



## Council

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### Seventeenth session

Kingston, Jamaica

11-22 July 2011

## Election of members of the Legal and Technical Commission

### List of candidates submitted by States parties

#### Note by the Secretary-General

1. The terms of office of the current members of the Legal and Technical Commission (“the Commission”) will end on 31 December 2011. By his note verbale No. 236/10 of 8 October 2010 and note verbal No. 293/10 of 17 December 2010, the Secretary-General invited the members of the International Seabed Authority to submit, at their earliest convenience but no later than 11 April 2011, as agreed by the Council in its decision contained in ISBA/13/C/6, the names and curricula vitae of candidates for the election to the Commission, to be held during the seventeenth session of the Authority between 11 and 22 July 2011.

2. In accordance with article 163 and article 165, paragraph 1, of the 1982 United Nations Convention on the Law of the Sea (“the Convention”), the members of the Legal and Technical Commission are elected by the Council from among the candidates nominated by the States parties for a term of five years. Due account shall be taken of the need for equitable geographical distribution and the representation of special interests. Members of the Commission shall have appropriate qualifications, such as those relevant to exploration for and exploitation and processing of mineral resources, oceanology, protection of the marine environment, or economical or legal matters relating to ocean mining and related fields of expertise. States parties shall nominate candidates of the highest standards of competence and integrity with qualifications in relevant fields so as to ensure the effective exercise of the functions of the Commission.

3. Pursuant to article 163, paragraph 2, of the Convention, the Commission shall be composed of 15 members. However, if necessary, the Council may decide to increase the size of the Commission having due regard to economy and efficiency. It is recalled that, at the first election of the members of the Commission in August 1996, the Council decided to increase the number of seats on the Commission from 15 to 22 without prejudice to future elections to the Commission.

4. It is also recalled that, at the fifth session of the Authority, in August 1999, following a proposal by the Chairman of the Latin American and Caribbean Group, the Council agreed to an additional candidate from that group for election to the Commission for the remainder of the term of office (ISBA/5/C/11). At the 61<sup>st</sup> meeting, on 22 March 2000, the Council elected Ms. Frida Maria Armas Pfirter (Argentina) as a member of the Commission for the remainder of the term of office. It was agreed that such election would be without prejudice to future elections to the Commission and future decisions relating to the number of members of the Commission and its composition (ISBA/6/C/3).

5. The next election of the Commission took place in 2001, for a five-year term commencing on 1 January 2002. In electing 24 candidates to the Commission for a five-year term of office (ISBA/7/C/6 and ISBA/7/C/7), the Council also decided, at its 72<sup>nd</sup> meeting, on 5 July 2001, to increase the size of the Commission to 24 members in accordance with article 163, paragraph 2, of the Convention, without prejudice to future elections to the Commission.

6. During the next election of the Commission at its 111<sup>th</sup> meeting during the twelfth session, the Council decided, having regard to the provisions of article 163, paragraph 2, of the Convention, to increase the size of the Commission to 25 members, without prejudice to future elections. Accordingly, the Council elected all the 25 candidates for a five-year term commencing on 1 January 2007. The Council also requested the Secretary-General to prepare, for consideration by the Council at its thirteenth session, a report on considerations relating to the future size and composition of the Commission and the process for future elections (ISBA/12/C/11).

7. On 18 July 2007, during the thirteenth session, the Council considered the question of the future size and composition of the Commission and the process for future elections, on the basis of a Note prepared by the Secretary-General (contained in document ISBA/13/C/2). The Council agreed that there was a need to streamline the procedures for future elections in order to avoid the difficulties that had arisen in connection with past elections to the Commission. The Council decided that the procedure for nomination of candidates for future elections of the Commission shall be as follows:

(a) At least six months before the opening of the session of the International Seabed Authority at which the election is to be held, the Secretary-General shall address a written invitation to all members of the Authority to submit their nominations for election to the Commission;

(b) Nominations for election to the Commission shall be accompanied by a statement of qualification or curriculum vitae setting out the candidate's qualifications and expertise in fields relevant to the work of the Commission and shall be received not less than three months prior to the opening of the relevant session of the Authority; nominations received less than three months prior to the opening of the relevant session of the Authority will not be accepted;

(c) The Secretary-General shall prepare a list in alphabetical order of the persons nominated for election to the Commission in accordance with paragraph (a) above, indicating the nominating member of the Authority, and containing an annex with the statements of qualification or curricula vitae submitted in accordance with paragraph (b) above; the list shall be circulated to all members of the Authority

not less than two months prior to the opening of the session at which the election is to be held (ISBA/13/C/6).

8. During the thirteenth session, the Council was not able to reach a consensus on the future size of the Commission. It was agreed, however, that it was essential for the Council to reach a decision on the size of the Commission prior to the next election, which was due to be held in 2011. To facilitate its deliberations, the Council decided to request the Secretary-General, taking into account the views of the Chairs of the Commission, to prepare a report for consideration by the Council in 2010 on the functioning of the Commission, with a view to the Council's determining in 2010 the number of members of the Commission to be elected in 2011 (ISBA/13/C/6).

9. At its 152<sup>nd</sup> and 153<sup>rd</sup> meetings during the sixteenth session, on 29 and 30 April 2010, respectively, the Council considered the question of the size and composition of the Commission. After considering the Note by the Secretary-General on this matter (ISBA/16/C/3), the Council expressed satisfaction with the work of the Commission and the manner in which it had functioned over the past five years; took note of the view expressed by the Commission through its Chairman to the effect that the current size of the Commission had not prevented it from carrying out its work effectively and efficiently; and emphasized that the Commission needed to maintain a wide range of expertise to enable it to carry out its complex work (ISBA/16/C/14\*).

10. With respect to the election of members of the Commission to be held in 2011, the Council agreed that the procedures for nomination of candidates for future elections of the Commission set out in document ISBA/13/C/6 (reproduced in paragraph 7 above) must be applied strictly. The Council also agreed that, for the 2011 election, the size of the Commission may be increased, having due regard to economy and efficiency, to up to 25 members, without prejudice to future elections (ISBA/16/C/14\*).

11. The 23 nominations submitted by members of the Authority up to 11 April 2011, being three months prior to the opening of the seventeenth session, are set out in the annex to the present note, together with the statements of qualifications and summaries of curricula vitae of the candidates.<sup>1</sup>

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<sup>1</sup> The original curricula vitae as submitted will be put on the website of the International Seabed Authority and reproduced for circulation at the seventeenth session of the Authority.

## Annex

### List of candidates nominated by States parties

<i>Name and nationality</i>	<i>Nominated by</i>
ABDEGBIE, Adesina Thompson (Nigeria)	Nigeria
BILLET, David (United Kingdom)	United Kingdom
BREKKE, Harald (Norway)	Norway
BROADBELT, Winifred M. (Netherlands)	Netherlands
ČIČEROV, Aleksander (Slovenia)	Slovenia
DA EMPOLI, Domenico (Italy)	Italy
DAVIS-MATTIS, Laleta (Jamaica)	Jamaica
De SOUZA, Kaiser (Brazil)	Brazil
ESCOBAR, Elva (Mexico)	Mexico
HOWORTH, Russell (Fiji)	Fiji
HYEONG, Kiseong (Republic of Korea)	Republic of Korea
JARMACHE, Elie (France)	France
KALNGUI, Emmanuel (Cameroon)	Cameroon
KHRAMOV, Denis Gennadyevich (Russian Federation)	Russian Federation
LOPERA, Eusebio (Spain)	Spain
MADUREIRA, Pedro (Portugal)	Portugal
OKAMOTO, Nobuyuki (Japan)	Japan
OYARZÁBAL, Mario (Argentina)	Argentina
PRZYBYCIN, Andrzej (Poland)	Poland
REICHERT, Christian (Germany)	Germany
RODRIGO, Cristian (Chile)	Chile
SUDHAKAR, Maruthadu (India)	India
ZHANG, Haiqi (China)	China

## **ADEGBIE, Adesina Thompson**

### **Postal address**

Nigerian Institute for Oceanography and Marine Research  
 P.M.B. 12729, Lagos, Nigeria.  
 Email: adeadegbie@yahoo.com; sadegbie@niomr.org  
 Phone: +234-8055210651 or +234-8032778521

### **Occupational objectives**

A professional position of challenge where my knowledge and experience in marine geology, oceanography, hydrography, coastal and marine management, global change studies and project management can be fully utilized.

### **Personal information**

Nationality: Nigerian  
 Date and place of birth: 31 March 1959; Ondo, Ondo State, Nigeria  
 Marital status: married  
 No. of children: two  
 Health: excellent

### **Languages spoken**

<i>Language</i>	<i>Oral</i>	<i>Written</i>	<i>Reading</i>
English	Excellent	Excellent	Excellent
German	Good	Fair	Fair

### **Education**

Ph.D. Geosciences University of Bremen, Germany 1998-2001

### **Scholastic honours**

Jan. 1998-Dec. 2000    IOC/UNESCO Scholarship/Research Grant for Ph.D. programme at the University of Bremen, Germany  
 Jan. 2001-June 2001    German Research Foundation (DFG)/University of Bremen Research Grant for Ph.D. thesis

### **Post-graduate professional training**

Training Programme on: The United Nations Convention on the Law of the Sea, Its Implementation and Agenda 21. Organized by the International Ocean Institute (IOI), Dalhousie University, Halifax, Canada, 9 June-15 August 1997

Sida Advanced International Training Course on Sustainable Coastal Development, Gothenburg, 23 October to 24 November 2006

Seminar on Integrated Coastal Management, Xiamen, China, 20 October to 14 November 2008

**Current employment**

Nigerian Institute for Oceanography and Marine Research (NIOMR), P.M.B. 80108, Victoria Island, Lagos, Nigeria, 15 March 1993 to date.

Present position: Assistant Director

**Job Description**

- Formulation of research projects for the Marine Geology and Geophysics Division in conjunction with the Head of Department
- Geophysical survey and bathymetry of the Nigerian continental margin
- Research into global climate change and sea level variations along the Nigerian coastal and marine areas

**Administrative activities**

- Member NIOMR Research Management Committee

**National and international assignment**

- Member: Inter-ministerial Committee on the International Seabed Authority (ISA)
- Member: Inter-ministerial Advisory Body of Experts for the Law of the Sea
- Member: Review Panel on the Environmental Impact Assessment (EIA) for the proposed Brass LNG Project (offshore component)
- Member: Technical Committee for the Evaluation of the Modelling and Simulation Studies for the Design of the Proposed Lekki EPZ Port and Harbour Project

**Publications**

- Adegbe, A. T. (2001). Reconstruction of paleoenvironmental conditions in Equatorial Atlantic and the Gulf of Guinea Basins for the last 245,000 years. *Berichte, Fachbereich Geowissenschaften, Universitaet Bremen*, No. 178, 113 pages
- Zabel, M., Schneider, R. R., Wagner, T., Adegbe, A. T., de Vries, U., Kolonic, S. (2001). Late Quaternary Climate Changes in Central Africa as Inferred from Terrigenous Input to the Niger Fan. *Quaternary Research* 56, 207-217
- Adegbe, A. T., Schneider, R. R., Röhl, U. and Wefer, G., (2003). Glacial millennial-scale fluctuations in central African precipitation recorded in terrigenous sediment supply and freshwater signals offshore Cameroon. *Palaeogeography, Palaeoclimatology, Palaeoecology*, vol. 197 (3-4), pp.323-333
- Adegbe, A. T., and Basse, C. E., (2007). Cretaceous foraminiferal biostratigraphy and paleoecology of Ikono-1 well, Calabar flank, south-eastern Nigeria. *Journal of Mining and Geology*, vol. 43 (1), pp- 31-41
- Adegbe, A. T. (2007). Glacial and Interglacial Variability of the Niger River Discharge into the Gulf of Guinea. *NIOMR Journal Publication*, vol. 1, pp. 1-11
- Itambi, A. C., von Dobeneck, T. and Adegbe A. T. 2010. Millennial-scale precipitation changes over Central Africa during the late Quaternary and Holocene: evidence in sediments from the Gulf of Guinea. *Journal of Quaternary Science*, vol. 25 pp. 267-279

**Conferences/seminars/workshop/symposium**

Sensitization Seminar on the Work of the International Seabed Authority: *Exploration and Exploitation of Deep Seabed Mineral Resources In The Area — Challenges for Africa and opportunities for Collaborative Research in the South Atlantic Ocean*. Congress Hall, Transcorp Hilton Hotel Abuja, Nigeria. 24-26 March 2009

2<sup>nd</sup> Annual Conference of the International Geological Correlation project No. 464 in São Paulo, Brazil. 30 August-3 September 2002

**Computer literacy**

I am versatile in the use of computers for word-processing, graphic analysis and evaluation of scientific data and website design. I have worked with and attained proficiency with many word-processors, graphic and web editor (HTML) software

**Professional affiliations**

Nigerian Association of Petroleum Explorationists  
Nigerian Mining and Geosciences Society  
International Society of Environmental Micropaleontology, Microbiology and Meiobenthology (ISEMMM)

**Hobbies**

Reading, travelling, sports and meeting people

**Referees**

Dr. O. A. Ayinla  
Executive Director  
Nigerian Institute for Oceanography and Marine Research  
P.M.B. 12729, Lagos, Nigeria  
Phone: +234-8064384985  
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Dr. L. F. Awosika  
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P.M.B. 12729, Lagos, Nigeria  
Phone: +234-8064273881  
Email: larryawosika@yahoo.com

**BILLETT David Stewart Martin**

**Position** Deep-Sea Ecologist  
**deepseasgroup**  
National Oceanography Centre  
Natural Environment Research Council (NERC)  
University of Southampton Waterfront Campus,  
Southampton SO14 3ZH, UK

E-mail dsmb@noc.ac.uk

**Date of birth** 29 December 1953

**Summary** I am a member of the ISA Legal and Technical Commission with particular responsibility for environmental issues. I am a deep-sea ecologist committed to finding solutions for the use of ocean resources and the long-term conservation of ocean ecosystems. I have broad experience of deep-sea habitats including seamounts, coral mounds, submarine canyons, mid-ocean ridges, abyssal plains, continental margins, as well as seabed fauna from microbial communities to fish. I have made a major contribution to understanding how climate affects deep-sea ecosystems and on methods to distinguish between man-made and natural change. I have worked closely with the deep-water offshore oil and gas industry and international organisations, such as the Un Convention on Biological Diversity, to devise regional environmental management plans. I have played a key role in the development of international deep-sea research projects in the Census of Marine Life (2002-2010). I have participated in and led over 45 international ocean research cruises.

**Qualifications**

March 1988 Ph.D. University of Southampton, UK - Deep-Sea Ecology  
May 1975 B.Sc. University College North Wales, Menai Bridge, Bangor, UK  
Marine Biology with Biochemistry

**Experience**

2007–present Legal and Technical Commission, International Seabed Authority, Kingston, Jamaica  
2009–present Deep-sea ecologist – EU Project HERMIONE (Hotspot Ecosystem Research and Man’s Impact on European Seas)  
2005–present NERC Research Grant - ECOMAR (Ecosystems of the Mid-Atlantic Ridge)  
2006–2010 Co-Chair, Ocean Biogeochemistry and Ecosystems Group, National Oceanography Centre, Southampton  
2005–2010 Scientific Steering Committee - Continental Margin Ecosystems on a Worldwide Scale (COMARGE – Census of Marine Life)  
2003–2010 Scientific Steering Committee - Census of the Diversity of Abyssal Marine Life (CeDAMar - Census of Marine Life)



2004–2007	Scientific Steering Committee - MarBEF (Marine Biodiversity and Ecosystem Functioning)
2004–2007	Coordinator MarBEF Project DEEPSETS (Deep-sea & Extreme Environments, Patterns of Species and Ecosystem Time Series)
2005–2007	Scientific Steering Committee — HERMES (Hotspot Ecosystem Research on the Margins of European Seas)
1998–2005	Head, DEEPSEAS Group, NOC, Southampton. Strategic, financial and personnel management. Development of deep-sea biology research
1997–2005	NERC Knowledge Transfer Grant DIEPS (Deep-water Industry, Environment, Policy and Science). EU OASIS (Oceanic Seamounts - an Integrated Study). Offshore oil and gas sponsored partnership SERPENT (Scientific and Environmental ROV Partnership using Existing Industrial Technology). NERC Grant – Impact of natural iron fertilisation on deep-sea ecosystems. EU project ACES (Atlantic Coral Ecosystem Study). Atlantic Margin Environmental Survey (AMES) for UK Government and industry. Scheherezade II - Benthic Environments in the Gulf of Oman and NW Arabian Sea
1990–1997	Head of External Affairs, Institute of Oceanographic Sciences, UK, responsible for developing industry-science and policy-science partnerships for all oceanographic disciplines, stimulating international partnerships and managing international projects, finance and resource planning, technology transfer, public understanding of science
1976–1990	Deep-sea ecologist with particular expertise in large bottom-dwelling organisms (megafauna) and deep-sea pelagic fauna. In-depth knowledge of the ecology of large deep-sea invertebrates. Discovery of seasons in the deep sea and the importance of surface primary productivity in regulating life on the abyssal seafloor

**Selected publications** — Over 85 publications in ISI cited scientific journals

- Billett, D.S.M., et al. (2010). Long-term change in the abyssal NE Atlantic: The ‘*Amperima* Event’ revisited. *Deep-Sea Research II* 57 (15) 1406-1417
- Wolff, G.A., Billett, D.S.M., Bett, B.J., Holtvoeth, J., FitzGeorge-Balfour, T., Fisher, E.H., Cross, I., Shannon, R., Salter, I., Boorman, B., King, N.J., Jamieson, A. and Chaillan, F. (submitted). The effects of natural iron fertilisation on deep-sea ecology. *PLoS One*.
- Benn, A.R., Weaver, P.P.E, Billett, D.S.M., et al. (2010). Human activities on the deep seafloor in the North East Atlantic: An Assessment of Spatial Extent. *PLoS One* 5 (9): e12730.
- Billett, D.S.M., et al. (2010) Why there is a need to consider the pelagic environment when preparing an environmental management plan for the Clarion Clipperton Zone (CCZ). ISA, Kingston Jamaica.
- Glover, A.G., Billett, D.S.M. et al. (2010). Temporal change in deep-sea benthic ecosystems: A review of the evidence from recent time series studies. *Advances in Marine Biology* 58, 1-95.

- Menot L., Billett D.S.M., et al. (2010) New Perceptions of Continental Margin Biodiversity. In: McIntyre, A., (Ed). Chapter 5. *Life in the World's Oceans: Diversity, Distribution and Abundance*. Wiley-Blackwell. 79-101.
- Ebbe, B., Billett, D.S.M., et al. (2010). Diversity of Abyssal Marine Life. In: McIntyre, A., (Ed). Chapter 8. *Life in the World's Oceans: Diversity, Distribution and Abundance*. Wiley-Blackwell. 139-160.
- Lampitt, R.S., Billett, D.S.M. & Martin, A.P. (2010). The sustained observatory over the Porcupine Abyssal Plain (PAP): Insights from time series observations and process studies. *Deep-Sea Research II* 57 (15) 1267-1271.
- Billett, D.S.M., et al. (2006). Mass deposition of jellyfish in the deep Arabian Sea. *Limnology and Oceanography* 51 (5), 2077-2083.
- Ramirez-Llodra E. & Billett, D.S.M. (2006). Ecosistemas de las profundidades marinas: reservorio privilegiado de la biodiversidad y desafíos tecnologicos. In "La exploracion de la biodiversidad marina. Fundacion BBVA, 63-92.
- Billett, D.S.M. (2006). Enhancing the understanding of the deep-sea environment: examples from the Atlantic Ocean. In: *Prospects for International Collaboration in Marine Environmental Research to Enhance Understanding of the Deep-Sea Environment*. ISA, Kingston Jamaica. p. 81-85.
- Wheeler, A.J., Billett, D.S.M., et al. (2004). The impact of demersal trawling on NE Atlantic deep-water coral habitats: In: *Benthic Habitats and the Effects of Fishing*, American Fisheries Society, USA. 41, 807-817.
- Wigham, B.D., Hudson, I.R., Billett, D.S.M. & Wolff, G.A. (2004). L'invasion des concombres de mer roses. *La Recherche* 375, May 2004, p106.
- Weaver, P.P.E., Billett, D.S.M., et al. (2004). Hotspot ecosystem research on Europe's deep-ocean margins. *Oceanography* 17, 48-59.
- Wefer, G., Billett, D.S.M., Hebbeln, D., Jørgensen, B.B., Van Weering, Tj. (2002) (Eds.). *Ocean Margin Systems*. Springer Verlag, Berlin, 495pp.
- Baker, M.C., ... Billett, D.S.M. et al. (2001). *The status of natural resources on the high seas - an environmental perspective*. 3-68, (Eds WWF/IUCN)
- Billett, D.S.M., et al. (1983) Seasonal sedimentation of phytoplankton to the deep-sea benthos. *Nature* 302, 520-522.

**BREKKE, Harald****Education**

- 1978-1983 University of Bergen, Norway — Cand. real degree (Masters/Ph. D. equivalent) in hard rock geology
- 1973-1977 Agder University College, Kristiansand, Norway — College degree in analytical chemistry, including mathematics, physics, statistics and programming

**Employment record**

- 1973 Teacher of mathematics at Chongwe Secondary School, Zambia
- 1980-1984 Part-time and full time research assistant at the Geological Institute, University of Bergen, Norway
- Since 1984 Senior Geologist and Project Coordinator in the Exploration Department in the Norwegian Petroleum Directorate (NPD), Stavanger, Norway
- Since 1996 Technical advisor to the Norwegian Government on the delineation of the Norwegian continental shelf
- Since 1997 Member of the Commission on the Limits of the Continental Shelf (CLCS) for three consecutive terms, Vice-Chairman of the sitting CLCS, and appointed Acting Chairman of the CLCS for its twenty-seventh session, 2011

**Experience related to the management of offshore resources**

In my capacity as senior geologist and project coordinator in the Norwegian Petroleum Directorate (NPD), I have had the following tasks and responsibilities:

- Geological/geophysical mapping of the geology and petroleum resources of the Norwegian continental shelf
- Petroleum resource assessment on regional and national scale
- Planning and development of resource assessment methods and tools
- Evaluation of company applications for new exploration licences
- Acted as NPD coordinator for application rounds for exploration licences on the Norwegian Continental Shelf
- Providing technical advice to Ministry of Industry and Energy
- Representing the NPD in various geoscientific programmes involving universities and industry
- Coordinating joint Norwegian-Russian geo-scientific mapping projects on the continental shelf of the Barents Sea (1996-to date)
- Coordinating NPD funded Norwegian scientific programs for geo-scientific research and data acquisition in the Arctic Ocean and the Barents Sea.
- Cruise Leader for marine geophysical data acquisition by icebreaker in the Arctic Ocean (2001, 2005)

- Giving external presentations on the geology, prospectivity and resources of the Norwegian continental shelf at various conferences on behalf of NDP
- Advisor to the Namibian State Oil Company (NAMCOR) under the Norwegian Foreign Aid Programme (1990-1994)
- Lecturing on the petroleum resources of the Arctic region at the University of Svalbard

#### **Miscellaneous qualifications**

I qualified as university lecturer in geology at Rogaland College, Norway and appointed external examiner at the Institute of Geology and Mineral Resources Engineering, Norwegian Institute of Technology, University of Trondheim, Norway. I served three terms as President of the Geological Society of Norway and have chaired the Geological Society's triennial international conference on the geology and resources of the Arctic in Tromsø ("Arctic Days" 2004, 2007 and 2010).

#### **Details on activities related to the Law of the Sea**

I was member of the Group of Experts convened in September 1995 by the United Nations Secretariat to prepare for the establishment of the CLCS, and joined the core group within that Group of Experts to work out a draft for a list of scientific documentation required for making submission regarding the outer limits of the continental shelf.

As a member of the Commission, I have devoted much time contributing to the documents it has produced. During my three terms in the Commission I have filled the following positions:

- Chairman and editor of Chapter 8 of the Scientific and Technical Guidelines of CLCS
- Chairman of the Editorial Committee in 2002-2004 when the Commission undertook a major revision of the Rules of Procedures of the Commission
- Expert adviser to the Sub-commission set up to consider the submission made by Brazil, regarding seismic interpretation and sediment thickness analyses
- Chairman of the Sub-commission set up to consider the submissions made by Australia, New Zealand and Japan.
- Member of the Sub-commission set up to consider the submissions made by France (French Guiana, New Caledonia, French Antilles and Kerguelen Island), United Kingdom of Great Britain and Northern Ireland (Ascension Island) and the Philippines (Benham Rise)

#### **Advice to coastal States**

I have assisted States regarding the preparation of their submissions to CLCS as follows:

- Participated in the preparation of the submissions made by Sri Lanka, Seychelles, Mauritius and Madagascar
- Given final review of the submissions made by Kenya, Bangladesh, South Africa and Mozambique

I am currently advisor to the joint project for preparing the submission to be made to the CLCS by Mauritania, Senegal, Cape Verde, Gambia, Guinea and Guinea Bissau and assisting in the preparation of the submission to be made to the CLCS by Somalia.

**Lectures and training courses**

I was one of the two scientific editors preparing the manual and the presentation material for the DOALOS Training Course on *the delineation of the continental shelf and the preparation of a submission to the CLCS*.

I have been invited lecturer at law of the sea conferences and courses by academia, Governments and DOALOS in Monaco (IHO), Buenos Aires, Kuala Lumpur, Reykjavik, Southampton (SOC), Accra, Colombo, Helsinki (EU Parliamentarians), Beijing, London (ESCR Seminar), Tromsø (Faculty of Law).

**Publications**

Since 1985 I have published 22 papers in scientific journals on onshore and offshore geology, geological resources, and scientific aspects of the implementation of article 76 of the United Nations Convention on the Law of the Sea.

**BROADBELT, Winifred M.**

Date of birth: 9 November 1956

Place of birth: Oranjestad, Aruba (Netherlands Antilles)

**Present position**

Senior Legal Counsel, Ministry of Infrastructure and the Environment, The Hague, the Netherlands.

**Education**

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|--------------|--|
| 1981         | Bachelor's degree in public and private international law, Jorge Tadeo Lozano University, Bogotá, Colombia   |
| 1986         | Master of Laws (LL.M.) Public International Law, majoring in Law of the Sea, Dalhousie University, Halifax, Canada   |
| 1987-present | Various courses including Ministry of Foreign Affairs training course for the diplomatic service; European law; Netherlands Institute for the Law of the Sea (NILOS, Utrecht University): course on Law of the Sea; Dutch administrative law; environmental law; computer science for lawyers; mediation |

**Professional experience**

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|--------------|--|
| 1981-1988    | Policy adviser, External Relations Bureau of the Government of the Netherlands Antilles (Kingdom of the Netherlands)             |
| 1988-1989    | Policy adviser, Department of Foreign Affairs of the Government of Aruba (Kingdom of the Netherlands)                            |
| 1989-1990    | Legal assistant at Port Management Consultants, Rotterdam  |
| 1990-1998    | Policy Officer, Administrative and Legal Affairs Department, Ministry of Transport, Public Works and Water Management, The Hague |
| 1998-2010    | Senior legal counsel, Legal Affairs Department, Ministry of Transport, Public Works and Water Management, The Hague              |
| 2010-present | Senior legal counsel, Legal Affairs Department, Ministry of Infrastructure and the Environment, The Hague                        |

**International meetings/conferences (selection)***Law of the Sea*

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|-----------|--|
| 1982      | Member of the delegation of the Kingdom of the Netherlands to the eleventh session of the Third United Nations Conference on the Law of the Sea and the Montego Bay Conference adopting the Convention |
| 1983      | Member of the delegation of the Kingdom of the Netherlands to the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea              |
| 1998-2010 | Member of the Dutch delegation to the meetings of the International Seabed Authority   |

*Law of the Sea-related subjects*

1990-present

OSPAR Commission (Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention): legal adviser to the Dutch delegation to the OSPAR Commission; head of delegation to the OSPAR Group of Jurists-Linguists

United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction: legal adviser to the Dutch delegation

International Maritime Organization: legal adviser to the Dutch delegation to meetings of:

- the Legal Committee (chair of the intersessional correspondence group on the development of the Convention on the Removal of Wrecks)
- the Marine Environment Protection Committee (e.g. the OPRC-HNS Protocol and Ballast Water Conventions)
- the Parties to the London Convention/London Protocol (chair of the working group on ocean fertilization)

**Languages**

English, Dutch, Spanish, Papiamentu (fluently), French (satisfactory)

**ČIČEROV, Aleksander**

Date of birth: 15 May 1949  
Place of birth: Ljubljana, Slovenia  
Nationality: Slovenian

**Present position**

Minister Plenipotentiary, Ministry of Foreign Affairs, Ljubljana, Slovenia. He is responsible for land, maritime and sea, river, road, railway and space transport bilateral and multilateral negotiations.

**Education**

1973 LL.B University of Ljubljana, Law Faculty  
1976 LL.M. University of Ljubljana, Law Faculty  
1976 Hague Academy of International Law Summer Course  
1982 Management of the Exclusive Economic Zone, Dalhousie University, Canada  
1998 Legal seminar, Paris  
2001 International Legal Seminar, Strasbourg  
2005 Symposium on Delimitation of the Continental Shelf, Hamburg  
2008 Consultations on climate changes, disputes and cooperation in Antarctica, Hamburg

**Professional experience**

1984 Member of Yugoslavia's delegation to the Third United Nations Convention on the Law of the Sea, Geneva  
1992 Apprenticeship in the Council of Europe  
1993 Head of Slovenia's delegation to the International Labour Organization Conference, Geneva  
1998 Member of Slovenia's delegation to the 32<sup>nd</sup> International Civil Aviation Organization Assembly session  
1999 Head of Slovenia's delegation to the Diplomatic Conference in Montreal  
2004 Slovenia's representative in the WG COMAR. Law of the Sea Party, Council of the European Union, Brussels  
2005 Deputy Member in the International Sava River Basin Commission (*continued*)  
2006 Member of the Space Committee of the International Law Association  
2008 Chairing the WG COMAR and represent the European Union during the Slovene Presidency (Law of the Sea), Brussels and United Nations



- 2009 Slovene's representative in the informal consultations concerning drafting a resolution of the General Assembly on oceans and the law of the sea
- 2010 Participation in AH WG on BBNJ, New York
- 2010 Participation in the International Law Association Conference, The Hague

**International meetings/conferences** (selection)

From the beginning of his career he has participated in various international bilateral and multilateral negotiations in international organizations and between States. He constantly follows and participates in the work of the WG COMAR (EU), UNSPLOS, UNICPOLOS and BBNJ, UNIDROIT, International Sava Basin Commission.

*Law of the Sea-related subjects*

Member of the WG COMAR — Law of the Sea Party, Council of the European Union (since 1004)

UNSPLOS

UNICPOLOS

Ad Hoc BBNJ Meetings

**Publications**

3 monographs, over 200 articles published in academic journals in Slovenian, English and French on law of the sea, civil aviation, general transport law, space law and international organizations

**Languages**

Slovenian (mother tongue), English (fluent), French (fluent), Italian (fluent), Croatian (fluent), Serbian (fluent), German (understands)

**Teaching**

For many years, he has been Senior Lecturer at the Faculty of Mechanical Engineering, Ljubljana, Slovenia. He has lectured widely at various Slovene Faculties and abroad. He is also a member of numerous professional associations.

**Da EMPOLI, Domenico**

Domenico da Empoli is at present professor of public finance and public accounting at the University of Rome.

He was born in Reggio Calabria on 24 September 1941. He studied law and economics at the University of Rome, where he remained as assistant professor (1967-1974) after completing his economics studies at the University of Chicago (1965-1967). In 1975 Prof. da Empoli was appointed full professor of public finance at the University of Messina. He then moved to the University of Naples (1979-1983), after which (1984 to present) he became a full professor of public finance and public accounting at the University of Rome.

He is author of various publications in Italian and in English on matters of public finance, as well as the editor of the *Journal of Public Finance and Public Choice*.

He has represented Italy at both the United Nations (New York and Geneva) and at the OECD, by serving on the Competition Committee and participating in the works of the Diplomatic Conference that established the International Criminal Court.

In 1979, Prof. da Empoli joined the Italian delegation the Third United Nations Conference on the Law of the Sea. Afterwards, he took part in the proceedings of the Preparatory Commission for the International Seabed Authority and the International Tribunal for the Law of the Sea, as well as in all sessions of the Authority. He was elected in 1995 to the I.S.A. Finance Committee and re-elected in 2001 for another five years. He has been Chairman of the Committee for the last four years.

In 2003, Domenico da Empoli was elected Chair of the Council of the International Seabed Authority.

Prof. da Empoli also represents Italy in other international fora, including the ISAR Group at UNCTAD (for which he served as Vice-President-cum-Rapporteur in 2000) and the OECD (Joint Committee for Trade and Competition, of which he is currently Vice-President).

**DAVIS-MATTIS, Laleta**

2 Staten Close  
 P.O. Box 2443  
 Kingston 8  
 Jamaica

Tel: (876) 756-4988  
 (876) 899-1087

Laleta Davis-Mattis is an Attorney-at-Law with over fifteen years experience at the Jamaican Bar. Propelled by her personal motto, “The Sky is Not The Limit: There is Scope Beyond”

**Education**

Master in Marine Management: Dalhousie University, Nova Scotia, Canada

Certificate in Legal Education, Norman Manley Law School, Kingston, Jamaica

Bachelor of Law, University of the West Indies, Cave Hill, Barbados

Bachelor of Arts (Mass Communications) University of the West Indies, Kingston, Jamaica

**International delegations and representation**

- Member of the Jamaican Delegation: United Nations Convention on the Law of the Sea (current)
- Member Legal and Technical Commission to the International Seabed Authority (current)
- Member of Jamaican Delegation: Convention on the International Trade in Endangered Species of Wild Flora and Fauna
- Member of Jamaican Delegation: Convention on the Protection of the Underwater Cultural Heritage
- Member of Jamaican Delegation: Biodiversity Convention
- National Expert on Access and Benefit Sharing to the Convention on Biological Diversity (up to 2006)
- Former Jamaican representative to FIDA: An Inter-American Network of Experts and Officials in Environmental Law, Enforcement and Compliance
- Member, Council for Oceans and Coastal Zone Management, Jamaica (current)
- Member: Board of Directors; Natural History Division, Institute of Jamaica (current)
- Member: Board of Directors; Devon House Development Company (current)
- Member: Board of Trustees; Jamaica National Heritage Trust (current)

- Member: Jamaica Legislative Task Force on Intellectual Property Rights Legislation in Jamaica (1998-2004)
- Member: Jamaica Institute of Environmental Professionals
- Director: Bethel Legal Aid Clinic, Kingston, Jamaica

**Local professional memberships and affiliation**

- Member: Council for Oceans and Coastal Zone Management, Jamaica (current)
- Member: Board of Directors; Natural History Division, Institute of Jamaica (current)
- Member: Board of Directors; Devon House Development Company (current)
- Member: Board of Trustees; Jamaica National Heritage Trust (current)
- Member: Jamaica Legislative Task Force on Intellectual Property Rights Legislation in Jamaica (1998-2004)
- Member: Jamaica Institute of Environmental Professionals
- Director: Bethel Legal Aid Clinic, Kingston, Jamaica

**Corporate legal**

Have been Company Secretary for much of my career and have directed the administration of Boards ensuring that they operate within the boundaries of jurisdictional limits.

**Legislation and policy development**

I have played a pivotal role in the development of the following legislation:

- The Natural Resources (Permits and Licenses) Regulations
- The Endangered Species (Conservation and Regulation of Trade) Act and regulations
- The Ozone Act (not yet promulgated)
- The Natural Resources (Transboundary Movement of Hazardous Waste) Regulations
- The Beach Control (Amendment) Act
- The Natural Resources (Air Quality) Regulations
- The Natural Resources (Sewage Effluent Regulations) (not yet promulgated)
- The Natural Resources (Trade Effluent) Regulations (not yet promulgated)

I have also consulted on The Marine Pollution Bill, The National Solid Waste Management Act, The Fisheries Bill, regulations to give effect to the Pesticides Control Act and instructions for the inclusion of the Rotterdam Convention in Jamaican Law.

I was instrumental in the development of the following policies: 5

- Jamaica's Policy on Protected Areas
- Jamaica's Biosafety Policy
- Jamaica's Beach Policy
- Jamaica's Oceans and Coastal Zone Policy

**Publications**

- Fisheries Management in Jamaica: International Perspectives (Joint Paper) Gladys Young and Laleta Davis-Mattis: *Journal International Wildlife Law and Policy* (2000) 4:131-146; Kluwer Academic Publishers, U.S.A.
- International Drug Trafficking and the Law of the Sea, vol. 14
- The Oceans Yearbook
- Chicago University Press

**De SOUZA, Kaiser Gonçalves**

Date and place of birth: 25 July 1958 (Recife, Brazil)

Nationality: Brazilian and French

Marital status: Married, two children

Address: Geological Survey of Brazil

Division of Marine Geology

SGAN 603, Suite J, Part A, 1<sup>st</sup> floor

70830-030, Brasilia, DF, Brazil

Tel: +55 61-3323-3381 or +55 61-3323-1059

Email: Kaiser.souza@cprm.gov.br

**Actual position**

Since November 2005: Head, Division of Marine Geology, Geological Survey of Brazil, Ministry of Mines and Energy, Brasilia, Brazil

**Education**

- |                |  |
|----------------|--|
| September 1994 | Certificate of Training in Methods of Prospecting and Exploration of Marine Mineral Resources — Preparatory Committee of the International Seabed Authority and the International Court of Law of the Sea (United Nations) |
| June 1994      | “Diploma of Expertise in Exploration and Development of Mineral Resource, option in Marine Mineral Resources”, Institut National Polytechnique de Lorraine —École National Supérieur de Géologie Appliquée, Nancy, France  |
| June 1993      | Certificate of Post-Doctoral Work. Federal Institute for Geosciences and Natural Resources, Hanover, Germany   |
| June 1991      | “Ph.D. in Earth Sciences”, Option Marine Geology. Université Pierre et Marie Curie, Paris, France  |
| September 1985 | “Diploma in Thorough Research Studies in Marine Geology”. Université Pierre et Marie Curie, Paris, France  |
| January 1984   | Diploma in Geology. Universidade do Vale do Rio dos Sinos — UNISINOS, São Leopoldo, RS, Brazil   |

**Training**

Geographical Information System ArcGIS 9.1; Microsoft software (Access Database, Windows XP, Word, Excel, PowerPoint, Outlook, Explorer, HTML, FrontPage, Projects) MapInfo Geographic Information System 7.0; Statistics for Mining and Environment — Isatis 5.1 software, People Management Training Programme (Training Management Personnel of the United Nations), Strategic Management for Quality, Policy and Law of the Sea, “Logical Framework” (the Program Management Method “teamup”)

**Languages**

<i>Languages</i>	<i>Speak</i>	<i>Write</i>	<i>Read</i>	<i>Understand</i>
Portuguese	Excellent	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent	Excellent
French	Excellent	Good	Excellent	Excellent
Spanish	Good	Slight	Excellent	Excellent
German	Slight	Slight	Slight	Slight

**Former professional experience**

*November 1997 to December 2004:* Marine Geologist — Office of Mineral Resources and Environmental Monitoring — International Seabed Authority (United Nations), Kingston, Jamaica

*May 1995 to October 1997:* Scientific and Technical Expert in Ocean Resource Affairs — Division of Marine Sciences, Ministry of Sciences and Technology in cooperation with the Interministry Commission for the Resources of the Sea (CIRM) and the Ministry of Environment, Brasilia, Brazil

*November 1991 to July 1993:* Visiting Research Fellow — Department of Marine Geophysics “Bundesanstalt Für Geowissenschaften und Rohstoffe” (Federal Institute for Geosciences and Natural Resources), Hannover, Germany

*September 1986 to June 1991:* Researcher (doctorate candidate) — Group d’Étude de la Marge Continentale, Laboratoire de Géodynamique Sous-marine, Observatoire Oceanographique de Villefranche-sur-mer, France

**Scientific production (2006 to 2011)**

- Participation in 78 workshops, meetings, conferences, seminars, including production of policy, plans, programmes and projects focused on activities related to exploration and exploitation of marine mineral resources
- Total of 55 publications and reports related to marine mineral resources and related subjects

**ESCOBAR, Elva G.****Research and professional experience**

- Since 2006 Full time professor, Universidad Nacional Autónoma de México,  
Instituto de Ciencias del Mar y Limnología
- 1999-2008 Head of Department, Ocean and Coastal System ICML UNAM-CU

**Areas of research**

Structure and function of benthic communities, marine conservation

**Honours and awards**

- 2010 President Mexican Astrobiological Society (SOMA)
- 2006 Member, Legal and Technical Commission ISBA, Investigador  
Sistema Nacional Nivel 3
- 2003 Distinction “Juana Ramírez de Asbaje” UNAM
- 2002 Scientific expert in marine science representing Mexico SRE
- 2002-2004 Committee Member, Ciencias Exactas, Naturales y Salud, del Foro  
Consultivo Científico y Tecnológico
- 2000 Award Divulgación Ciencias para la Salud, Novartis-Primera  
Plana, 2000 UNAM: PRIDE D; 1995-1997
- 1998-2000 Latin American Governor, The Crustacean Society
- 1997 Fellow Mexican Academy of Sciences, 1997 Cátedra  
Extraordinaria Iztacata, UNAM
- 1994 Research Affiliate TAMU

**Species dedicated**

- 1997 *Boca elvae* sp. n. new amphipod Lowry, J. K. & H. S. Stoddart.  
1997. *Memoirs of the Hourglass Cruises*. Vol. X
- 1997 *Marphysa escobarae* sp. n. new polychaete Salazar-Vallejo, S. I. &  
L. F. Carrera-Parra 1997 *Rev. Biol. Trop.* 45(4): 1481-1498
- 2010 *Colomastix escobarae* n. sp. new amphipod Winfield I. & M. Ortiz.  
*Scientia Marina* 74(4): 773-782
- 2011 *Pycnoderma escobarae* n. sp. Salazar-Vallejo, S. I. 2011 *Zootaxa*  
2819; 1-50, p.35



### Selected academic products

- Wei C. L., Rowe, G. T., Escobar-Briones, E., Boetius, A., Soltwedel, T., Caley, J., Soliman, Y., Huettmann, F., Qu, F., Yu, Z., Pitcher, R., Haedrich, R. L., Wicksten, M. K., Rex, M. A., Baguley, J. G., Sharma, J., Danovaro, R., MacDonald, I. R., Nunnally, C. C., Deming, J. W., Montagna, P., Lévesque, M., Weslawski, J. M., Wlodarska-Kowalczyk, M., Ingole, B. S., B A Yool, B. J., Bluhm, B. A., Iken, K., Narayanaswamy, B. E. 2010. Global Patterns and Predictions of Seafloor Biomass Using Random Forests. *PLoS ONE* 5(12): e15323. doi: 10.1371/journal.pone.0015323
- Ramirez-Llodra, E., Brandt, A., Danovaro, R., Escobar, E., German, C. R., Levin, L. A., Martinez Arbizu, P., Menot, L., Buhl-Mortensen, P., Narayanaswamy, B. E., Smith, C. R., Tittensor, D. P., Tyler, P. A., Vanreusel, A. and Vecchione, M. 2010. Deep, diverse and definitely different: unique attributes of the world's largest ecosystem. *Biogeosciences*, 7, C1178-C1179
- Miloslavich, P., Díaz, J. M., Klein, E., J. A., Díaz, C., Gobin, J., Escobar-Briones, E., Cruz-Motta, J. J., Weil, E., Cortés, J., Bastidas, A. C., Robertson, R., Zapata, F., Martín, A., Castillo, J., Kazandjian, A., Ortiz, M. 2010. Marine Biodiversity in the Caribbean: Regional Estimates and Distribution Patterns. *PLoS ONE* 5(8): e11916. doi: 10.1371/journal.pone.0011916
- Zhang, J., Gilbert, D., Gooday, A. J., Levin, L., Naqvi, S. W. A., Middelburg, J. J., Scranton, M., Ekau, W., Peña, A., Dewitte, B., Oguz, T., Monteiro, P. M. S., Urban, E., Rabalais, N. N., Ittekkot, V., Kemp, W. M., Ulloa, O., Elmgren, R., Escobar-Briones, E. and Van Der Plas, A. K. 2010. Natural and human-induced hypoxia and consequences for coastal areas: synthesis and future development. *Biogeosciences* 7: 1443-1467
- Gooday, A. J., Bett, B. J., Escobar, E., Ingole, B., Levin, L. A., Neira, C., Raman, A. V., Sellanes, J. Habitat heterogeneity and its influence on benthic biodiversity in oxygen minimum zones. *Marine Ecology* 31:125-147
- Stuart C. T., Martinez Arbizu, P., Smith, C. R., Molodtsova, T., Brandt, A., Etter, R. J., Escobar-Briones, E., Fabri, M.-C. and Rex, M. A. 2008. CeDAMar global database of abyssal biological sampling. *Aquatic Biology* 4:143-145
- Canet C., Prol-Ledesma, R. M., Escobar-Briones, E., Mortera-Gutiérrez, C., Lozano-Santa Cruz, R., Linares, C., Cienfuegos, E. and Morales-Puente, P. 2006. Mineralogical and geochemical characterization of hydrocarbon seep sediments from the Gulf of Mexico. *Marine and Petroleum Geology* 23 (5) 605-619
- MacDonald, I. R., Bohrmann, G., Escobar, E., Abegg, F., Blanchon, P., Blinova, V., Brückmann, W., Drews, M., Eisenhauer, A., Han, X., Heeschen, K., Meier, F., Mortera, C., Naehr, T., Orcutt, B., Bernard, B., Brooks, J. and de Faragó, M. 2004. Asphalt Volcanism and Chemosynthetic Life in the Campeche Knolls, Gulf of Mexico. *Science* 304: 999-1002
- UNEP and IOC-UNESCO 2009. An Assessment of Assessments, Findings of the Group of Experts, Start-up Phase of a Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects. ISBN 987-92-807-2976-4 (co-author and coordinator of the project). 220 pp.

- Vierros, M., Cresswell, I., Escobar-Briones, E., Rice, J. and Ardron, J. 2009. Global Open Oceans and Deep Seabed (GOODS) — Biogeographic Classification. Paris, UNESCO-IOC. (IOC Technical Series, 84)
- Steele, J., Alverson, D.L., Auster, P., Collie, J., DeAlteris, J. T., Deegan, L., Escobar E., Hall, S. J., Kruse, G. H., Pomeroy, C., Scanlon, K.M. and Weeks, P. 2002. Effects of trawling and dredging on Seafloor Habitats. Committee on Ecosystem Effects of Fishing: Phase 1 — Effects of Bottom Trawling on Seafloor Habitats. National Research Council Division on Earth and Life Studies Ocean Studies Board. National Academy Press, Washington, D.C. 126 pp. ISBN 0-309-08340-0
- Ayala-Castañares, A., Knox, R. A., Aguayo-Camargo, J. E., Clarke, M. E., Costa, D., Escobar-Briones, E., Faulkner, D. J., Gallegos-García, A., Gold-Bouchot, G., Gutiérrez-Galindo, E., Huyer, A., Krause, D. C., Lluch-Belda, D., Martens, C., Martínez-García, M., Mooers, C. K. N., Ochoa de la Torre, J. L., Rowe, G. T., Soto, L. A., Vicente-Vidal Lorandi, F., Vicente-Vidal Lorandi, V. M. 1999. Building Ocean Science Partnerships: The United States and Mexico Working Together. Report of the National Research Council. National Academy Press. Washington, D.C. 292 pp. ISBN 0309-05881-3
- Barbiere, J. and Escobar-Briones, E. 2011. An environment to be discovered: marine biodiversity assessment Ch. 2 In Sustainable development annual report “A Planet for Life 2011” APFI, 2011. AFD & Institut du Développement Durable et des Relations Internationales (in press)
- MacCracken, M. L., Escobar-Briones, E., Gilbert, D., Korotaev, G., Naqvi, W., Perillo, G., Rixen, T., Stanev, E., Sundby, B., Thomas, H., Unger, D. and Urban, E. 2009. Vulnerability of Semi-Enclosed Marine Systems to Environmental Disturbances. Ch. 2, pp. 9-3- in (Eds.) Edward R. Urban, Jr., Bjørn Sundby, Paola Malanotte-Rizzoli and Jerry M. Melillo, B. Watersheds, Bays, and Bounded Seas: The Science and Management of Semi-Enclosed Marine Systems. Island Press-SCOPE 70, USA; pp. 269
- Kroěze, C., Middelburg, J., Leemans, R., Escobar-Briones, E., Fennel, W., Glaser, M., Harashima, A., Kee Liu K. and M. L. Meybeck. 2009. Integrating Tools to Assess Changes in Semi-Enclosed Marine Systems. Ch. 5 pp. 77-96. In: (Eds.) Edward R. Urban, Jr., Bjørn Sundby, Paola Malanotte-Rizzoli and Jerry M. Melillo. B. Watersheds, Bays, and Bounded Seas : The Science and Management of Semi-Enclosed Marine Systems. Island Press-SCOPE 70). USA, pp. 269

### **Thesis directed**

Doctorate: 3

Masters in Science: 18

Bachelor in Science: 27

### **Recent research projects**

Factores que definen la variabilidad de la diversidad biológica y biomasa béntica en el mar profundo del Golfo de México. Convocatoria del Programa de Apoyo a Proyectos de Investigación e Innovación Tecnológica (PAPIIT) IN204307-3

BIG 2008 Biodiversité et Interaction à Guaymas collaboration with Anne Godfroy IFREMER, 120,000 Euro Ship time, Nautile submersible BIG cruise 2010, Mexican Co-PI Anne Godfroy

Fresh estimates of biomass by trophic and/or species levels in all realms Cross-Project Synthesis Sloan Foundation. Co-PIs G. T. Rowe

Genetic diversity of representative polychaete, sipunculan and crustacean species as indicators of species ranges and dispersal in the Sigsbee Abyssal Plain. Co-PIs A. Schulze Programa de Colaboración en Investigación entre investigadores de la Universidad de Texas A&M e Instituciones Mexicanas Texas A&M y ONACYT

Análisis de diversidad beta, gamma y biomasa béntica en el mar profundo del Golfo de México, el Mar Dediterráneo y Mar Cantábrico Co-PIs Joan E. Cartes ICM-CSIC Proyectos de Investigación Conjunta del ONACYT Colaboración bilateral México-España; área de conocimiento de Biología y Qulmica

### **Cruise experience**

Total 46 oceanographic cruises in collaboration with national research groups (29) and international (17) with European (4) and North American (13) scientists, in the Gulf of Mexico and the Gulf of California. PI of 18

### **Coordination and organization of meetings**

CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 13) UNESCO side event follow-up workshop on the biogeography of deep and open ocean areas

Taller Biodiversidad en la III Reunión de Investigación Ecológica a Largo Plazo de la RED MEX\_LTER; Autlán, Jalisco

Mexican-German-US Workshop on marine science in the Southern Gulf of Mexico: Results from RV SONNE cruise SO174 and Planning of future cooperation R/V METEOR cruise M67 in 2006 Universidad Nacional Autónoma de México (UNAM) México DF

Hidratos de Metano: La Fuente de Gas Natural más importante del Futuro. I. Geofísica UNAM, PEMEX, IMP, SENER, AMGE, Dol. Ing. Geofís. Méx. UNAM

### **Committee member of journals and panels**

EcoHealth, Springer-Verlag Ecosystem Health Blackwell Science, Gulf of Mexico Science, Revista de Investigaciones Marinas U. Habana Cuba, Revista Mexicana de Biodiversidad. SCOR IOC Working Group 128, COMARGE CoML, COAST-IOC, GMA-DOALOS, OSB US-Mexico Collaboration in Ocean Scientific Research Joint Working Group, IUCN Experts workshop on the development of Biogeographic classification systems for the use of open ocean and deep seabed marine protected areas, NAS Committee on Evaluating the effects of Bottom trawling on Seafloor habitats

### **Member of scientific societies**

Limnology and Oceanography, American Geophysical Union, The Oceanography Society, The Crustacean Society, The International Meiobenthologist Society, The Biological Society of Washington, Gulf Estuarine Research Society

## **HOWORTH, Russell**

Dr. Howorth returned to SOPAC as Director in February 2010. He is a professional earth scientist. He retired as Deputy Director of SOPAC on 30 September 2005, after serving the region with SOPAC for over 26 years. He has worked for, and/or carried out fieldwork in all Pacific small island developing States. He has published over 60 research papers, as well as being on country teams as adviser at many international fora such as UN-CSD for seven years, 1998-2005, the World Summit on Sustainable Development in 2002, and in 2004-2005 the preparatory meetings for both the Mauritius International Meeting on SIDS and the Second World Conference on Disasters in Kobe. During 2005 he also assisted the ACP/EU Secretariat and member States draft the new ACP/EU Natural Disaster Fund and participated on the Task Force drafting the Pacific Plan. He has worked with all development partners supporting the region.

Dr. Howorth is also the owner/operator of Matadrevula Advisory Services, a small company he established and registered in the Fiji Islands in 2006, in order to provide visibility to his being requested to provide advice with a broad environmental and sustainable development emphasis to countries, organisations and individuals in the region.

From 2006 until February 2010 he has provided services to the New York based UNDESA Division for Sustainable Development, and UNDESA Water Branch and SIDS Unit, the UNDP Pacific Sub-Regional Centre in Suva, the European Union Suva Delegation, and the South Pacific Tourism Organisation, as well as been a part time Senior Adviser to the Pacific Islands Applied Geoscience Commission (SOPAC) Directorate. In mid 2007 he completed a substantial project proposal for the Christian World Service to support the churches in the Pacific islands develop and strengthen their role in disaster risk reduction. During the first half of 2008 he has assisted the newly established Regional Office for IUCN Oceania in preparing its strategic and operational plans and developing particular project concepts, including the Pacific Ocean 2020 Challenge a major project endorsed in October 2008 by the World Conservation Council. Country specific work over the past 3 years has included visits to FSM, Marshall Islands, Palau, Papua New Guinea, Solomon Islands and Tuvalu to develop country implementation plans for disaster risk management related projects supported from the EDF9 National Programmes. In September 2008 he was in the Cook Islands drafting of a Business Plan for Emergency Management Cook Islands, as part of the Prime Minister's Office.

During 2009 he has engaged in the following consultancies:

- Senior technical advisor to the EU Regional Authorising Office based at the Pacific Islands Forum Secretariat to assist in managing the selection of projects to be funded under the 10<sup>th</sup> EDF Regional Indicative Programme worth €95 million
- A member of a 3-person team to analyse and validate the regional institutional arrangements proposed for SOPAC, SPC and SPREP
- Prepared a regional overview of the Millennium Development Goals (MDGs) for the Asian Development Bank in conjunction with the UNDP Pacific Centre

- Currently he is about to commence a consultancy for the ESCAP Pacific Operations Centre to prepare the reporting for the 5-year review of the Mauritius Strategy for further implementation of the Barbados Programme of Action for SIDS

He has a keen interest in capacity-building for Pacific island nations and established the Certificate in Earth Science and Marine Geology for in-service training of technicians working in the earth sciences.

His broader environmental and sustainable development interests are demonstrated in many ways, for example: (i) as a team leader of the work on developing the first globally applicable environmental vulnerability index which Pacific SIDS presented at the Mauritius Meeting, and (ii) as a technical adviser to the United Nations on National Sustainable Development Strategies and the Millennium Development Goals in Pacific SIDS.

**HYEONG, Kiseong**

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Korea Ocean Research & Development Institute  
Ansan P.O. Box 29  
Seoul, 425-600  
Korea

Office: +82-31-400-6382  
Fax: 82-31-418-8772  
E-mail: kshyeong@kordi.re.kr

**Research and professional experiences**

Since 2009	Principal Research Scientist Korea Ocean Research and Development Institute
2009-2010	Visiting Scholar National Oceanography Centre, University of Southampton, UK
2002-2008	Senior and Principal Research Scientist Korea Ocean Research and Development Institute
2000-2002	Post-doc Research Associate Department of Geosciences, University of Houston, Houston, TX
1991-1993	Geologist, Hyundai Resources Development Corporation (Korean-based oil company), Seoul, Korea

**Education**

2000	Ph.D. in Geology, University of Houston, Houston, TX
1990	M.Sc. in Geology, Seoul National University, Seoul, Korea
1987	B.Sc. in Geology, Seoul National University, Seoul, Korea

**Areas of research interests**

Geochemistry of deep seabed mineral resources, Sinking particle fluxes in interior of ocean, Paleoceanography, Paleoclimatology

**Honours and awards**

A Ministerial Award from the Ministry of Science and Technology, Republic of Korea 2008

Award for distinguished scientific publication in KORDI, 2007

Award for distinguished scientific publication in KORDI, 2006

**Current research projects involved**

- Development of Deep Seabed Mineral Resources (polymetallic nodules)  
Ministry of Land, Transport and Maritime Affairs, Republic of Korea

- Korea Deep-sea Environmental Study in the North-eastern Pacific (CCFZ), Ministry of Land, Transport and Maritime Affairs, Republic of Korea
- Exploration for Seafloor Hydrothermal Deposits and Fe-Mn Crusts in the South-western Pacific, Ministry of Land, Transport and Maritime Affairs, Republic of Korea
- Assessment of the Impact of Climate Change on Marine Ecosystem in South Sea of Korea, Ministry of Land, Transport and Maritime Affairs, Republic of Korea

### **Cruise experience**

More than 20 scientific cruises for environment studies and exploration for deep seabed mineral resources (polymetallic nodules, Co-rich manganese crust, and seafloor massive sulfide deposits) and environmental studies in collaboration with SOEST, University of Hawaii (2) and with Integrated Ocean Drilling Program (1)

### **Coordination and organization of meetings**

- Underwater Mining Institute 2003: New Horizons for Marine Mining — Progress through International Cooperation, 2003, Jeju, Korea
- The 4<sup>th</sup> to 6<sup>th</sup> Meetings of China-Korea Cooperation on Deep-sea Mineral Resources Development, from 2004 to 2009 every two years

### **Member of scientific societies**

Underwater Mining Institute  
 International Marine Minerals Society  
 Geological Society of Korea  
 The Korean Society of Oceanography  
 American Geophysical Union  
 Geological Society of America  
 The Geochemical Society

### **Work experience with the International Seabed Authority**

- Writing and editing of “Annual Report on the Exploration Activities of the Government of the Republic of Korea for Polymetallic Nodules in Clarion-Clipperton Fracture Zone” submitted to the International Seabed Authority from 2002 to 2009
- Contribution to International Seabed Authority Technical Study No. 6: “A Geological Model of Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone” and “A Prospector’s Guide for Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone”, ISA Technical Study No. 6, International Seabed Authority, Kingston, Jamaica, 105 pp.
- A member of working group for “A Geological Modeling of Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone” carried out by the International Seabed Authority from 2003 to 2010
- A participant at the meeting of representatives of contractors on the development of a geological model of polymetallic nodule resources of the Clarion-Clipperton Zone (CCZ), November 2003

**List of papers and book contributions****Papers in international peer reviewed journals**

- Hyeong, K., Kim, J., Pettke, T., Yoo, C. M. and Hur, S.-D., 2011, Lead, Nd, and Sr isotope records of pelagic dust: Source indication versus the effects of dust extraction procedures and authigenic mineral growth, *Chemical Geology*, in press
- Kim, H. J., Kim, D. Yoo, C. M., Chi, S.-B., Khim, B. K. and Hyeong, K., 2011, Influence of ENSO variability on sinking-particle fluxes in the north-eastern equatorial Pacific, *Deep-Sea Research I*, accepted
- Kim, H. J., Hyeong, K., Yoo, C. M., Chi, S.-B., Khim, B. K. and Kim, D., 2010, Seasonal variations of particle fluxes in the north-eastern Pacific during normal and weak El Niño period, *Geosciences Journal*, 14, 415-422
- Lyle M., Palike H., Nish, H., Raffi, I. Gamage, K., Klaous A., Hyeong, K. and others, 2010, The Pacific Equatorial Age Transect, IODP Expeditions 320 and 321: Building a 50-million-year-long environmental record of the Equatorial Pacific, *Scientific Drilling*, 9, 4-15
- Lawrence, J. R., Hyeong, K., Maddocks, R. F. and Lee, K. S., 2008, Passage of tropical storm Allison (2001) over south-east Texas recorded in  $\delta^{18}\text{O}$  values of Ostracoa, *Quaternary Research*, 74, 339-342
- Shimamura, M., Hyeong, K., Yoo, C. M., Watanabe, T., Irino, T. and Chung, H. S., 2008, High resolution stable isotope records of scleractinian corals near Ishigaki Island: Their implication as a potential paleoclimatic recorder in middle latitude regions, *Geosciences Journal*, 12, 25-31
- Kim, J., Hyeong, K., Jung, H. S., Moon, J. W., Kim, K.-H., and Lee, I., 2006, Southward shift of the Inter-tropical Convergence Zone during the Late Tertiary: Evidence from ferromanganese crusts on seamounts west of the Marshall Islands, *Paleoceanography*, 21, PA4218
- Hyeong, K., Yoo, C. M., Kim, J., Chi, S.-B., and Kim, K.-H., 2006, Flux and grain size variation of eolian dust as a proxy tool for the paleo-position of the Intertropical Convergence Zone in the north-east Pacific, *Paleogeography Paleoclimatology, Paleoecology*, 241, 214-223
- Hyeong, K., Park, S.-H., Yoo, C. M., Kim, K.-H., 2005, Mineralogical and geochemical compositions of the eolian dust from the north-east equatorial Pacific and their implications on paleolocation of the Intertropical Convergence Zone, *Paleoceanography*, 20, 1-11, 2005
- Kim, J., Hyeong, K., Yoo, C. M., Moon, J. W., Kim, K.-H., Ko. Y. T., and Lee, I., Textural and geochemical characteristics of Fe-Mn crusts from four seamounts near the Marshall Islands, western Pacific, *Geosciences Journal*, 9, 331-338, 2005
- Hyeong, K. and Capuano, R. M., Hydrogen isotope fractionation factor for mixed-layer illite/smectite at 60 to 150 degree C: New data from the north-east Texas Gulf Coast, *Geochimica et Cosmochimica Acta*, 68, 1529-1543, 2004
- Hyeong, K. and Lawrence, J. R., Hydrology of the Gulf Intra-coastal Waterway in the San Bernard-Brazos River Estuaries, *Geosciences Journal*, 7, 27-35, 2003



- Hyeong, K. and Capuano, R. M., Controls on the Ca/Mg ratios of Texas Gulf Coast brines: Evidence for buffering by calcite/dolomite equilibria, *Geochimica et Cosmochimica Acta*, 65, 3065-3080, 2001
- Lee, Y. L., Hyeong, K., and Yoo, C. M., Cyclic sedimentation across a Middle Ordovician carbonate ramp (Duwibong Formation), Korea. *FACIES*, 44, 61-74, 2001
- Hyeong, K. and Capuano, R. M., 2000, The effect of organic matter and H<sub>2</sub>O<sub>2</sub> organic-matter-removal on the  $\delta D$  of smectite-rich samples. *Geochimica et Cosmochimica Acta*, v. 64, p. 3829-3837

#### **Papers in domestic peer reviewed journals (in Korean)**

- Khim, B. K., Kim, Y. H., Kim, H. J., Hyeong, K. and Yoo, C. M., 2010, Variation of calcium carbonate content in deep-sea pelagic sediments of the western Pacific Ocean, *Ocean and Polar Research*, 32, 15-22
- Hyeong, K., Shimamura, M., Watanabe, T., Yamano, H., Sugihara, K., and Kim, J., 2008, Evaluation of Jeju/Tsushima hermatypic corals as sea surface temperature (SST) recorders, *Ocean and Polar Research*, 30, 351-359
- Chi, S. B., Lee, H. B., Hyeong, K., Ju, S. J., Lee, G. C. and Ham, D. J., 2008, Geotechnical properties of pelagic red clay in north-east Equatorial Pacific, *Journal of the Korean Society of Oceanography*, 13, 286-294
- Kim, H. J., Kim, D., Hyeong, K., Kim, K.-H., Son, J.-W., Hwang, S.-C., Chi, S.-B., Kim, K.-H. and Khim, B. K., 2008, Seasonal variations of particle fluxes in the north-eastern Pacific, *Journal of the Korean Society of Oceanography*, 13, 200-209
- Hyeong, K., Kim, J., Yoo, C. M., Moon, J. W. and Kim, K.-H., 2008, Phosphogenesis recorded in the Co-rich crusts of the north-west Pacific seamounts, *Journal of Geological Society of Korea*, 44, 435-446
- Lee, H. B., Chi, S. B., Hyeong, K., Park, C. K., Kim, K.-H. and Oh, J. K., 2006, Physical properties of surface sediments from the KR (Korea Reserved) 5 area, north-east equatorial Pacific, *Ocean and Polar Research*, 28
- Chi, S. B., Lee, H. B., Kim, J. W., Hyeong, K., Ko, Y. T. and Lee, K. Y., 2006, Mass physical properties in deep-sea sediment from the Clarion-Clipperton Fracture Zone, north-east equatorial Pacific, *Resources Environments Geology*, 39
- Yoo, C. M., Hyeong, K., Moon, J. W., Kim, K.-H. and Chi, S.-B., 2004, Late Pleistocene Paleooceanographic Changes of the West Equatorial Pacific, *Ocean and Polar Research*, 26, 175-185
- Chi, S.-B., Hyeong, K., Kim, J., Kim, H. S., Lee, G. C. and Son, S. K., Classification of Deep-sea Sediment by Geotechnical Properties from the KODOS Area in the C-C Zone of the North-east Equatorial Pacific, *Ocean and Polar Research*, 22, 529-544
- Hyeong, K., Kim, H.-H., Chi, S.-B. and Yoo, C. M., 2004, Paleo-latitude of the Intertropical Convergence Zone in the North-east Pacific during the Late Cenozoic, *Ocean and Polar Research*, 26, 245-253

**Book (contributions)**

- Palike H., Nish, H., Lyle, M., Raffi, I., Klaus A., Gamage, K., Hyeong, K. and others, 2010, Proceedings of the Integrated Ocean Drilling Program Volume 320/321 Expedition Reports: Pacific Equatorial Age Transect, Integrated Ocean Drilling Program, 141 pp
- International Seabed Authority, 2010, A Geological Model of Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone, ISA Technical Study, No. 6, International Seabed Authority, Kingston, Jamaica, 75 pp
- International Seabed Authority, 2010, A Prospector's Guide for Polymetallic Nodule Deposits in the Clarion-Clipperton Fracture Zone, ISA Technical Study, No. 6, International Seabed Authority, Kingston, Jamaica, 105 pp
- Palike H., Nish, H., Lyle, M., Raffi, I., Klaus A., Gamage, A., Hyeong, K. and others, 2009, Integrated Ocean Drilling Program Expedition 320 Preliminary Report: Equatorial Age Transect, Integrated Ocean Drilling Program, 175 pp
- Lyle, M., Raffi, I., Palike H., Nish, H., Gamage, A., Klaus A., Hyeong, K. and others, 2009, Integrated Ocean Drilling Program Expedition 321 Preliminary Report: Pacific Equatorial Age Transect, Integrated Ocean Drilling Program, 112 pp
- Hyeong, K., 2007, Coral Reef — Tropical Rain Forests of the Pacific, in: Ocean and Culture series 16, ed. K. H. Chu, 37-43, Ocean and Culture Foundation, Seoul, Korea
- Hyeong, K., 2006, Burning Ice-Gas Hydrate, in: "Our economic territory in deep ocean", Ministry of Maritime Affairs and Fisheries, ROK, 67-73 pp
- Kim, W. S., Kim, K.-H., Lee, M. J., Hyeong, K., Hong, S., Park, K. H. and Yun, C. H., 2003, Repository of Resources, Deep Seabed, Ministry of Maritime Affairs and Fisheries, ROK, 160 pp

## JARMACHE, Elie

### Position

Special Adviser on the Law of the Sea, Secrétariat général de la mer

### Main professional experience

- Special Adviser on the Law of the Sea, Secrétariat général de la mer (law of the sea, biodiversity, continental shelf, scientific research, Part XI, EU marine policy)
- Head of French delegation to the Commission on the Limits of the Continental Shelf
- Chairman of the Advisory Body of Experts on the Law of the Sea (ABELLOS) of the Intergovernmental Oceanographic Commission (IOC/UNESCO) since 2000
- French expert with the European Commission, Maritime Policy Unit, Directorate-General for Maritime Affairs and Fisheries (MARE)
- Former Director of International and European Relations of the French Institute for the Exploration of the Sea (FREMER) from 1998 to 2003
- Senior lecturer in international law at the Institut d'Etudes Politiques (IEP) of Paris

### Main publications

- "Marine scientific research and the United Nations Convention on the Law of the Sea" in *Troubled Waters, Ocean science and Governance*, edited by Geoff Holland and David Pugh, Cambridge University Press, 2010
- "L'exploration et l'exploitation des ressources de la mer à la lumière des dispositions de la Convention de Montego Bay", in *Les implications juridiques de la ratification de la Convention des Nations Unies sur le droit de la mer*, Université Mohamed V, Publications IURS, 2010
- "La pratique de la Commission des limites du plateau continental", *Annuaire Français de Droit International*, LIV, 2008
- "Les organisations internationales et la mer : gouvernance improbable ou impossible?", the journal *Administration*, June 2008,
- "La haute mer et la biodiversité", journal of the Institut du développement durable et des relations internationales (IDDRI), July 2008
- "A propos de la Commission des limites du plateau continental", *Annuaire du droit de la mer 2006*, Tome XI, Institut du droit économique de la mer (INDEMER), Monaco
- "La recherche, acteur de la politique maritime européenne?", Proceedings of the Brest colloquium, Centre for the Law and Economics of the Sea of the University of Western Brittany (UBO/CEDEM), Pédone, 2007
- "Sur quelques difficultés de la recherche scientifique marine", *Mélanges offerts à Lauren Lucchini et Jean-Pierre Quéneudec*, Pédone, 2003

- “Les dispositions techniques et financières dans l'Accord relatif à l'application de la Partie XI de la Convention des Nations Unies sur le droit de la mer” (with Jean-Pierre Lenoble), in *E:spaces et Ressources Maritimes*, Pédone, 1995
- “La Résolution II de l'Acte final de la 3<sup>ème</sup> Conférence des Nations Unies sur le droit de la mer”, in *Espaces et Ressources Maritimes*, Pédone, 1988

**KALNGUI, Emmanuel**

Born on 17 January 1956 at Douala, Cameroon

Married. Father of 5 children

Geological Engineer, Master of Sciences in Petroleum Geology, Moscow Institute of Petroleum Engineering, IM GoubkinRussy 1982

Member of Legal and Technical Commission of the International Seabed Authority

Member of the commission on the limits of the Continental shelf related to the Convention on the Law of the Sea of the United Nations since 2007

Languages: French, English, Russian

**KHRAMOV, Denis Gennadyevich**

Birth date: 9/7/1975  
Birthplace: Samara  
Education: Higher legal education. In 1997 graduated from the Ural State Law Academy  
Scientific degrees: Ph.D. Law  
Knowledge of foreign languages: English  
State awards: none  
Visits abroad: numerous

**Professional career**

1992-1997	Student of the Ural State Law Academy, Yekaterinburg
1997-1999	Lawyer, the Centre for the Legal Problems of the Northern Territories, Moscow
1999-2001	Chief Expert, Deputy Head of the Division, Ministry of Fuel and Energy of the Russian Federation, Moscow
2001-2003	Deputy Head of the Division, Head of the Division, Ministry of Economic Development and Trade of the Russian Federation, Moscow
2003-2007	Deputy Head of the Department, JSC Zarubezhneft, Moscow
2007-2008	Senior Associate, Dewey&LeBoeuf, Moscow
Since 08/2008	Director of the Department of the State Policy and Regulation in the Field of Geology and Subsoil Use, Ministry of Natural Resources and Ecology of the Russian Federation, Moscow
Since 06/2009	Member of the Legal and Technical Commission of the International Seabed Authority

## **LOPERA, Eusebio Caballero**

Date of birth: 19 January 1948

Marital status: married

Nationality: Spanish

### **Academic qualifications**

- Diploma in Geology (Universidad Complutense de Madrid)
- Ph.D. in hand, due to be completed. Subject: “Mineralization in the Oriental Cordillera — Dominican Republic”, Salamanca University

### **Other studies**

- Master in Business Administration
- Diploma in Environmental Auditing
- Diploma in Waste Management
- Various courses applied to mineral resources investigation in: geophysics, geochemistry, satellite imagery interpretation, carbonates sedimentation and gemmology

### **Professional experience**

- |           |   |
|-----------|---|
| 1973-1982 | <p>Compañía Española de Minas de Tharsis</p> <p>Involved in all kinds of work related to the development and exploration of two polymetallic massive sulphide deposits (San Guillermo-Filón Notre and La Zarza)</p> <p>From 1977-1982 Head of Exploration Department for this company</p> |
| 1982-1986 | <p>Exxon Minerals Spain</p> <p>From 1982-1985 Senior Minerals Geologist in charge of the exploration of VHMS, SMS and epithermal deposits types in SW Spain</p> <p>From 1985-1986 Advisor for the exploration of the same types of deposits in several countries in Europe</p>            |
| 1987-2010 | <p>Instituto Geológico y Minero de España (IGME — Spanish Geological Survey). Working in the Minerals and Environmental Management team, in charge of projects related to mineral resources, metallogenic mapping and thematic mapping</p>  |

### **International experience**

Exploration and field trips in Portugal, France, Sweden, Finland, Australia-Tasmania and the Dominican Republic

Special mentions for the work undertaken in the Dominican Republic (Island Arc Domain) as Director of three projects, named C, L and 1b, during the years 1997-2000, 2002-2004 and 2006-2010

The projects were focussed on providing the necessary general infrastructure on thematic mapping for the country to develop and boost activities in the mining

sector. The projects were financed by the European Union with the SYSMIN I and II Program.

The final works produced included:

- 98 Geological Maps at 1/50.000 scale
- 31 Minerals Resources Maps at 1/100.000 scale
- 31 Geomorphological and Morphodynamic Maps at 1/100.000 scale
- 3 Geotechnics Maps at 1/100.000 scale
- 4 Soil and Mineralometric studies covering the surface of the Projects
- 1 Study on the Artesanal mining sector in the Dominican Republic
- 1 Study of Seismic Microzonification in Santiago de los Caballeros city

#### **Other projects related to HVMS**

- Volcanologic and Paleogeographic reconstruction of the Pyrite Belt (SW of Spain)
- Ossa Morena Variscan magmatism and related mineralizations
- Paleoenvironmental modelling and metals hydrothermal geochemistry of Massive Sulphide deposits of the Pyrite Belt
- Gravity investigation in the SW of Spain (Pyrite Belt)
- Innovative Analytical and Geophysical Technologies for detecting blind polymetallic orebodies in Southern Spain

#### **Other experience**

- Expert in mining legislation
- Member of the Spanish committee of “Technical Working Group for Management of Tailings and Waste-Rock in Mining Activities”
- Member of the National Experts of Mining Waste Committee
- Member of the Spanish Committee at the International Seabed Authority (Kingston, Jamaica)
- Member of the Legal and Technical Commission of ISBA for the 2007-2011 period

#### **Languages**

English: Fluent spoken, read and written

French: Fluent spoken and read, average written

Spanish: Mother language

#### **Papers**

Roger, G., Lecolle, M., Lopera, E., “Notes about the structure of the Puebla de Gúzman Anticline” (1974). *Comp. Rend. Univ. Pierre et Marie Curie*

Lopera, E., Madel, J., Santos, A. “Geología del flanco Norte del anticlinal de Puebla de Guzmán” (1976). *IGME Colección Informes*



- Strauss, G. K., Roger, G., Lecolle, M., Lopera, E. "Geochemical study of the La Zarza Sulphide Deposit (Huelva, Spain)" (1981). *Economic Geology*
- Locutura, J., Bel-Lan, A., Lopera, E. "Cartografía geoquímica multielemental en sedimentos de corriente en un contexto de arco volcánico. Aplicación al análisis de potencialidad metalogenética en un área de la Rep. Dominicana" (2002). *Acta Geológica Hispánica* v. 37 No. 2-3
- Escuder, J., Contreras, F., Stein, G., Urien, P., Jousert, M., Bernardesz, E., Hernáiz, P., Lewis, J., Lopera, E., Perez Estaun, A. (2004). "La secuencia magmática Jurásico Superior-Cretácico Superior en la Cordillera Central, República Dominicana: Sección cortical de un arco-isla intraoceánico". *Geo-Temas* 6(1): 41-44
- Lopera, E., Locutura, J., Bel-Lan, A. "Mapas metalogenéticos en España y Rep. Dominicana" (2005). ISBN 85-7499-012-4
- Escuder, J., Diaz de Neira, A., Hernáiz, P., Monthel, J., García, J., Joubert, M., Lopera, E., Ullrich, T., Friedman, R., Mortensesn, J., Pérez-Estaúna, A. (2006). "Magmatic relationships and ages of Caribbean island-arc tholeiites, boninites and related felsic rocks, Dominican Republic". *Lithos*
- Escuder, J., Contreras, F., Joubert, M., Urien, P., Stein, G., Weis, D., Ullrich, T. Lopera, E., Pérez-Estaúna, A. (2006). "Procesos de subducción bajo el plateau oceánico Caribeño: la secuencia magmática Jurásico Superior-Cretácico Superior de la Cordillera Central, República Dominicana". *Boletín Geológico y Minero* (vol. esp.)

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## **MADUREIRA, Pedro Miguel Ferreira Cardoso**

Date of birth: 28 June 1970

### **Languages**

- Portuguese: native speaker
- English: fluent, spoken and written
- French: good, spoken and written
- Spanish: easy understanding

### **Education**

- 1993: Degree in Geology — Faculdade de Ciências da Universidade de Lisboa (16, Very Good)
- 1997: Master in Geodynamics — Faculdade de Ciências da Universidade de Lisboa (Very Good)
- 2006: Ph.D. in Geology — Universidade de Évora (Dstinação e Louvor por Unanimidade)

### **Current professional activity**

- |           |  |
|-----------|--|
| 2006      | Professor of Marine Geology and Geologic Resources at the Department of Geosciences of the University of Évora   |
| 2007-2010 | High-level scientific advisor at the Task Group for the Extension of the Continental Shelf<br>High-level scientific advisor at the Task Group for Maritime Affairs |

### **Area of scientific activity**

Petrology, Resources and Geochemistry

### **Domain of specialization**

Igneous Petrology and geochemistry — Characterization of mantle sources and mantle heterogeneity; magma evolution processes; noble gas geochemistry

### **Present research interests**

- Islands formation and evolution
- Geological resources in the ocean: their formation and exploration
- Law of the sea and the programme on the Extension of the Continental Shelf
- Geomicrobiology related to volcanic rocks
- Lithosphere vs. asthenosphere interaction

### **Training and short courses**

- Since 2003, several months were dedicated to analyse noble gases from olivine crystals at the Laboratoire de Géochimie et Cosmochimie housed at the Institut de Physique du Globe de Paris under the supervision of Professor Manuel Moreira

- CRONUS-EU Summer School. Applications of Cosmogenic Nuclides to Earth Surface Sciences. 12-17 June 2006, Harkány, Hungary
- Argus Remote Systems Course: ROV operations. 16-21 August 2009, Bergen, Norway

#### **Consulting activities related to the sea**

- Participation since September 2007 in the Task Group for the Extension of the Continental Shelf of Portugal (TGECS-PT). From 2008 to now, participation as scientific adviser in the area of geology (petrology and geochemistry)
- One of coordinators, within this area of research, of the final report on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, submitted to the Commission on the Limits of the Continental Shelf on 11 May 2009
- Active participant in the oceanographic campaigns promoted by the TGECS-PT to collect geophysical, geological and hydrographic data
- 2007 — EMEPC/Açores/G3/2007 — Azores Plateau; Great Meteor seamounts
- 2008 — EMEPC/Açores/G3/Luso/2008 — Azores Plateau; Great Meteor seamounts (as chief scientist)
- 2009 — EMEPC/Açores/G3/Luso/2009 — Gorringe Bank; Azores Plateau; Mid-Atlantic Ridge; Great Meteor seamounts (as chief scientist)
- 2010 — EMEPC/MarBis/Selvagens2000 — Selvagens Islands; Azores Plateau; Altair and Milne seamounts (as chief scientist)

#### **Research projects**

- Participation in the STAMINA project (PDCTM1999MAR15255) — Study of Tectonic and Magmatic Interactions in Azores (from 2001 to 2005)
- Participation in the STRIPAREA project (POCI/CTE-GIN/59653/2004) — Study of the Azores Triple Point Area
- PI in the EVOLV project (PTDC/CTE-GIN/71838/2006) — Evolution of Linear Volcanic ridges in Central Azores: interaction between magmatic and tectonic processes
- Participation in the INOGAZ project (PTDC/CTE-GIN/68851/2006) — Isotopes, Noble gases and Water-Rock interaction of the central group of the Azores Islands: a contribution to the geothermal potential evaluation and the seismo-volcanic hazard assessment
- Participation in the OREAZ project (PTDC/CTE-GIX/102061/2008) — Origin and evolution of the Azores plateau
- Participation in the MEGA hazards project (PTDC/CTE/GIX/108149/2008) — Mass-wasting episodes in the geological evolution of the Azores islands: timing, recurrence, mechanisms, and consequences
- Participation in the TerRific project (PTDC/MAR/111306/2009) — Unravelling melting processes and volcanism on the Terceira Rift, Azores: a melt inclusion and vesicle study

**Memberships**

Geochemical Society of America

**Publications**

Madureira, P., Moreira, M., Mata, J. and Allègre, C. J. (2005) Primitive helium and neon isotopes in Terceira island (Azores archipelago). *Earth and Planetary Science Letters*, 233, 429-440

Moreira, M. and Madureira, P. (2005) Cosmogenic helium and neon in 11My old ultramafic xenoliths: consequences for mantle signatures in old samples, *G<sup>3</sup>*, 6(8), 1-5

Silva, P., Henry, B., Marques, F., Mateus, A., Madureira, P., Lourenço, N., and Miranda, M. (2006) Variation of magnetic properties in sedimentary rocks hosting the Fom Zguid dyke (southern Morocco): Combined effects of re-crystallization and Fe-metasomatism. *Earth and Planetary Science Letters*, 241 978-992

Silva, P. F., Henry, B., Marques, F. O., Madureira, P. and Miranda, J. M. (2006). Paleomagnetic study of the Great Forum Zguid dyke (southern Morocco): A new pole for Africa 197 Ma ago validated by a positive contact test related to metasomatic processes. *Geophysical Research Letters* 33, No. 21, L21301,

Hildenbrand, A., Madureira, P., Marques, F. O., Cruz, I., Henry, B., and Silva, P. (2008) Multi-stage evolution of a sub-aerial volcanic ridge over the last 1.4 Myr: São. Jorge Island, Azores Mid-Atlantic Ridge. *Earth and Planetary Science Letters*, 273, 289-298

Silva, P., Marques, F., Henry, B., Madureira, P., Hirt, A. M., Font, E. and Lourenço, N. (2010). Thick dyke emplacement and internal flow: A structural and magnetic fabric study of the deep-seated dolerite dyke of Forum Zguid (southern Morocco), *Journal of Geophysical Research*, doi:10.1029/2010JB007638

Madureira, P., Mata, J., Mattielli, N., Queiroz, G., Silva, P. (accepted). Mantle source heterogeneity, magma generation and magmatic evolution at Terceira Island (Azores archipelago): Constraints from elemental and isotopic (Sr, Nd, Hf, and Pb) data, *Lithos*

Madurerira, P., Moreira, M., Nunes, J., Lourenço, N., Gautheron, C., Carvalho, M., Mata, J., Pinto de Abreu, M. (2001). He and Ne isotopic ratios along the Terceira Rift: Constraints on the boundary between Eurasia and Nubia mantle sources. Submitted to *Geophysical Research Letters*

**Papers in national periodicals with referees**

Rosas, F., Madureira, P., Fonseca, P. and Ribeiro, A. (1993). Complexo Ofiolítico de Beja-Acebuches: estudo de afloramentos críticos ao longo desta sutura, situada no segmento sul da Cadeia Varisca Ibérica. *GAIA*, vol. 7

Madureira, P., Moreora, M, and Mata, J. (2003). Helium and Neon isotopic evidence for lower mantle contribution to the Terceira island magmatism. *Memórias e Notícias*, Departamento de Geociências da Universidade de Coimbra

Madureira, P., Coelho, P., Lourenço, N. and Pinto de Abreu, M. (2009). The extension of the continental shelf in the Azores area. *Geoboletim do Centro de Geofísica de Évora*

Madureira, P., Moreira, M. and Mata, J. (2008) The Ne isotopic signature of Terceira lavas (Azores): evidence for Ne recycling? *E-Terra*, v. 5, No. 11

### Book chapters

Silva, P. F., Henry, B., Hildenbrand, A., Marques, F. O. and Madureira, P. (2008), Resultados preliminares de um estudo paleomagnético da ilha do Faial (Arquipélago dos Açores), In: Sismo 1998 Açores. Uma década depois, C. S. Oliveira, A. Costa and J. C. Nunes (Eds.), 741 pp

### Conference proceedings

Rosas, F., Madureira, P., Fonseca, P. and Ribeiro, A. (1993). The Beja-Acebuches Ophiolitic Complex: study of critical outcrops along this suture in the southern Iberian Variscan Fold Belt, Abstract supplement No. 6 to *TERRA nova*, vol. p.6

Madureira, P., Moreira, M., Mata, J., and Queiroz, G. (2004). Multiple olivine He isotopic signatures from a single rock sample. Goldschmidt abstract conference supplement to *Geochimica et Cosmochimica Acta*, p.A284

Moreira, M., Doucet, S., Madureira, P., Lecomte, A. and Allègre, C. (2004). Helium-Neon systematics in OIB and the nature of the source of mantle plumes. Goldschmidt abstract conference supplement to *Geochimica et Cosmochimica Acta*, p. A283

Silva, P. F., Marques, F. O., Miranda, J. M., Lourenço, N., Henry, B., Mateus, A., Madureira, P. (2004). Comparative AMS Study between Messejana (Iberian Peninsula) and Forum Zgund (Southern Morocco) Dykes. *Contributions to Geophysics and Geodesy*, v. 34, 139-140

Madureira, P., Moreira, M., Mata, J. (2005). The Azores hotspot: a lower mantle origin for Terceira magmas as shown by Ne isotopic data. Goldschmidt abstract conference supplement to *Geochimica et Cosmochimica Acta*, p. A106

Moreira, M. and Madureira, P. (2005). Cosmogenic helium and neon extracted by crushing: A technique for discriminating between mantle and cosmogenic helium. Goldschmidt abstract conference supplement to *Geochimica et Cosmochimica Acta*, p. A106

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- Silva, P., Henry, B., Hildenbrand, A., Madureira, P., Marques, F., Cruz, I. (2009). Paleomagnetic Study of a Sub-Aerial Volcanic Ridge (S. Jorge Island — Azores archipelago). Implications on the Island Construction and the Cobb Mountain Event. American Geophysical Union, Joint Meeting, 24-27 May, Toronto, Canada
- Silva, P., Henry, B., Hildenbrand, A., Madureira, P., Marques, F., Kratinova, Z. (2010). Paleomagnetic and K/Ar studies on selected islands of the Azores archipelago. 12<sup>th</sup> Castle Meeting New Trends in Geomagnetism Paleo, Rock and Environmental Magnetism. 29 August-4 September, Castle of Nové Hrady, Czech Republic
- Silva, P., Henry, B., Hildenbrand, A., Madureira, P., Marques, F., Miranda, M., Kratinova, Z., Nunes, J. C. (2010). Spatial/temporal evolution of Faial's onshore volcanism (Azores archipelago). American Geophysical Union, Joint meeting, 8-13 August, Foz do Iguassu, Brazil
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**Education**

1985 Bachelor of Science in Geology  
 Shimane University, Shimane, Japan

**Professional experience**

4/1985-4/1990 Joined the Metal Mining Agency of Japan (MMAJ)  
 Mineral Exploration Technological Development Division,  
 Technical Development Department  
 5/1990-5/1992 Natural Resources Development Study Division, Industrial and  
 Mining Development Study Department, Japan International  
 Cooperation Agency (JICA)  
 5/1992-3/1994 Technical Cooperation Division, Overseas Activities Department  
 3/1994-5/1996 Resources Research Department, Deep Ocean Resources  
 Development Co. Ltd. (DORD)  
 6/1996-4/1998 Deputy Project Manager for Manganese Nodule Mining System  
 program, Agency of Industrial Science and Technology, Ministry  
 of International Trade and Industry (MITI)  
 4/1998-9/2001 Deputy Director, Mineral Exploration Technological  
 Development Division, Technical Development Department,  
 MMAJ  
 9/2001-9/2003 Offshore Minerals Environmental Geologist, South Pacific  
 Applied Geoscience Commission (SOPAC) in Fiji as JICA Expert  
 9/2003-2/2004 Deputy Director, Mineral Exploration Technological  
 Development Division, Technical Development Department,  
 MMAJ  
 2/2004 Established Japan Oil, Gas and Metals National Corporation  
 (JOGMEC)  
 2/2004-6/2006 Deputy Director, Deep-sea Mineral Exploration and Technology  
 Division, Metals Technology Department, JOGMEC

7/2006-6/2009	Project Director, Deep-sea Mineral Exploration and Technology Division, Metals Technology Department, JOGMEC
7/2009-present	Director, Deep-sea Mineral Exploration and Technology Division, Metals Technology Department, JOGMEC (In charge of Exploration and R&D project for Seafloor Massive Sulfides and Cobalt-rich Ferro-manganese Crusts)
11/2009-present	Lecturer (Yokohama National University and Waseda University)
4/2009-present	Member of Legal and Technical Commission, International Seabed Authority

#### **Memberships/associations**

The Society of Resource Geology (Japan), Councillor  
 The Mining and Materials Processing Institute of Japan  
 International Marine Minerals Society (IMMS)

#### **International meetings/conferences attended (selection)**

1995	Speaker and participant, the First (1995) ISOPE Ocean Mining Symposium, Tsukuba, Japan
2001	Staff, 29 <sup>th</sup> Annual Session, SOPAC Governing Council, Majuro, Marshall Islands
2002	Speaker and Staff, 30 <sup>th</sup> Annual Session, SOPAC Governing Council, Suva, Fiji
2002	Speaker and participant, 33 <sup>rd</sup> Underwater Mining Institute Annual Meeting (UMI2002), Wellington, New Zealand
2003	SOPAC Delegation, International Seabed Authority (ISA) Scientists Meeting for Geological Model, Kingston, Jamaica
2003	SOPAC Delegation, International Seabed Authority (ISA) Workshop for Geological Model, Nadi, Fiji
2004	Head of Japanese Delegation, 33 <sup>rd</sup> Annual Session SOPAC Governing Council, Suva, Fiji
2005	Head of Japanese Delegation and Speaker, 34 <sup>th</sup> Annual Session SOPAC Governing Council, Apla, Samoa
2006	Speaker and participant, 36 <sup>th</sup> Underwater Mining Institute Annual Meeting (UMI2006), Kiel, Germany
2007	Technical Program Co-Chairs and Hosts, 37 <sup>th</sup> Underwater Mining Institute Annual Meeting (UMI2007), Tokyo, Japan
2008	Participant, 38 <sup>th</sup> Underwater Mining Institute Annual Meeting (UMI2008), Mississippi, USA
2009	Participant, 9 <sup>th</sup> (2009) ISOPE Ocean Mining Symposium, Chennai, India
2010	Participant, 2010 Offshore Technology Conference, Houston, USA
2010	Participant, 39 <sup>th</sup> Underwater Mining Institute Annual Meeting (UMI2009), Gelenzhik, Russia
2010	Speaker and participant, Japan-New Zealand Workshop on Seafloor Resources, Tokyo, Japan



### Main publications

“Resource Potential of Hydrothermal Activities on the East Pacific Rise (8°N-14°N)”, Proceedings of the First (1995) ISOPE Ocean Mining Symposium, Tsukuba, Japan, 21-24 November, pp. 139-147, 1995

“Preliminary Cruise Report on the Japan/SOPAC Deep-sea Cooperative Mineral Resources Study Program, R/V Hakurei-Maru No. 2, Marshall Islands”, SOPAC Preliminary Report 152, 2002

“Summary of the Japan/SOPAC Deep-sea Mineral Resources Research Program, Triple Junction in North Fiji Basin, Hakurei-Maru No. 2 Cruise, Fiji” (confidential), SOPAC Technical Report 355, 2002

“Japan/SOPAC deep-sea mineral resources study programme — Stage II (2000)”. Abstract presented at the STAR Session 2002, SOPAC Miscellaneous Report 487, pp. 48-49, 2002

“The review of results of the R/V Hakurei-Maru No. 2 Cruise on the Japan/SOPAC Cooperative Deep-sea Mineral Resources Study Project, 2000-2002 — Focus on the results of marine short drilling around the Triple Junction in the North Fiji Basin during the 2001 survey cruise”. 33<sup>rd</sup> Underwater Mining Institute Annual Meeting, 3-18 November, Wellington, New Zealand, 2002

“Summary Report on the Results of Phase 1 (2000-2002) of Stage II of the Japan/SOPAC Cooperative Deep-sea Mineral Resources Study Programme with Future Initiatives of the Programme from 2003 to 2005”. Abstract presented at the STAR Session 2003, SOPAC Miscellaneous Report 549, p. 42, 2003

“Current Activities of Exploration and Metallurgical Technology for Cobalt-rich Ferro-Manganese Crusts”. Proceeding of the Mining and Materials Processing Institute of Japan, 2004 (*in Japanese*)

“Deep-sea Mineral Potential in the South Pacific Region — Review of the Japan/SOPAC Deep-sea Mineral Resources Study Programme”. Occasional Papers No. 41, Kagoshima University Research Center for the Pacific Islands, pp. 21-30, 2005

“Japan-SOPAC Cooperative Deep-sea Mineral Resources Study Programme: The summary of the programme”. Abstract presented at the STAR Session 2005, SOPAC Miscellaneous Report 603, pp. 50-51, 2005

“Deep-Sea Mineral Potential in the South Pacific Waters — The Results of the 21-Year Long-Term Japan/SOPAC Cooperative Deep-sea Mineral Resources Study Programme, 1985-2005”. 36<sup>th</sup> Underwater Mining Institute Annual Meeting, 24-30 September, Kiel, Germany, 2006

“Outline of Exploration and Metallurgical R&D Study for Cobalt-rich Ferro-Manganese Crusts”. Proceeding of the Mining and Materials Processing Institute of Japan, 2009 (*in Japanese*)

“Geophysical and Geological Exploration of the Cobalt-rich Ferro-Manganese Crusts: An Attempt at Small-Scale Mapping of a Micronesian Seamount”. Marine Georesources and Geotechnology, 28, pp. 192-206, 2010 (co-author: Prof. A. Usui)

“JOGMEC’s activities for the development of sea-floor massive sulfides”. The 22<sup>nd</sup> Ocean Engineering Symposium, 17-18 March 2011, JFOES & JASNOE, 2011 (*in Japanese*)

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**Subject areas**

International Law, Conflict of Laws

**Education**

Master of Laws (LL.M.), International Law, Harvard Law School (Cambridge, United States), 2004-2005

Master Studies in Diplomacy, Argentine Foreign Service Institute, 1996-1997

Post-Graduate Diploma in Law, University of La Plata Law School, 1992

Juris Doctor, University of La Plata Law School, 1991

Bachelor of Arts in Law, University of La Plata Law School, 1990

**Diplomatic and legislative positions**

Office of the Legal Adviser, Argentine Ministry of Foreign Affairs, International Trade and Worship, since 2007

Counsellor and Consul General, Argentine Foreign Service, since 2008

Deputy Consul, Head of the Consular Office, Promotion Center and Consulate General of the Argentine Republic in New York, 1998-1004 and 2005-2007

First Secretary and Consul, Argentine Foreign Service, 2003-2007

Second Secretary and Consul, Argentine Foreign Service, 2000-2002

Legislative Liaison Officer, Argentine Ministry of Foreign Affairs, International Trade and Worship, 1997-1998

Third Secretary and Consul, Argentine Foreign Service, 1997-1999

Adviser for International Affairs, Office of the Vice-President, Senate of the Argentine Province of Buenos Aires, 1992-1993

**Appointments and Commission for the Argentine Government**

Legal Adviser — Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the International Seabed Area (Request for Advisory Opinion submitted to the Seabed Disputes Chamber), International Tribunal for the Law of the Sea, Hamburg, Germany, 2010

International Seabed Authority, Delegate, Fourteenth and Fifteenth Sessions of the Assembly and the Council (Kingston, Jamaica, 2008-2009). Acting Head of Delegation, Sixteenth Session of the Assembly and the Council (Kingston, 2010)

Legal Adviser and Delegate — Pulp Mills on the River Uruguay (Argentina vs. Uruguay), International Court of Justice, The Hague, The Netherlands, 2007-2010

International Maritime Organization (IMO), since 2008. Delegate Ninety-fourth and Ninety-fifth Sessions of the Legal Committee (London, 2008, 2009), Eighty-eighth Session of the Maritime Safety Committee (London, 2010)

Alternate Commissioner to the International Whaling Commission, since 2009. Head of Delegation, Intersessional Meeting (Florida, United States, 2010). Delegate, Sixty-second Session (Agadir, Morocco, 2010)

United Nations Commission on International Trade Law (UNCITRAL), since 2007. Delegate, Forty-first Session of the Commission (New York, United States, 2008), Forty-eighth and Forty-ninth Sessions of Working Group II (Arbitration and Conciliation) (New York and Vienna, 2008), Fiftieth Session of WG II (Vienna, Austria, 2009)

Hague Conference on Private International Law, since 2007. Delegate, Meetings of the Council on General Affairs and Policy (The Hague, The Netherlands, 2009, 2010), Special Commission on the Practical Operation of The Hague Apostille, Service, Taking of Evidence and Access to Justice Conventions (The Hague, 2009)

International Institute for the Unification of Private Law (UNIDROIT), since 2007. Delegate, First and Second Sessions of the Diplomatic Conference to Adopt a Convention on Substantive Rules for Intermediated Securities (Geneva, 2008-2009)

Seventh Inter-American Conference of Private International Law (CIDIP VII), Delegate since 2007.

### **Teaching positions**

Professor of International Law, Masters Program in International Relations, University of El Salvador, 2009-2010

Professor of International Law, Graduate Program on Law of Advanced Technologies, Argentine Catholic University, 2008-2010

Adjunct Professor of International Law, University of Buenos Aires Law School, 2009

Adjunct Professor of Private International Law, University of La Plata Law School, since 1995

Visiting Professor of Private International Law, Argentine Foreign Service Institute, 2009-2010

Assistant Professor of International Law, University of Buenos Aires Law School, 2009

Adjunct Professor of Private International Law, UADE Argentine Business University Law School, 1997-1998

Assistant Professor of International Law, University of La Plata Law School, 1994-1997

Assistant Professor of Private International Law, University of Buenos Aires Law School, 1994-1995

Assistant Professor of Private International Law, Catholic University of La Plata Law School, 1994-1995

### **Books (in Spanish)**

International Law — Contemporary Problems [Problemas actuales del derecho internacional], Ábaco, Buenos Aires, forthcoming in 2011

(Editor) Translational Procedure — Essays in Honor of Prof. Gualberto Lucas Sosa [Derecho procesal transnacional. Libro homenaje a Gualberto Lucas Sosa], Ábaco, Buenos Aires, forthcoming in 2011

Argentine Citizenship — A Study from the Standpoints of Public International Law, Private International Law and Argentine Municipal Law, with References to European and Mercosur Integration Law [La nacionalidad argentina: Un estudio desde la perspectiva del derecho internacional público, del derecho internacional privado y del derecho interno argentino, con referencias al derecho de la integración], La Ley, Buenos Aires, 2003. Reviewed by Griselda Jatib, in *Revista Jurídica Argentina La Ley*, vol. 2004-A, p. 1513, et seq.; by Horacio Daniel Piombo, in *Revista Jurídica Argentina La Ley*, vol. 2004-A, p.1525, reprinted in *Revista de Derecho Internacional y del Mercosur / Direito Internacional y do Mercosul*, vol. 2003-6 p. 155 et seq.; and by Marfa Alejandra Sticca, *Anuario Argentino de Derecho Internacional*, vol. 13, 2004, p. 267

Absence and Presumption of Death in Private International Law [Ausencia y presunción de fallecimiento en el derecho internacional privado], Ábaco, Buenos Aires, 2003, Reviewed by Fernando Sagarna, in *Revista Jurídica Argentina La Ley*, vol. 2003-F, p. 1511

International Insurance Contracts — Insurance in Private International Law and in European and Mercosur Integration Law. International Reinsurance Transactions. Foreign Insurance and Reinsurance Corporations [El contrato de seguro multinacional: Los seguros en el derecho internacional privado y en el derecho de la integración. El reaseguro y la retrocesion multiestatales. El ejercicio extraterritorial de la actividad aseguradora], Ábaco, Buenos Aires, 1998

### **Shorter works in collection**

“Living Wills and Euthanasia in the Conflict of Laws” [Testamento vital y eutanasia en el conflicto de leyes], in Stefania Negri (ed.), *Between Life and Death: Respect for Human Dignity and Individual Wills in End-of-Life Care* — Perspectives of Domestic, Comparative and International Law on the Italian Law on the Living Will, Salerno, Italy, forthcoming in 2011 (in English)

“Freedom of Movement as a pre-condition for Private International Law. Legalization and Translation of Documents for Immigration Purposes in MERCOSUR”, in Mario, J. A. Oyarzábal (ed.), *Derecho Procesal Transnacional* — Libro Homenaje al Prof. Dr. Gualberto Lucas Sosa, Ábaco, Buenos Aires, forthcoming in 2011 (in Spanish)

“Domicile in Private International Law”, in Diego P. Fernández Arroyo, Gonzalo Para Aranguren, Didier Opertti Badan, José Antonio Moreno Rodríguez y Jürgen

Basedow (eds.), *Derecho Internacional Privado — Derecho de la libertad y el respeto mutuo. Ensayos a la memoria de Tatiana B. de Maekelt*, Centro de Estudios de Derecho, Economía y Política, Asunción, Paraguay, 2010, p453 (in Spanish)

“The Right to Privacy and Transborder Personal Data Flows in Argentine Private International Law” [El derecho a la intimidad y el tratamiento de datos personales en el derecho internacional privado argentino], in *Lecciones y Ensayos* (Journal of the University of Buenos Aires Law School), vol. 83, p.49 (2007). Reprinted in Diego P. Fernández Arroyo and Nuria González Martín (eds.), *Tendencias y Relaciones: Derecho Internacional Privado Actual — Jornadas de la ASADIP 2008* — Universidad Nacional Autónoma de México-Porrúa-Asociación Americana de Derecho Internacional Privado, México, 2019, p. 267 (in Spanish)

“Name and Protection of Personal Identity. Issues Raised in the Fields of Public and Private International Law” [El nombre y la protección de la identidad de las personal. Cuestiones de derecho internacional público y privado], in *Prudentia Iuris* (Journal of the Catholic University of Buenos Aires School of Law), vol. 58, p. 73 (2004). Reprinted in Fernando Parra-Aranguren (ed.), *Studia iuris civilis — Libro Homenaje a Gert F. Kummerow Aigster*, Tribunal Supremo de Justicia, Caracas, 2004, p. 459 (in Spanish)

“Argentine Nationality and International Law” [Régimen internacional de la nacionalidad argentina], in International Organization for Migration (ed.), *Primeras Jornadas sobre el Régimen Jurídico de la Nacionalidad Argentina*, Buenos Aires, 2003, p. 51 (in Spanish)

#### **Articles in Argentine legal periodicals (in Spanish)**

“May Argentine Nationals Relinquish their Argentine Nationality in Order to Acquire a Foreign Nationality?” [¿Se puede renunciar a la ciudadanía argentina para adquirir una nacionalidad extranjera? (comentario al fallo de la Cámara Nacional Electoral en autos “D., C. D. y otro”, 5/3/2009)] in *Jurisprudencia Argentina* (LexisNexis), vol. 2003-III, p. 533

“Effects in Argentina of Foreign Same-Sex Marriages” [Efectos en la Argentina de matrimonios extranjeros entre personas del mismo sexo], in *Revista de Derecho de Familia*, No. 44, p. 123 (2009)

“The Recent Decision of the Argentine Supreme Court on the Issue of Supreme Court Justice Zaffaroni’s Dual Citizenship” [La doble nacionalidad del Juez Zaffaroni en la reciente sentencia de la Corte Suprema: Una decisión correcta por las razones equivocadas] in *Jurisprudencia Argentina*, 2008-I-484

“Recognition in Argentina of the Paternity of Children born Abroad by Artificial Insemination to a Same-Sex Couple” [El reconocimiento en la Argentina de la paternidad de hijos concebidos en el extranjero por inseminación artificial de una pareja de homosexuales hombres], in *La Ley — Actualidad*, 21/2/2006

“Trafficking in Persons. An Emerging Issue in Argentina-United States Relationship” [La trata de personas: Un tema emergente en la relación bilateral con Estados Unidos], in *Anuario Argentino de Derecho Internacional*, vol. XIV, p. 95 (2005)

“Lex Electronica: A ‘Common Law’ of Internet?” [La lex electronica: Un ‘Common Law’ de la Internet?], in *DeCITA Derecho del Comercio Internacional — Temas y Actualidades*, vol. 3, p. 365 (2005)

“Hermaphroditism and Transexualism in Argentine Private International Law” [Algunos problemas derivados del hermafroditismo y de la transexualidad en el derecho internacional privado argentina], in *Revista de Derecho de Familia*, No. 30, p. 97 (2005)

“Beginning and End of Legal Personality of Natural Persons in Private International Law” [El inicio y el fin de la existencia de las personas humanas en el derecho internacional privado], in *El Derecho*, 210-1146 (2005)

“Acts of Civil Status in Private International Law and the Competence of Argentine Diplomatic and Consular Authorities [Los actos de estado civil en derecho internacional privado. Y la competencia específica de los agentes diplomáticos y consulares argentinos], in *Anuario Argentino de Derecho Internacional*, vol. XIII, p. 125 (2004)

“The Immigration Law of the United States. A Brief Comment on the ‘U. S Immigration and Nationality Act’” [La legislación migratoria de los Estados Unidos. Breve reseña de los aspectos más salientes de la ‘U. S. Immigration and Nationality Act’], in *res diplomatica* (Journal of the Argentine Foreign Service), vol. 7, p. 41 (2004). Reprinted in *Revista de Derecho Comparado*, vol. 9, p. 225 (2004)

“Decentralization of Legalizations and Apostille” [La descentralización del proceso de legalización mediante la Apostille], in *El Derecho — Legislación Argentina*, 2004-B-1011; *Revista del Colegio de Abogados de la Plata* No. 65, p. 189(2004)

“Dual Nationality and Citizenship. Article 8 of Law No. 346 and the Exercise and Enjoyment of Political Rights by Argentine Natioins Naturalized in a Foreign Country” [Doble nacionalidad y ciudadanía. El artículo 8° de la ley 346 y la suspensión de los derechos políticos de los naturalizados en país extranjero], in *La Ley*, 2003-F, 1158

“Authentication of Documents for Use in Argentina. New Developments” [Nuevos desarrollos en el proceso de legalización de documentos extranjeros], in *La Ley*, 2003-C, 1426; *Revista del Notariado* (Colegio de Escribanos de Ia Ciudad de Buenos Aires), No. 872, p. 27 (2003)

“Dual Nationality in International Law and in Argentine Municipal Law” (La doble nacionalidad en el derecho internacional y en la legislación argentina], in *Revista de Derecho Internacional y del Mercosur*, No. 1, p. 7 (2003).

“Applicable Law to Contracts in Transnational Cyberspace [La ley aplicable a los contratos en el ciberespacio transnacional], in *El Derecho*, 201-709 (2003). Updated in *DeCITA Derecho del Comercio Internacional Temas y Actualidades*, vol. 5/6, 2006, p. 129. Reprinted in *Revista de Derecho Comercial y de las Obligaciones*, 2007-B-735

“The New Treaty on Dual Nationality with Spain” [El nuevo tratado de doble nacionalidad con España], in *La Ley*, 2003-A-1320

“Competent Court and Electronic Contracts in Private International Law [Juez competente y contratos electrónicos en el derecho internacional privado], in

*Jurisprudencia Argentina*, 2002-IV-1010. Updated in *DeCITA Derecho del Comercio Internacional — Temas y Actualidades*, vol. 1, p. 289 (2004)

“Presumption of Death. International Aspects [Aspectos internacionales de la presunción de fallecimiento], in *La Ley*, 2001-F, 1417

#### Articles in foreign legal periodicals

“The Legal Regime of Antarctica, in *Annuaire du Comité Maritime International*, 2010 (forthcoming in 2011) (Belgium) (in English)

“Werner Goldschmidt's Private International Law: In Memoriam” [Das internationale Privatrecht von Werner Goldschmidt: In Memoriam] in *Rebels Zeitschrift für Ausländisches und Internationales Privatrecht*, vol. 72, p. 601 (2008) (Germany) (in German)

“Comments on the Additional Protocol Modifying the Treaty on Dual Citizenship between Argentina and Italy [II Protocollo aggiuntivo che modifica l'Accordo italo-argentino sulla cittadinanza], in *Rivista di Diritto Internazionale*, vol. 90(3), p. 749 (2007) (Italy) (in Italian)

“Exemption from Translation of Documents for Immigration Purposes among Mercosur States” [Dispensa de traduções para efeitos de imigração no MERCOSUL], in *Revista de Informação Legislativa* (Journal of the Brazilian Federal Senate), vol. 171, p. 125 (2006) (Brazil) (in Portuguese). Reprinted in Spanish in *Revista de Derecho Privado y Comunitario*, 2005-3, p. 672 (Argentina); *Revista de Derecho de la Universidad Austral de Chile*, vol. XIX No. 2, p. 109 (2006) (Chile); *Revista de Derecho del Tribunal Supremo de Justicia*, vol. 24, p. 347 (2007) (Venezuela); and *Revista Boliviana de Derecho*, vol. 4, p. 161 (2007) (Bolivia)

“Jurisdiction over Electronic Contracts — A View on Inter-American, Mercosur and Argentine Rules”, in *Temple International and Comparative Law Journal*, vol. 19, p. 87 (2005) (United States) (in English)

“The Legalization Agreement between Argentina and Brazil [O Acordo de simplificação de legalizações com a Argentina], in *Revista de Direito Constitucional e Internacional* (Editora Revista dos Tribunais), No. 51, p. 343 (2005) (Brazil) (in Portuguese)

“Capacity in Argentine Private International Law” [La capacidad en el derecho internacional privado argentino], in *Revista Mexicana de Derecho Internacional Privado y Comparado*, vol. 17, p. 9 (2005). Originally published in *Jurisprudencia Argentina*, 2004-III-1186

“The Amendment of the Argentine-Italian Treaty on Dual Citizenship” (La revisione dell'Accordo italo-argentino di doppia cittadinanza], in *Rivista di Diritto Internazionale Privato e Processuale*, vol. 41, p. 101 (2005) (Italy) (in Italian)

“Some Remarks on the Issue of Personal Status in Private International Law” [Observaciones generales sobre el estatuto personal en derecho internacional privado], in *Revista de Derecho del Tribunal Supremo de Justicia*, No. 14, p. 165 (2004) (Venezuela) (in Spanish)

“International Electronic Contracts — A Note on Argentine Choice of Law Rules”, in *University of Miami Inter-American Law Review*, vol. 35, p. 499 (2004) (United States) (in English)

“The Additional Protocol to the Treaty on Dual Nationality between Argentina and Spain. The Argentine Perspective” [El Protocolo Adicional al Convenio de nacionalidad entre España y Argentina. Un análisis desde la perspectiva argentina], in *Revista Española de derecho Internacional*, vol. 56, p. 759 (2004) (Spain) (in Spanish)

#### **Articles in the press**

“Dual Surnames in Proposed Bill” [Doble apellido], in *La Nación*, May 12, 2007 (Argentina) (in Spanish)

“Mercosur Citizens” [Ciudadanos del Mercosur], in *La Nación*, Jan. 17, 2003 (Argentina) (in Spanish). Reprinted in *Revista Internacional del Notariado Latino*, vol. 106, 2003, p. 90. (in Spanish, English and French). Reviewed by Ambassador Adhemar G. Bahadrian, Consul General of Brazil in Buenos Aires, in *La Nación*, Jan. 23, 2003

#### **Reviews**

Reviewing Benedetta Ubertazzi, *La capacità delle persone fisiche nel diritto internazionale privato* [Capacity of Physical Persons in Private International Law], Cedam, Padova, 2006, in *Anuario Argentino de derecho Internacional*, vol. 16-1, p. 233 (2007)

Reviewing Diego P. Fernández Arroyo (ed.), *Derecho internacional privado de los Estados del Mercosur, Argentina, Brasil, Paraguay, Uruguay* [Private International Law of the Mercosur States], Zavalia, Buenos Aires, 2003, in *University of Miami Inter-American Law Review*, vol. 36, p. 361 (2005) (United States) (in English). Reprinted in Portuguese in *Revista de Direito do Consumidor*, vol. 59, p. 360 (2006) (Brazil)

Reviewing Diego P. Fernández Arroyo, *Derecho internacional privado interamericano: Evolución y perspectivas* [Inter-American Private International Law. Development and Perspectives], 2nd ed., Universidad Anáhuac del Sur/Miguel Porrúa, Mexico, 2003, in *Uniform Law Review/Revue de Droit Uniforme*, vol. 3, p. 694 (2004) (UNIDROIT) (in English)

Reviewing Jan Kleinheisterkamp & Gonzalo A. Lorenzo Idiarte (coords.), *Avances del derecho internacional privado en América Latina — Liber Amicorum Jürgen Samtleben* [Developments in Private International Law in Latin America], Fundación de Cultura Universitaria, Montevideo, 2002, in *DeCITA Derecho del Comercio Internacional Temas y Actualidades*, vol. 1, p. 536 (2004) (Argentina) (in Spanish)

#### **Law review experience**

Associate Editor, Submissions Team, *Harvard International Law Journal*, Winter and Summer issues, 2005

Member of the Board of Editors, *DeCITA Derecho del Comercio Internacional Temas y Actualidades*, since 2003



**Professional affiliations**

Member, Argentine Society of International Law

Member, International Law Association — Argentine Branch

Member, Argentine Society of Comparative Law

Member, Inter-American Society of Private International law (Paraguay). Deputy Secretary General, 2007-10

Member, International Academy of Comparative Law (France)

Member, Harvard International Law Society, 2004-05 (United States)

**Languages**

Spanish (native); English, French and Portuguese (fluent); Italian and German (read)

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**Academic education**

1994 M.Sc. degree in Stratigraphic-Prospecting Geology, Warsaw University  
2008 M.Sc. Eng. degree in Environmental Protection in Economy, AGH University of Science and Technology, Cracow  
Since 2006 Opened Ph.D. program, Faculty of Geology, Warsaw University (Title: Late-Holocenian Climate Changes Recorded in a Marine and Lake Cores from Maritime Antarctic (King George Island, South Shetlands))

**Professional experience**

1994-2000 Assistant — Faculty of Geology, Warsaw University  
2000-2002 Partner — Magma (general partnership) — Warsaw  
2002-2003 Wintering Technical Coordinator — XXVII Polish Antarctic Expedition (Arcotowski — Polish Antarctic Station, King George Island, South Shetlands, Maritime Antarctic)  
2004-2007 Senior Specialist — Department of Geology and Geological Concessions, Polish Ministry of the Environment  
Since 2007 Deputy Director — Department of Geology and Geological Concessions, Polish Ministry of the Environment  
2006-2011 Member of the Legal and Technical Commission ISBA (2009 — Dep. Chairman)

Professional experience in geology, geological and mining legal regulations, geological administration, verification of the application and granting licenses for onshore and offshore exploration and exploitation of the minerals from deposits, verification of the environmental impact assessments

**Research experience**

- 1994-2000 Sedimentology — Faculty of Geology, Warsaw University
- 2002-2003 Marine Geology, Sedimentology — XXVII Polish Antarctic Expedition
- 2004-2006 Polish National Polar Program
- 2005-2006 Member of project ClicOPEN Eol 193, for IPY Activities ID 34 (IPY — International Polar Year 2007/2008) — Impact of climate induced glacial melting on marine coastal communities of Western Antarctic Peninsula

**Scientific publications**

- Birkenmajer, K., Gazdzicki, A., Krajewski, K., Przybycin, A., Solecki A., Tatur, A. and Ho Il Yoon, 2005: First Cenozoic glaciers in West Antarctica, *Polish Polar Research*, vol. 26, No. 1, pp. 3-12

**REICHERT, Christian J.**

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 Employer Federal Institute for Geosciences and Natural Resources (BGR)  
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**Academic and professional record**

Since 2009 Federal Institute for Geosciences and Natural Resources (BGR),  
 Head of sub-department “Marine Resources Exploration”. The  
 unit comprises some 45 scientists, engineers and technicians,  
 dedicated to forefront exploration of continental margins and the  
 deep sea with geophysical and geological methods  
 1993-2008 Federal Institute for Geosciences and Natural Resources (BGR),  
 Head of Sub-division “Geophysical Research”. The unit  
 comprised some 70 scientists, engineers and technicians,  
 dedicated to Marine Geophysics, earthquake and volcano  
 monitoring, monitoring within the scope of the Comprehensive  
 Test-Ban Treaty (CTBTO), helicopter and ground geophysics as  
 well as polar research  
 1992-1993 Scientific Employee with the Geological Survey of Lower Saxony  
 (NLfB), Acquisition, processing and interpretation of shallow-  
 seismic data  
 1992 Dr. rer. nat. degree (Ph.D.), Freie Universität Berlin  
 1983-1991 Manager Assistant for the German Continental Seismic Reflection  
 Programme (DEKORP) with the Geological Survey of Lower  
 Saxony (NLfB), Hanover  
 1977-1983 Scientific Employee with the Geological Survey of Lower Saxony  
 (NLfB), Hannover  
 1977 - Diploma Degree in Geophysics, Freie Universität Berlin  
 1970-1977 Studies of Geophysics, Geology and Geodesy, Freie Universität  
 Berlin and Technical University Berlin

**Research interests and current activities**

Topics: seismic reflection, seismic refraction, gravity, magnetics, Law of the Sea

Structure and processes at active and passive continental margins

Initiation and coordination of international geoscientific projects

German-French collaboration in marine-geoscientific studies on the Mozambique  
 continental margin, along with additional partners from Mozambique and Portugal  
 (MoBaMaSis)

German-French-Moroccan-Canadian-Danish collaboration on the Northwest African continental margin and its Canadian conjugate part

Marine Research programme on South Atlantic Margins within the DFG priority research programme SPP 1375 (SAMPLE)

Implementation of the United Nations Convention on the Law of the Sea (support for developing countries for delineation and sustainable usage of their maritime zones)

### Memberships

Since 2008, Member of the Legal and Technical Commission (LTC) at the International Seabed Authority, Kingston, Jamaica

Since 2008, Member of the Steering Committee of the DFG priority research programme SPP 1375 (SAMPLE)

Since 2007, Chairman of the Advisory Board of the German Hydrographic Consultancy Pool, Economic Association (GHyCoP)

Member of several professional organisations such as Society of Exploration Geophysicists (SEG), American Geophysical Union (AGU), Deutsche Geophysikalische Gesellschaft (DGG), Geologische Vereinigung, Deutsche Gesellschaft für Polarforschung

### Selected publications

Franke, D., Ladage, S., Schnabel, M., Schreckenberger, B., Reichert, C., Hinz, K., Paterlini, M., Abelleira, J. de and Siciliano, M. (2010), Birth of a volcanic margin off Argentina, South Atlantic, *Geochemistry Geophysics Geosystems*, 11, Q0AB04, doi:10.1029/2009GC002715

Kopp, H., Hindle, D., Klaeschen, D., Oncken, O., Reichert, C. and Scholl, D. (2009): Anatomy of the western Java plate interface from depth-migrated seismic images, *Earth and Planetary Science Letters*, vol. 288, pp. 399-407

Contreras-Reyes, E., Grevemeyer, I., Flüh, E. R., Reichert, C. (2008): Upper lithospheric structure of the subduction zone offshore of southern Arauco peninsula, Chile, at ~38°S; *Journal of Geophysical Research*, vol. 113, pp. B07303

Franke, D., Reichert, C., Damm, V., and Piepjohn, K. (2008). The South Anyui suture, Northeast Arctic Russia, revealed by offshore seismic data. *Norwegian Journal of Geology*, Vol. 88, pp. 189-200

Reichert, C., (2008): Determination of the Outer Continental Shelf Limits and the Role of the Commission on the Limits of the Continental Shelf;: *International Journal of Marine and Coastal Law*, Vol. 24, pp. 387-399

Franke, D., Hinz, K. and Reichert, C. (2004), Geology of the East Siberian Sea, Russian Arctic, from seismic images: Structures, evolution, and implications for the evolution of the Arctic Ocean Basin, *Journal of Geophysical Research*, vol. 109, pp. B07106

**RODRIGO, Cristian R.**

Coordinator of Scientific Education and Divulcation, Chilean Antarctic Institute (INACH)

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**Studies**

- 2008 Doctor in Science in Earth Sciences specializing in Applied Geophysics, CICESE Baja California, Mexico
- 2000 Master of Science in Earth Sciences specializing in Applied Geophysics, CICESE Baja California, Mexico
- 1994 Oceanographer, Pontificia Universidad Católica de Valparaíso, Chile

**Professional experience**

- 2010 to present Head of Scientific Education and Divulcation Section, INACH, Punta Arenas, Chile
- 2008 to 2009 Scientific Project Coordinator, INACH, Punta Arenas, Chile
- 2005 to 2007 Scientific Project Manager, INACH, Punta Arenas, Chile
- 2004 Acting Head of the CENDOC-SHOA, Valparaíso, Chile
- 2000 to 2004 Head of Bathymetric Data Processing Section, SHOA, Valparaíso, Chile
- 1996to 1998 Head of Marine Geology Section, SHOA, Valparaíso, Chile
- 1993 to 1996 Head of Submarine Geomorphology Program, SHOA, Valparaíso, Chile

**Academic experience**

- 2005 to present Associate Professor, Universidad de Magallanes, Punta Arenas, Chile.  
Lectures: Descriptive Oceanography, Antarctic Oceanography, Physical Oceanography, Geology and Geological Oceanography
- 2003 to 2005 Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile  
Lectures: Potential Methods and Geological Oceanography
- 2003 to 2005 Invited Professor, SHOA-IHO, International Engineering Course in Hydrography  
Lectures: Geological Oceanography and Hydrography II
- 1995 to 1998 Lecturer, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile  
Lectures: Marine Geophysics and Geological Oceanography

### Main publications

- Rodrigo, C. 2011. Bathymetric interpretation of the Valparaíso area: comments on the paper of H. P. Vergara & R. Astudillo, "Offshore structural highs in the Valparaíso Region, Central Chile". *Revista de Biología Marina y Oceanografía*. Accepted
- Rodrigo, C., Vera E. and González-Fernández, A. 2009. Variability of the bottom simulating reflector (BSR) and its association with tectonic structures in the Chilean margin between Arauco Gulf (37°S) and Valdivia (40°S). *Marine Geophysical Researches*, 30: 1-19
- Rodrigo, C., González-Fernández, A. and Vera E. 2009. Seismic analysis and distribution of bottom simulating reflector (BSR) in the Chilean margin offshore Valdivia (40°S). *Journal of South American Earth Sciences*, 27:1-10
- Rodrigo, C. 2006. Characterization and Classification of the Puerto Montt Bay by means of multibeam bathymetry and backscatter data analysis, Puerto Montt, Chile, *Revista Investigaciones Marinas*, 34(1):83-94
- Morales, E. and Rodrigo, C. 2005. Methane hydrates: hazard and risk assessment at the Chilean continental margin between 32°S and 45°S. *Revista Geográfica de Valparaíso*, 36:221-231
- Hey, R., Baker, E., Bohnenstiehl, D., Massoth, G., Kleinrock, M., Martinez, F., Naar, D., Pardee, D., Lupton, J., Feely, R., Gharib, J., Resing, J., Rodrigo, C., Sansone, F., and Walker, S. 2004. Tectonic and Volcanic Segmentation and Controls on Hydrothermal Venting along Earth's Fastest Active Seafloor Spreading System, EPR 27°-32°S. *Geochemistry Geophysics Geosystems*, vol. 5, No. 12, Q12007, doi:10.1029/2004GC000764
- Baker, E. T., Hey, R. N., Lupton, J. E., Resing, J. A., Feely, R. A., Gharib, J. J., Massoth, G. J., Sansone, F. J., Kleinrock, M., Martínez, F., Naar, D. F., Rodrigo, C., Ohnenstiehl, D. and Pardee, D. 2002. Hydrothermal Venting Along Earth's Fastest Spreading Center: East Pacific Rise, 27.5°-32.3°S. *Journal of Geophysical Research*, 17 No. 7, EPM 2/1-14

### Main scientific abstracts

- Rodrigo, C., González, A., Vera, E., Díaz, J. and Morales, E. 2004. Submarine gas hydrates in the Chilean margin; preliminary seismic analysis of the bottom simulating reflector (BSR), *GEOS*, vol. 24, No. 2
- Hey, R., Baker, E., Kleinrock, M., Martinez, F., Naar, D., Bohnenstiehl, D., Pardee, D., Massoth, G., Rodrigo, C., Gegg, S., Reed, T. and Andersson, A. 2001. Fine-Scale Volcano-Tectonic Patterns Along the Hotspot and Non-Hotspot Influenced Fastest Spreading Parts of the East Pacific Rise, and Their Relation to Hydrothermal Activity, *Eos Trans. AGU*, 82, Fall Meet. Suppl.
- Gallardo, L. A., Rodrigo, C. and Pérez, M. A. 2000. Multi-dimensional gravity inversion in multilayers. *GEOS*, vol. 20
- Rodrigo, C., González, A. and Gallardo, A. 2000. Lithosphere structure in the area of Easter Island, through interpretation of bathymetric and gravimetric data, *GEOS*, Vol. 20

- Hey, R., Kleinrock, M. C., Martinez, F., Bohnenstiehl, D. R., Padree, D., Naar, D., Rodrigo, C., Davis, M., Baker, E. and Massoth, G. J. 1998. High resolution mapping and imaging of the fastest seafloor spreading system, *Eos Trnas. AGU, 79, Fall Meet. Suppl.*
- Hey, R., Baker, E., Lupton, J. E., Massoth, G. J., Kleinrock, M. C., Naar, D. F., Martinez, F., Pardee, D. R., Bohnenstiehl, D., Davis, M. and Rodrigo, C. 1998. Multidisciplinary investigation of the fastest ridge: tectonic segmentation and hydrothermal patterns, *Eos Trnas. AGU, 79, Fall Meet. Suppl.*
- Hey, R., Baker, E., Lupton, J., Bohnenstiehl, D., Freely, D., Gharib, J., Gegg, S., Gleason, D., Kleinrock, M., Martinez, F., Massoth, G., Naar, D., Pardee, D., Resing, J., Rodrigo, C. and Sansone, F. 1998. Hydrothermal and Structural Investigations Along the Fastest Seafloor Spreading Center: The 28-32S EPR Reorganizing Plate Boundary. *Eos Trnas. AGU, 79, Spring Meet. Suppl.*

### **Book chapters**

Marine Geology of Chile. 2010. Edited by SERNAGEOMIN and CONA. Chapters: "Platforms, research methods and sampling"; "Geophysical databases"; "Submarine canyons in the Chilean continental margin"; "Submarine geomorphology in the Chilean Antarctic Territory"; "Sediments thickness in the Chilean Antarctic Territory"; and "Submarine geomorphology and sedimentology in the Bransfield Strait"

Progress in the oceanographic knowledge of Chilean inner waters, from Puerto Montt to Cape Horn", 2008. Silva, N. & Palma, S. (eds.) "*Submarine topography in the Chilean North Patagonian channels*" CONA-Universidad Católica de Valparaíso, Valparaíso, 19-23



## **SUDHAKAR, Maruthadu**

Born in Cuddapah, Andhra Pradesh (India) in 1959, Dr. Sudhakar took Bachelor's degree in Geology, Physics and Chemistry from Sri Venkateswara University (1978), obtained M.Sc. Tech in Applied Geology and Ph.D (1994) from Indian School of Mines, Dhanbad. He also obtained Master's degree in Law of the Sea and Marine Policy from the London School of Economics & Political Science, UK as a British Council Fellow.

During his career till date, Dr. Sudhakar served two premier research institutions of the country -- National Institute of Oceanography (NIO; 1982-1997) & National Centre for Antarctic and Ocean Research (NCAOR; 1997-2009) in Goa –and occupied various positions such as project leader and scientist in various grades. He has contributed extensively for research and development in the field of Oceanography/Offshore Surveys/Polar Sciences/Marine Technology. Presently he is serving as an Advisor and Scientist 'G' in the Ministry of Earth Science, Govt. of India, New Delhi, and is heading the Awareness and Outreach Programmes and Vessel Management Divisions of the Ministry.

Sudhakar is a veteran oceanographer, spent more than 1500 days at sea on-board research vessels, both as leader and member of deep-sea expeditions. He was mainly involved as leader in major national thrust programmes such as the Survey and Exploration of Polymetallic Nodules in Indian Ocean, Oceanography studies of Southern Ocean, Delineation of Continental Shelf demarcation, Multibeam Swath Bathymetric Surveys in EEZ of India, Vessel Management of ORV Sagar Kanya and other Chartered Vessels. His major scientific contributions include delineation of major nodule deposits in Central Indian Basin and demarcation of potential areas for resource development; discovery of a large pumice field, which provided first evidence for intraplate volcanism; discovery of zeolite deposits and their relation to nodules and volcanics in Central Indian Ocean Basin; discovery of impact microcrates on Australasian microtektites, the first terrestrial analogs identified akin to lunar microcraters; discovery of minitektites in the Australasian strewn field; mapping the seabed and charting the bathymetry of Prydz Bay area for approach channel in the Larsemann Hills, East Antarctica. He has also been a major interface to the scientists in the country and implemented a large number of field campaigns of Earth, Atmosphere and Ocean Sciences as a part of National Programmes of various Ministries/National Institutes/Universities and other International Collaborators during his career.

He represented India at the Preparatory Commission for the United Nations Law of the Sea (PrepCom) and involved in the deliberations for allocation of Pioneer Area of Polymetallic Nodules in Indian Ocean to India in 1987. Dr. Sudhakar presently is an Elected Member of the Legal & Technical Commission (LTC) of the International Seabed Authority (ISBA) for the term 2007-2011. He is also a member of Scientific Committee on Ocean Research (SCOR), ICSU. He was a visiting scientist to the Aachen University of Technology, Germany; a resource person of the International Ocean Institute, Malta; Member, National Steering Committee for Science and Astronomy Olympiads; Member, Research Council of National Ship Design Research Centre (NSDRRC). He is the designate "Commissioner" of Govt. of India for the Yeosu Expo 2012.

Dr. Sudhakar is an Elected Fellow of the Andhra Pradesh Academy of Sciences (India), Honorary Fellow of Indian Society of Applied Geochemists, Elected Life Fellow of Indian Geophysical Union Fellow of Geological Society of India, Executive Member of Indian Geological Congress, Life Member and currently Governing Council Member of Ocean Society of India, Life Member of Mineral Engineers of India, Fellow of Mining Engineers Association of India, Life Member of Indian Science Congress and Member of American Chemical Society. He is a recognized guide and supervisor of Goa and Mangalore Universities in fields of Marine Sciences and Geoinformatics and has been the supervisor of many Ph. D and Post-graduate students for their thesis/project works. Dr. Sudhakar served in many national committees and is presently serving many departmental and national committees. He published over 60 research papers in referred International/National Journals and presented over 50 papers in conferences and seminars. He has been a referee of scientific journals and recently a special section on India's Contribution to Southern Ocean in Current Science Journal as Guest Editor.

**ZHANG, Haiqi**

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Marital status Married

**Present offupation**

Deputy Director, Department of Geological Investigation, China Geological Survey

**Educational background**

Master of Science, Ocean University of Qingdao (currently Ocean University of China), 1990

Ph.D. Ocean University of China, 2007

**Professional experience**

2001-2005 Director of Marine Geology Division, China Geological Survey  
2005- Deputy Director of Geological Investigation Department,  
China Geological Survey

**Awards and publications**

Participant, numerous State-level key projects such as “Program on oil and gas exploration in South China Sea” and “Program on gas hydrate exploration”

Leading coordinator, the project of “The Geological and Resources Survey and Assessment in Marine Areas of China”, which was awarded the second prize of the State Science and Technology Progress Award in 2006

Chief Scientist, gas hydrate drilling cruise, 2007

Winner, the State Science and Technology Progress Award

Winner, six provincial or ministerial level awards in science and technology

Author, eight books and nearly one hundred academic papers and technical reports

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