

**Carlos Marcelo Paterlini (Argentina)**

[Original: Spanish]

**Personal information**

Date and place of birth: 28 September 1947, Mercedes, Province of Corrientes, Argentina

**Academic background****Postgraduate qualifications:**

Geodetic and Geophysical Engineer

Graduate School of Geodetic and Geophysical Engineering and Hydrographic Engineering, School of Engineering, University of Buenos Aires (1974–1981).

Hydrographic Engineer

Graduate School of Geodetic and Geophysical Engineering and Hydrographic Engineering, School of Engineering, University of Buenos Aires (1974–1981).

**University degree:**

Surveyor

School of Engineering, University of Buenos Aires (1967–1973).

**Specialization**

Mr. Paterlini has specialized in marine geophysics. He has also gained extensive experience in aeromagnetic surveys.

**Professional activity**

1975 to date:

Scientific Researcher in the Research and Development Track for the Armed Forces, Ministry of Defence, based in the Marine Geology and Geophysics Division of the Oceanography Department of the Argentine Hydrographic Service (SHN). He is currently Principal Researcher/Project Director and Head of the Marine Geophysics Section of the Oceanography Department of SHN.

In the last 34 years, the marine geophysics research and development tasks carried out by Mr. Paterlini have been mainly focused on contributing to the geological and geophysical knowledge of the Argentine Continental Shelf within the framework project entitled “Geological and Geophysical Reconnaissance of the Argentine Continental Shelf”.

He has participated in more than 15 oceanographic surveys, as Chief Scientist in some, and in joint projects with both national and foreign institutions such as the Instituto Antártico Argentino (IAA), the Lamont-Doherty Earth Observatory, the United States Naval Research Laboratory and the Federal Institute for Geosciences and Natural Resources of the German Geological Survey (BGR). He has published more than 30 scientific papers, both alone and with other authors. He has also written more than 20 technical reports.

2003 to date:

Technical Coordinator of the Technical Subcommittee of the National Commission on the Outer Limit of the Continental Shelf (COPLA, Argentina), responsible for managing, monitoring and coordinating the various technical tasks involved.

1976-2002:

Extensive work on projects aimed at solving practical problems posed by the construction of large engineering works of national scope both on the seacoast and on major rivers, and has served as an evaluator of mining resources. Projects in which he has participated or which he has managed include:

- 1998-2002: Monitoring of aerogeophysical surveys, Santa Cruz de la Sierra, Bolivia.
- 1995: Geophysical studies for the Paraná-Paraguay River Waterway Project. Geological and geophysical studies, Buenos Aires-Colonia (Uruguay) Bridge Project over the Río de la Plata.
- 1992: Studies for the siting of the fishing port of Caleta Paula, Santa Cruz.
- 1991-1992: Seismic interpretation for oil prospecting in the El Santiagueño and Meseta Espinosa areas of the Neuquina and San Jorge basins, respectively (CADIPSA).
- 1986: Upgrading of the port of Montevideo, Uruguay.
- 1983: Site study for the operation of an offshore oil rig, Tierra del Fuego (Total Austral).
- 1982: Site seismicity, Atucha II nuclear power plant, Buenos Aires.
- 1980: Channel dredging, Bahía Blanca estuary, Buenos Aires.
- 1977: Siting of a deep-water seaport, Punta Médanos, Buenos Aires.
- 1976: Mining prospecting, Sierra Grande, Río Negro.

#### **Academic activity**

- 1976 to date: School of Engineering, Universidad Católica Argentina. Associate Professor of Topography and Geodetics. Full Professor with tenure since 2008.
- 1996 to date: School of Sea Sciences, Naval University Institute, Argentine Navy. Full Professor. Courses in: Instrument Physics, Topography I and II, Geodetics and Elements of Geophysical Exploration, for the B.Sc. in Cartography.
- 1991-1994: Technological Institute of Buenos Aires. Associate Professor of Marine Geophysics, Department of Oceanography.
- 1980-1981: Technological Institute of Buenos Aires. Professor of Magnetism, Department of Hydrography.
- 1974-1978. Buenos Aires School of Cartography. Substitute Full Professor. Subjects: Photogrammetry and Physics.

### Specialized courses

1987 to date: One-year training course in oceanography for commanding officers of the Argentine Navy. Subject: Marine Geophysics.

### Supervision of B.Sc. theses

- 1997: Technological Institute of Buenos Aires, Department of Oceanography. Title: “Estudio geológico-geofísico aplicado al mejoramiento de un puerto pesquero” (“Geological and geophysical study of the upgrading of a fishing port”).
- 1996: Technological Institute of Buenos Aires, Department of Oceanography. Title: “Estudios de sitios para la instalación de plataformas off-shore” (“Study of sites for the installation of offshore rigs”).
- 1994: Technological Institute of Buenos Aires, Department of Oceanography. Title: “Análisis y modelado de una anomalía magnética conspicua en el Golfo San Matías” (“Analysis and modelling of a conspicuous magnetic anomaly in the San Matías Gulf”).

### Publications

Significant publications from the past three years:

#### Scientific journals

1. Parker, G., Violante, R.A., Paterlini, C.M., Marcolini, S., Costa, I.P., and Cavallotto, J.L., Las secuencias sismoestratigráficas del Plioceno-Cuaternario en la Plataforma Submarina adyacente al litoral del este bonaerense (Pliocene-Quaternary seismostratigraphic sequences on the submarine shelf adjacent to the shore of eastern Buenos Aires Province), in *Latin American Journal of Sedimentology and Basin Analysis*, vol. 15, No. 2 (Asociación Argentina de Sedimentología, La Plata, Argentina, 2008), pp. 105-124. ISSN 1669-7316.
2. Hernández-Molina, F.J., Paterlini, C.M., Violante, R.A., Marshall, P., de Isasi, M., Somoza, L., and Rebesco, M., Contourite depositional system in the Argentine Margin: an exceptional record of the influence and global implications of Antarctic water masses, in *Geology*, Vol. 37, No. 6 (Geological Society of America, 2009), pp. 507-510. ISSN 0091-7613.
3. Violante, R.A., Paterlini, C.M., Costa, I.P., Hernández-Molina, F.J., Segovia, L.M., Cavallotto, J.L., Marcolini, S., Bozzano, G., Laprida, C., García Chaporí, N., Bickert, T. and Spiess, V., El Talud Continental adyacente al litoral del este bonaerense: morfología, registro geológico y evolución (The continental slope adjacent to the littoral of eastern Buenos Aires Province: morphology, geological record and evolution), in *Latin American Journal of Sedimentology and Basin Analysis*, Vol. 17, No. 1 (Asociación Argentina de Sedimentología, La Plata, Argentina, 2010), MS 188.
4. Hernández-Molina, F.J., Paterlini, M., Somoza, L., Violante, R.A., Arecco, M.A., de Isasi, M., Rebesco, M., Uenzelmann-Neben, G., Neben, S., and Marshall, P., Giant mounded drifts in the Argentine Basin: origins, global implications in the thermohaline circulation, and gas hydrate potential, in *Marine and Petroleum Geology*, Vol. 27 (2010), pp. 1508-1530.

### Books and book chapters

Violante, R.A., Marcolini, S., Cavallotto, J.L., Paterlini, C.M., Costa, I.P., Laprida, C., Dragani, W., Watanabe, S., Totah, V., Rovere, E.I., and Osterrieth, M.L., The Argentine Continental Shelf: morphology, sediments, processes and evolution since the last glacial maximum. Submission for *Continental Shelves During the Last Glacioeustatic Cycle: Shelves of the World Reviews*, the final volume of Project IUGG-UNESCO-IGCP 464, *Continental Shelves During the Last Glacial Cycle*, A.R. Chivas and F.L. Chiocci, eds. (Geological Society of London, United Kingdom). Submitted manuscript No. CSDLGC-485.

### Congresses, symposiums and other scientific meetings

1. Violante, R.A., Paterlini, C.M., Costa, I.P., Cavallotto, J.L., Segovia, L.M., Marcolini, S., Laprida, C., García Chaporí, N., Hernández-Molina, F.J., Watanabe, S., Totah, V., and Bozzano, G., Aspectos geológicos, geofísicos y evolutivos del sector bonaerense del Margen Continental Argentina (Geological, geophysical and evolutionary aspects of the Buenos Aires Province sector of the Argentine Continental Margin), paper presented at the Sixth Jornadas Geológicas y Geofísicas Bonaerenses, Mar del Plata, Argentina, 2007. Abstract 111.
2. Violante, R.A., Paterlini, C.M., Costa, I.P., Segovia, L.M., and Cavallotto, J.L., Las secuencias sedimentarias del Cenozoico en el margen continental bonaerense (The Cenozoic sedimentary sequences in the continental margin of Buenos Aires Province), paper presented at the Sixth Jornadas Geológicas y Geofísicas Bonaerenses, Mar del Plata, 2007. Abstract 102.
3. Costa, I.P., Segovia, L., Paterlini, C.M., and Violante, R.A. Evolución de las terrazas del talud continental superior en el área que comprende al cañón submarino Mar del Plata (Evolution of terraces on the upper continental slope in the area comprising the Mar del Plata submarine canyon), paper presented at the Sixth Jornadas Geológicas y Geofísicas Bonaerenses, Mar del Plata, 2007. Abstract 104.
4. Costa, I.P., Segovia, L., Paterlini, C.M., and Violante, R.A. Retrogradación del borde exterior de la Plataforma submarina durante el Pleistoceno frente a Mar del Plata (Pleistocene retrogradation of the submarine shelf outer edge opposite Mar del Plata), paper presented at the Sixth Jornadas Geológicas y Geofísicas Bonaerenses, Mar del Plata, 2007. Abstract: 107.
5. Violante, R.A., Costa, I.P., Marcolini, S., Paterlini, C.M., Segovia, L., Cavallotto, J.L., Laprida, C., García Chaporí, N., Bozzano, G., Hernández-Molina, F.J., Bickert, T., and Spiess, V., Descripción morfosedimentaria de los ambientes de plataforma exterior-talud del este bonaerense (Morphosedimentary description of the outer shelf-slope settings in the eastern sector of the Buenos Aires Province), paper presented at the Twelfth Reunión Argentina de Sedimentología, Buenos Aires, Argentina, June 2008. Abstract 186, A. Tripaldi and G. Veiga, eds.
6. Violante, R.A., Paterlini, C.M., Hernández-Molina, F.J., Marshall, P., de Isasi, M., Somoza, L., Costa, I.P., Segovia, L., Spiess, V., and Bickert, T., Los rasgos erosivos y depositacionales del sector norte del talud continental argentino (Erosional and depositional features of the northern sector of the Argentine

- continental slope), paper presented at the Twelfth Reunión Argentina de Sedimentología, Buenos Aires, Argentina, June 2008. Abstract 187, A. Tripaldi and G. Veiga, eds.
7. Hernández-Molina, F.J., Paterlini, M., Marshall, P., de Isasi, M., Somoza, L., and Violante, R.A., The Argentine Continental Slope Contourite Depositional System, paper presented at the Twelfth Reunión Argentina de Sedimentología, Buenos Aires, Argentina, June 2008. Abstract 83, A. Tripaldi and G. Veiga, eds.
  8. Hernández-Molina, F.J., Paterlini, M., Marshall, P., de Isasi, M., Somoza, L., and Violante, R.A., The evolution of the contourite depositional system in the Argentine margin: influence and global implications of Antarctic water masses, paper presented at the Twelfth Reunión Argentina de Sedimentología, Buenos Aires, Argentina, June 2008. Abstract 84, A. Tripaldi and G. Veiga, eds.
  9. Costa, I.P., Segovia, L., Violante, R.A., Paterlini, C.M., and Cavallotto, J.L., Megaestructuras sedimentarias en el talud continental argentino (Sedimentary megastructures on the Argentine continental slope), paper presented at the Seventeenth Congreso Geológico Argentino, Sociedad S. de Jujuy, vol. III: 1198-1199, 2008.
  10. Violante, R.A., Cavallotto, J.L., Paterlini, C.M., Marcolini, S., and Costa, I.P., Morphology and sedimentology of the continental shelf adjacent to eastern Buenos Aires Province, Argentina, paper presented at the Second Annual Conference, International Geological Correlation Programme Project 526 (“Risks, Resources, and Record of the Past on the Continental Shelf: Mining Late Quaternary Geological Evidence”), Natal, Brazil, 2008. Abstract volume: 7-8.
  11. Costa, I.P., Paterlini, C.M., and Violante, R.A., Depósitos de corrientes de contorno y turbidez en el cañón submarino Mar del Plata (Contour current deposits and turbidity in the Mar del Plata submarine canyon), paper presented at the Fourteenth Reunión Científica de la Asociación Argentina de Geofísicos y Geodestas, Mendoza, Argentina, 2009. Abstracts 281–282.
  12. Costa, I.P., Paterlini, C.M., and Violante, R.A. Cañón Mar del Plata: arquitectura de un sistema turbidítico activo (Mar del Plata canyon: architecture of an active turbiditic system), paper presented at the Seventh Jornadas Nacionales de Ciencias del Mar and Fifteenth Coloquio de Oceanografía, International Association for the Physical Sciences of the Oceans, Bahía Blanca, Argentina, December 2009.
  13. Violante, R.A., Hernández-Molina, F.J., Paterlini, C.M., Bozzano, G., Krastel, S., Hanebuth, T., Preu, B., and Laprida, C., Contouritic terraces on the northern Argentina middle continental slope (Southwestern Atlantic), paper presented at the international congress “Deep-Water Circulation: Processes and Products”, Baiona, Pontevedra, Spain. In *Geotemas*, vol. 11, 2010, pp. 183-184.
  14. Bozzano, G., Violante, R.A., Paterlini, C.M., Hernández-Molina, F.J., Hanebuth, T., Huppertz, T., Orgeira, M.J. and Krastel, S., Contourite drifts over the Ewing Terrace (Northeastern Argentina, Southwestern Atlantic), paper presented at the international congress “Deep-Water Circulation: Processes and Products”, Baiona, Pontevedra, Spain. In *Geotemas*, vol. 11, 2010, pp. 41-42.

15. Hernández-Molina, F.J., Somoza, L., Paterlini, C.M., Violante, R.A., Rebesco, M., Uenzelmann-Neben, G., Arecco, M.A., and de Isasi, M., The role of giant drifts as gas hydrate reservoirs on the Argentine contourite depositional system, paper presented at the international congress “Deep-Water Circulation: Processes and Products”, Baiona, Pontevedra, Spain. In *Geotemas*, vol. 11, 2010, pp. 96-97.
16. Violante, R.A., Paterlini, C.M., Bozzano, G., Hanebuth, T., Strasser, M. and Krastel, S., “Morphosedimentary characteristics and evolution of the Mar del Plata Submarine Canyon, Northern Argentina Continental Margin”, paper submitted to the Eighteenth International Sedimentological Congress, Mendoza, Argentina. Submitted with abstract ID no. 208.
17. Hernández-Molina, F.J., Paterlini, C.M., Violante, R.A., Somoza, L., Rebesco, M., and Uenzelmann-Neben, G., Partially buried giant mounded drifts in the Argentine continental margin: origins, and global implications for the history of thermohaline circulation, paper submitted to the Eighteenth International Sedimentological Congress, Mendoza, Argentina. Submitted with abstract ID no. 643.
18. Violante, R.A., Hernández Molina, F.J., Paterlini, C.M., Bozzano, G., and Marcolini, S., Conditioning factors and resulting morphosedimentary features in the upper-middle continental slope offshore eastern Buenos Aires province, Argentina, paper submitted to GeoSur 2010, International Geological Congress on the Southern Hemisphere, Mar del Plata, Argentina.
19. Violante, R.A., Preu, B., Hernández Molina, F.J., and Paterlini, C.M., Los rasgos morfosedimentarios del talud medio del este bonaerense: implicancias genéticas en la evolución del Margen Continental Argentino (Morphosedimentary features in the middle slope of eastern Buenos Aires province: genetic implications in the evolution of the Argentine Continental Margin), paper submitted to the Eighteenth Congreso Geológico Argentino, Neuquén, Argentina, May 2011.
20. Costa, I.P., Violante, R.A. and Paterlini, C.M., Movilidad de los bancos del Río de la Plata en función de la dinámica estuárica y fluvial (Mobility of the Río de la Plata banks based on the estuary and river dynamics), paper submitted to the Eighteenth Congreso Geológico Argentino, Neuquén, Argentina, May 2011.

#### **Recognition by the National Academy of Engineering**

- 1985: Received the Eduardo E. Baglietto Award from the National Academy of Engineering for co-authoring the best paper on a geophysical subject, “Relevamiento aeromagnético regional en el Mar de Weddell noroccidental-antártida”) (“Regional aeromagnetic survey in the northwestern Weddell Sea — Argentine Antarctica”).

#### **Membership in scientific societies**

Asociación Argentina de Geofísicos y Geodestas (Argentine Association of Geophysicists and Geodesists)

International Association for the Physical Sciences of the Oceans (IAPSO)

International Association of Geomagnetism and Aeronomy (IAGA)