

CURRICULUM VITAE

1. PERSONAL DETAILS

Full Name: Marta Pérez-Gussinyé
Nationality: Spanish
Work Address: Faculty of Geosciences
MARUM (Center for Marine Environmental Sciences)
Klagenfurter Strasse 2-4
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2. EDUCATION & QUALIFICATIONS

- 1990-1996: MSc in Physics – Faculty of Physics, University of Barcelona, Spain.
- 1996-2000: PhD – Department of Geodynamics, Geomar, Kiel University, Germany. Thesis on "*Continental rifting and break-up at the West Iberia margin: an integrated geophysical study*", supervisor: Prof. T. Reston.

3. EMPLOYMENT

- October 2000 – August 2001: Postdoctoral researcher at Geomar, Kiel University (Germany).
- October 2001 – September 2004: Postdoctoral researcher at the Dept. of Earth Sciences of Oxford University.
- October 2004 – June 2005: NERC Research fellow at the Dept. of Earth Sciences of Oxford University (3 years fellowship).
- July 2005 – December 2008: Ramon y Cajal research fellow at the Spanish Research council (Institute of Earth Sciences 'Jaume Almera', Barcelona, Spain (5 years fellowship).
- January 2009 – December 2011: Lecturer in Geophysics and Geodynamics at the Dept. of Earth Sciences, Royal Holloway, University of London.
- 1st May 2010 – 30th September 2010: Maternity leave.
- January 2012 –December 2014: Senior Lecturer in Geophysics and Geodynamics at the Dept. of Earth Sciences, Royal Holloway, University of London.
- 14th August 2013 –February 2014: Maternity leave.
- January 2015 – October 2015: Reader Lecturer in Geophysics and Geodynamics at the Dept. of Earth Sciences, Royal Holloway, University of London.
- November 2015 – present: Professor at MARUM/Institute of Marine Sciences of the University of Bremen (W3).

4. PUBLICATION OUTPUTS

REFEREED JOURNAL ARTICLES

Articles in peer-reviewed international journals

- Mezri, L, García-Pintado, J, **Pérez-Gussinyé, M**, Liu, Z, Bach, W and Cannat, M (2024) Tectonic controls on melt production and crustal architecture during magma-poor seafloor spreading. *Earth and Planetary Science Letters*, 628. 118569. doi:10.1016/j.epsl.2024.118569
- **Pérez-Gussinyé, M**, Xin, Y, Cunha, T, Ram, R, Andrés-Martínez, M, Dong, D and García-Pintado, J (2024) Synrift and post-rift thermal evolution of rifted margins: a re-evaluation of classic models of extension. *Geological Society, London, Special Publications*, 547(1). doi:10.1144/sp547-2023-128

- Zhang, Z, Dong, D, Li, S, Pérez-Gussinyé, M, Wang, X, Fan, J and Li, C (2024) A dynamic rifting model of the Caroline Ridge, West Pacific Journal of Asian Earth Sciences, 271. 106218. doi:10.1016/j.jseaes.2024.106218
- Mc-Clay, K., Khalil, S.M., Bos-worth, W. & Pérez-Gussinyé, M., (2024) Tec-tono-strati-graphic evol-u-tion of the north-west-ern Red Sea Egypt - a review, The Red Sea - Volume 2 Geo-log-y, ed-ited by N. Ra-sul & I. Stew-art, pub-lished by Taylor & Fran-cis.
- Jiménez-Díaz, A., Negredo, A. M., Sánchez-Pastor, P., Fullea, J., Kirby, J. F., Ruiz, J., Pérez-Gussinyé, M., Yu, C., The mechanical nature of the lithosphere beneath the Eastern Central Atlantic hotspots, (2023), in *Geochemistry, Geophysics, Geosystems*, doi: 10.1029/2022GC010608.
- Raghuram, G, Pérez-Gussinyé, M, Andrés-Martínez, M, García-Pintado, J, Neto Araujo, M and Morgan, JP (2024) Asymmetry and evolution of craton-influenced rifted margins. *Geology*. doi:10.1130/G51370.1
- Liu, Z., Pérez-Gussinyé, M., García-Pintado, J., Mezri, L., Bach, W. (2023) Mantle serpentinization and associated hydrogen flux at North Atlantic magma-poor rifted margins, in *Geology*, doi: 10.1130/G50722.1/620081
- Pérez-Gussinyé, M., Collier, J., Armitage, J., Hopper, J. R., Sun, Z., and Ranero, C. R., (2023), To-wards a pro-cess-based ap-proach to the study of rifted continental margins, in *Nature Reviews Earth and Environment*, doi: 10.1038/s43017-022-00380-y
- Araujo, M., Pérez-Gussinyé, M., Muldashev, I. A. (2022). Oceanward rift migration during formation of SantosBenguela ultrawide rifted margin, in *Geol. Soc. Spec. Publ.*, doi: 10.1144/SP524-2021-123
- Muldashev, I., Pérez-Gussinyé, M., Sobolev, S., (2022). Modelling of continental normal earthquakes, in *Geochemistry, Geophysics, Geosystems*, doi: 10.1029/2022GC010615
- Liu, Z., Pérez-Gussinyé, M., Rüpke, Muldashev, Bayracki, Minshull, Lateral coexistence of ductile and brittle deformation shapes magma-poor distal margins: an example from the West Iberia-Newfoundland margins, *Earth Planet. Sci. Lett.*, 578, 117288, <https://doi.org/10.1016/j.epsl.2021.117288>, 2022.
- Pérez-Gussinyé, M., Liu, Z., Numerical modelling of rifting: an overview, (2021) in *Rifted Margins*, Wiley/ISTE eds., DOI:10.51926/ISTE.5061.5
- Albers, E, Bach, W, Pérez-Gussinyé, M., McCammon, C and Frederichs, T., Serpentinization-Driven H₂ production from continental break-up to mid-ocean ridge spreading: Unexpected high rates at the West Iberia margin. (2021) *Frontiers in Earth Science*, 9. doi:10.3389/feart.2021.673063
- Muldashev, I., Pérez-Gussinyé, M., Araujo, M., KineDyn: Thermomechanical forward method for validation of seismic interpretations and investigation of dynamics of rifts and rifted margins, *Phys. Earth Planet. Int.*, <https://doi.org/10.1016/j.pepi.2021.106748>, 2021.
- Pérez-Gussinyé, M., Andres-Martinez, M., Xin, Y., Araujo, M, Armitage, J., Phipps Morgan, J., Lithospheric strength and rift migration controls on synrift stratigraphy and breakup unconformities at rifted margins: Examples from numerical models, the Atlantic and South China Sea margins. *Tectonics*, 39, e2020TC006255. <https://doi.org/10.1029/2020TC006255>, 2020.
- Lamb, S., Moore, J., Pérez-Gussinyé, M, Stern, T. (2020). Global whole lithosphere isostasy: implications for surface elevations, structure, strength and densities of the continental lithosphere, *Geochem, Geophys, Geosyst.*, doi :10.1029/2020GC009150, 2020
- P. Morgan, J., Taramón, J. M., Araujo, M., Hasenclever, J., Pérez-Gussinyé, M, Causes and consequences of asymmetric lateral plume flow during South Atlantic rifting. *Proceedings of the National Academy of Sciences* (2020), 117 (45) 27877 27883; DOI: 10.1073/pnas.2012246117.
- Andrés-Martínez, M, Pérez-Gussinyé, M, Armitage, JJ, Morgan, JP. (2019) Thermomechanical implications of sediment transport for the architecture and evolution of continental rifts and margins . *Tectonics*, 35. doi: 10.1029/2018T-C005346.
- Zhao, Z., Sun, Z., Liu, J., Pérez-Gussinyé, M, Zho, H., The continental extension discrepancy and anomalous subsidence pattern in western Quingdan Basin, South China Sea, (2018), *EPSL*, Volume 501, Pages 180-191

- Armitage, JJ , Petersen, KD, **Pérez-Gussinyé, M.**, The Role of Crustal Strength in Controlling Magmatism and Melt Chemistry During Rifting and Break-Up, G-cubed, DOI 10.1002/2017GC007326, 2018
- Ros, **Pérez-Gussinyé**, Araújo, Thoaldo Romeiro, Andrés-Martínez, Morgan Lower Crustal Strength Controls on Melting and Serpentinization at Magma-Poor Margins: Potential Implications for the South Atlantic, G-cubed, 2017
- Melnick, D., Yıldırım, C., Hille-mann, C., Garcin, Y., Çiner, A., **Pérez-Gussinyé, M.**, Strecker, R., M.: Slip rate of the Sultanhan Fault in Cent-ral Anato-lia from de-formed Pleis-to-cene shorelines of paleo-lake Konya and implications for hazards in low strain regions, *Geophys. J. Int.*, 2017
- Brune, S., Heine, C., Clift, P. D., **Pérez-Gussinyé, M.**, Rifted Margin Architecture and Crustal Rhe-ology: Re-view-ing Iberia-New-found-land, Cent-ral South At-lantic, and South China Sea. In: Mar-ine and pet-ro-leum Geo-logy, Volume 79, Pages 257–28. doi: 10.1016/j.mar-pet-geo.2016.10.018, 2017.
- G. Bayrakci, T. A. Minshall, D. S. Sawyer, T. J. Reston, D. Klaeschen, C. Papenberg, C. Ranero, J. M. Bull, R. G. Davy, D. J. Shillington, M. **Perez-Gussinye**, J. K. Morgan, Fault controlled hydration of the upper mantle, *Nature Geoscience* 9, 384–388 (2016) doi:10.1038/ngeo2671, 2016.
- Martinez, M.A., Phipps Morgan, J., **Pérez-Gussinyé, M.**, A new stabilisation algorithm for free-surfaces based on an implicit penalization load, *Physics of the Earth and Planet. Int.*, 246, 41-51.2015
- Brune, S., Heine, C., **Pérez-Gussinyé, M.**, Sobolev, Rift migration causes continental margin asymmetry and crustal hyper-extension, *Nature Comm*, 5, 4014, doi: 10.1038/ncomms5014, 2014
- Jimenez-Diaz, A., Ruiz J., **Pérez-Gussinyé, M.**, Álvarez-Gómez, Kirby, Tejero R., Capote R., Spatial variations of effective elastic thickness and mechanical anisotropy of the lithosphere in Central America and surrounding regions, *Earth and Planet. Sci. Lett.*, 391, 55–66, 2014.
- Rüpke LH., Schmid DW., **Pérez-Gussinyé M.**, Hartz E. (2013): Interrelation between rifting, faulting, sedimentation, and mantle serpentinization during continental margin formation—including examples from the Norwegian Sea, G-cubed, accepted, doi: [10.1002/ggge.20268](https://doi.org/10.1002/ggge.20268), September 2013.
- Deng, Y.F., Zhang, Z.J., Fan, W.M., **M. Pérez-Gussinyé**. Multitaper spectral method to estimate the elastic thickness of South China and its implications for intracontinental deformation. *Geoscience Frontiers*. Doi: 10.1016/j.gsf.2013.05.002, 2013.
- **Pérez-Gussinyé**, A tectonic model for hyperextension at magma-poor rifted margins: an example from the West Iberia–Newfoundland conjugate margins, *Geol. Soc., London, Spec. Publ.*, 369, doi:10.1144/SP369.19, 2013.
- Manea, V., **Pérez-Gussinyé**, Manea M., Chilean flat-slab subduction controlled by overriding plate thickness and trench roll-back, *Geology*, 40 (1), 35-38, 2012.
- Jiménez-Munt, Fernández, Vergés, Garcia-Castellanos, **Pérez-Gussinyé**, Decoupled accommodation of convergence between Africa and Eurasia. Modelling the lithospheric structure across the Gorringe Bank and the NW Moroccan margin, *JGR*, doi:10.1029/2010JB008105, 2011.
- Lowry, **Pérez-Gussinyé**, The role of crustal quartz in controlling Cordilleran deformation, *Nature*, doi:10.1038/nature09912, 2011.
- Ranero, **Pérez-Gussinyé***, Sequential faulting explains the asymmetry and extension discrepancy of conjugate margins *Nature*, doi:10.1038/nature09520, 2010. ** authors have contributed equally to this work.*
- **Pérez-Gussinyé, M.**, M. Metois, M. Fernández, J. Vergés, J. Fulla & A.R. Lowry, Effective Elastic Thickness of Africa and its relationship to other proxies for lithospheric structure and surface tectonics, *Earth and Planet. Sci. Lett.*, 287, 152-167, doi:10.1026/j.epsl.2009.08.004, 2009.
- **Pérez-Gussinyé, M.**, C. Swain, J. Kirby & A.R. Lowry, Spatial variations of the effective elastic thickness using multitaper spectral estimation and wavelet method: examples

- from synthetic data and application to South America, *G-cubed*, 10, Q04005, doi:10.1029/2008GC002229, 2009.
- Pérez-Gussinyé, M., A.R. Lowry, J. Phipps Morgan & A. Tassara, Effective Elastic Thickness along the Andean margin and their relationship to subduction geometry, *G-cubed*, doi:10.1029/2007GC001786, 2008.
 - Pérez-Gussinyé, M., A.R. Lowry, A.B. Watts, The Effective Elastic Thickness of South America and its implications for intra-continental deformation, *G-cubed*, doi:10.1029/2006GC001511, 2007.
 - Reston T.J & M. Pérez-Gussinyé, Lithospheric extension from rifting to continental break-up at magma-poor margins: rheology, serpentinisation and symmetry, *Int. J. Earth Sci.*, doi:10.1007/s00531-006-0161-z, 2007.
 - Pérez-Gussinyé, M., J.P. Morgan, T.J Reston & C.R. Ranero, From rifting to spreading at non-volcanic margins: insights from numerical modeling, *Earth Planet. Sci. Lett.*, 244, 458-473, 2006.
 - Pérez-Gussinyé, M. & A.B. Watts, The long-term strength of Europe and its implications for plate forming processes, *Nature*, doi:10.1038/nature03854 2005.
 - Reston, T.J., C.R. Ranero, O. Ruoff, M. Pérez-Gussinyé & J.J. Danobeitia, Geometry of extensional faults developed at slow-spreading centers from pre-stack depth migration of seismic reflection data in the Central Atlantic, *Geophys. J. Int.*, 159, 591-606, 2004.
 - Pérez-Gussinyé, M., A.R. Lowry, A.B. Watts & I. Velicogna, On the recovery of the effective elastic thickness using spectral methods: examples from synthetic data and from the Fennoscandian Shield, *J. Geophys. Res.*, 109, doi:10.1029/2003JB002788, 2004.
 - Pérez-Gussinyé, M., C.R. Ranero, T.J. Reston & D. Sawyer, Mechanisms of extension at non-volcanic margins: Evidence from the Galicia Interior basin, west of Iberia, *J. Geophys. Res.*, 108, doi:10.1029/2001JB000901, 2003.
 - Reston, T.J., J. Pennel, A. Stubenrauch, I. Walker & M. Pérez-Gussinyé, Detachment faulting, mantle serpentinization and serpentinite-mud volcanism beneath the Porcupine Basin, southwest Ireland, *Geology*, 29, 587-590, 2001.
 - Pérez-Gussinyé, M., T.J. Reston & J.P. Morgan, Serpentinisation and magmatism during extension at non-volcanic margins - the effect of initial lithospheric structure, in Non-volcanic rifting of continental margins: a comparison of evidence from land and sea, *Geol. Soc. Spec. Publ.*, 187, 551-576, 2001.
 - Pérez-Gussinyé, M. & T.J. Reston, Rheological evolution during extension at passive non-volcanic margins: onset of serpentinization and development of detachments leading to continental break-up, *J. Geophys. Res.*, 106, 3961-3975, 2001.

5. ACADEMIC PRIZES AND FELLOWSHIPS

- October 2011: Royal Holloway College performance award.
- 2005: 'Ramon y Cajal' Fellowship of the Spanish Ministry of Science and Education, MEC (5 years). **Value £228,661**
- 2004: UK National Environmental Research Council (NERC) Postdoctoral Fellowship (3 years). **Value £180,000**
- 1997: Marie Curie individual Fellowship of the EU for PhD. studies in GEOMAR, Kiel, Germany (3 years). **Value £118,479** (converted from Deutsche Mark)
- 1995: Fellowship from the Spanish financial institution 'La Caixa' for PhD. studies in GEOMAR, Kiel, Germany (1 year). **Value £16,937** (converted from Spanish pesetas)
- 1994: UE Erasmus Fellowship in GEOMAR, Kiel, Germany (3 months). **Value £1692** (converted from Spanish pesetas).
- 1993: Fellowship IAESTE (International Association for the exchange of scientific and technical students) at the Institute for Crystal Physics, Budapest, Hungary (1 month). **£846** (converted from Spanish pesetas).

6. INVITED PRESENTATIONS

Invited presentations to peer-reviewed specialized workshops

1. 2004: "InterMARGINS workshop: Modelling the extensional deformation of the lithosphere", Pontresina, Switzerland, organized by INTERMARGINS: "From rifting to seafloor spreading at non-volcanic margins: insights from numerical modelling", M. Pérez-Gussinyé, J. Phipps Morgan, C.R. Ranero, & T. Reston
2. 2006: "Investigating continental break-up and sedimentary basin formation", Pontresina, Switzerland, organized by Integrated Ocean Drilling Program (IODP), 2006: "Crustal Thinning faulting and asymmetry development during rifting", M. Pérez-Gussinyé & C.R. Ranero
3. 2008: Ocean Drilling Consortium (ODC) meeting, Houston, US, organized by the Integrated Ocean Drilling Program (IODP) and a consortium of oil companies Houston Texas, 2008: "Drilling of non-volcanic margins", M. Pérez-Gussinyé
4. 2008: Geological Society Rifts Conference, Houston, US, organized by the Geological Society of London, Soc. for Sedimentary Geol., Petroleum Group, The Houston Museum of Natural Science, Keynote: "A Tectonic Model of Faulting during Rifting and the Development of the Asymmetry of Conjugate Non-volcanic Margins", C.R Ranero & M. Pérez-Gussinyé
5. 2009: Defining the Lithosphere-Asthenosphere boundary, Dublin, Ireland, organized by the European Science Foundation, "Effective Elastic Thickness, T_e , of continents: relationship to other proxies for lithospheric structure and surface tectonics", M. Pérez-Gussinyé
6. 2011: EarthScope Institute on the Lithosphere Asthenosphere Boundary, Portland, Keynote: Toward in-situ measurement of lithospheric rheology, *keynote*, A R Lowry, E Beard, L Seunarine, D L Schutt, K D Putirka, and M. Pérez-Gussinyé
7. 2011: Conjugate margin structure and evolution in the North Atlantic and other margins, organized by the South China sea institute of Oceanology of the Chinese Academy of Sciences, Guangzhou, China, November 2011, *keynote*, M. Pérez-Gussinyé
8. 2011: NSF-margins workshop, *keynote*, M. Pérez-Gussinyé [declined due to family related issues]
9. 2012: Workshop on IODP drilling of the South China sea, Shanghai, China, M. Pérez-Gussinyé
10. 2012: Deep-water continental margins: the final exploration frontier, Geol. Soc London, M. Pérez-Gussinyé
11. 2013: IODP Workshop on Drilling of the South China sea, Guangzhou, China, September 2013 [declined because of maternity leave], *keynote*, M. Pérez-Gussinyé
12. 2013: Structure and Dynamics of the lithosphere/asthenosphere system, Workshop at college the France, Paris, November 2013, *keynote*, M. Pérez-Gussinyé.
13. 2015: "The Lithosphere-Asthenosphere Boundary/Nature of the Tectonic Plates", Workshop at the Geol. Soc. London, [declined because of timing problems], February 2015.
14. 2016: Invited presentation at the RIFTS III conference, Geological Society London.
15. 2016: Invited presentation at the "Roberts conference" on rifted margins at RHUL.
16. 2019: Invited presentation at the XVII National Symposium of Tectonic Studies/XI International Symposium on Tectonics/XI South-Brazilian Symposium of Geology, Bento Gonçalves, Brazil

Invited presentations to peer-reviewed internationally established conferences

17. 2003: American Geophysical Union Fall meeting (AGU), San Francisco: "The formation of non-volcanic rifted margins by the progressive extension of the continental lithosphere", Reston, T.J., M. Pérez-Gussinyé, V. Gaw, & J. Phipps Morgan
18. 2007: American Geophysical Union Spring meeting (AGU), Acapulco: "The effective elastic thickness of South America and its implications for intra-continental deformation and subduction dynamics", M. Pérez-Gussinyé, T. Lowry, T. Watts, & J. Phipps Morgan

19. 2008: European Geophysical Union meeting (EGU), Union Session: “New techniques for characterization of the lithospheric structure: current state and debates”, J.C. Afonso, **M. Pérez-Gussinyé**, Fulla, M. Fernández
20. 2010: American Geophysical Union Fall meeting (AGU), San Francisco, 2010: “Sequential faulting explains the asymmetric structure of conjugate margins and the extension paradox”, C. R. Ranero, **M. Pérez-Gussinyé**
21. 2011: European Geophysical Union meeting (EGU), 2011: “A new tectonic model for sequential faulting and crustal thinning”, **M. Pérez-Gussinyé**, C. R. Ranero
22. 2011: European Geophysical Union meeting (EGU), 2011: “Overriding plate thickness, trench dynamics and flat-slab subduction”, V. Manea, **M. Pérez-Gussinyé**, and M. Manea
23. 2012: International Geological Congress, Brisbane, ‘Sequential faulting explains the asymmetry and extension discrepancy of conjugate margins’, **M. Pérez-Gussinyé**
24. 2013: AGU: Meeting of the Americas, **M. Pérez-Gussinyé** [declined due to advanced pregnancy]
25. 2013: European Geophysical Union meeting (EGU), 2013: “Imaging ductile flow: what Earthscope data tells us about flow rheology of the lithosphere”, Lowry, Becker, Buehler, Miller, **M. Pérez-Gussinyé**, Schutt, Seunarine.
26. 2014: European Geophysical Union meeting (EGU), 2014: “Rheological controls on faulting patterns and architecture at magma-poor rifted margins”, **M. Pérez-Gussinyé**, S. Brune.
27. 2014: American Geophysical Union (AGU), 2014: “Overriding plate thickness, trench dynamics and flat-slab subduction”, V. Manea, **M. Pérez-Gussinyé**, and M. Manea.
28. 2015: European Geophysical Union (EGU): “Modes of extension and serpentinisation at the West Iberia margin”, **M. Pérez-Gussinyé**
29. 2018: European Geophysical Union (EGU): “The role of the lower crustal strength at controlling melting and serpentinisation at magma-poor margins”, **M. Pérez-Gussinyé**
30. 2020: Transform margin workshop, Smolenice, Slovakia, **M. Pérez-Gussinyé**
31. 2023: AGU, “Hydrothermal Feedbacks on Tectonics During Magma-Poor Rifting and Start of Oceanic Spreading”, **M. Pérez-Gussinyé**
32. 2024: 37th International Geological Congress, South Korea, **M. Pérez-Gussinyé**
33. 2024: ADA Lovelace Workshop on Modelling Mantle and Lithosphere Dynamics: “Spatio-temporal Dynamics of Hydrothermal Circulation over 10 million years of Ultraslow-Rifting and Spreading”, **M. Pérez-Gussinyé**
34. 2024: ECORD Summer School “From Ridges to Flanks to Margins – lithosphere dynamics and connections to global environmental changes”, Bremen, Germany, **M. Pérez-Gussinyé**
35. 2024: EAGE 5th Global Energy Transition meeting, session “The Natural Hydrogen System”, Rotterdam, **M. Pérez-Gussinyé**

Invited seminars at universities, companies and online seminars

1. *June 1999*: Southampton Oceanographic Centre, UK, **M. Pérez-Gussinyé**
2. *March 2001*: Department of Earth Sciences, Oxford University, **M. Pérez-Gussinyé**
3. *November 2003*: Bullard Laboratories, University of Cambridge, **M. Pérez-Gussinyé**
4. *December 2003*: Lamont Doherty Earth Observatory, Columbia University, **Pérez-Gussinyé**
5. *February 2004*: Department of Earth Sciences, Oxford University, **M. Pérez-Gussinyé**
6. *July 2004*: Department of Applied Mathematics, Oxford University, **M. Pérez-Gussinyé**
7. *December 2004*: Southampton Oceanographic Centre, **M. Pérez-Gussinyé**
8. *April 2006*: GEOTOP, Univ. of Quebec, Montreal, **Pérez-Gussinyé**
9. *June 2006*: Seismology and Geodynamics Group at ETH, Zürich, **M. Pérez-Gussinyé**
10. *January 2007*: Institut du Physique du Globe, IPGP, Paris, **M. Pérez-Gussinyé**
11. *February 2008*: Dept. Spatial Sciences, Curtin University, Australia, **M. Pérez-Gussinyé**
12. *June 2008*: Institut Universitaire Européen de la Mer, Brest, France, **M. Pérez-Gussinyé**
13. *June 2009*: Dept. Earth Sciences, University of Oxford, **M. Pérez-Gussinyé**

14. *February 2011*: Dept. Earth Sciences, RHUL, M. Pérez-Gussinyé
15. *May 2011*: Geological Survey of Norway, M. Pérez-Gussinyé
16. *May 2011*: Statoil-Oslo, Stavanger, M. Pérez-Gussinyé
17. *August 2011*: GeoForschungs Zentrum Potsdam, Germany, M. Pérez-Gussinyé
18. *September 2011*: Petrobras, Brasil, M. Pérez-Gussinyé
19. *December 2011*: Utah State University, Dept. Geology, M. Pérez-Gussinyé
20. *December 2011*: Stanford University, Dept. of Geophysics, M. Pérez-Gussinyé
21. *February 2012*: University of Lisbon, M. Pérez-Gussinyé
22. *April 2012*: Petrobras, Brasil, M. Pérez-Gussinyé
23. *2014*: Dept. Earth Sciences, Imperial College, M. Pérez-Gussinyé
24. *2016*: Lecture at South China Sea Institute of Oceanology, M. Pérez-Gussinyé
25. *2018*: Petrobras, Brasil, M. Pérez-Gussinyé
26. *2019*: Petrobras, Brasil, M. Pérez-Gussinyé
27. *2021*: Online Rift Seminar Series, M. Pérez-Gussinyé
<https://www.youtube.com/watch?v=OGMKWvZseo8>
28. *2022*: Natural production of Hydrogen Workshop, Oldenburg, Germany
29. *2023*: Petrobras, M. Pérez-Gussinyé
30. *2023*: ETH, Zürich, M. Pérez-Gussinyé
31. *2024*: Shell, M. Pérez-Gussinyé
32. *2024*: Online Rift Seminar Series, M. Pérez-Gussinyé: <https://youtu.be/l-mSQTntkPk?si=ejfqa7eG79aeZRK6>

7. CONFERENCE PAPERS

I have been attending in the order of 2—5 international meetings and workshops per year over the past 25 years. For many of them I have authored or co-authored 3—4 abstracts.

8. ORGANISATION OF CONFERENCES

- *December 2005*: Main convener of session T33 at AGU meeting (San Francisco): “Mechanisms of Continental Extension During Basin and Rifted Margin Formation”.
- *December 2006*: Co-convener AGU (San Francisco): “Strength of the Earth's Lithosphere: Recent Advances in the Estimate and Interpretation of the Elastic Thickness”.
- *December 2007*: Main convener EGU (Vienna): “Tectonics and magmatism during continental rifting and break-up”.
- *August 2010*: Co-convener of session T06 “Flat Slab subduction”, AGU Meeting of the Americas, Brazil.
- *October 2012*: Convener of UK Geological Society meeting (London): “Deep-Water continental margins: the final exploration frontier”.
- *April 2016*, Convener at EGU.
- June 2022, Main workshop convener at EAGE.
- *March 2023*, session convener at Deutsches Geophysikalisches Gemeinschaft (DGG), Bremen, Germany.
- *September 2023*, session convener at Geoberlin.
- *December 2023*, session convener at AGU.

9. PROJECTS & FUNDING (since 2010)

- DFG Project 390741603. Topic: “The Ocean Floor – Earth’s Uncharted Interface”. Funding amount: ~56 million € (funding for two, 5 years postdocs in my group). Period: 1/1/2019 – 31/12/2025. **Role: PI** (one of 25).
- DFG project GPF 18-1-42. Seismic cruise on topic: “Campos basin seismic experiment: from continental extension to oceanic spreading revealed by wide-angle data”. Funding amount: 272,000 €. Planned cruise for: Dec. 2025. **Role: PI**.

- *Third-party funding from Petrobras. Topic: "Integrated Geophysical- Geodynamic study of the North-eastern Brazilian margin". Funding amount: 559743 €. Period: 1/12/2023–30/11/2026. Role PI.*
- *Funding from Young Universities for the Future of Europe (YUFE). Topic: "CHAracterizing H2 natural Reservoirs at Rifted Margins", Funding: 3 year postdoctoral fellowship to Irene Merino. Period: 20/3/2024–19/2/2027. **Role: supervisor.***
- *Funding form China Scientific Council Scholar- ship (CSC). Topic: "Interaction between tectonic deformation and magmatism at the northern South China Sea rifted margin". Funding: 2 year PhD fellowship to Mr. Yang. Period: 1/02/2024 – 31/01/2026. **Role: supervisor.***
- *Funding form CSC. Topic: "Numerical modelling of the hyper-extension mechanism of the southern Australian margins". Funding: 1 year postdoctoral fellowship to Dr. Zhang. Period: 15/10/2023–14/10/2024. **Role: supervisor.***
- *DFG funding. Topic: "Long-term development of rift-rift-rift triple junctions: Numerical modelling and field observations". Funding: 3 year postdoctoral fellowship to Dr. Muluneh. Period: 1/06/2024 – 31/06/2027. **Role: supervisor.***
- *Funding form CSC. Topic: "Interaction of tectonics and surface process at rifted continental margins: example form the Red Sea". Funding: 1 year PhD fellowship to Mr. Haokun. Period: 15/11/2024– 14/10/2025. **Role: supervisor.***
- *DFG project PE 2615/2-1. Topic: 'Serpentinisation, fluid flow, hydrogen and methane production at magma poor margins'. Funding amount: 276100 € Period: 15/03/2018 – 09/12/2022. **Role: PI.***
- *Third-party funding from Petrobras. Topic: 'The Linkage between the rift related magmatism and the CO2 production in Santos Basin: An evolutionary perspective from thermomechanical simulators.' Funding amount: 53,200 € + PhD position for 3 years. Period: 2019 – 2022. **Role: PI.***
- *Third-party funding from Petrobras. Topic: 'Multi-2D Integration seismic observations, kinematic and dynamical models for understanding of lateral and vertical movements during the evolution of Santos, Campos and Espírito Santo Basins'. Funding amount: 28,300 € + Postdoc position for 1.5 years. Period: 8/2018 -12/2019. **Role: PI.***
- *Helmholtz Network of Excellence funding (between AWI and MARUM). Topic: 'The Polar System and its Effects on the Ocean Floor (POSY)'. Funding amount: 133,500 €. Period: 2019 – 2022. **Role: PI.***
- *Research Grant funded by Shell, Chevron and Petrobras for the groups COMPASS. Topic: "Continental Margin Process Analysis, Structures and Stratigraphy". Funding amount: £630,000. Period: 2014– 2017 **Role: PI** (one of 5).*
- *Research Grant funded by STATOIL. Topic: "Estimating heat-flow, subsidence and sedimentation patterns from a sequential faulting kinematic model". Funding amount: £186000. Period: 2011– 2014. **Role: PI.***

10. PhD STUDENT SUPERVISION

- Yang Haokun, 2024-2025
- Peng Yang, 2023-2025
- Rennan Oliveira, 2019-2024.
- Xin Yangfan, 2016-2020.
- Elena Ros, 2014- 2017
- Miguel Andrés Martínez, 2011—2015.
- Giovanni Pezzati, co-supervised with Pete Burgess and Rob Hall, 2012—2015.
- Jorge Taramon, 2014- 2016, co-supervised with J. Phipps Morgan.

11. POSTDOC SUPERVISION

- Miguel Andrés-Martínez, 2016-2019
- Dr. Hasenclever, 2016-2017
- Iskander Mushaldev, 2017-2021

- Dongdong Dong, 2015-2016, 2018
- Mario Araujo, 2018-2020
- Leila Mezri, 2019-2025
- Zhonglan Liu, 2018-2021
- Elmar Albers, 2019-2020
- Andres-Javier Garcia, 2019-2025
- Raghu Ram, 2019-2022
- Karim Norouzi, 2023-2026
- Erkan Gun: 2024-2027
- Irene Merino: 2024-2027

EXTERNAL ENGAGEMENT/IMPACT

12. ACADEMIC-RELATED ACTIVITIES BEYOND THE HE SECTOR

- *December 2010*: Interview on BBC Radio Surrey on the consequences for hydrocarbon exploration of the work that appeared in Ranero & Perez-Gussinye, Nature, 2010.
- *May 2011*: Interview at Sky News TV on the Lorca earthquake, Spain, May 2011.
- *Reports on the article from Ranero & Perez-Gussinye*, Nature, 2010 have appeared in:
 - Science Daily: <http://www.sciencedaily.com/releases/2010/11/101103151954.htm>
 - Oilprice.com: <http://oilprice.com/Energy/Energy-General/A-New-Way-to-Prospect-and-Discover-Oil-and-Gas.html>
 - Business High-Beam: <http://business.highbeam.com/408989/article-1G1-244680649/report-summarizes-life-sciences-study-findings-cr-ranero>
 - Lectures notes on area balancing of cross sections from Cassey Moore (University Santa Cruz, US: <http://ic.ucsc.edu/~casey/earth150/Lectures1.html>)
 - Background reading for courses on Imaging continental breakup with ocean bottom seismic techniques at NOCS Graduate School Projects Southampton (<http://www.noc.soton.ac.uk/soes/projects/system.php?mode=showproject&project=737>)
- *Reports on the article from Lowry & Perez-Gussinye*, Nature, 2011 have appeared in:
 - *News and Views Section of Nature*: Burgmann, R., and P. Audet, 2011. Continental jelly, Nature, 471, 312-313 (News & Views)
 - *Science magazine* (<http://news.sciencemag.org/sciencenow/2011/03/quartz-fingers-weak-spots-in-ear.html>)
 - *US National Science Foundation* (http://www.nsf.gov/news/news_summ.jsp?cntn_id=118951)
 - Science Daily (<http://www.sciencedaily.com/releases/2011/03/110316152949.htm>).
 - Daily Mail (<http://www.dailymail.co.uk/sciencetech/article-1367149/Could-quartz-hold-key-predicting-earthquakes-volcanoes.html>)
 - Reuters (<http://us.mobile.reuters.com/article/scienceNews/idUSTRE72F87D20110316>)
 - London News (<http://www.londonthenews.com/news/Science/20110317/20592372/Study-Quartz-Could-Predict-Earthquakes.htm>)
 - First Science (http://www.firstscience.com/home/news/breaking-news-all-topics/viscous-cycle-quartz-is-key-to-plate-tectonics-page-2-1_101906.html)
- Reports on Pérez-Gussinyé et al., 2023, in Nature Reviews Earth and Environment appeared in:
 - Phys.org: <https://phys.org/news/2023-02-continental-margins-carbon-neutral-economy.html>
 - Science Daily: <https://www.sciencedaily.com/releases/2023/02/230214153908.htm>
 - Das Physikportal: <https://www.pro-physik.de/nachrichten/das-potenzial-von-riftraendern-fuer-eine-kohlenstoffneutrale-wirtschaft>

- Die Linde. <https://dielinde.online/21799/ueberblick-ueber-das-potential-von-riftraendern-fuer-eine-energiewende/>
- Deutsche Geologische Gesellschaft: <https://www.dggv.de/besseres-verstaendnis-auf-dem-weg-zu-einer-kohlenstoffneutralen-wirtschaft/>

ADMINISTRATION/LEADERSHIP

13. CURRENT INTERNAL POSITIONS OF RESPONSIBILITY

- Women's representative at the Dept. Geosciences, University of Bremen.
- *Member of the Dept. Geosciences Council.*
- *Member of the MARUM Council.*

13. EXTERNAL POSITIONS OF RESPONSIBILITY

- *May 2010 – May 2012:* Member of the European Geoscience Union Outstanding Young Scientist Award committee for the Tectonics and Structural Geology Section.
- *October 2013 – onwards:* Member of the management committee of the European COST action: FLOWS (Impact of Fluid circulation in old oceanic Lithosphere on the seismicity of transform-type plate boundaries: new solutions for early seismic monitoring of major European Seismogenic zones). The role involves coordinating the project in the UK and at the EU level. This includes planning and dissemination of project activities.
- *October 2013 – onwards:* member of the Royal Astronomical Society Diversity Committee.
- AGU, Jason Morgan Award committee member, 2022-2023.

14. MEMBERSHIPS, AFFILIATIONS, OTHER APPOINTMENTS

- Member of the European Geosciences Union.
- Member of the American Geophysical Union.
- *Peer-review:* of papers for a large number of major international geoscience journals (e.g. Nat. Geosci., Nat. Comm., Geology, G-cubed, JGR, Tectonics, Tectonophysics, Physics of the Earth and Planetary Interiors, Marine Geology, Geophysical Journal International, Earth and Planetary Science Letters, Geological Society Special Publications, Basin Research, Physics of the Earth and Planetary Interiors, Nature Geoscience...).

15. DATE THE CURRICULUM VITAE WAS PREPARED

- *September 2024*