



**Positions held outside IFREMER**

- Co-organizer of session, Geological and Mineralogical Association of Canada (GAC-MAC) 2011, Ottawa, Canada, on the United Nations Convention on the Law of the Sea, May 2011

**Main professional activities related to the United Nations Convention on the Law  
of the Sea**

Since 2003, as Scientific and Technical Manager for EXTRAPLAC, Dr. Roest has been in charge of all the scientific

2011: International workshop for the sharing of experience by countries which have deposited submissions with the Commission on the Limits of the Continental Shelf, Buenos Aires, Argentina

### **Research interests**

- Scientific and technical questions related to the delimitation of the outer limit of the continental shelf
- Nature and evolution of continental margins, sedimentary basins and their potential resources
- Interpretation methods for potential fields
- Geodynamics and plate tectonics

### **Publications, abstracts, conferences and seminars**

Dr. Roest has published or co-published over 50 peer-reviewed articles, some 50 reports and over 200 abstracts in national and international journals and other publications. He has also drafted or assisted with the drafting of a large number of assessments and drawn up many maps, open file reports and papers on various issues relating to continental margins and their potential resources, including in his capacity as the Scientific and Technical Manager of EXTRAPLAC, on the delineation of the outer limits of the continental shelf pursuant to the United Nations Convention on the Law of the Sea. He has participated in more than 70 national and international conferences and seminars.

### **Citation index**

Source:	Web of Science
Number of peer-reviewed papers:	56
Number of citations:	2,034
H-index:	23

### **Peer-reviewed publications**

Pichot, T., M. Patriat, G. K. Westbrook, T. Nalpas, M.-A. Gutscher, W. R. Roest, E. Deville, M. Moulin, D. Aslanian and M. Rabineau, 2012. Tectonostratigraphic evolution of the Barracuda Ridge and Tiburon Rise as recorded by Cenozoic stratigraphy, east of the Barbados accretionary wedge, *Marine Geology* (in press).

Sauter, D., H. Sloan, M. Cannat, J. Goff, P. Patriat, M. Schaming and W. R. Roest, 2011. From slow to ultra-slow: How does spreading rate affect seafloor roughness and crustal thickness? *Geology*, 39, pp. 911-914, DOI: 10.1130/G32028.1

Patriat M., T. Pichot, G. K. Westbrook, M. Umber, E. Deville, F. Benard, W. R. Roest, B. Loubrieu and the ANTIPLAC Cruise Party, 2011. Evidence for

variations in the strength of the hot spot source, *Journal of Geophysical Research — Solid Earth*, 116, B09104, DOI: 10.1029/2010JB007768.

Herzer, R.H., D. H. N. Barker, W. R. Roest and N. Mortimer, 2011. Oligocene-Miocene spreading history of the northern South Fiji Basin and implications for the evolution of the New Zealand plate boundary, *Geochemistry Geophysics Geosystems*, 12, article No. Q02004, DOI:10.1029/2010GC003291.

Labails, C., Jean-Louis Olivet, D. Aslanian and W. R. Roest, 2010. An alternative early opening scenario for the Central Atlantic Ocean, *Earth and Planetary Science Letters*, 297, pp. 355-368.

Gaullier, V., L. Loncke, L. Droz, C. Basile, A. Maillard, M. Patriat, W. R. Roest, B. Loubrieu, L. Folens and F. Carol, 2010. Slope instability on the French Guiana

- Bourlon, E., J. C. Mareschal, W. R. Roest and H. Telmat, 2002. Geophysical Correlations in Ungava Bay, *Canadian Journal of Earth Sciences*, 39, 5, pp. 625-637.
- Hannington, M. D., P. Herzig, P. Stoffers, J. Scholten, R. Botz, D. Garbe Schönberg, I. R. Jonasson, W. R. Roest et al., 2001. First observations of high temperature submarine hydrothermal vents and massive anhydrite deposits off the north coast of Iceland, *Marine Geology*, 177, pp. 199-220.
- Müller, R. D., C. Gaina, W. R. Roest and D. L. Hansen, 2001. A recipe for micro-continent formation, *Geology*, 29, pp. 203-206.
- Srivastava, S. P., J. C. Sibuet, S. Cande, W. R. Roest and I. D. Reid, 2000. Magnetic evidence for slow seafloor spreading during the formation of the Newfoundland and Iberian margins, *Earth and Planetary Science Letters*, 182, pp. 61-76.
- Pilkington, M., W. F. Miles, G. M. Ross and W. R. Roest, 2000. Potential field signatures of buried Precambrian basement in the Western Canada Sedimentary Basin, *Canadian Journal of Earth Sciences*, 37.
- Müller, R. D., J.-Y. Royer, S. C. Cande, W. R. Roest and S. Maschenkov, 1999. A quantitative analysis of North American-South American plate motions since chron 34 (83 Ma), in: *Sedimentary Basins of the World: Caribbean Sedimentary Basins*, P. Mann, ed., Elsevier Science.
- Benn, K., W. R. Roest, P. Rochette, N. G. Evans and G. S. Pignotta, 1999. Geophysical and structural signatures of syntectonic batholith construction: the South Mountain Batholith, Meguma Terrane, Nova Scotia, *Geophysical Journal International*, 136, pp. 144-158.
- Bird, R. T., W. R. Roest, M. Pilkington, R. E. Ernst and K. L. Buchan, 1999. An approach to the reconstruction of deformed continental crust using gridded geophysical data, *Exploration Geophysics*, 30, pp. 101-104.
- Srivastava, S. P. and W. R. Roest, 1999. The extent of oceanic crust in the Labrador Sea, *Marine and Petroleum Geology*, 16, pp. 65-84.

Verhoef, J., R. Macnab, W. R. Roest and J. Arkani-Hamed, 1995. New database documents the magnetic character of the Arctic and North Atlantic. *Eos, Transactions, American Geophysical Union*

- Roest, W. R., and W. P. Srivastava, 1991. Kinematics of the plate boundaries between Eurasia, Iberia and Africa in the North Atlantic from Late Cretaceous to present, *Geology*, 19, pp. 613-616.
- Verhoef, J., B. J. Collette, J. J. Dañobeitia, H. A. Roeser and W. R. Roest, 1991. Magnetic anomalies off West Africa ( $20^{\circ}$ - $38^{\circ}$ N), *Marine and Geophysical Research*, 13, pp. 81-103.
- Srivastava, S. P., W. R. Roest, G. Oakey, S. Levesque, L. C. Kovacs, J. Verhoef and R. Macnab, 1990. The motion of Iberian as obtained from a detailed aeromagnetic survey in the Newfoundland Basin, *Tectonophysics*, 184, pp. 229-260.
- Verhoef, J., K. H. Usow and W. R. Roest, 1990. A new method for plate reconstructions: the use of gridded data, *Computers and Geosciences*, 16, pp. 51-74.
- Marillier, F., P. Hull, W. R. Roest and P. Durling, 1990. New color techniques help to interpret deep seismic reflections, *Eos, Transactions, American Geophysical Union*, 71, p. 1147/1150.

EXTRAPLAC project team, 2009. Partial submission to the Commission on the Limits of the Continental Shelf, part 2, main text — French Antilles

EXTRAPLAC project team, 2009. Partial submission to the Commission on the Limits of the Continental Shelf, part 1, executive summary, Reunion and Saint-Paul and Amsterdam

EXTRAPLAC project team, 2009. Partial submission to the Commission on the Limits of the Continental Shelf, part 2, main text — Saint-Paul and Amsterdam

EXTRAPLAC project team, 2009. Partial submission to the Commission on the Limits of the Continental Shelf, part 2, main text — Reunion

EXTRAPLAC and SA Extended Shelf Claim Project team, 2009. Joint partial submission to the Commission on the Limits of the Continental Shelf, part 1, executive summary, Prince Edward Islands and Crozet Archipelago

EXTRAPLAC and SA Extended Shelf Claim project team, 2009. Joint partial submission to the Commission on the Limits of the Continental Shelf, part 2, main text, Prince Edward Islands and Crozet Archipelago

EXTRAPLAC project team, 2008. Report on the Kergueplac 3 cruise

EXTRAPLAC project team, 2007. Del Cano Rise Survey, processing of bathymetric data

EXTRAPLAC project team, 2007. French continental shelf. Partial submission to the Commission on the Limits of the Continental Shelf pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea in respect of the areas of French Guiana and New Caledonia, part 1, executive summary

EXTRAPLAC project team, 2007. French continental shelf. Partial submission to the Commission on the Limits of the Continental Shelf pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea in respect of the areas of French Guiana and New Caledonia, part 2, main text — French Guiana

EXTRAPLAC project team, 2007. French continental shelf. Partial submission to the Commission on the Limits of the Continental Shelf pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea in respect of the areas of French Guiana and New Caledonia, part 2, main text — New Caledonia

EXTRAPLAC project team, 2007. Report on the ANTIPLAC cruise

EXTRAPLAC project team, Ireland, Spain and the United Kingdom of Great Britain  
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REmote Views and Exploration of Antarctic Lithosphere Workshop, Open File Report — United States Geological Survey, pp. 100-101.

Bankey, V., A. Cuevas, D. Daniels, C. Finn, I. Hernandez, P. Hill, R. Kucks, W. Miles, M. Pilkington, C. Robert, W. R. Roest, V. Rystrom, S. Shearer, S. Snyder, R. Sweeney, J. Velez, J. Phillips and D. Ravat, 2002. Digital data grids for the magnetic anomaly map of North America, Open-File Report — United States Geological Survey.

Hildenbrand T. G., M. Acuna, M. Bracken, D. Hardwick, W. Hinze, J. Phillips and W. R. Roest, 2002. Rationale and operating plan for a U.S. high-altitude magnetic survey, Open File Report 02-0366 — United States Geological Survey.

Hildenbrand T. G., A. Briesacher, G. Flanagan, W. Hinze, A. M. Hittelman, G. Keller, D. Plouff, W. R. Roest, J. Seeley, D. A. Smith and W. Webring, 2002. Rationale and

Loncke, L., C. Basile, V. Gaullier, A. Maillard, M. Patriat, F. Sage, W. Roest, 2009. New insights on shear margin gravitational evolution trough time. The case of equatorial margins. EGU General Assembly 2009, 19-24 April 2009, Vienna, Austria. Abstract in: *Geophysical Research Abstracts*, 11, 5231.

Loncke L, V. Gaullier, C. Basile, A. Maillard, M. Patriat, B. C. Vendeville, L. Folens and W. Roest, 2009. Fluid-escape structures and slope instabilities along the French Guiana margin. EGU General Assembly 2009, 19-24 April 2009, Vienna, Austria. Abstract in: *Geophysical Research Abstracts*, 11, 5263.

Benard, F., E. Deville, M. Patriat, E. Le Drezen, B. Loubrieu, E. Thereau, M. Umber, W. Roest and R. Vially, 2008. The Tiburon and Barracuda ridges linked with a recent N-S American plates convergence: results from the Antiplac marine survey. 33rd International Geological Congress, 6-14 August 2008, Oslo, Norway. Abstract.

Courreges, E., W. R. Roest, P. Patriat, M. Patriat, M. Maia and M. Munsch, 2008. Magnetic data on the northeastern margin of the Kerguelen plateau: constraints for the Australia-Antarctica separation. *Eos, Transactions, American Geophysical Union*, 89(53), Fall Meeting Supplement, Abstract T51B-1885.

Labails, C., J. L. Olivet, D. Aslanian, M. Sahabi, W. Roest, B. Sichler and P. Unternehr, 2008. Early tectonic evolution of the central Atlantic ocean. 33rd International

margin. 11ème Congrès Français de Séimentologie, 23-25 October 2007, Caen, France. Abstract in: *Livre des résumés*, 57, 202.

Loncke, L., L. Droz, V. Gaullier, C. Basile, W. Roest and M. Patriat, 2006. Effects of structural inheritance on the distribution and importance of slope stabilities along a passive transform margin. The example of the French Guyana margin. European Geosciences Union 2006, 2-7 April 2006, Vienna, Austria, *Geophysical Research Abstracts*, 8, 03803.

Loncke, L., L. Droz, V. Gaullier, C. Basile, W. R. Roest and M. Patriat, 2006. Effet de l'héritage structural sur la distribution et l'importance des instabilités gravitaires le long d'une marge, 28-30 March 2006, Paris, France. Abstract in: *Programme et Résumés*, 51.

Roest, W., M. Patriat, B. Loubrieu, R. Vially and S. Youssef, 2006. Satellite derived predicted bathymetry: essential tool for UNCLOS ‘article 76’ on the extension of the legal continental shelf beyo5 -.03aU0 nnaSyimpiume on115 Y 106(e)-4(asd)-

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