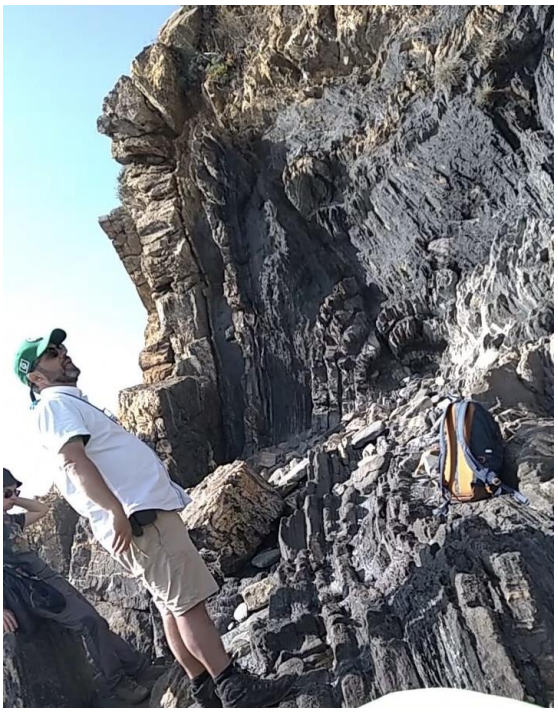
Filipe M. Rosas | Short Curriculum Vitae



Personal Information

Name: Filipe Medeiros Rosas

Date of Birth: 24 September 1970
Place of Birth: Lisbon, Portugal

Professional Address:
Departamento de Geologia,
Faculdade de Ciências da Universidade de Lisboa
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Education

- **Habilitation (Geology) -** University of Lisbon, March 2018
- **PhD in Geology (Internal Geodynamics) -** University of Lisbon, July 2003
- **MSc in Geology (Internal Dynamic Geology)** – University of Lisbon, July 1996
- **BSc (4 years "Licenciatura") in Geology (scientific branch)** – University of Lisbon, October 1993

Work Experience

- **Assistant Professor ("Professor Auxiliar") -** Faculty of Science, University of Lisbon, July 2003 - Present.
- **Tutor (off-campus) of Heriot-Watt University (Edinburg, Scotland)**, from Abril 2014 to February 2020: Lecturer of the Petroleum Geoscience course of the Master of Science in Petroleum Engineering offered by the Heriot-Watt University and ISPG/GALP consortium ("Instituto do Petróleo e Gás, Galp Energia").
- **Trainee Assistant ("Assistente")** - Faculty of Science, University of Lisbon, from January 2000 to July 2003: Trainee Assistant of the Geodynamics section (Geology Department, Faculty of Science, University of Lisbon).

- **PhD Scholarship holder** – from February 1997 to December 1999: PhD scholarship granted by the national science foundation - FCT ("Fundação Para a Ciência e Tecnologia").
- **Trainee Scholarship holder** – from September 1996 to January 1997: Trainee scholarship granted by the national geological survey (IGM - "Instituto Geológico Mineiro")
- **MSc Scholarship holder** – from April 1994 to July 1996: MSc scholarship granted by the national science foundation (JNICT – "Junta Nacional de Investigação Científica e Tecnológica").

Research Projects

Participation in research projects as PI (FCT project)

- **MODELINK** (from April 2014 to April 2015): "Modeling the tectonic missing link between the active Gloria and SWIM fault systems along the (Atlantic) Eurasia-Nubia plate boundary"; Project coordinator: **Filipe M. Rosas** (University of Lisbon, IDL). Budget: **€49,936**.

Participation in research projects (FCT projects)

- **SPIDER** (from January 2016 to January 2019): "Seismogenic Processes In slowly DEforming Regions"; Project coordinator: Susana Custódio (UL, IDL). Budget: **€200.000**.

- **iPLUS** (from July 2012 to June 2015): "Interaction between Mantle PLUmes and Subduction zones"; Project coordinator: Catherine Mériaux (IDL). Budget: €**90.000**.

- **SWIMGLO**: "The Gloria-SWIM plate boundary Faults connection and its importance on the propagation of tectonic deformation and deep-water ecosystems along the Azores-Gibraltar Plate Boundary"; Project coordinator: Pedro Terrinha (Instituto Nacional de Engenharia, Tecnologia e Inovação (INETI), Portugal). Budget: €**185.535**.

- **TOPOMED** (from September 2008 to July 2012): "Plate re-organization in the western Mediterranean: lithospheric causes and topographic consequences" - A Collaborative Research Project for the ESF-EUROCORE Programme - 4D Topography Evolution in Europe: Uplift, Subsidence and Sealevel Change (TOPO-EUROPE). PI: Pedro Terrinha (Instituto Nacional de Engenharia, Tecnologia e Inovação - INETI, Portugal). Budget: €**195.320**.

- **ALMOND** (from January 2008 to April 2011): "Modelação multi-escala da deformação do Golgo de Cádis". PI: Maria da Conceição Neves (University of Algarve, Portugal). Budget: €**50.000**.

- **TECTAP** (September 2007 to February 2011): "Structure, stratigraphy and tectono-thermal evolution of the Tagus Abyssal Plain". Project coordinator: Marylin Moulin (UL, IDL, Portugal). Budget: €**120.000**.

- **SWITNAME** (from March 2006 to February 2009): "Tectonic Numerical and Analogue Modelling of SW Iberia". Project coordinator: Luís Matias (UL, DEGGE, IDL). Budget: €**24.000**.

- **MAGMAFLUX** (2006-2009): "Origem, instalação e fluxo de intrusões ígneas ao longo de falhas mantélicas e crustais". Project coordinator Pedro Terrinha (INETI - University of Lisbon)

Participation in research projects (European project)

- **NEAREST** (2006-2009): "Integrated observations from NEAR shore sourcES of Tsunamis: towards an early warning system"; European project coordinated by Nevio Zitellini (Univ. Bolonha, Italy).

Teaching Experience

- I've been teaching **Geology** for almost **23 years**, i.e., since the year 2000, at the **University of Lisbon** (Geology Department, Faculty of Sciences).

- During this period, I taught **18 different courses**, 13 at BSc degree level, and 5 at MSc level.

- I coordinated (as course "regent") 4 courses at **BSc level**: **Structural Geology**, **Marine Geology**, **Field Geology I** and **Field Geology II**.

- At **MSc level** I coordinated (as course "regent") the following 5 courses: **Structural Geology and Tectonics**, **Numerical and Experimental Modelling of Geological Processes**, **Tectonophysics**, **Geology of Continental Margins**, and **Geology of Oceanic Basins**.

Present teaching (2022/2023):

BSc Geology degree courses:

- **Structural Geology** (course **coordinator or "regent"**, 2nd year/2nd semester);
- **Field Geology** (course **coordinator or "regent"**, 3rd year/2nd semester);
- **Tectonics** (participation in teaching theoretical and practical courses, 3rd year/2nd semester);
- **Programming and Scientific Calculus in Geology** (participation in teaching practical courses, 1st year/2nd semester).

MSc Geology degree courses:

- **Tectonophysics (course** coordinator or "regent", 1st year/2nd semester)

Past teaching:

THEORETICAL COURSES:

- **Tectonophysics** (Master course in Geophysics, DEGGE, Faculty of Science, University of Lisbon)
- **Experimental and Numerical Modelling of Geological Processes** ("Modelação Experimental e Numérica de Processos Geológicos", Master course in Geology – Structural Geology, Department of Geology, Faculty of Science, University of Lisbon);
- **Marine Geology** (undergraduate course, Department of Geology, Faculty of Science, University of Lisbon);
- **Geology of Oceanic Basins** (Master course in Marine Sciences, Faculty of Science, University of Lisbon)
- **Geology of Continental Margins** (Master course in Geology, Department of Geology, Faculty of Science, University of Lisbon)
- **Petroleum Geology** (Master of Science in Petroleum Engineering of Heriot-Watt University (Edinburg, Scotland)

PRACTICAL COURSES:

- **Computational Geology** ("Computação Aplicada à Geologia", 3rd year of University of Lisbon 4-year Geology degree)
- **Structural Geology** ("Geologia Estrutural", 3rd year of University of Lisbon 4 year Geology degree)
- **Geo-maths** ("Geomatemática", 3rd year of University of Lisbon 4-year Geology degree)
- **Field Geology I, II, and III** ("Geologia de Campo I, II e III" 1st, 2nd and 3rd year of University of Lisbon 4-year Geology degree)
- **Geology** ("Geologia", 1st year of University of Lisbon 4-year Geology degree)

PhD students:

Current:

– **Afonso Gomes**. "Geodynamic Modelling of Obduction: a new contribution towards a fully buoyancy-driven plate tectonics theory". Co-supervised with N. Riel (Bergen University, Norway) and J.C. Duarte (University of Lisbon). Started in September 2019.

Completed thesis:

- **Jaime Almeida**. "Geodynamic modelling of subduction zones: Subduction zone initiation by polarity reversal and main dynamic controls on the stability of single-sided subduction". Co-supervised with N. Riel (Univ. JGU, Mainz, Germany), started in March 2017, ended in February 2022.

- **João Daniel Casal Duarte**. "Tectonics of the Gulf of Cadiz: the role of the Gibraltar arc in the reactivation of the SW Iberia margin". University of Lisbon. Co-supervised with P. Terrinha, started in 2008, ended in 2012.

MSc Students:

Current:

- **Francisco Bolrão**. "Numerical modeling of subduction zones: thermo-mechanical stabilization as a function of overriding plate rheology and thickness". Started in 2019. Co-supervised by João Duarte (IDL, DG-FCUL).

– **Diogo Neves**. "Numerical modelling of boudinage in non-coaxial deformation regimes: implications for the interpretation of natural structures". Started in 2022. Co-supervised by João Duarte (IDL, DG-FCUL).

- **Nuno Rodrigues**. "Modelling of intra-oceanic rifting and implications for the Terceira Rift in the Azores".Started in 2022. Co-supervised by João Duarte (IDL, DG-FCUL).

- **Francisco Pereira**. "Numerical modelling of sheath folds under non-coaxial and coaxial deformation regimes: implications for the interpretation of natural structures as shear-sense kinematic indicators". Started in 2022. Co-supervised by João Duarte (IDL, DG-FCUL).

Completed thesis:

Afonso Gomes. "Analogue modelling of strike-slip fault propagation across crustal (interbedded) low viscosity anomalies". Starting in March 2018, ended February 2019.

Cristiana Pereira da Cunha. "The interaction between macrofauna and mud volcanoes". Universidade de Lisboa. Co-supervised with P. Terrinha (IPMA, GeoFCUL). and M. Cunha (Univ. Aveiro). Started in 2013, ended in 2016.

Jaime Almeida. “Kinematic Evolution of a Transcurrent Fault Propagating Through Consecutive Volcanic Cones:a Case of Rheology and Separation” Co-supervised with Hemin Koyi (Univ. Uppsala, Suécia). (from 2015 to 2016).

Ruth Keppler. “Analogue modelling of continental rifts: The influence of viscous channel thickness on the development of overlying brittle deformation patterns”. University of Bonn. Co-supervised with Thorsten Nagel, started in 2009, ended in 2011.

Ana Rita da Graça Barbosa Branco Fernandes. "Controlo estrutural e evolução tectónica de diapiros salíferos na Bacia Lusitânica". University of Lisbon. Co-supervised with P. Terrinha, started in 2007, ended in 2009.

João Daniel Casal Duarte. "Morfoestruturas Quilométricas em Forma de Crescente nas Águas Profundas do Golfo de Cádis". University of Évora. Co-supervised with P. Terrinha, started in 2005, ended in 2007.

Silvina Maria Marques Rosa Nunes Pimentel. "Aplicação da Modelação Analógica e Gráfica ao Ensino da Geologia, Utilizando o Caso da Formação da Cadeia da Arrábida". Universidade de Lisboa. Co-supervised with J. C. Kullberg (Univ. Nova de Lisboa), started in 2004, ended in 2006.

Research Interests

Main scientific domain:

Tectonics and Structural Geology mainly focused on using **analogue and numerical geodynamic modelling** techniques applied to the resolution of different **tectonic problems at different scales**.

Main research interests:

- Analogue and Numerical Modelling:
    - Dynamics of **induced subduction initiation** by oceanic plateau docking and polarity reversal (subduction flip);
    - **Double graben formation** during early continental rifting;
    - Pre-tectonic **morpho-rheological perturbations across active strike-slip systems**;
    - **Passive vs. active strain accommodation above thrust ramp systems** of different geometries (flat-ramp-flat or convex-concave);
    - Rheological control on **narrow vs. delocalized rifting** fault patterns;
    - Morpho-tectonic gauge of active **strike-slip faulting** under simple shear or transpressive regimes.
    - Tectonic **thrust-wrench fault interference** and related stress transference;
    - **Sheath fold formation** under co-axial and non-coaxial shear regimes.
- Tectonic continental collision and build-up of **orogenic belts during the Variscan cycle** in SW Iberia.
- Tectonics of the **Eurasia - Africa (Nubia) plate boundary in NE Atlantic**: the discrete dextral strike-slip transform Gloria Fault and its link to the Gulf of Cadiz diffuse plate boundary.
- Meso-Cenozoic tectonic evolution of the West Iberian Margin (morpho-tectonic analysis and **interpretation** of combined **multi-beam swath bathymetry and reflection seismic** profiles in the WIM offshore).

Published Articles

Bibliometrics:

ORCID: http://orcid.org/0000-0002-6734-2916

Scopus: https://www.scopus.com/authid/detail.uri?authorId=15737449500

Author ID: 15737449500
Documents by author: 32
Total citations: 923 (by 384 documents)
h-index: 17

Thomson Reuters: https://www.webofscience.com/wos/author/record/A-4104-2013

Web of Science ResearcherID: A-4104-2013
Documents by author: 31
Total citations: 867
h-index: 17

Google Scholar: https://scholar.google.pt/citations?user=FA4LenMAAAAJ&hl=pt-PT

Total citations: 1431
h-index: 19

International peered reviewed publications (accepted or in print):

2022

[34] Escada, C.; Represas, P.; Santos, F.; Pereira, R.; Mata, J.; **Rosas, F. M.** (2022). New evidence of Late Cretaceous magmatism on the offshore central West Iberian Margin (Estremadura Spur) from potential field data. **Tectonophysics.** https://doi.org/10.1016/j.tecto.2022.229354.

[33] Almeida, J.; Riel, N., **Rosas, F. M.**; Duarte, J.; Kaus, B. (2022). Self-replicating subduction zone initiation by polarity reversal. **Communications Earth & Environment,** 3(55). https://doi.org/10.1038/s43247-022-00380-2.

[32] Oliveira, M. E.; Gomes, A.S.; **Rosas, F. M.**; Duarte, J. C.; França, G. S.; Almeida, J. C.; Fuck, R. A. (2022). Impact of crustal rheology and inherited mechanical weaknesses on early continental rifting and initial evolution of double graben structural configurations: Insights from 2D numerical models. **Tectonophysics**, 229281. https://doi.org/10.1016/j.tecto.2022.229281.

[31] J. Almeida; N. Riel; **F. M. Rosas**; J. C. Duarte; W. P. Schellart (2022). Polarity-reversal subduction zone initiation triggered by buoyant plateau obstruction. **Earth and Planetary Science Letters**. https://doi.org/10.1016/j.epsl.2021.117195

2021

[30] Pereira, R.; Mata, J.; Ramalho, R.S.; **Rosas, F.M.**; Silva, B.; Represas, P.; Escada, C.(2021). Nature, timing and magnitude of buried Late Cretaceous magmatism on the central West Iberian Margin. **Basin Research**. https://doi.org/10.1111/bre.12640

[29] Oliveira, M. E.; Gomes, A.; Duarte, J. C.; França, G.; **Rosas, F. M.**; Fuck, R. A.; Silva, F. A.(2021). Evolution of parallel, oblique and triple-junction rifts: Insights from analogue modelling. **Journal of South American Earth Sciences**. https://doi.org/10.1016/j.jsames.2021.103394

[28] Pereira, R.; **Rosas, F**.; Mata, J.; Represas, P.; Escada, C.; Silva, B. (2021). Interplay of tectonics and magmatism during post-rift inversion on the central West Iberian Margin (Estremadura Spur). **Basin Research**. https://doi.org/10.1111/bre.12524

2020

[27] Goussin, F., Riel, N., Cordier, C., Guillot, S., Boulvais, P., Roperch, P., Replumaz, A., Schulmann, K., Dupont-Nivet, G., **Rosas, F.**, Guo, Z. (2020). Carbonated Inheritance in the Eastern Tibetan Lithospheric Mantle: Petrological Evidences and Geodynamic Implications. **Geochemistry, Geophysics, Geosystems**, 21 (2). https://doi.org/10.1029/2019GC008495

2019

[25] Terrinha, P., Ramos, A., Neres, M., Valadares, V., Duarte, J., Martínez-Loriente, S., Silva, S., Mata, J., Kullberg, J. C., Casas-Sainz, A., Matias, L., Fernández, O., Muñoz, J. A., Ribeiro, C., Font, E., Neves, C., Roque, C., **Rosas, F.**, Pinheiro, L., Bartolomé, R., Sallarès, V., Magalhães, V., Medialdea, T., Somoza, L., Gràcia, E., Hensen, C., Gutscher, M-A., Ribeiro, A., Zitellini, N., (in press). The Alpine Orogeny in the West and Southwest Iberia Margins. In: C. Quesada and J. T. Oliveira (eds.), The Geology of Iberia: A Geodynamic Approach, **Regional Geology Review**s, https://doi.org/10.1007/978-3-030-11295-0_11

[24] Gomes, A.S., **Rosas, F.M.**, Duarte, J.C., Schellart, W.P., Almeida, J., Tomás, R., Strak, V., 2019. Analogue modelling of brittle shear zone propagation across upper crustal morpho-rheological heterogeneities. **Journal of Structural Geology**, 126:175-197. http://dx.doi.org/10.1016/j.jsg.2017.05.002

2018

[23] Duarte, J.C., Schellart, W.P., **Rosas, F.M.**, 2018. The future of Earth's oceans: consequences of subduction initiation at the Atlantic in the present Supercycle. **Geological Magazine**, :1-14. http://dx.doi.org/10.1017/S0016756816000716

2017

[22] **Rosas, F.M.**, Duarte, J.C., Almeida, P., Schellart, W.P., Riel, N., Terrinha, P., 2017. Analogue modelling of thrust systems: passive vs. active hanging wall strain accommodation and sharp vs. smooth fault-ramp geometries. **Journal of Structural Geology**, 99:45-69. http://dx.doi.org/10.1016/j.jsg.2017.05.002

2016

[21] **Rosas**, **F.M.**, Duarte, J.C., Schellart, W.P., Tomás, R., Terrinha, P., 2016. Seismic potential of thrust-wrench tectonic interference between major active faults offshore SW Iberia: a new explanation for the 1755 Great Lisbon Earthquake? **American Geophysical Union, Geophysical Monograph Series 219**. (Duarte, J.C. and Schellart, W.P. eds., Plate Boundaries and Natural Hazards). Published by John Wiley & Sons, Inc. doi: 10.1002/9781119054146.ch9

2015

[20] Meriaux, C.A., Duarte, J.C., Duarte, S., Chen, Z., **Rosas, F.M.**, Mata, J., Schellart, W.P., Terrinha, P., 2015. Capture of the Canary mantle plume material by the Gibraltar arc mantle wedge during slab rollback. **Geophysical Journal International**, 201: 1717-1721. doi: 10.1093/gji/ggv120.

[19] **Rosas, F.M.**, Duarte, J.C., Schellart, W.P., Tomás, R., Grigorova, V., Terrinha, P., 2015. Analog modeling of different angle thrust-wrench fault interference in a brittle medium. **Journal of Structural Geology**, 74: 81-104. doi:10.1016/j.jsg.2015.03.005.

2014

[18] Duarte, J.C., Rosas, F.M., Terrinha, P., Schellart, W.P., Boutelier, D., Gutscher, M.A., Ribeiro, A., 2014. Are subduction zones invading the Atlantic? Evidence from the SW Iberia margin: REPLY. **Geology** 42.

[17] **Rosas**, **F.M.**, Terrinha, P., Duarte, J., Baptista, L., Kullberg, C., Almeida, J., Barata, F., Carvalho, B., Grigorova, V., Tomás, R., Almeida, P., 2014. Analog modelling of strike-slip fault (lateral) propagation from an elastic to a viscous medium: insights from trial experiments. **Comunicações Geológicas**, 101 (volume especial III): 1429-1432 (ISSN: 0873-948X; e-ISSN: 1647-581X).

2013

[16] Keppler, R., **Rosas**, **F.M.,** Nagel, T.J., 2013. Thin viscous middle-crust and evolving fault distribution during continental rifting: insights from analog modeling experiments. **Tectonophysics**, 608: 161–175, doi: http://dx.doi.org/10.1016/j.tecto.2013.10.001.

[15] Duarte, J.C., **Rosas**, **F.M.,** Terrinha, P., Schellart, W.P., Boutelier, D., Gutscher, M.-A., Ribeiro, A., 2013. Are subduction zones invading the Atlantic? Evidence from the southwest Iberia margin. **Geology**, doi:10.1130/G34100.1.

2012

[14] Gutscher, M.A., Dominguez, S., Westbrook, G.K., Le Roy, P., **Rosas**, **F.,** Duarte, J.C., Terrinha, P. Miranda, J.M., Graindorge, D., Gailler, A., Sallares, V., Bartolome, R., 2012. The Gibraltar subduction: A decade of new geophysical data. **Tectonophysics**, 574-575: 72-91(http://dx.doi.org/10.1016/j.tecto.2012.08.038)

[13] **Rosas**, **F.M.,** Duarte, J.C., Neves, M.C., Terrinha, P., Silva, S., Matias, L., Gràcia, E., Bartolome, R., 2012. Thrust-wrench interference between major active faults in the Gulf of Cadiz (Africa-Eurasia plate boundary, offshore SW Iberia): tectonic implications from coupled analogue and numerical modeling. **Tectonophysics**, 548-549:1-21 (http://dx.doi.org/10.1016/j.tecto.2012.04.013)

[12] Cunha, T.A., Matias, L.M., Terrinha, P., Negredo, A.M., **Rosas**, **F.**, Fernandes, R.M.S., Pinheiro, L.M., 2012. Neotectonics of the SWIberia margin, Gulf of Cadiz and Alboran Sea: a reassessment including recent structural, seismic and geodetic data. **Geophysical Journal International**, 188 (3): 850-872, doi: 10.1111/j.1365-246X.2011.05328.x (http://onlinelibrary.wiley.com/doi/10.1111/j.1365-246X.2011.05328.x/full)

2011

[11] Duarte J.C, **Rosas**, **F.M.**, Terrinha, P., Gutscher, M.-A., Malavieille, J., Silva, S., Matias, L., 2011. Thrust - wrench interference tectonics in the Gulf of Cadiz (Africa - Iberia plate boundary in the North-East Atlantic): Insights from analog models. **Marine Geology**, 289: 135-149,doi:10.1016/j.margeo.2011.09.014

2010

[10] Duarte J.C, Terrinha, P., **Rosas**, **F.M.**, Valadares, V., Pinheiro, L.M., Matias, L., Magalhães, V., Roque, C., 2010. Crescent-shaped morphotectonic features in the Gulf of Cadiz (offshore SW Iberia). **Marine Geology**, 271: 236-249,doi:10.1016/j.margeo.2010.02.017.

[09] Duarte, J.C., Valadares, V., Terrinha, P., **Rosas, F**., Zitellini, N. and Gràcia, E., 2010. Anatomy and tectonic significance of WNW-ESE and NE-SW lineaments at a transpressive plate boundary (Nubia-Iberia). **Trabajos de Geología**, 29: 237-241.

2009

[08] Terrinha, P., Matias, L., Vicente, J., Duarte, J., Luís, J., Pinheiro, L., Lourenço, N., Diez, S., **Rosas, F**., Magalhães, V., Valadares, V., Zitellini, N., Mendes Víctor, L. and MATESPRO Team, 2009. Morphotectonics and Strain Partitioning at the Iberia-Africa plate boundary from multibeam and seismic reflection data. **Marine Geology**, 267: 156-174, doi:10.1016/j.margeo.2009.09.012.

[07] **Rosas, F.M.**, Duarte, J., Terrinha, P., Valadares, V., Matias, L., 2009. Morphotectonic characterization of major bathymetric lineaments in NW Gulf of Cadiz (Africa-Iberia plate boundary): insights from analogue modelling experiments. **Marine Geology**, 261: 33-47, doi:10.1016/j.margeo.2008.08.002.

[06] Gutscher, M-A., Dominguez, S., Pascal, G., Babonneau, N., Mulder, T., Bartolome, R., **Rosas**, **F.**, Terrinha P., 2009. Tectonic shortening and gravitational spreading in the Gulf of Cadiz accretionary wedge: observations from multi-beam bathymetry and seismic profiling. **Marine and Petroleum Geology**, 26: 647-659,doi:10.1016/j.marpetgeo.2007.11.008.

[05] Neves, M.C., Terrinha, P., Afilhado, A., Moulin, M., Matias, L., **Rosas, F**., 2009. Response of a multi-domain continental margin to compression: study from seismic reflection - refraction and numerical modelling in the Tagus Abyssal Plain. **Tectonophysics**, 468: 113-130, doi:10.1016/j.tecto.2008.05.008.

2008

[04] **Rosas, F.M.**, Marques, F.O., Ballèvre, M., Tassinari, C., 2008. Geodynamic evolution of the SW Variscides: orogenic collapse shown by new tectonometamorphic and isotopic data from western Ossa-Morena Zone, SW Iberia, **Tectonics**, 27, TC6008, doi:10.1029/2008TC002333.

2002

[03] **Rosas, F**., Marques, F.O., Luz, A., Coelho, S., 2002. Sheath folds formed by drag induced by rotation of rigid inclusions in viscous simple shear flow: nature and experiment. **Journal of Structural Geology**, (24): 45-55. http://dx.doi.org/10.1016/S0191-8141(01)00046-3

2001

[02] **Rosas, F**., Marques, O.F., Coelho, S., Fonseca, P., 2001. Sheath fold development in bulk simple shear: Analougue modeling of natural examples from the Southern Iberian Variscan fold belt, in Koyi, H.A. & Mancktelow, N.S. (Eds.), Tectonic Modeling: A Volume in Honor of Hans Ramberg, **Geological Society of America**, Boulder, Colorado, **Memoir** 193, pp. 101-110. http://memoirs.gsapubs.org/content/193/101.full.pdf+html

1999

[01] Fonseca, P., Munhá, J., Pedro, J., **Rosas, F**., Moita, P., Araújo, A., Leal, N., 1999. Variscan ophiolites and high-presssure metamorphism in southern Iberia. **Ofioliti**, 24 (2), 259-268 http://www.ofioliti.it/index.php/ofioliti/article/view/106