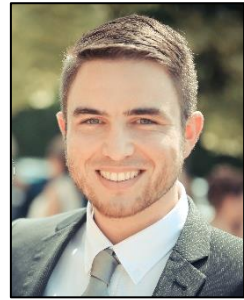


## Damien Do Couto - Geologist

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### AREAS OF EXPERTISE

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- Regional studies, basin analysis and seismic/sequence stratigraphy based on well data and seismic analysis and interpretation.
- Field geology, stratigraphy, tectonics and geodynamics.
- Gravity measurement and modelling, static 3D modeling

### EXPERIENCE

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- May 14-**            **University of Geneva**, Switzerland  
Post-doctoral researcher
- Basin analysis on the Swiss Molasse Basin, identification and characterization of deep reservoirs.
- Oct 10-Jan 14**    **Total and University of Pierre & Marie Curie** Paris, France  
*PhD*
- Insights in geodynamic and sedimentary processes of the Alboran domain (Western Mediterranean Sea) during the Neogene and re-assessment of the varied potential petroleum systems in the area.
  - Structural and (bio)stratigraphic field studies; seismic stratigraphy; 3D basin modelling.
- Fev 09 –Jun 09**    **Institut des Sciences de la Terre d'Orléans** (Earth Science Institute) Orléans, France  
*Master Thesis in collaboration with BRGM*
- Geological significance of in-situ EPMA dating on monazite crystals: application to the polymetamorphic sequence of La Sioule, French Massif Central (structural field analyses; microscopic structural/petrographic identifications; in-situ EPMA dating and SEM analyses).
- May 08 - Jun 08**    **Institut des Sciences de la Terre d'Orléans** (Earth Science Institute) Orléans, France  
*Master's Degree*
- Research assistant project entitled Holocene paleoenvironmental reconstruction from proglacial lake sediments in the Western Alps (Lake Blanc Huez, France).
  - Palynological analyses on cores samples (chemical treatment to microscopic identification and counting); assessment of the human activity impact.

### EDUCATION

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- Oct 10 - Jan 14**    **University of Pierre & Marie Curie** Paris, France  
*TOTAL scholarship holder*  
PhD. Geodynamic evolution of the Alboran domain (Spain – Morocco) during the Neogene: tectonic and sedimentary study of its onshore and offshore sedimentary basins.  
Supervisors: Christian Gorini (UPMC, Paris), Laurent Jolivet (ISTO, Orléans), Jean-Luc Auxietre (TOTAL)
- Sep 04- Sep 09**    **University of Orléans** Orléans, France  
*M.sc. Geosciences (with Distinction) Ranked 1<sup>st</sup>*  
*Bachelor of Geoscience (with Distinction) Ranked 2<sup>nd</sup>*

## FIELD WORK & OCEANOGRAPHIC CRUISES

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Numerous field trips done in Andalucia (southern Spain) and in the Rif (northern Morocco) to study the Neogene tectonic and sedimentary history of both margins.

Field course of *Clastic Sedimentology, a practical course on sandstone reservoirs illustrating modern and ancient reservoir analogs*, Tremp Basin (Spain) TOTAL.

**May - Aug 12** Participated in the **SARAS - Eurofleet** and **MARLBORO 2** cruises (E. d'Acremont, Chief scientist) Objectives: image the active tectonic structures and sedimentary systems in the South Alboran Sea. Material: High-resolution multibeam and seismic acquisition, recovery of shallow gravity-cores and box-core samples.

**Jun 10** Participated in the **SAGAS-Bis** cruise (B. Alonso, Chief scientist) Objectives: stratigraphic/morphologic interaction through the study of turbidites and contourites in the northern Alboran Sea (Spain). Material: High-resolution multibeam and seismic acquisition, recovery of shallow gravity-core.

## TEACHING EXPERIENCE

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**2014** Geophysics Exploration courses (Seismic stratigraphy, Time-depth conversion and seismic interpretation) for Master of Geology University of Geneva.

Introduction course of the seismic and geological interpretation software IHS Kingdom in the frame of the AAPG Student Chapter of the University of Geneva (2 days).

**2011 & 2012** Field school for the ENAG School (BRGM, Orléans, France) (jointly with Tuduri, J.; Jolivet, L.): geology of the southeastern Spain sedimentary basin and volcanic province of Cabo de Gata.

## MENTORING

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**2011-2012** Daichi Yoon, MSc degree, University Pierre & Marie Curie, Paris (France) jointly with C. Gorini. Tectonic and stratigraphic study of the northern Alboran Sea basin (Spain).

**2010-2011** Nicolas Folcher, MSc degree, University of Orléans (France) jointly with C. Gumiaux, R. Augier, and L. Jolivet. Structural evolution of the Sorbas Basin (southeastern Spain): insights from joined gravity and 3D modeling surveys.

**2009-2010** Noémie Le Bret, MSc degree, University of Orléans (France) jointly with L. Jolivet and C. Gumiaux. 3D modelling of the Sorbas Basin, southeastern Spain: illustration of the Messinian Erosional Surface.

## COMMUNICATIONS

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**Publications** (in press and published):

**Do Couto D.**, Popescu S.M., Suc J.P., Melinte-Dobrinescu M.C., Barhoun N., Gorini C., Jolivet L., Poort J., Jouannic G., Auxietre J.L. Reply to the comment on the paper "Lago Mare and the Messinian Salinity Crisis: Evidence from the Alboran Sea (S. Spain) by Do Couto et al. (2014) *Marine and Petroleum Geology* 52 (57-76)" authored by Serrano and Guerra-Merchán, *Marine and Petroleum Geology*, in press.

**Do Couto D.**, d'Acremont E., Estrada F., Gorini C., Ercilla G., Juan C., Ammar A., Jabour H., The Alboran Sea Regional Settings and MSC surfaces, in Lofi *et al.* (Eds), The Messinian Salinity Crisis seismic markers in the Mediterranean Sea – Volume 2, *CCGM / Mémoires de la SGF*, in press.

D'Acremont E., Gutscher M.A., Rabaute A., Mercier de Lépinay B., Lafosse M., Poort J., Ammar A., Tahayt A., Le Roy P., Smit J., **Do Couto D.**, Cancouët R., Prunier C., Ercilla G., Gorini C., 2014. High-resolution imagery of active faulting offshore Al Hoceima, Northern Morocco, *Tectonophysics*, 632, 160-166.

**Do Couto D.**, Gumiaux C., Augier R., Leuret N., Folcher N., Jouannic G., Jolivet L., Suc J.P., Gorini C., 2014a. Tectonic inversion of an asymmetric graben: insights from a combined field and gravity survey in the Sorbas basin, *Tectonics*, 33(7), 1360-1385.

**Do Couto D.**, Popescu S.M., Suc J.P., Melinte-Dobrinescu M.C., Barhoun N., Gorini C., Jolivet L., Poort J., Jouannic G., Auxietre J.L., 2014b. Lago Mare and the Messinian Salinity Crisis: Evidences from the Alboran Sea (S. Spain), *Marine and Petroleum Geology*, 52, 57-76.

Augier R., Jolivet L., **Do Couto D.** and Negro F., 2013. From ductile to brittle, post- to late-orogenic evolution of the Betic Cordillera: Structural insights from the North-eastern Internal Zones, *Bulletin de la Société Géologique de France*, 184, 405-425.

Suc J.-P., **Do Couto D.**, Melinte-Dobrinescu C.M., Macaleț R., Quillévéré F., Clauzon G., Csato I., Rubino J.L., Popescu S.M., 2011. The Messinian Salinity Crisis in the Dacic Basin (SW Romania) and early Zanclean Mediterranean - Eastern Paratethys high sea-level connection, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 310, 3-4, 256-272.

#### **Publications** (in review):

Bache F., Gargani J., Suc J.P., Gorini C., Rabineau M., Popescu S.M., Rubino J.L., Olivet J.L., Leroux E., Jouannic G., **Do Couto D.**, Clauzon G., Dos Reis A.T., Aslanian D., Stagpoole V. Messinian evaporite deposition during sea level rise in the Gulf of Lions (Western Mediterranean). *Marine and Petroleum Geology*.

Clauzon G., Le Strat P., Duvail C., **Do Couto D.**, Suc J.P., Molliex S., Bache F., Besson D., Lindsay E.H., Opdyke N.D., Rubino J.L., Popescu S.M., Haq B., Gorini C. The Roussillon Basin (S. France): a case-study to distinguish local from regional events between 6 and 3 Ma, *Marine and Petroleum Geology*.

Clauzon G., Suc J.-P., **Do Couto D.**, Jouannic G., Melinte-Dobrinescu C.M., Jolivet L., Quillévéré F., Leuret N., Mocochain L., Popescu S.M., Martinell J., Doménech R., Rubino J.L., Gumiaux, C., Warny S., Bellas S.M., Gorini C., Bache F., Rabineau M., Estrada F.. New insights on the Sorbas Basin (SE Spain): the onshore reference of the Messinian Salinity Crisis, *Marine and Petroleum Geology*.

**Do Couto D.**, Gumiaux C., Jolivet L., Augier R., Leuret N., Folcher N., Jouannic G., Suc J.P., Gorini C. 3D modeling of the Sorbas Basin (Spain): new constraints on the Messinian Erosional Surface morphology, *Marine and Petroleum Geology*.

**Do Couto D.**, Faure M., Augier R., Cocherie A., Rossi P., Li X., Lin W. Monazite EPMA and zircon U-Pb SIMS chronological 1 constraints on the tectonic, metamorphic and thermal events in the inner part of the Variscan orogen, example from the Sioule series, French Massif Central, *International Journal of Earth Science*.

Popescu S.M., Dalibard M., Suc J.P., Barhoun N., Melinte-Dobrinescu M.C., Bassetti M.A., Deaconu F., Head M.J., Gorini C., **Do Couto D.**, Rubino J.L., Auxietre J.M., Floodpage J. Messinian–Zanclean boundary and Lago Mare events in the deep southwestern Mediterranean, *Marine and Petroleum Geology*.

Suc J.P., Popescu S.M., **Do Couto D.**, Clauzon G., Rubino J.L., Melinte-Dobrinescu M.C., Quillévéré F., Brun J.P., Dumurdžanoz N., Zagorchev I., Lesić V., Tomić D., Sokoutis D., Meyer B., Macaleț R., Rifelj H. Marine gateway vs. fluvial stream within the Balkans from 6 to 5 Ma, *Marine and Petroleum Geology*.

## Conference papers and abstracts:

Moscariello A., Chelle-Michou C., Clerc N., **Do Couto D.**, Rusillon E. Regional Research for Geothermal Resources in Western Switzerland. *12<sup>th</sup> Swiss Geoscience Meeting*, 21-22 November 2014, Fribourg – Switzerland.

**Do Couto D.**, Gorini C., Auxietre J.L., d'Acremont E., Jolivet L., Ammar A., Jabour H. Late Cenozoic tectono-stratigraphic evolution of the Western Alboran Sea basin: insights on the geodynamic history. *ISC Sedimentology at the crossroads of new frontiers*, 18-22 August 2014, Geneva - Switzerland.

**Do Couto D.**, Gorini C., Estrada F., Popescu S.M., Suc J.P., Barhoun N., Melinte-Dobrinescu M.C., Auxietre J.L., Rubino J.L. The Messinian Salinity Crisis in the Alboran Sea: morphology of the Messinian Erosional Surface from land to sea. *14<sup>th</sup> RCMNS Congress Regional Committee on Mediterranean Neogene Stratigraphy*, 8-12 september 2013, Istanbul – Turkey.

**Do Couto D.**, Gumiaux C., Augier R., Lebreton N., Folcher N., Jouannic G., Jolivet L., Suc J.P., Gorini C. 3D structure and tectonic evolution of the Sorbas basin: an inverted asymmetric graben impacted by the Messinian Salinity Crisis. *14<sup>th</sup> RCMNS Congress Regional Committee on Mediterranean Neogene Stratigraphy*, 8-12 september 2013, Istanbul – Turkey.

Frizon de Lamotte D., Auxietre J.L., Blanpied C., Leparmentier F., Chamot-Rooke N., Gorini C., Arsenikos S., Raulin C., **Do Couto D.** The Phanerozoic evolution of the South-Tethys Domain from Morocco to Iran: vertical movements and main geodynamic events. *75<sup>th</sup> EAGE Conference & Exhibition*, 10-13 June 2013, London – United Kingdom.

**Do Couto D.**, Jolivet L., Augier R., Gumiaux C., Lebreton N., Folcher N. Syn-sedimentary dome-shaped folding in the southern flank of the Sorbas Basin (SE Spain). *AAPG European Regional Conference*, 8-10 April 2013, Barcelona – Spain.

**Do Couto D.**, Gorini C., Jolivet L., Auxietre J.L., d'Acremont E., Ercilla G., Ammar A., Jabour H. Re-evaluation of the Western Alboran Basin history. *AAPG European Regional Conference*, 8-10 April 2013, Barcelona – Spain.

Le Pourhiet L., **Do Couto D.**, Labayed R., d'Acremont E., Smit J., Ammar A., Jabour H., Gorini C. Formation and deformation of the Alboran-Rif system? Insights from 3D thermo-mechanical modelling. *European Geosciences Union General Assembly*, 22-27 April 2012, Vienna – Austria.

Gorini C., d'Acremont E., Elabbassi M., **Do Couto D.**, Migeon S., Ammar A., Estrada F., Ercilla G., Alonso B., Poort J., Jabour H. Giant slide in the South Alboran margin: Upper Miocene margin inversion or Messinian sea level fall? *European Geosciences Union General Assembly*, 22-27 April 2012, Vienna – Austria.

**Do Couto D.**, Gorini C., Jolivet L., Letouzey J., d'Acremont E., Auxietre J.L., Le Pourhiet L., Estrada F., Elabbassi M., Ammar A., Jabour H., Vendeville B. Evolution of a Miocene sag basin in the Alboran Sea. *European Geosciences Union General Assembly*, 22-27 April 2012, Vienna – Austria.

d'Acremont E., Gorini C., Elabbassi M., Farran F., Leroy S., Mercier de Lépinay B., Migeon S., Poort J., Ammar A., Smit J., **Do Couto D.**, Ercilla G., Alonso B. Past and present active sedimentation and tectonics in the South Alboran Sea. *European Geosciences Union General Assembly*, 22-27 April 2012, Vienna – Austria.

**Do Couto D.**, Elabbassi M., Ammar A., Gorini C., Estrada F., Letouzey J., Smit J., Jabour H., Auxietre J.L., 2011. Miocene shale tectonics in the Moroccan margin, Alboran sea. *MAPG-AAPG 2nd International Convention and Exhibition*, 5-7 October 2011, Marrakech - Morocco.

**Do Couto D.**, Suc J.P., Lebreton N., Gumiaux C., Jolivet L., Gorini C., Clauzon G., Jouannic G., Estrada F. Impacts of the Messinian Salinity Crisis on the Spanish margin of the Alboran Sea, Western Mediterranean. *European Geosciences Union General Assembly*, 3-8 April 2011, Vienna – Austria.

## **SKILLS**

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**IT:** GIS (ArcGis, Global Mapper, Map Info), HIS Kingdom Suite, Schlumberger Petrel & Petromod, 3D Geomodeller (Intrepid Geophysics), Adobe Illustrator & Photoshop, Microsoft Office

**Languages:** English and Spanish (written and spoken fluently), French (native language)

## **PROFESSIONAL AFFILIATIONS**

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I am member of the International Association of Sedimentology (IAS), and the Swiss Association of Energy Geoscientists (SASEG).