sallares, C. Gras, Downward continuation of marine seismic reflection data: An undervalued tool to improve velocity models, ***Geophysical Journal International***, *Geophysical Journal International*, Volume 230, Issue 2, August 2022, Pages 831–848, https://doi.org/10.1093/gji/ggac087 (2022)

129. Grevemeyer, I., C R. **Ranero**, C. Papenberg, V. Sallares, R. Bartolomé, M. Prada, L. Batista and M. Neres, 2022, The continent-to-ocean transition in the Iberia Abyssal Plain: ***Geology***, https://doi.org/10.1130/G49753.1 (2022)

130. Ugalde, A., C. Becerril, A. Villaseñor, C. R. **Ranero**, M. R. Fernández-Ruiz, S. Martin-Lopez, M. González-Herráez, and H. F. Martins. Noise Levels and Signals Observed on Submarine Fibers in the Canary Islands Using DAS, ***Seismol. Res. Lett***. XX, 1–13, doi: 10.1785/0220210049. (2022)

131. Gras, C., C. E. Jiménez-Tejero, V. Sallarès, A. Meléndez and C. R. **Ranero**, "Toward a Practical Appraisal for Waveform Tomography of Band- and Offset-Limited Marine Seismic Data," in ***IEEE Transactions on Geoscience and Remote Sensing***, vol. 60, pp. 1-14, 2022,

Art no. 4504814, doi: 10.1109/TGRS.2021.3097966. (2022)

132. Camafort, M., **Ranero**, C. R., Gràcia, E., Active tectonics of the North Tunisian continental margin. Tectonics, 41, e2021TC007110. https://doi. org/10.1029/2021TC007110 (2022)

133. Corbera, G., C. Lo Iacono, C. D. Standish, E. Gràcia, C. **Ranero**, V. A.I. Huvenne, Eleni Anagnostou, G. L. Foster, Glacial-aged development of the Tunisian Coral Mound Province controlled by glacio-eustatic oscillations and changes in surface productivity. **Marine Geology**, 446, https://doi.org/10.1016/j.margeo.2022.106772. (2022)

134. Kluesner, J. W., Silver, E. A., Bangs, N. L., **Ranero**, C. R., Nale, S., Gibson, J., & McIntosh, K. D. Mega-depressions on the Cocos Ridge: Links between volcanism, faults, hydrothermal circulation, and dissolution. **Geochemistry, Geophysics, Geosystems**, 23, e2022GC010370. https://doi. org/10.1029/2022GC010370 (2022)

135. Gómez de la Peña, L., **Ranero**, C.R., Gràcia, E. & Booth-Rea, G., Azañón, J.M., Tinivella, U., Yelles-Chaouche, A. Evidence for a developing plate boundary in the western Mediterranean. **Nature Comm**. 13. 4786. 10.1038/s41467-022-31895-z. (2022)

136. 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**. https://doi.org/10.1038/s43017-022-00380-y (2023)

137. Ugalde A, Seguí A, de Ortuzar M, de Ortuzar JM & **Ranero** CR, 'Subfluvial tunnel layout design: Mapping recent sediment fill in Bilbao Estuary using H/V spectral ratio', **Engineering Geology**, 327, 2023, 107338. (2023)

138. Loreto MF, Zitellini N, **Ranero** RC, Palmiotto C & Prada M 2023, 'Reply to the comment of Torrente et al on Extensional tectonics during the Tyrrhenian back-arc basin formation and a new morpho-tectonic map', **Basin Research**, 35, 2409–2416 (2023)

139. Neres M & **Ranero** CR, 'An appraisal using magnetic data of the continent-to-ocean transition structure west of Iberia', **Geophys. Jour. International**, 234, 3, 1819-1834 (2023)

140. Zhang, J., Zhao, M., Ding, W., **Ranero**, C. R., Sallares, V., Gao, J., et al.. New insights into the rift-to-drift process of the northern South China Sea margin constrained by a three-dimensional wide-angle seismic velocity model. *Journal of Geophysical Research: Solid Earth*, *128*, e2022JB026171. https://doi. org/10.1029/2022JB026171 (2023)

141. Hao, S., Mei, L., **Ranero**, C. R., Zhou, Z., Pang, X., & Zheng, J.. 3D crustal architecture and along-strike variation in the mid-northern South China Sea rifted margin. Journal of Geophysical Research: Solid Earth, 129, e2023JB026876. https://doi.org/10.1029/2023JB026876 (2024)

Book chapters peer-reviewed Non SCI

1. **Ranero**, C. R., von Huene, R., Flueh, E. R., Weinrebe, W., Hinz, K., Leandro, G., Alvarado, G. and Duarte, M. Lower plate control on subduction erosion processes along the Middle America convergent margin. ***Zeitschrift für Angewandte Geologie*** zum Internationalen Geologen-Kongress, Rio de Janeiro, August 2000, "Rio Band". editor Prof. H. Miller, München, vol. SH1, 291-296 (2000).
2. **Ranero**, C. R., Weinrebe, W., Tectonic processes during convergence of lithospheric plates at subduction zones. Ed. P. Wille, ***Sound images of the oceans***, Springler Publisher (2005).
3. **Ranero**, C. R.; von Huene, R.; Weinrebe, W. and Barckhausen, U., Convergent margin tectonics of Middle America: A marine perspective. In: ***Central America, Geology, Hazards and Resources***, pp. 239-265. Ed. G. Alvarado and J. Bunschu, A. A. Balkema Publisher (2007).
4. McIntosh, K. D., E. A. Silver, I. Ahmed, A. Berhorst, C. R. **Ranero**, R. K. Kelly, and E. R. Flueh, The Nicaragua Convergent Margin: Seismic Reflection Imaging of the Source of a Tsunami Earthquake, Rica, in: ***The seismogenic zone of subduction thrust faults***, T. Dixon and J.C. Moore eds., Columbia University Press, NewYork, pp 257-287 (2007).
5. Morgan, J. P., C. R. **Ranero**, Chapter 21 - Roles of Serpentinization in Plate Tectonics and the Evolution of Earth's Mantle, Editor(s): João C. Duarte, Dynamics of Plate Tectonics and Mantle Convection, Elsevier, ISBN 9780323857338 Pages 511-537, https://doi.org/10.1016/B978-0-323-85733-8.00011-1 (2023).

Papers peer-reviewed in Non-SCI Journals

1. Gil Ibarguchi, J. I., Abalos, B. Campillo, A., Higuero, A., Lopez, B., Pinilla, V., **Ranero**, C. R., Rodríguez, R., Urtiaga, M. K. Asociaciones con granate-clinopiroxeno en la 'unidad catazonal superior' del complejo del cabo Ortegal (NW España). *Cuaderno Lab. Xeológico de Laxe*, 12, 165-181, (1987).
2. **Ranero**, C.R., von Huene, R., Hinz, K. The tectonic structure of the chilean convergent plate boundary between 32° - 34° S (Offshore Valparaiso) *Abstracts extendidos del VIII Congreso Geológico Chileno*. vol III, 1839-1842, (1997).
3. Flueh, E., Grotzki, N., Husen, S., **Ranero**, C. R., Reichert, C., Vidal, N. Seismic refraction investigations of the deep crustal structure offshore Chile. *Abstracts extendidos del VIII Congreso Geológico Chileno*. Vol. III, 1823-1827, (1997).
4. Yáñez, G., **Ranero**, C. R. , von Huene, R., Diaz, J. Magnetic domains across a segment of the convergent margin at the southern central Andes (32° - 34°). *Abstracts extendidos del VIII Congreso Geológico Chileno*. Vol. III, 1865-1869, (1997).
5. Stavenhagen, A. U., Flueh, E. R., **Ranero**, C. R., McIntosh, K. D., Shipley, T., Leandro, G., Schulze, A., and Dañobeitia, J.J. Seismic wide-angle investigations in Costa Rica - A transect from the Pacific to the Atlantic Coast across the Middle American Land bridge. *Zentralblatt für Geologie and Paläontologie*, vol. H 3-6, 393-408 (1998).
6. von Huene, R., **Ranero**, C. R., Diversity in the convergent margin structure offshore South America. in: Andean geodynamics: extended abstracts. Paris: Institut de recherche pour le développement. IRD - Georg August Universität - Geochemisches Institut, 797-800 (1999).
7. Yáñez, G., **Ranero**, C. R., The role of the Juan Fernández ridge in the long lived Andean segmentation at 33.5°S. in: Andean geodynamics: extended abstracts. Paris: Institut de recherche pour le développement. IRD - Georg August Universität - Geochemisches Institut, 815-819 (1999).
8. von Huene, R., **Ranero**, C. R., Hinz, K., and Yáñez, G. Recent marine geophysics along the South American convergent margin. *Zeitschrift für Angewandte Geologie* zum Internationalen Geologen-Kongress , Rio de Janeiro, August 2000, "Rio Band". editor Prof. H. Miller, München, vol. SH1, 311-316 (2000).
9. Flueh, E. R., **Ranero**, C. R. and von Huene, R., The Costa Rican Pacific margin: from accretion to erosion. *Zentralblatt für Geologie and Paläontologie* 7-8, 669-678 (2000).
10. McIntosh, K.; Ahmed, I.; Silver, E.; Kelly, R.; **Ranero**, C. R.; Flueh, E.; Berhorst, A. Nicaragua/Costa Rica Marine Geophysics Update. *MARGINS Newsletters*, No 8, Spring 2002, 3-5 (2002).
11. Silver, E.; **Ranero**, C. R.; LaFemina, P.; Marshall, J. Central America Town Meeting. *MARGINS Newsletters*, No 8, Spring 2002, 12 (2002).
12. von Huene, R.; Alvarado, G.; Brown, K., Harris, R.; Kinoshita, M.; Suyehiro, K.; McIntosh, K., Phipps Morgan, J.; Morris, J.; Protti, M.; **Ranero**, C. R.; Scholl, D.; Schwartz, S. Discussion of ODP Leg 205 and drilling of Middle America seismogenic zone. *Eos Trans. AGU*, 84, N.91, (2003).
13. von Huene, R., **Ranero** C. R., Vannucchi, P. and Saito, S. Focusing on Proto-Seismic Zone of Erosional Convergent Margin, *Eos Trans. AGU*, *85*(7), 70. (2004)
14. Kinoshita, M., Moore, G., von Huene, R., Tobin, B, **Ranero** C.R., The seismogenic zone experiment, Oceanography, 19, N.4, 28-39, (2006).

15. **Ranero**, C. R., Vannucchi, P., von Huene R., and the CRISP proponents. Drilling the Seismogenic Zone of an Erosional Convergent Margin: iODP **C**osta **Ri**ca **S**eismogenesis **P**roject CRISP. Scientific Drilling Special Issue N.1, 51-54, (2007).
16. Silver, E., Vannucchi, P., Bangs, N., Ujiie, K., Harris, R., **Ranero**, C. R., , Report on GeoPRISMS Mini-Workshop - "Integrating CRISP IODP Drilling and 3D Seismic Study. Geoprisms Newsletter, N28, 18-19, Spring (2012).
17. Fisher, D.; P. Vannucchi , **Ranero**, C. R., Fluid Flow, Material Transfer & Deformation in the Forearcs of Convergent Margins. Geoprisms Newsletter, N29, 13-14, Fall (2012).
18. C. R. **Ranero**, E. Gràcia, V. Sallarès, X. Garcia, J. Gallart, R. Bartolomé, C. Lo Iacono, S. Martínez-Loriente, X. Moreno, M. Prada, H. Perea, M. G. Vendrell, I. Grevemeyer, S. Moeller, M. Jegen, R. Evans, N. Zitellini. The Western Mediterranean Pairs of Basin and Arc Systems. Geotemas. (2012).
19. Fisher, D.; **Ranero**, C. R., P. Vannucchi. Fluid Flow, Deformation, Fluid Flow, and Mass Transfer in the Forearc of Convergent Margins. GSA Today. 26-28 (2012).
20. C. R. **Ranero**, V. Sallares, N. Zitellini, I. Grevemeyer, M. Guzman, M. Prada, S. Moeller, R. De Franco & The Medoc Cruise Party. The tectonic structure of the Tyrrhenian Basin, a complex interaction among faulting and magmatism. Rend. Online Soc. Geol. It., Vol. 21, pp. 251-252, (2012)
21. V. Sallares, C. R. **Ranero**, N. Zitellini, I. Grevemeyer, M. Guzman, M. Prada, S. Moeller, R. De Franco & the MEDOC Cruise Party. The structure of the Tyrrhenian from integration of multichannel seismic images, wide-angle seismic data, and gravity modeling. Rend. Online Soc. Geol. It., Vol. 21, pp. 253-254, (2012)
22. Eulàlia Gràcia, Rafael Bartolome, Hector Perea, Ximena Moreno, Laura Gómez de la Peña, Cesar R. **Ranero**, Claudio Lo Iacono, Sara Martínez-Loriente, Susana Diez, Eulàlia Masana and Juanjo Dañobeitia seismic hazard of active faults in the Alboran Sea inferred from submarine paleosismology. Iberfault. pp101-104. Lorca. Spain. 22-24 Oct., 2014.
23. Laura Gómez de la Peña, César R. **Ranero**, Eulàlia Gràcia, Rafael Bartolome and TopoMed cruise party. Técnicas avanzadas de procesado de datos de sísmica de reflexión multicanal aplicadas a mejorar la visualización de fallas activas del Mar de Alborán. Iberfault. Pp229-234. Lorca. Spain. 22-24 Oct., 2014.
24. **Ranero** R. C., & Calahorrano A., Evaluación de las estructuras tectónica de la zona del Golfo de Cádiz y la Cuenca del Guadalquivir a partir de imágenes sísmicas. 3a Reunión Ibérica sobre Fallas Activas y Paleosismología (Iberfault). pp 317-320. Resúmenes de la 3a Reunión Ibérica sobre Fallas Activas y Paleosismología, Alicante, España (2018).
25. Gómez de la Peña L., C. R. **Ranero**, E. Gràcia, H. Perea, G. Booth-Rea, J.M. Azañón, I. Grevemeyer and H. Kopp. New insights of the iberian-african plate boundary along the alboran basin (western mediterranean) based on deep seismic images, pp 125-128. Resúmenes de la 3a Reunión Ibérica sobre Fallas Activas y Paleosismología, Alicante, España (2018).
26. M. Camafort, E. Gràcia and C.R. **Ranero**. Active tectonics of the offshore north tunisian continental margin, pp 309-311. Resúmenes de la 3a Reunión Ibérica sobre Fallas Activas y Paleosismología, Alicante, España (2018).
27. Gràcia E., Bartolome R., H. Perea, S. Martínez-Loriente, L. Gómez de la Peña, M. Camafort, C. Lo Iacono, C. S. Serra, W. N. Meservy, E. Masana, I. Grevemeyer, C. R. **Ranero**. Unveiling the largest strike-slip fault systems in the alboran basin with

unprecedented resolution, pp 313-316. Resúmenes de la 3a Reunión Ibérica sobre Fallas Activas y Paleosismología, Alicante, España (2018).

Papers in Popular Science / Outreach Journals

1. **Ranero**, C. R. and von Huene, R. Wenn Tiefseeberge das Festland rammen. *Spektrum der Wissenschaft* (German Scientific American) 2, 12-14 (2001)
2. V. Sallares and C. R. **Ranero**. Shaking up geophysics. A new model for improved tsunami prediction. *Research Outreach* (2020)
3. Sallares (coordinator) et al., A Safer Ocean : Towards Marine Hazard Impact Mitigation. Challenge 5. Pp 97-116 in Vol. 13 OCEAN SCIENCE CHALLENGES FOR 2030, Topic Coordinators: Ananda Pascual & Diego Macías. CSIC SCIENTIFIC CHALLENGES: TOWARDS 2030. Challenges coordinated by: Jesús Marco de Lucas & M. Victoria Moreno-Arribas (2021)

Group Supervision and Training (Barcelona-CSI, last 10 years)

Current Supervised Postdocs

Laura Gómez de la Peña, funded Juan de Ła Cierva programme
Melania Cubas Armas
Irene Merino Perez
Alejandra Lago Cameselle
Sergi Ventosa Rahuet
Tatiana Rodriguez Mlodziankowski

Previous Postdocs

Patricia Cadenas (SE Asia basins; 2020-2022) currently IPMA, Lisbon
David Blanco (Eastern Mediterranean Basin; 2020-2022) currently Private Sector.
Estela Jimenez (Full Waveform Tomography, staff member since 2022)
Manel Prada (Travel time tomography, currently staff member since 2022)
Adria Melendez (Travel Time Tomography; 2010-2020).
Sergi Ventosa (Full Waveform Tomography; 2019-2020) currently postdoc CSIC
Alcinoe Calahorrano (Seismic reflection processing, 2007-2010; 2011-2019) currently at Geologic de Catalunya .
Daniel Dagnino (Full Waveform Tomography; 2013-2019) currently Private Sector.
Jianzheng Zhang (2017) currently at the South China Sea Institute of Oceanology
Alejandra L. Cameselle (2016-2017) currently at the University of Vigo (Spain)
Manel Prada (2015) Dublin Institute for Advanced Studies and now Staff CSIC
Sara Martinez (2016) Irish Centre for Research in Applied Geosciences (Dublin) and now CSIC
Ben Demol (2012-2013) currently Senior Geologist at VNG Norge (Norway)
Ivan Vargas Cordero (2011-2013) currently university lecturer (Valparaiso, Chile)
Jean Kormann (2008-2010) currently Senior Lecturer at Montanuniversität Leoben (Austria)
Josep de la Puente (2007-2008) currently Senior Scientist at Barcelona Supercomputer Center

PhD Supervision

Ph.D. title: Continental Rifting West of Iberia, an Integrated Geophysical Study.
Ph.D. student: Marta Pérez-Gussinyé
University: Univ. de Kiel (Alemania) Date: July 2000

Ph.D. title: Rifting of the Tyrrhenian
Ph.D. student: Manel Prada
University: Barcelona University Date: 17 January 2014

Ph.D. title: Travel Time Tomography methods
Ph.D. student: Adriá Melendez
University: Barcelona University Date: 19 December 2014

Ph.D. title: The western Mediterranean Basins
Ph.D. student: Montserrat Guzman Vendrell
University: Barcelona University Date: 30 Nov 2015

Ph.D. title: Tectonic structure and formation kinematics of the western Mediterranean basins
Ph.D. student: Marina Viñas
University: Barcelona University Date: 20 enero 2017

Ph.D. title: The origin and tectono-sedimentary structure of the Alboran Basin
Ph.D. student: Laura Gómez de la Peña
University: Barcelona University Date: 8 Junio 2017

Ph.D. title: Neotectonics of north Tunisia continental margin
Ph.D. student: Miquel Camafort
University: Barcelona University Date: 26 April 2019

Ph.D. title: Strategies for Tomographic Inversion of Seismic Data
Ph.D. student: Claudia Gras
University: Barcelona University Date: 08 Nov. 2019

Ph.D. title: Joint Inversion of near vertical and wide angle seismic data
Ph.D. student: Slaven Begovic
University: Barcelona University Date: 14 Feb. 2020

Ph.D. title: Geophysical constraints on the nature of geological domains of continental rifted margins: Examples from the West Iberia margin and Ligurian Basin
Ph.D. student: Irene Merino
University: Barcelona University Date: 22 October 2021

Ph.D. title: The lithospheric structure of northwest Africa
Ph.D. student: Alejandra Neri Oliva
University: Barcelona University Date: Ongoing

MSc. Supervision (last 15 years)

M.Sc. title: Analysis and processing of multichannel seismic reflection data applied to the study of the structure of rifted continental margins.
M.Sc. student: Montserrat Guzman Vendrell
University: Universidad de Barcelona. Date: 2008

M.Sc. title: Analysis, processing and interpretation of multichannel seismic data from a rifted continental margin. The Xisha Trough (South China Sea).
M.Sc. student: Patricia Guerrero Álvarez
University: Universidad de Barcelona. Date: 2008

M.Sc. title: La estructura tectónica de la cuenca oriental de Alborán mediante una transecta con sísmica multicanal From la plataforma continental Marroquí To la cuenca de Almería
M.Sc. student: Laura Gomez de la Peña
University: Universidad de Barcelona. Date: 2012

M.Sc. title: Quantitative morphometric analysis for the tectonic characterisation of northern Tunisia
M.Sc. student: Miquel Camafort (Best Earth Sciences Master Award 2015)
University: Universidad de Barcelona. Date: 2015

M.Sc. title: The Tectono-Sedimentary Evolution Of The Gulf Of Guayaquil-Tumbes Basin (Ecuador)

M.Sc. student: Diego Andres Ruilova Torres
University: Universidad de Barcelona. Date: Jun, 2022

Doctoral Courses and training

- University de Granada (Spain) 8-10 October de 2012. Formation of Mediterranean Basins and Rifting of Continental Margins (6 hours).
- Universe of Parma (Italy) 4-7 March de 2013. Four day block course on Tectonics of Mid Ocean Ridges, Rifted Continental margins, and Subduction Zones. (24 hours)
- University of Granada (Spain) 6 Febrero de 2014. The seismic structure of crust formed in back-arc spreading centers and the origin of Alpine-Himalayan Ophiolites. (2 hours).
- Marine Sciences Institute Sept 2015. One week block course on seismic data theory, processing and imaging. (30 hours)
- I have personally trained some 30 visiting PhD students and postdocs during the last 25 years on seismic processing and modelling, and interpretation of their own data. The visits have extended from 1-18 months.

Work at Societies

- Member of AGU Seismology nominations committee for Fellows and Awards 2020-2024
- Member of AGU Tectonophysics nominations committee for Fellows and Awards 2022-2024
- Member of the Committee of the Stephan Mueller Medal of the TS Division of the European Geosciences Union 2017-2019.
- Spanish representative in the Industrial Liaison Panel of the European Consortium for Ocean Research Drilling (ECORD) for the Integrated Ocean Drilling Program (2009-2013).
- Spanish alternate chair at ECORD (2009-2013).
- Vice-president Tectonics and Structural Geology (TS) division of the European Geosciences Union (EGU) (April 2009-2012).
- Chair of Committee of the Stephan Mueller medal of the TS Division Geology (TS) division of the EGU (2009-2012).
- President of the Tectonics and Structural Geology (TS) division of the EGU (April 2005-April 2009).
- Chair of the Programme Committee of the TS division of the EGU (2006 - 2009).
- Secretary of Tectonics and Structural Geology (TS) division of European Geosciences Union (EGU) (2004).
- Member of the Steering Committee of the Euromargins Programme (2004-2005).

Evaluation panel member

- Member “Red de Expertos de la Agencia de Certificación e Innovación Española (ACIE)”.
- Evaluator of different programs of European Union, NSF-US, NERC-UK, RC-Noruega, CONICYT-Chile, Ifremer-Flotte Francia, ANEP-Spain.
- Evaluation of Tenure and Professorship applications at US (Woods Hole Oceanographic Institution, Lamont Doherty Earth Observatory), UK (Royal Holloway, Durham Uni.) and Germany (Geomar) research centres.
- Evaluator of La Caixa Bank Foundation grants (2015- 2019)
- Evaluator for the Institut Universitaire de France (2016-2018).
- Member of Natural Resources Area committee from Spanish Ministry of Economy (Sept 2013 - July 2017).

Editorial Boards

2005-2008 Associate editor, eEARTH
2015-2016 Guest editor Tectonophysics Special volume Seismix 16th Symposium
2016-2020 Guest editor Geosphere special topic Subduction Top to Bottom -2
2018-2020 Guest editor Lithos special topic the Subduction Interface.

Organizer of International Congresses, Symposiums & Workshops (last 15 years)

- Magellan Workshop: **Gulf of Cadiz**.. Lisbon*, Portugal.* **Organisers**: P. Terrinha and M. Neres (IPMA, Lisbon), C.R. Ranero (Barcelona-CSI, ICREA at CSIC). *(35 participants)* September 12-13, 2019
- AAPG Workshop "Alpine Folded Belts and Extensional Basins", Granada, *Spain*, **Organiser.** 15th and 16th March, 2018
- Magellan Workshop TIME: **T**yrrheni**a**n **M**agmatism & Mantle **E**xhumation. Bolognia*, Italy.* **Organisers**: N. Zitellini (CNR-Bolognia), C.R. Ranero (Barcelona-CSI, ICREA at CSIC). *(38 participants)* September 12-14, 2017.
- Subduction Interface Processes International Symposium. Castelldefells*, Barcelona, Spain.* **Organisers**: P. Agard (PMCU-Paris), V. Sallares (Barcelona-CSI, CSIC), C. R. Ranero (ICREA at CSIC). *(104 participants)* April 18-21, 2017
- 16th Deep SEISMIX International Symposium. Castelldefells*, Barcelona, Spain Multi-scale Seismic Imaging of the Earth's crust and Upper Mantle.* **Organisers**: R. Carbonell (CSIC-Barcelona), Josep Gallart (CSIC-Barcelona), V. Sallares (CSIC-Barcelona), C. R. Ranero (ICREA at CSIC).*(over 100 participants)* October 12-17, 2014
- *Geological Society of America Penrose Conference. Il Ciocco, Lucca, Italy* .Fluid Flow, Material Transfer & Deformation in the Forearcs of Convergent Margins. **Organisers**: D. Fisher (Pennsylvania State University); P. Vannucchi (Univ. of Florence, Firenze); C. Ranero (ICREA at CSIC). *(over 80 participants) March 26-31, 2012*
- *American Geophysical Union Townhall Meeting*, San Francisco. USA. Costa Rica Seismogenesis Project (CRISP). **Organisers**: E. Silver (Santa Cruz Uni.); N. Bangs (Institute of Geophysics, Uni. Texas); C. R. Ranero (ICREA at CSIC) 2011
- Programme Committee member of the yearly European Geosciences Union (EGU) Assembly from 2005 to 2010.

Organizer of Sessions at International Congresses (last 15 years)

- *European Geoscience Union* 2007, Vienna. Austria.
  Session: Open Session Tectonics and Structural Geology.
- *European Geoscience Union* 2007, Vienna. Austria.
  Session: Seismogenic coupling zones - state and processes.
- *European Geoscience Union* 2008, Vienna. Austria.
  Session: Open Session Tectonics and Structural Geology.
- *European Geoscience Union* 2008, Vienna. Austria.
  Session: From rifting to drifting: observations, models and ideas on passive margin formation.
- *European Geoscience Union* 2009, Vienna. Austria.
  Session: Open Session Tectonics and Structural Geology.
- *American Geophysical Union,* Fall meeting, December, 2010, San Francisco. USA.
  Session: T22B From Sediment Inputs to Seismogenesis at Subduction Zones II.
- *American Geophysical Union,* Fall meeting, December, 2010, San Francisco. USA.
  Session: T13G The Formation and Deformation of the Mediterranean Basins,

Continental Margins, and Arcs.

- *American Geophysical Union,* Fall meeting, December, 2011, San Francisco. USA.
  Session: T13G Formation and Deformation of the Mediterranean Basins, Margins, and Arcs.
- *European Geoscience Union* 2012, Vienna. Austria.
  Session: Geodynamics of the westernmost Mediterranean and NW Africa.
- *American Geophysical Union,* Fall meeting, December, 2012, San Francisco. USA.
  Session: The Western Mediterranean: Diffuse Plate Boundary Geodynamics.
- *European Geoscience Union* 2013, Vienna. Austria.
  Session: Nature and physical properties of the plate interface in subduction zones: Cross-disciplinary views from Geodynamics-Geochemistry-Seismology-Modeling (TS6.6/GD5.6/GMPV20/SM5.3).
- *Asia Oceania Geoscience Society* 11th Annual Meeting. Sapporo, Japan. 28 Jul. - 01 Aug., 2014.
  Session: New Perspectives on Subduction Zone Megathrust Earthquakes (SE20).
- *American Geophysical Union*, San Francisco, Dec. 14-18, 2015.
  Session: Oceanic and Arc Lithospheres: Clues from Modern Examples and Ophiolites. (T32C).
- *European Geoscience Union*, Vienna. Austria 2017.
  Session: Probing the subduction plate interface. (TS7.4/GD5.7/NH4.15).
- *European Geoscience Union*, Vienna. Austria 2017.
  Session: The evolution and architecture of rifts, rifted passive margins, and mid oceanic ridges: from mantle dynamics to surface processes. (TS6.1/GD5.4).
- *European Geoscience Union*, Vienna. Austria 2018.
  Session: From break-up to spreading: Multi-scale Observations and Models of end-of-rift, Continent-Ocean Transition, and Spreading Initiation. (TS6.2/GD6.3/SM2.16).
- *European Geoscience Union*, Vienna. Austria 2018.
  Session: Tectonics and Geodynamics of the Mediterranean. (TS7.10/GMPV9.3/SM2.12/SSP2.17).
- *American Geophysical Union*, Chicago. USA 2022.
  Session: Subduction Initiation at the Turning Point of the Wilson Cycle. (T14A).
- *European Geoscience Union*, Vienna. Austria 2023.
  Session: Initiation and evolution of subduction: dynamics, volatiles and melts from the surface to the deep mantle. (Session GD4.1).
- *European Geoscience Union*, Vienna. Austria 2024.
  Session: Initiation and evolution of subduction: dynamics volatiles and melts from the surface to the deep mantle (Session GD4.1).

Invited Congress Talks, Seminars and Keynote (last 15 years)

1. Along-strike supply of volcanic rifted margins: A mechanism for sudden along-strike transitions between volcanic and non-volcanic rifted margins. **European Geoscience Union** 3sd General Assembly, Vienna. Austria. April 2007
2. Tectonics at the edge of the Andes: The Chile Convergent Margin. **European Geoscience Union** 3sd General Assembly, Vienna. Austria. April 2007
3. The hydrogeological system of the Middle America margin and its influence on long-term tectonics and interplate seismogenesis. Workshop to Integrate Subduction Factory and Seismogenic Zone Studies in Central America. Organized by **US-MARGINS and German SFB 574**, Heredia, Costa Rica. 20 June 2007
4. The hydrogeological systems of incoming oceanic plates and overriding convergent margins of subduction zones: Insights from studies of the Middle America Trench. **WHOI Geodynamics Seminar series** Woods Hole Oceanographic Institution, Woods Hole, USA. 21 February 2008
5. A Tectonic Model of Faulting during Rifting and the Development of the Asymmetry of Conjugate Non-volcanic Margins. **Rifts Renaissance: Stretching the crust and extending exploration frontiers**. *Houston, TX. USA*. 20 August 2008
6. The hydrogeological system of the forearc of subduction zones and its significance for long-term tectonics and the generation of interplate thrust earthquakes. **7th International Symposium on Andean Geodynamics** (ISAG). Nice, France. 3 Sept. 2008
7. The Costa Rica seismogenesis Project (CRISP), a Complex Drilling Proposal at the iODP. The next decade of the Seismogenic Zone Experiment. **US Margin Program Workshop**. Mount Hood, Oregon, USA. 24 Sept. 2008
8. The distinct hydrogeological system of the forearc of the Middle America Trench: significance for long-term tectonics and updip limit of the interplate seismogenic zone. **AGU Fall Meeting**. San Francisco, Calif., USA. 19 Dic. 2008
9. Hydration of Incoming Oceanic Plates and Dehydration of Slabs: Implications for Intraslab seismicity and Arc Volcanism. **European Intensive Seminars** On Petrology: High-pressure Metamorphism and Subduction Zones. Granada, Spain. 28th June 2009.
10. An overview of the relationship between hydrogeological system, long term tectonics and interplate seismogenesis at subduction zones. Submarine Paleoseismology: The Offshore Search of Large Holocene Earthquakes. 11-16 September 2010. **ESF Research Conferences**. Obergurgl, Austria. 29 Sept. 2010.
11. Ranero, C R., Perez-Gussinye, M. Simple Andersonian faulting explains extension paradox and formation of asymmetry of conjugate non-volcanic margins. **AGU Fall Meeting**, San Francisco, Calif., 13-17 Dec. 14 Dec. 2010
12. Ranero, C R., An overview of ongoing studies on the lateral changes of the plate-boundary structure of Middle America, the 3D multichannel seismic experiment at the CRISP area, and the north Chile region. **SFB574 Final colloquium**, May 23-25, 2012. Lübeck, Alemania. 25 May 2012.
13. El sistema hidro-geológico del ante-arco de las zonas de subducción y su influencia en la tectónica y la generación de terremotos inter-placa. Facultad de Ciencias. **Universidad de Granada**. Spain. 29 June 2012
14. Rifting and the formation of conjugate pairs of continental margins. Facultad de Ciencias.

Universidad de Granada. Spain. 8 Oct 2012

15. The formation of the Tyrrhenian Basin, a complex interaction among faulting, magmatism and mantle exhumation in a back-arc rift context. Facultad de Ciencias. **Universidad de Granada**. Spain. 10 October 2012
16. Seismic reflection Images, wide-angle seismic velocity models, and magnetoteluric structure of the Gibraltar Arc system: A geological interpretation of the geodynamic origin of Gulf of Cadiz imbricated wedge, the Alborán basin, and the South-Balearic basin. Science Faculty. **Universidad de Granada**. Spain. 10 October 2012
17. Ranero, C.R.; A. Et al.. Significance of broad scale deformation of incoming plates at ocean trenches. **AGU Fall Meeting**. 4 Dec 2012
18. Ranero, C.R. Costa Rica SEISMOGENESIS Project (CRISP). **Chikyu+10 international Workshop** (Keynote). Hitotsubashi University. Tokyo. Japan. 22 April 2013
19. Ranero, C.R., E. Gràcia, I. Grevemeyer, X. Garcia, & WestMed, TopoMed, Geomargen-1, & Amelie cruises The Gibraltar Arc System: Miocene formation and Plio-Pleistocene deformation from seismic images, Vp models, and magnetoteluric data. **EGU General Assembly**. Vienna, Austria. 29 April 2014
20. Ranero, C. R. & proponents, Costa Rica Seismogenesis Project. **Workshop KANAME and Beyond. Sapporo**, Japan. 2 August 2014
21. *Ranero*, C.R., et al. The western Mediterranean Basins. **JAMSTEC, Yokohama**, Japan. 4 August 2014
22. Ranero, C.R., et al. The Miocene formation and the Pliocene deformation of the Gibraltar Arc System. 10th **Topo-Europe workshop**. Barcelona. Spain. 17 Sept. 2014
23. Ranero, C. R. Great Earthquakes of Subduction Zones. **IBERFAULT2014**. 2sd Iberian meeting on active faults and paleoseismology. Lorca, Murcia, Spain. 23 Oct. 2014
24. Ranero, C.R., The Miocene to recent tectonic evolution of the Gibraltar Arc System. **RCMNS interim colloquium** on Mediterranean Atlantic gateways, Rabat, Morocco. 7 Mayo 2015
25. Ranero, C. R. et a. The Tyrrhenian Basin: fault activity migration, focusing of deformation, break up, magmatism and fast mantle exhumation. In **EGU General Assembly**. Vienna, Austria. 14 April 2015.
26. The birth and termination of the Western Mediterranean subduction systems. Invited seminar at **Institute de Physique du Globe, Paris**, France. 15 Feb. 2016
27. Imaging transformation of incoming plates at ocean trenches. Invited talk at "Bend-fault serpentinization workshop" **Royal Holloway University of London**. 21-23 June 2016, Egham, UK. 21 June 2016
28. Neogene tectonics and the Messinian Salinity Crisis. Invited talk at **COST Action** MedSalt Symposium. University of PALERMO 24-26 October 2016, Palermo, Italy. 25 Oct. 2016
29. Neogene tectonics and the Messinian Salinity Crisis. Invited talk at **ICDP workshop**: Investigating Miocene Mediterranean-Atlantic Gateway Exchange IMMAGE. Nov. 24-26th, 2016, Rabat, Morocco. 25 Nov 2016
30. End of subduction of the Tethys Ocean and initiation of continental collision: A conceptual framework for basin interpretation and active tectonics of the Mediterranean realm. **Campus Repsol, AGGEP**, Madrid. 4 April 2017
31. Terminal subduction of the Tethys lithosphere and initial continental collision in the

Mediterranean realm. **IFREMER, Brest**, France 16 June 2017.

32. How broad and deep is the region of chemical alteration of oceanic plates at trenches? T14B-04. Ranero, C.R. et al. **Fall AGU Meeting** New Orleans, USA, 11 Dec 2017.
33. Illuminating subduction systems: 50 years of limited geophysical success and what to do with so many remaining challenges. **50 years of plate tectonics Symposium**. College de France, Paris. 25-26 June 2018
34. The significance of deformation and hydration of incoming plates at subduction trenches. **EGU General Assembly**. Vienna, Austria. 4 April 2019.
35. The significance of deformation and hydration of incoming plates at subduction trenches. **Goldschmidt**. Barcelona, Spain. 21 August 2019.
36. Multiphase tectonic interaction of Tyrrhenian - Tunisia Margin - Ionian systems: Implications for regional seismogenesis. **EGU General Assembly**. Online VC. 04 May 2020
37. The Tectonic structure of the Calabria Arc system. ECORD/ICDP – **MagellanPlus Workshop** SCYLLA: serpentinite diapirs in the Calabrian Arc subduction system / CNR-ISMAR, Bologna, September 21-23, 2022
38. The Structure of the Pacific Convergent Margin of Central America. **MagellanPlus Workshop** COSNICA, The life cycle of a microplate at a convergent margin / University of Graz. Austria. 28 September 2022