



REPÚBLICA ARGENTINA

INFORME NACIONAL PRESENTADO A LA
ASOCIACIÓN INTERNACIONAL PARA LAS
CIENCIAS FÍSICAS DEL OCÉANO –IAPSO–

XXIV ASAMBLEA GENERAL DE LA UNIÓN GEODÉSICA Y GEOFÍSICA INTERNACIONAL – UGGI –

Perugia, Italia, 2 – 13 julio de 2007

ARGENTINA REPUBLIC

NATIONAL REPORT PRESENTED TO THE
INTERNATONAL ASSOCIATION FOR THE
PHYSICAL SCIENCES OF THE OCEANS –IAPSO–

XXIV GENERAL ASSEMBLY OF THE INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS – IUGG –

Perugia, Italy, 2 – 13 July, 2007

COMITÉ NACIONAL DE LA UNIÓN GEODÉSICA Y GEOFÍSICA INTERNACIONAL

**NATIONAL COMMITTEE OF THE INTERNATIONAL UNION
OF GEODESY AND GEOPHYSICS**

BUENOS AIRES. ARGENTINA
2007



Union Géodésique et Géophysique Internationale
International Union of Geodesy and Geophysics

REPÚBLICA ARGENTINA

COMITÉ NACIONAL DE LA UNIÓN GEODESICA Y
GEOFÍSICA INTERNACIONAL
(CNUGGI)

ARGENTINA REPUBLIC

NATIONAL COMMITTEE OF THE INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS

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International Union of Geodesy and Geophysics
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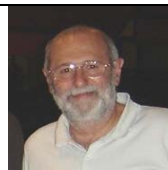


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International Union of Geodesy and Geophysics
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- ◆ *Currently, the Argentinean National Committee of IAPSO (CNIAPSO) has 87 Members whose nationality is Argentina.*
- ◆ *Most of them carried their research work on Physical Oceanography and related sciences at different national institutes, centres, laboratories and universities.*
- ◆ *Some of them are temporarily abroad, working at foreign institutes, centres, laboratories and universities.*
- ◆ *Therefore, the present National Report has been organised in order to include the activities of both type of Members. First, the reported activities are listed by institute, including the ones corresponding only to CNIAPSO's Members that have worked within it. Secondly, the activities corresponding to individual researchers, temporarily abroad, are listed.*

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Centro Nacional Patagónico - CENPAT -

– National Patagonia Centre –

Mission: - To provide an appropriate environment in order to enable Scientific-Technological Research & Development activities, including the necessary administrative staff, building and all types of required facilities.

- To contribute with the academic formation of researchers, technicians, under-graduate and graduate young students who have been awarded with fellowships.
- To manage co-operative relationships among governmental offices, universities, productive sectors and different services within the region.
- To keep in contact with national and international scientific institutions, as well as productive organisations with analogous interests.

The CENPAT is conducted by its Director whose mission is to co-ordinate the research plans, projects and programmes that are locally carried out, namely, in the region, the country and abroad.

3.- NAMES: Members of CNIAPSO that work at this institution:

José Luis Esteves	(PhD in Oceanology)	esteves@cenpat.edu.ar
Adán E. Pucci	(PhD in Chemistry)	aeppi@infovia.com.ar
Andrés Luján Rivas	(MD in Oceanography)	andres@cenpat.edu.ar

4.- FIELD WORK:

ESTEVEZ, José Luis	Marine Chemistry. Water Pollution.
PUCCI, Adán E.	Coastal and Marine Geology (<i>Currently, retired</i>)
RIVAS, Andrés	Physical Oceanography

5.- PUBLICATIONS:

- Olivera, N. L., Commendatore, M. G., Delgado, O. and **Esteves, J. L.** (2003): "Microbial characterisation and hydrocarbon biodegradation potential of natural bilge waste microflora". *Journal of Industrial Microbiology and Biotechnology*. 30: 542 – 548.
- Torres, A. I., Gil, M. N., and **Esteves, J. L.** (2004): "Nutrient uptake rates by the alien alga *Undaria pinnatifida* (Phaeophyta) (Golfo Nuevo, Patagonia, Argentina) when exposed to diluted sewage effluent". *Hydrobiologia*. 520 (1-3): 1 – 6.
- Cinti, A., Barón, P. J. and **Rivas, A. L.** (2004): "The effects of environmental factors on the embryonic survival of the Patagonian *squid loligo gahi*". *Journal of Experimental Marine Biology and Ecology*, 313, 2004, 225:240.
- Gagliardini, D. A. and **Rivas, A. L.** (2004): "Environmental characteristics of San Matías gulf obtained from Landsat-Tm and ETM+ data". *Gayana*, 68, N° 2, Tomo 1, 186:193.
- Gil, M., Torres A. I. and **Esteves, J. L.** (2005): "Uptake of sewage derived nitrogen by *Ulva rigida* (Chlorophyceae) in Bahía Nueva (Golfo Nuevo, Patagonia, Argentina)". *Hydrobiology*, 532: 39 – 43.
- Nievas, M. L., Commedatore, M. G., Olivera, N. L., **Esteves, J. L.** and Bucalá, V. (2005): "Biodegradation of bilge waste from Patagonia with an indigenous microbial community". *Bioresource Technology*, 97 : 2280 – 2290.
- Bogazzi, E., Baldoni, A., **Rivas, A. L.**, Martos, P., Reta, R., Orensanz, J. M., Lasta, M., Dell’Arciprete, P. and Werner, F. (2005): "Spatial correspondence between areas of concentration of Patagonian scallop (*Zygochlamys patagonica*) and frontal systems in the South-western Atlantic". *Fisheries Oceanography*, 14:5, 359-376.
- **Rivas, A. L.** and Piola, A. R. (2005): "Inertial oscillations at the shelf off northern Patagonia". *Atlantic* 27(2), 75-86.
- **Esteves, J. L.**, Commedatore, M. G., Nievas, M. L., Massara Paletto, V. and Amin, O. (2006): "Hydrocarbon pollution in coastal sediments of Tierra del Fuego Islands, Patagonia, Argentina". *Marine Pollution Bulletin*, 52: 572 – 597.
- Gil, M. N., Torres, A., Harvey, M. A. and **Esteves, J. L.** (2006): "Heavy metals in marine organisms from the coastal zone of Continental Argentinean Patagonia". *Journal of Marine Biology and Oceanography*, 41(2): 167 – 176.
- **Rivas, A. L.**, Dogliotti, A. I. and Gagliardini, D. A. (2006): "Satellite – measured surface chlorophyll variability in the Patagonian shelf". *Continental Shelf Research*, 26, 703:720 (doi:10.1016/j.csr.2006.01.013).
- **Rivas, A. L.** (2006): "Quantitative estimation of the influence of surface thermal fronts over chlorophyll concentration at the Patagonian shelf". *Journal of Marine Systems*, 63, 183:190 doi:10.1016/j.jmarsys.2006.07.002
- Tonini, M. H., Palma, E. D. and **Rivas, A. L.** (2006). "High resolution model of Patagonic gulfs". *Computational Mechanics*, Vol. XXV, Chap. Cardona, Nigro, Sonzogni and Storti Eds, AMCA, Santa Fe, 1441-1460. ISSN: 1666-6070.

6.- CONGRESS:

- **V National Congress of Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Buenos Aires, Argentina, 8 – 12 December, 2003.
 - Baldoni, A., Bogazzi, E., **Rivas, A. L.**, Martos, P., Reta, R., Orensanz, J. M., Lasta, M. and Dell’Arciprete, P. “Association between the areas of Patagonia scallop’s (*scallop*) concentration (*Zygochlamys patagonica*) and the South Western Atlantic fronts”. Abstracts 69.
 - **Esteves, J. L.**, Solis, M. E., Rodriguez, V. and Willers, V. “Ushuaia and Golondrinas bays – Coastal water quality and water influx. (January 2001)”.
 - Gagliardini, D. A. and **Rivas, A. L.** “Environmental characteristics of San Matías gulf determined from Landsat TM/ETM information”. Abstracts 109.
 - Hernández Moresino, R. and **Rivas, A. L.** “Evaluation of the spatial-temporal variability of A-chlorophyll in an area of the Argentinean Continental Shelf (40° - 48° S) from satellite data”. Abstracts 121.
 - Massara Paletto, V., Commendatore, M. and **Esteves, J. L.** “Anthropic and biogenic hydrocarbons in Nueva Bay (Patagonia, Argentina)”.
 - Paparazzo, F. E., Schloss, I., Solis, M., Ruiz-Pino, D., Poisson, A., Bianchi, A., Balestrini, C. and **Esteves, J. L.** “Nutrients fluctuations in the Argentinean Continental Shelf south of 42° S”.
 - **Rivas, A. L.**, Dogliotti, A. I. and Gagliardini, D. A. “Surface Chlorophyll Variability at Patagonia shelf from SeaWiFS data”. Abstracts 161.
 - Santinelli N., Sastre V., Ciccarone P., Solís M., Andrade A. and **Esteves, J. L.** “Space and temporal dynamics of *Alexandrium tamarense* populations, Paralytic Shellfish Poisoning and associated nutrients in the north coast of Chubut Province. (Winter 2000 to winter 2002)”.
 - Vazquez, N. N., Gil, M. N., **Esteves, J. L.** and Amín, O. A. “Zn, Cu, Pb and Cd pollution in intertidal sediments of the coastal zone of Beagle channel, Tierra del Fuego, Argentina”.
 - Williams, G., **Esteves, J. L.** and Gagliardini, D. A. “Oceanographic phenomena detection through satellite information and meteorological forecast (North patagonic gulfs). Preliminary data”.
 - Willers, V., Narvarte, M. and **Esteves, J. L.** “Imposex in *Buccinanops globulosum* of the northern zone of Patagonia”.
- **Brazilian Congress of Oceanography**, organised by Brazilian Association of Oceanography and Vale do Itajaí University. Itajai. Santa Catarina. Brazil, 10-15/10/2004:
 - Hasan, E. J., Gil, M. N. and **Esteves, J. L.** “Subtidal sediment characterisation through nutrient exchange at sediment-water interface in Nueva Bay (Golfo Nuevo, Chubut, Argentina)”.
 - Niencheski, L. F., **Esteves, J. L.**, Freitas, U. and Torres, A. “Hydro environment of Lagoa Dos Patos (RS) and Golfo Nuevo (Patagonia): hydro chemical studies for environmental management.”

- **PORSEC2004** (Pan Ocean Remote SEnsing Conference), Univ. de Concepción, Chile, 2004:
 - Gagliardini, D. A. and **Rivas, A.L.**: “Environmental characteristics of San Matías gulf obtained from Landsat-Tm and ETM+ data”.
- **XI° Latin American Congress of Marine Science and XXV° National Congress of Marine Science of Chile**. 16-20 May, 2005.
 - Torres, I., Gil, N., Amín, O. and **Esteves, J. L.** “Environmental quality evaluation of Encerrada bay (Ushuaia, Tierra del Fuego Province, Patagonia, Argentina. Preliminary data”.
 - Williams, G. , Gagliardini, D. A. and **Esteves, J. L.** “San Matías gulf: physical and chemical characterization using in situ oceanographic data and satellite images landsat TM/ETM”.
- **VI° Latin American Congress of Environmental Mutagenese, Teratogenese and Carcinogenese and XIV° Argentine Congress of Toxicology**, organised by Argentinean Toxicological Association. 1- 4 November, 2005.
 - Vázquez, N. N., **Esteves, J. L.**, Narvarte, M. A., Comoglio, L. and Amin, O. “Physiological answers of mussels to pollution”.
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.
 - Commendatore, M.G., **Esteves, J. L.**, Nievas, M. L. and Solana, V. P. “Península Aristizábal I. Hydrocarbons in sediments and hydrocarbons waste characterization”.
 - de Freitas, U., Niencheski, L. F., **Esteves, J. L.** and Rodilla, M. “Benthonic metabolism in an aquaculture area (Lagoa dos Patos - Brazil)”.
 - **Esteves, J. L.**, Gil, M. N. and Amín, O. “First data of heavy metals in Los Estados Island (Tierra del Fuego archipelago Argentine)”.
 - Ferrando, A., **Esteves, J. L.** and Elías, R. “Marobenthonic and environmental indicators: a multivariate analysis in sandy beaches (Puerto Madryn, 43° S, 65° W)”.
 - Gil, M.N., Amin, O., Torres, A. and **Esteves, J. L.** “Water quality variability in Ushuaia bay – Golondrina bay system. Tierra del Fuego, Argentina”.
 - Lezcano, A. and **Rivas, A.** “Spatial high resolution maps of sea surface temperature”.
 - Paparazzo F.E., Schloss I., Solís M. and **Esteves, J. L.** “Chemical characteristics of tidal fronts in Argentinean Continental Shelf and the biological implications”.
 - Pisoni J. P and **Rivas, A. L.** “Thermal fronts at the Argentinean Continental Shelf using TSM satellite data”.
 - **Rivas, A. L.** “Quantitative estimation of thermal fronts’ influence on the surface concentration of chlorophyll at Patagonia shelf”.
 - **Rivas, A. L.** “Thermal fronts surface concentration of chlorophyll at Patagonia shelf from satellite data”.
 - **Rivas, A. L.** “Spatial-temporal variability of the SST in the South Western Atlantic”.

- Sastre V., Santinelli, N., Solis, M., **Esteves, J. L.** Ferrario M., Ciccarone, P. and Perez, L. “Toxic algae bloom in coastal waters of Chubut Province”.
- Tonini, M. H., Palma, E., **Rivas, A. L.** “Circulation and dynamics of Patagonia gulfs: 3D barotropic model”.
- Williams, G. and **Esteves, J. L.** “San Matías gulf: temporal and spatial variation of temperature and nutrient and chlorophyll “a” concentration in the water column”.
- Williams, G., Gagliardini, D., **Rivas, A. L.**, Sapoznik, M., Narvarte, M., González, R. “Environmental characterisation of San Matías gulf (Argentina) using AVHRR and SeaWiFS information”.

7.- COURSES:

- Course on Chemical Oceanography by Dr **J. L. Esteves**, 2nd. Cycle for Biologists. National University of Patagonia “*San Juan Bosco*” (each year).
- Course on Physical Oceanography by MD **A. L. Rivas**, Advanced Cycle for Biologists. National University of Patagonia “*San Juan Bosco*” (each year).
- Course on Physics II by MD **A. L. Rivas**, Advanced Cycle for Biologists. National University of Patagonia “*San Juan Bosco*” (each year).
- Course on “Presence and impact of hydrocarbons in coastal marine ecosystems and biodegradation processes”, by Dr Michele Gilewicz, Dr. Philippe Cuny and Dr. Vincent Grossi, with Marseille Oceanologic Center, co-ordinated by Dr **J. L. Esteves**, organised by French Embassy, French Honorary Consulate CENPAT and Patagonia Natural Foundation. CENPAT. Puerto Madryn. Chubut. Argentina. 15-19 November, 2004.
- Course on “Liquid waste management in coastal municipalities”, co-ordinated by Dr **J. L. Esteves**, organised by Train Sea COSAT Brazil, UNEP/GPA and UNESCO-IHE. Puerto Madryn. Chubut. Argentina. 16-20 May, 2005.
- Course on “Integrated coastal management”, by Dr Isabel Moreno Castillo, with Balear Island University, co-ordinated by Dr **J. L. Esteves**, organised by Balear Island University, Orion Association, National University of Patagonia, CENPAT and Patagonia Natural Foundation. Puerto Madryn. Chubut. Argentina. 4-19 February, 2006.

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Centro de Geología de Costas y del Cuaternario - CGCyC –

dependiente de la Facultad de Ciencias Exactas y Naturales,
Universidad Nacional de Mar del Plata

– *Coastal Geology and Quaternary Centre* –

*with the Faculty of Exact and Natural Sciences, National University
of Mar del Plata.*

Mission: The Coastal Geology and Quaternary Centre (CGCyC) was created on 1979 through an Agreement between the Scientific Investigations Commission of Buenos Aires Province (C.I.C.) and National University of Mar del Plata (UNMdP). On 1985 the CGCyC started to exclusively depend on UNMdP, in particular, on its Faculty of Exact and Natural Sciences. From its creation, it is characterised by its strong interest in research, teaching and services to the community through the transference of its knowledge.

3.- NAMES: Members of CNIAPSO that work at this institution:

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Federico Ignacio Isla (PhD in Geology)

fisla@mdp.edu.ar

4.- FIELD WORK:

BÉRTOLA, Germán Ricardo

Geological Oceanography

ISLA, Federico Ignacio

Geological Oceanography

5.- PUBLICATIONS:

Articles in International and National Journals.

- **Bértola, G.** and Cortizo L. (2006): “Sand transport in active and hung littoral dunes in the south-east of Buenos Aires”. *Journal of the Argentinean Geological Association*. Vol. 60 (1):174-184. ISSN 0004-4822.
- Bujalesky, G. G. and **Isla, F. I.** (2006): “Quaternary deposits of the Fueguina Atlantic Coast between Peñas and Ewan capes, Argentina *Journal of the Argentinean Geological Association*, 61, 1, 81-92.

- Cortizo, L. C. and **Isla, F. I.** (2006): "Evolution and dynamics of the dune-barrier of San Cayetano and Tres Arroyos, Buenos Aires". *Journal of the Argentinean Geological Association*, 23 pp. (Accepted for its publication).
- Espinosa, M. A., Hassan, G. S. and **Isla, F. I.** (2006): "Diatom distribution across a temperate micro-tidal marsh, Mar Chiquita Coastal Lagoon, Argentina". *Thalassas. An International Journal of Marine Sciences*. 22 (2): 9-16.
- Hassan, G., Espinosa, M. A. and **Isla, F. I.** (2006): "Modern diatom assemblages in surface sediments from estuarine systems in the south-eastern Buenos Aires province, Argentina". *Journal of Paleolimnology* 35(1) 15 pp.
- Hassan, G. S., Espinosa, M. A. and **Isla, F. I.** (2007): "Dead diatom assemblages in surface sediments from a low impacted estuary: the Quequén Salado River, Argentina". *Hydrobiology*. (Published Online).
- **Isla, F. I.**, Bujalesky, G. G., **Bértola, G. R.**, Iantanos, N. and Estrada, E. (2007): "Typology of Argentine beaches: composition, tidal range and wave energy". *Journal of Coastal Research*, 8 pp.
- **Isla, F. I.** and Lasta, C. A. (eds.) (2006): *Manual of Coastal Manage for Buenos Aires Province*. EUEM, Mar del Plata, 281 pp.
- **Isla, F. I.** (2006): "Erosion and coastal defence". In: Isla, F. I & Lasta, C. A. (eds.) *Manual of Coastal Manage for Buenos Aires Province, EUEM, Mar del Plata, 125-147*.
- **Isla, F. I.** and Bujalesky, G. G. (2006): "Coastal Geology and morphology of Patagonia and Fueguino Archipelago". In: Rabassa, J. R. (ed) *Late Cainozoic of Patagonia*, Elsevier Sci. Publ., 16 pp. (Accepted for its publication).
- Stutz, S., Prieto, A. R. and **Isla, F. I.** (2006): "Holocene evolution of the Mar Chiquita coastal lagoon area, Argentina indicated by pollen analysis". *Journal of Quaternary Science* 21, 1, 17-28.

6.- CONGRESS:

- **9° Argentinean Congress of Bio- Stratigraphy and Palaeontology.** Córdoba, 18-22 September, 2006:
 - Espinosa, M. A. and **Isla, F. I.** "Environmental evolution related to an obstruction of a tide-channel in the Walker Stream, Bahía San Blas, Buenos Aires".
 - Hassan, G. S., Espinosa, M. A. and **Isla, F. I.** "Diatoms distribution in surface sediments in the river Queue Salado estuary (Buenos Aires, Argentina): consequences in the re-building of coastal paleo- environments".
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006:
 - **Isla, F. I.** and **Bértola, G. R.** "Sand distribution in the infra-littoral beaches: possibility of repopulating Villa Gesell and Quequén beaches".
 - **Isla, F. I.** "Multipurpose artificial reefs: their possibilities of settling at the Argentinean coast".

- Madirolas, A., Lasta, M., Trepode, M., Alavarez Colombo, G. L., Iantanos, N. and **Isla, F. I.** “Morphological characteristics of the submarine canyons of the northern Patagonia”.
- Schnack, E., **Isla, F. I., Bértola, G. R.**, and Pousa, J. “The erosive processes in the eastern Atlantic littoral of Buenos Aires Province: steps of specific management and strategies in the frame of the integrated treatment of the coastal zone”.

7.- COURSES:

- 2006: Cycle for Biologists, National Univ. of Mar del Plata. (Each year). Courses on:
 - “Foundations of Geology” by **G. Bértola**. First semester.
 - “Teledetection” by **F. I. Isla**. First semester.
 - “Risks associated to natural processes” by **G. Bértola**. Second semester.

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- ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Centro de Investigaciones del Mar y la Atmósfera (CIMA / CONICET-UBA)

– (Centre for Oceanic and Atmospheric Research) –

Mission: CIMA (Centre for Oceanic and Atmospheric Research), is an institution supported by CONICET (National Council for Scientific and Technological Research of Argentina) and UBA (University of Buenos Aires). It is located at the University of Buenos Aires main building, close to the Department of Atmospheric and Oceanic Sciences not far from downtown.

Research activities at CIMA are mainly focused on Climate Modelling, Climate Regional Variability, Regional Effects of Anthropogenesis Effects on Climate, Shelf Seas Modelling and Dynamics, Numerical Weather Forecast and Climate Change. CIMA is the main, probably the only, research centre of Argentina fully devoted to atmosphere and ocean modelling.

3.- NAMES: Members of CNIAPSO that work at this institution:

Virna Loana Meccia (MD in Oceanography) virna@cima.fcen.uba.ar

Claudia Gloria Simionato (PhD in Oceanography) claudias@cima.fcen.uba.ar

4.- FIELD WORK:

M ECCIA, Virna Loana Physical Oceanography

SIMIONATO, Claudia Goria Physical Oceanography

5.- PUBLICATIONS:

Articles in International and National Journals.

- **Simionato, C. G., Dragani, W. C., Meccia, V. L.** and Nuñez, M. N. (2004): “A numerical study of the barotropic circulation of the Río de la Plata estuary: sensitivity to bathymetry, earth rotation and low frequency wind variability”. *Estuarine, Coastal and Shelf Science*, (61/2), 261-273.

- **Simionato, C. G., C., Nuñez, M. N. and Engel, M. (2004):** “A set of 3-d nested models for tidal propagation from the Argentinean Continental Shelf to Río de la Plata estuary”. *Journal of Coastal Research*, (20) 3, 893-912.
- Adlen, S., Brodsky, E. E., Oki, T., Ridley, A. J., Sánchez, L., **Simionato, C. G.** Yoshizawa, K. and Shamir, U. (2004): “New report charts course for Future of Geosciences”. EOS, Vol. 85, No. 3, 20. Ed. by American Geophysical Union. ISSN: 0096-3941. Washington D.C., USA.
- **Simionato, C. G., Meccia, V. L.** Dragani, W. and Nuñez, M. (2005): “Barotropic tide and baroclinic wave’s observations in the Río de la Plata estuary”. *Journal of Geophysical Research*, 110, C06008, doi: 10.1029/2004JC002842.
- **Simionato, C. G.,** Vera, C.S. and Siegmund, F. (2005): “Surface wind variability on seasonal and interannual scales over the Río de la Plata area”. *Journal of Coastal Research*, 21(4), 770–783.
- **Simionato, C. G., Meccia, V. L.** Dragani, W and Núñez, M. (2006): “On the use of the NCEP/NCAR surface wind for modelling barotropic circulation in the Río de la Plata estuary”. *Estuarine, Coastal and Shelf Science*. (70), 195-206.
- **Simionato, C. G., Meccia, V. L.,** Dragani, W. C. Guerrero, R. and Núñez, M. (2006): “The Río de la Plata estuary response to wind variability in synoptic to intra-seasonal scales. part 1: Barotropic response”. *Journal of Geophysical Research*, (2005JC003297).
- **Simionato, C. G., Meccia, V. L.,** Guerrero R., Dragani, W. and Nuñez, M. (2006). “The Río de la Plata estuary response to wind variability in synoptic to intra-seasonal scales. Part 2: baroclinic response and its implications on the salt wedge structure”. *Journal of Geophysical Research – Ocean*. (Accepted for its publication).

Technical Reports.

- **Simionato, C. G., Meccia, V. L.,** Dragani, W. C. and Nuñez, M. N., 2003. “Model HamSOM/CIMA: Seasonal Circulation and plumes from the principal tributaries in the Río de la Plata”. Rep. CIMA/CONICET-UBA, Oct-03-01, 48 pp. (CD).

Other published articles.

- **Simionato, C. G.** 2003. “International Association Of The Physical Sciences Of The Ocean –IAPSO–: The Future of Physical Oceanography”, in: GEOSCIENCES: The Future – Final Report of the Group Geosciences, The Future. Pp. 29-42. E. Brodsky (Ed.). Electronic book published by the International Union of Geodesy and Geophysics (IUGG). Secretary General: Jo Ann Joselyn. CIRES. Campus Box 216. Univ. of Colorado. Boulder, CO 80309 USA. 106 pp. July, 2003. With anonymous reviewer system.

6.- CONGRESS:

- **V National Congress of Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Buenos Aires, Argentina, 8 – 12 December, 2003.

- Allegrino, J., Saenz, G., Dragani, W. C. , Schmidt, S. and **Meccia, V. L.** “Waves prediction for the coasts of the Province of Buenos Aires using different Data Bases of Meteorological Data”. (Poster).
- **Meccia, V. L.**, Dragani, W. C., Schmidt, S. and Pousa, J. “Beach profile evolution during intense wind wave events at Pinamar”.
- **Meccia, V.**, **Simionato, C. G.**, Dragani, W. and Núñez, M. “Seasonal circulation and flux corridors at the Río de la Plata’ estuary based upon HamSOM/CIMA model”. FREPLATA Symposium.
- **Simionato, C. G.**, Dragani, W. C. Núñez, M. and **Meccia, V. L.** “Currents and heights simulation at Río de la Plata using Hamsom/Cima model forced by the re-analysis of NCEP and comparisons with observations”. FREPLATA Symposium.
- **Simionato, C. G.**, Dragani, W. C. and Núñez. “Propagation of the principal moon semidiurnal tide wave in the South-eastern South American continental shelf and Rio de la Plata”. FREPLATA Symposium.
- **Simionato, C. G.** and Núñez, M. N. “A numerical study of summer-winter variability in the salinity surface front of the Río de la Plata”. FREPLATA Symposium.
- **Simionato, C. G.** and Vera, C. C. “Surface wind variability over the Río de la Plata estuary in seasonal and inter-annual time scales on the base of the NCEP/NCAR reanalyses”. FREPLATA Symposium.
- **XI Latin-American Congress on Marine Sciences.** Viña del Mar, Chile. 16 – 20 May 2005.
 - **Simionato C. G, Meccia V. L.**, Dragani W. C. and Núñez M. N. “Observations of internal waves in the estuary of Río de la Plata”.
- **IX Argentinean Congress of Meteorology (CONGREMET IX) “WEATHER, CLIMATE, WATER AND SUSTENTABLE DEVELOPMENT”.** Buenos Aires, Argentina. 3 – 7 October, 2005.
 - **Simionato, C. G. Meccia, V. L.**, Dragani, W. C., Guerrero, R. and Núñez, M. “Río de la Plata’s estuary barotropic response to wind variability at synoptic and inter-seasonal scales”.
- **IX Argentinean Congress on Meteorology.** Bs. As., Argentina, 3 - 17 October 2005.
 - **Simionato C. G., Meccia V. L.**, Dragani W. C., Guerrero R. A. and Núñez M. N. “Barotropic response of the estuary of Río de la Plata to wind variability in the synoptic and Inter.-seasonal scales”.
- **8th International Conference on Southern Hemisphere Meteorology and Oceanography,** Foz do Iguazú, Brazil, 23 – 28 April, 2006.
 - **Simionato, C. G.**, Berasategui, A., **Meccia, V. L.**, Acha, M. and Mianzan, H. “The potential role of wind variability on plankton retention in the Río de la Plata estuary: a numerical study”.
 - **Simionato, C. G., Meccia, V. L.** , Dragani, W. C. Guerrero, R and Núñez, M. “Recent advances in the knowledge of the Río de la Plata estuary circulation, forcings and variability”.

- **23rd Scientific Meeting of the Argentinean Association of Geophysics and Geodesy (AAGG).** Bahía Blanca, Buenos Aires, Argentina. 14 – 18 August, 2006.
 - Dragani, W. C., Speroni, J., D' Onofrio, E., Mazio, C. A. **Simionato, C. G.**, Fiore,, M. M. E., Grismeyer, W., **Meccia, V. L.**, Nuñez, M., Di Biase, F., Antonietti, S., Demilio, G., Stadelmann, M., Borjas, R. and Sobre Casas, M. M. "Circulation study of San Matías Gulf's waters applying hydrodynamic numerical models forced with tide and wind. Sub-project a-b-30 (GEF-Patagonia)".
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.
 - **Meccia, V. L., Simionato, C. G.**, Guerrero, R. A., Dragani, W. C. and Núñez, M. N. "Currents vertical structure in the estuary of Río de la Plata: variability in the synoptic and inter-seasonal scales and its implications in the stratification".
 - Simionato, C. G.**, Berasategui, A., **Meccia, V. L.**, Acha, M. and Mianzán, H. "A physical mechanism for the retention of eggs and early larvae in the Río de la Plata estuary".
 - Guerrero, R. , Lucas, A., **Simionato, C. G.** "Variability of oceanographic regimes in the Argentinean Continental Shelf north 42°".
 - Martín, P. B., Campos, M. I., Dragani, W. C., **Simionato, C. G.**, Nuñez, M. N. "Analysis of an extreme wind waves event on the Río de la Plata".

7.- COURSES:

- 2006: September. Course attended by **C. G. Simionato**. Matlab and practical applications on climate variability studies. Claris Training Activities. DCAO, FCEN, UBA. Buenos Aires, 20-24 February, 2006.
- One semester course on Introduction to Physical Oceanography by **C. Simionato**, 2nd year for Physical Oceanography Undergraduate Students at Univ. of Bs. As. (every year).
- One semester course on Ocean Dynamics by **C. Simionato**, 3rd. Year for Physical Oceanography Undergraduate Students at University of Buenos Aires (every year).

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Instituto Antártico Argentino

– *Argentinean Antarctic Institute* –

Mission: The Argentinean Antarctic Institute (IAA) was created on April 17, 1951, making true one of the fundamental pillars dreamed by Cnel.Hernán Pujato for enhancing and extending the Argentinean presence in the Antarctic. At that time the IAA became the first scientific organization exclusively devoted to Antarctic matters and it preceded the Antarctic Treaty signature as well as the creation of the Scientific Committee on Antarctic Research (SCAR).

3.- NAMES: Members of CNIAPSO that work at this institution:

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4.- FIELD WORK:

FERREYRA, Gustavo	Biological Oceanography – UV effects on polar plankton communities
SCHLOSS, Irene Ruth	Biological Oceanography – Antarctic Food Webs, Climate Change
TOSSONOTTO, Gabriela V.	Antarctic Oceanography

5.- PUBLICATIONS :

- Longhi, M. I., **Schloss, I. R.**, Wiencke, C. (2003): “Effect of irradiance and temperature on photosynthesis and growth of two Antarctic benthic diatoms, *Gyrosigma subsalinum* and *Odontella litigiosa*”. *Marine Botany* 46: 276-284. Language: English. ISSN 0006-8055.
- Pakhomov, E., Fuentes, V., **Schloss, I. R.**, Atencio, A., Esnal, G. B. (2003): “Beaching of the tunicate *Salpa thompsoni* at high levels of suspended particulate matter in the

Southern Ocean: implications for a “starvation in the midst of plenty” hypothesis”. *Polar Biology* (26): 427-431. 2003. Language: English. ISSN: 0722-4060.

- Ferrario, M. E., Licea, M. S. Balestrini, C. F. and **Ferreya, G. A.** (2004): “Species of *Pseudo-nitzschia* in the Drake Passage (54 - 61° S to 46 - 64°)”, in K. A. Steidinger, J. H. Landsberg, C. R. Tomas and G. A. Vargo (eds.) *Harmful Algae* 2002. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO, St. Petersburg, Florida, USA, pp. 434-436.
- Hernández, E., **Ferreya, G. A.** and Mac Cormack, W. P. (2004): “Effect of solar radiation and the subsequent dark periods on two newly isolated and characterized Antarctic marine bacteria”. *Polar Research*, 23 (1): 67-77.
- Bianchi, A. A., Bianucci, L., Piola, A. R., Ruiz Pino, D., **Schloss, I. R.**, Poisson, A. and Balestrini, C. (2005): “Vertical stratification and air-sea CO₂ fluxes in the Patagonian shelf”. *Journal of Geophysical Research*, Vol. 110, C07003, doi: 10.1029/2004JC002488, 2005. Language: English. ISSN 0148-0227.
- Bouchard, J. N., Roy, S., Curtosi, A., Campbell, D. and **Ferreya, G. A.** (2005): “Ultraviolet-b effects on photo-system II efficiency of natural phytoplankton communities from Antarctica: Relative importance of damage and repair”. *Polar Biology*, 28:60-618.
- **Ferreya, G. A.**, **Schloss, I. R.** And Demers, S. (2005): “Rôle de la glace saisonnière dans la dynamique de l'écosystème marin de l'Antarctique: Impact potentiel du changement climatique global”. *Vertigo*, 5(3):1-21.
- Hernando, M. P. and **Ferreya, G. A.** (2005): “The effects of UV radiation on photosynthesis in an Antarctic diatom (*Thalassiosira* sp.): Does vertical mixing matter?” *Journal of Experimental Marine Biology and Ecology*, 325:35-45.
- Hernando, M. P., Malanga, G. and **Ferreya, G. A.** (2005): “Oxydative stress and antioxidant defences generated by solar UV in a sub-Antarctic marine phytoflagellate. In: The Magellan-Antarctic Connection: Links and Frontiers at High Southern Latitudes”. *Scientia Marina*, W.E. Arntz, G.A. Lovrich and S. Thatje (eds.), 69 (suppl. 2):287-295.
- Sargian, P., Mostajir, B., Chatila, K., **Ferreya, G. A.**, Pelletier, E. and Demers, S. (2005): “Non-synergistic effects of water-soluble crude oil and enhanced ultraviolet-B radiation on a natural plankton assemblage”. *Marine Ecology Progress Series*, 294:63-77.
- Sargian, P., Pelletier, É, Mostajir, B., **Ferreya, G. A.** and Demers, S. (2005): “TBT toxicity on a natural planktonic assemblage exposed to enhanced ultraviolet-B radiation”. *Aquatic Toxicology* 73:299-314.
- Barnes, D. K. A., Fuentes, V., Clarke, A., **Schloss, I. R.** (2006): “Rising shallow sea temperatures around King George Island, Antarctica”. *Deep-Sea Research II* 53, 853–865. ISSN: 0967-0645.
- Belzile, C., Demers, S., **Ferreya, G. A.**, **Schloss, I. R.**, Nozais, C., Lacoste, K., Mostajir, B., Roy, S., Gosselin, M., Pelletier, E., Ganesella, S., Diaz, S. and Vernet, M. (2006): “UV Effects on Marine Planktonic Food-Webs: A Synthesis of Results from Mesocosm Studies”. *Photochemistry and Photobiology*, 82: 850–856 ISSN: 0031-8655.

- Díaz, S., Camilión, C., Escobar, J., Deferrari, G., Roy, S., Lacoste, K., Demers, S., Belzile, C., **Ferreira, G. A.**, Ganesella, S., Gosselin, M., Nozais, C., Pelletier, E., **Schloss, I. R.** and Vernet, M. (2006): "Simulation of Ozone Depletion Using Ambient Irradiance Supplemented with UV Lamps. (Symposium in Print) UV Effects on Aquatic Systems". *Photochemistry and Photobiology*, 82: 857–864. ISSN: 0031-8655.
- Ferrero, E., Eöry, M., **Ferreira, G. A.**
- **Schloss, I. R.**, Zagaressé, H., Vernet, M. and Momo, F. (2006): "Vertical Mixing, Turbidity, and Ecological Effects of Ultraviolet Radiation in Planktonic Communities". *Photochemistry and Photobiology*, 82: 898–902.
- Ferreira, G. A., Mostajir, B., **Schloss, I. R.**, Chatila, K., Ferrario, M. E., Sargian, P., Roy, S., Prod'homme, J., Demers, S. (2006): "Ultraviolet B radiation effects on the structure and function of lower trophic levels of the marine planktonic food web". *Photochemistry and Photobiology*, 82: 887–897. ISSN: 0031-8655.
- Hernández, E. A., **Ferreira, G. A.** and Mac Cormack, W. P. (2006): "Response of two Antarctic marine bacteria to different natural UV radiation doses and wavelengths". *Ant. Sci.*, 18(2):205-212.
- Hernando, M., Schloss, I. R., Roy, S. and **Ferreira, G. A.** (2006): "Photo-acclimation to Long-Term UVR Exposure of Natural Sub-Antarctic Phytoplankton Communities: Fixed Surface Incubations vs. Mixed Mesocosms. *Photochemistry and Photobiology*, 82: 923–935 ISSN: 0031-8655.
- Longhi, M. L., **Ferreira, G. A.**, **Schloss, I. R.** and Roy, S. (2006): "Variable phytoplankton response to enhanced UV-B and nitrate addition in mesocosm experiments at three latitudes (Canada, Brazil and Argentina)". *Mar. Ecol. Prog. Ser.* 313:57-72.
- Longhi, M. L., Roy, S., **Ferreira, G. A.**, **Schloss, I. R.** (2006): "Influence of nitrate availability and nutritional status on phytoplankton responses to UV-B radiation at three latitudes (Canada, Brazil and Argentina)". *Marine Ecology Progress Series*. Vol. 313: 57–72, ISSN: 0171-8630.
- Momo, F., Ferrero, E., Eöry, M., Esusy, M., Iribarren, J., **Ferreira, G. A.**, **Schloss, I. R.** and Demers, S. (2006): "Mathematical models for UVR effects in marine communities". *Photochem. and Photobiol. (Symposium in Print) UV Effects on Aquatic Systems* (in press).
- Momo, F., Ferrero, E., Eöry, M., Esusy, M., Iribarren, J., **Schloss, I. R.** and Demers, S. (2006): "The whole is more than the sum of its parts: Modelling Community-Level Effects of UVR in Marine Ecosystems". *Photochemistry and Photobiology*, 82: 903–908. ISSN: 0031-8655.
- Roy, S., Mohovic, B., Ganesella, S., **Schloss, I. R.**, Ferrario, M. E., Demers, S. (2006): "Effects of Enhanced UV-B on Phytoplankton Biomass and Composition of Mesocosm-Enclosed Natural Marine Communities from three latitudes". *Photochemistry and Photobiology*, 82: 909–922, ISSN: 0031-8655.
- van den Belt, M., Costanza, R., Demers, S., Diaz, S., **Ferreira, G. A.**, Koch, E. W., Momo, F. R. and Vernet, M. (2006). "Mediated Modelling of the Impacts of Enhanced UV-b Radiation on Ecosystem Services". *Photochem. and Photobiol. (Symposium in Print) UV Effects on Aquatic Systems* (in press).

- Almandoz, G. O., Ferrario, M. E., **Ferreira, G. A., Schloss, I. R.**, Esteves, J. L. and Paparazzo, F. E. (2007): “The Pseudo-nitzschia genus (*Bacillariophyceae*) in continental shelf waters of Argentina (Southwestern Atlantic Ocean, 38-55°S). Harmful algae”. 6: 93-103.
- **Schloss, I. R., Ferreira, G. A.**, Ferrario, M. E., Almandoz, G. O, Codina, R., Bianchi, A. A., Balestrini, C. F, Ochoa, H. A, Ruiz-Pino, D., Poisson, A. (2007): “Role of plankton communities in pCO₂ sea-air variation in the south-western Atlantic Ocean”. *Marine Ecology Progress Series*. Language: English. ISSN: 0171-8630. (In press).

6.- CONGRESS :

- **Congress of Science and Technology**, National University of Luján, Luján, Buenos Aires. Argentina. 2003.
 - Campana, G., Giorgi, A. and **Schloss, I. R.** “Effect of *Pomacea canaliculata*’s density on the structure of the periphyton”.
- **IBMANT-ANDEEP Meeting**, Ushuaia, Tierra del Fuego, Argentina, 19-24 October, 2003.
 - Atencio, A. G., **Schloss, I. R., Ferreira, G. A.**, Gerdes, D. “Seasonality in the maxima of Total Particulate Matter vertical flux in an Antarctic coastal shallow environment”. (REF.: Berichte zur Polarforschung. Reports on Polar Research. Alfred-Wegener Institute 2003 Bremerhaven, Germany).
 - Paparazzo, F. E., Schloss, I. R., Solis, M., Ruiz-Pino, D., Poisson, A., Esteves, J. L.. “Oceanographic features of the Sub-Antarctic and Polar Fronts in the South-Western Atlantic Ocean during summer 2001”.
- **V National Congress of Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Buenos Aires, Argentina, 8 – 12 December, 2003.
 - Balestrini, C., Bianchi, A., Ferrario, M., **Ferreira, G.**, Piola, A., Poisson, A. and **Schloss, I. R.** “ARGAU Project: Measurements of CO₂ and the associated physical, chemical and biological parameters in the Southern Atlantic Ocean and Antarctica”.
 - Paparazzo, F. E., **Schloss, I. R.**, Solis, M., Ruiz-Pino D., Poisson A., Bianchi, A. A., Balestrini, C. F., Esteves, J. L. “Fluctuations in the concentration of nutrients at the Argentinean Continental Slope for latitudes located at the south of 42° S parallel”.
 - Bianchi, **Schloss, I. R.**, Ruiz Pino, D., Balestrini, C., Ferrario, M., Poisson, A., **Ferreira, G. A.** and Piola, A.. “CO₂ fluxes at the Argentinean Continental Slope and Weddell Sea: Influence of environmental variables”.
 - **Schloss, I. R., Ferreira, G. A.**, Ferrario, Me, Balestrini, C, Ruiz-Pino, D, Poisson, A. “The role of Biology in the fluxes of CO₂ between the sea and the atmosphere: global models and field data”.
 - Atencio, A., **Schloss, I. R., Ferreira, G. A.**, Gerdes, D. “Seasonal study of the vertical flux of particles in sediments and in the sea water column within a marine Antarctic environment of shallow waters: Caleta Potter, Isla 25 de mayo, Antarctica”.

- **Ferreyra, G. A., Schloss, I. R.,** Ruiz Pino, D. and Poisson, A. “Fluxes of CO₂ between the atmosphere and the ocean in the South Atlantic and Antarctica: the role of the biologic bomb”.
- **Ferreyra, G. A., Schloss, I. R.,** Sahade, T., Quartino, M., Momo, F. and Atencio, A. “Pelagic-benthonic coupling: Ten years synthesis at Caleta Potter (Antarctica)”.
- **2^{do}. Inter-disciplinary Forum of Sciences related with the environment and Life Quality.** Faculty of Exact Sciences, National University of Catamarca, Catamarca, Argentina. 10 and 11 December, 2003.
 - Ferrero, E., Momo, F., **Schloss, I. R.** “A mathematical model for the primary producers and their consumers in Antarctic coastal ecosystems”.
- **XXVIII SCAR and COMNAP XVI Meetings,** Congress Centre, Bremem, Germany, July, 2004: **SCAR Open Science Conference,** 25–31 July 2004, “**Antarctica and the Southern Ocean in the Global System**”, 26–28 July, 2004:
 - **Schloss, I. R., Ferreyra, G. A.,** Ferrario, M. E., Balestrini, C. F., Ruiz-Rino D., Poisson A. “CO₂ dynamics in the Southern Ocean: the role of biology”.
- **V Argentinean Symposium and 1st. Latin-American Symposium on Antarctic Investigations,** organised by the Argentinean Antarctic Institute. Buenos Aires, Argentina, 30 August - 3 September, 2004:
 - Almandoz, G., Ferrario, M., **Schloss, I. R.,** Atencio, A., Dogliotti, A., **Ferreyra, G. A.** “Marine phytoplankton in the Argentinean Sea and Antarctica: abundance, distribution and ecology”.
 - Bianchi, A., Charo, M., Bianucci, L., **Schloss, I. R., Ferreyra, G. A.** “Spatial and inter-annual variability of CO₂ fluxes in the Weddell Sea. Its relation with the environmental variables”.
 - **Ferreyra, G. A., Demers, S., Schloss, I. R., Tosonotto, G. V.,** Hernando, M., Hernandez, E., Oyarbide, F., Calviño, E., Rodriguez, S., Cantoni, L., Gonzalez, O., Ulrich, A.” Effects of ultraviolet radiation on the lower levels of the planktonic food web in Antarctica”.
 - Paparazzo F., Esteves J. L., Solis L., **Schloss, I. R.** “Evaluation of inorganic nutrients in the South Western Atlantic Ocean and Argentinean sea under the frame of ARGAU Project”.
 - Resplandy, L., **Schloss, I. R.,** Concheyro, A., Dogliotti, A., Bouloubassi, I., Mejanelle, L. “Cocolithophores distribution in the South Atlantic and the Antarctic Oceans”.
 - **Schloss, I. R.,** Ferreyra, G., Ferrario, M., Balestrini, C. F., Almandoz, G., Poisson, A. “CO₂ fluxes between the sea and the atmosphere, the Biology role”.
- **XXIX SCAR Meeting,** Category: “Antarctica and the Global Climate System (AGCS)”. Hobart, Australia. 8–20 July 2006:
 - Bertolín, L., **Schloss, I. R., Tosonotto, G. V.,** Marensi, S. “The effects of the collapse of the Larsen Ice Shelf (Antarctica) on phytoplankton growth”.
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.

- **Tossonotto, G. V.** “CTD’s measurements next to Larsen ice-barrier, Antarctica”.
- **Tossonotto, G. V.** “The effects of Larsen ice-barrier collapse (Antarctica) related to phytoplankton development”.

7.- COURSES:

- 2006: 11 – 13 September. Conference on Global Climate Change, Pre-Biennial of Art from the End of the World, co-ordinated by S. Marensi with the collaboration of H. Sala, V. Alder and **G. V. Tossonotto**. Latin-American Museum. Buenos Aires, Argentina.
- 2006: MD- thesis in Biological Sciences entitled “The effects of the Larse ice barrier collapse (Antarctica)”, by M. L. Bertilín. Director: **I. R. Schloss**, Co-Director: **G. V. Tossonotto**. University of Buenos Aires. Dissertation: 5 October 2006.

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Instituto Argentino de Oceanografía - IADO -

Argentinean Institute of Oceanography –

Mission: IADO carries out scientific research on the Argentinean Sea and its resources, contributing to develop either researchers or technicians. It also advises public and private institutions about the feasibility of scientific programmes. It has a large library with a great amount of information on the subjects it is involved. It organises seminars and courses to divulge different topics related to Oceanography and environmental protection.

Regarding its link with the IUGG (UGGI), IADO is one of the institutes that has probably the major number of IAPSO's Members in Argentina, among its researchers.

3.- NAMES: Members of CNIAPSO that work at this institution and at the National Southern University*, having a fluid interaction with researchers from IADO:

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4.- FIELD WORK:

ALIOTTA, Salvador	Marine Geology
ANDRADE, J. Santiago	Oceanography
ANGELES, Guillermo	Oceanography
BEIGT, Débora	Geomorphology. Estuaries and coasts dynamics.
BHON, Vanessa Yael	Physical Oceanography.
CALO, Jorge*	Oceanography
CAMPO de FERRERAS, Alicia*	Physical Geography
CARBONE, M. Elizabeth	Geomorphology. Estuaries and coasts dynamics.
CUADRADO, Diana	Marine Geology. Sediments transport.
DIEZ, Paula G.	Marine Geology. Coastal management. Sediments transport.
FEDERICI, Gisela	Physical Oceanography. Sediments transport.
GELÓS, Eduardo	Marine Geology.
GINSBERG, Silvia Susana	Oceanography. Marine Geology.
GÓMEZ, Eduardo A.	Oceanography. Marine Geology.
LISAZOAIN, Guillermo	Oceanography. Marine Geology.
MARASCHIN, Silvio	Oceanography. Marine Physics
MARCOS, Ángel*	Oceanography
MARCOVECCHIO, Jorge	Marine Chemistry.
MARINI, M. Fabián	Physical Oceanography.
MELO, Walter D.	Physical Oceanography. Digital Cartography.

MINKOFF, Darío R.	Physical Oceanography.
NATALI, Mariano	Physical Oceanography.
PALMA, Elbio	Physics. Marine Physics
PÉREZ, Daniel*	Marine Physics
PERILLO, Gerardo, M. E.	Physical Oceanography.
PICCOLO, María Cintia	Physical Oceanography.
PIERINI, Jorge, O.	Physical Oceanography.
SCHILLIZI, Roberto	Marine Geology.
SPAGNUOLO, Jorge	Geology.

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6.- CONGRESS:

- **CLIVAR/OOPC/IAI Workshop on the SouthAtlantic climate observing system.** Angra dos Reis Brasil, 6-8 February, 2003:
 - Matano R. P, Barnier, B., Campos, B., Coward, A., McLean, J., **Palma, E.**, Penduff, T., Schouten, M., Treguier, A. M., Wainer, I. and Webb, D. "The Mesoscale Circulation of the South Atlantic Ocean: Does it Matters to Climate?"
- **First Meeting of the Aquarius-SAC-D Science Team.** NASA-CONAE, Mar del Plata, Buenos Aires Province, 18 March, 2003
 - **Palma, E. D.**, Matano, R. P. and Piola, A. R. "A three dimensional numerical study of the Southwestern Atlantic Shelf circulation". (Awarded poster).
- **EGS-AGU-EUG Joint Assembly.** Nice, France, 6 - 11 April, 2003:
 - **Palma, E. D.**, Matano, R. P. and Piola, A. R 2A barotropic study of the Southwestern Atlantic Shelf circulation".
- **Workshop on the Dynamics of Fluid Mud Layers in Coastal Waters.** Rio de Janeiro, Brazil, May, 2003:
 - Kjerfve, B., Dias, G. T. M. Rine, J. M., Gardner, L. R. and **Perillo, G. M. E.** "Mud along the coast of Atlantic South America". (Invited Talk).
 - **Perillo, G. M. E.** "Effects of dredged Fluid Mud on the Suspended Sediment Transport in Galván Port, Argentina". (Invited Talk).
- **XXIII IUGG Assembly / IAPSO Symposium.** Sapporo, Japan, 30 June-11 July, 2003:
 - Matano R. P., **Palma, E D.** and Piola, A. R. "A numerical study of the shelf circulation in the Southwestern Atlantic".
 - Piola, A. R., **Palma, E. D.** and Matano, R. P. "Circulation in the western Argentine Basin: model and observations".

- **17th Biennial Conference of the Estuarine Research Federation Simposio SPS-20 “River-Estuary Interactions”.** Seattle, Washington, USA. September, 2003:
 - **Perillo, G. M. E., Pérez, D. E. and Piccolo, M. C.** “Internal Waves in Highly Stratified Quequén River Estuary, Argentina”.
- **IX Congresso da Associação Brasileira de Estudos Quaternarios y II Congresso do Quaternario de Países de Línguas Ibéricas.** Recife, Brazil. 12 - 19 October, 2003:
 - **Aliotta, S., Spagnuolo, J.** and Farinati, E. “Geological evidences of the transgressive-regressive Holocene process at the entrance of Bahía Blanca estuary, Argentina”.
 - Correa, I., **Aliotta, S.** and Weschenfelder. “Evidences of barrier structures in the access channel Los Patos lagoon”.
 - **Ginsberg, S. S., Aliotta, S.** and Lizasoain, G. “Model of sedimentary circulation in a system of meso-tidal interconnected channels determined with side scan sonar”.
- **V National Congress of Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Pcia. de Buenos Aires, Argentina, 8 – 12 December, 2003.
 - **Aliotta, S.,** Giagante, D., Briceño, W. and Farinati, E. “Sediment logy and taphonomy of a Holocene marine deposit at the west of Bahía Blanca, Buenos Aires Province”.
 - Amin, O., Comoglio, L., Asteasuain, R., Freije, R. H. and **Marcovecchio, J.** “Distribution of inorganic nutrients in the coastal zone nearby Ushuaia city (Tierra del Fuego) and its relation with terrestrial sources”.
 - Barriá de Cao, M. S., **Beigt, D., Piccolo, M. C.** and dos Santos, E. “Relationship between abiotic and biotic factors and the abundance and diversity of *Tintinnida (Ciliophora)* in Bahía Blanca estuary”.
 - **Beigt, D., Piccolo, M. C., Perillo, G. M. E.** and dos Santos, E. “Annual cycle of temperatures and heat flux at the soil el suelo in a tides plain of Bahía Blanca estuary”.
 - Botté, S., Chiarello, N., Asteasuain, R., Contardi, E., Freije, R. H. and **Marcovecchio, J.** “Disolved metals as recent pollution indicators Bahía Blanca estuary, Argentina”.
 - Botté, S., Delucchi, F., Asteasuain, R., Chiarello, N., Contardi, E. Freije, R. H. and **Marcovecchio, J.** “Surface sediments in the tides plains as source of metals trace for the Bahía Blanca estuary, Argentina”.
 - **Carbone, M. E. and Piccolo, M. C.** “Variation of the water level inside the estuary of Claromecó stream”.
 - Cervellini, P. M., **Beigt, D., Piccolo, M. C.** and dos Santos, E. “Zooplankton Variability and its relationship with temperature at Puerto Cuatrerros, Bahía Blanca estuary”.
 - Del Blanco, L., Botté, S., Chiarello, N., Arlenghi, J., Freije, R. H. and **Marcovecchio, J.** “Estimation of the contribution of heavy metals by Sauce Chico river and Napostá Grande stream to Bahía Blanca estuary”.
 - **De Marco, S., Botté, S. and Marcovecchio, J.** “Mercury distribution in estuarine wetlands and salt-marshes from Argentina: an overview”.

- **De Marco, S.**, Freije, R. H. and **Marcovecchio, J.** “Seasonal variation of the phytoplanktonic composition at Mar Chiquita coastal lagoon (Buenos Aires, Argentina)”.
- **Diez, P.**, **Melo, W. D.**, **Perillo, G. M. E.** and **Piccolo, M. C.** “Evaluation of the inundated areas at Samborombón bay, using Landsat TM satellite images”.
- Escapa, M., **Minkoff, D.**, **Perillo, G. M. E.** and Iribarne, O. O. “Effects of the digger crab *Chasmagnatus granulatus* on the erosion of marshes dominated by *Salicornia*”.
- **Federici, G. A.**, **Gómez, E. A.**, **Cuadrado, D. G.** and Borges M. “Influence of the *Spartina alterniflora* in the harbour sedimentation”.
- **Ginsberg, S. S.**, **Cuadrado, D. G.** and **Gómez, E. A.** “Hydro-sedimentologic study in an area for tilting of dredged material”.
- **Gómez, E. A.**, **Cuadrado, D. G.**, **Pierini, J. O.** and **Federici, G. A.** “Sedimentation at an inner harbour. Determination of processes involved and interaction with the anthropoid activity”.
- **Gómez, E. A.**, Amos, C. L. and Li, M. Z. “Predictions and measurements of sand transport”.
- Hoffmeyer, M. S., **Beigt, D.**, **Piccolo, M. C.** and dos Santos, E. “Recruiting of the copepods *Acartia tonsa* and *Eurytemora americana* in Pto Cuatrerros, Bahía Blanca estuary”.
- Hoffmeyer, M. S., Berasategui, A. A., **Piccolo, M. C.**, Fernández Severini, M. D., Menéndez, M. C. and Biancalana, F. “Morphology of *Acartia tonsa* eggs and *Eurytemora americana* (Copepoda, Calanoida)”.
- **Maraschin, S. D.**, **Minkoff, D. R.**, **Pierini, J. O.** and **Perillo, G. M. E.** “Generation of tide-channels upon the basis of topographic study – Preliminary analysis”.
- **Maraschin, S. D.**, **Pierini, J. O.**, **Minkoff, D. R.** and **Perillo, G. M. E.** “Oceanographic characteristics of the southern Channel, Bahía Blanca estuary”.
- **Minkoff, D. R.** and **Perillo, G. M. E.** and Escapa, M. C. “Evolution of tide- channels in a marsh of Bahía Blanca”.
- **Minkoff, D. R.** and **Perillo, G. M. E.** and **Pérez, D. E.** “Topographic survey system of non-accessible tide channels”.
- **Natali, M.**, **Gómez, E. A.**, **Cuadrado, D. G.** “Marine morpho-dynamics in the Trinidad island, Bahía Blanca estuary”.
- **Palma, E. D.**, Matano, R. P. and Piola A. R. “Simulation of oceanic circulation over the continental shelf of the Southern Atlantic Ocean. Part I: Barotropic Model”.
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- **Pérez, D. E.**, **Perillo, M. M.** and **Perillo, G. M. E.** “Calibration curve determination of an Acoustic Doppler Velocimeter (ADV) for the computation of the suspended sediment turbulent flux”.

- **Pierini, J. O., Perillo, G. M. E., Gómez, E. A. and Cuadrado, D. G.** “Effect of the tide plains on the la hydro-dynamics of Rosales and Belgrano harbours (Bahía Blanca)”.
- **Pierini, J. O. and Perillo, G. M. E.** “Evaluation of a circulation model in inter-tides environments”.
- **Pierini, J. O. and Perillo, G. M. E.** “Application of a numerical model to tide (inlets)”.
- **Piola, A. R., Palma, E. D. and Matano R. P.** “Variations of Río de La Plata impact over the continental shelf: wind *versus* volume”.
- **Piola, A. R., Palma, E. D. and, R. P.** “Simulation of oceanic circulation over the continental shelf of the Southern Atlantic Ocean. Part II: Comparison with observations”.
- **Popovich, C., Spetter, C., Asteasuain, R., Contardi, E., Freije, R. H. and Marcovecchio, J.** “Succession of diatoms’ annual bloom in the Bahía Blanca estuary and its relation with environmental parameters”.
- **Sitz, L., Palma, E. D. and Piola, A. R.** “Impact of the election of wind climatologies on the barotropic circulation in the continental shelf of the Southern Atlantic Ocean”.
- **American Ocean Sciences Meeting** of the AGU. Portland, Oregon, EE.UU. 26 – 30 January, 2004:
 - **Matano, R. P., Strub, P. T., James, C. and Palma, E. D.** “The Low-Frequency Variability of the South Atlantic Circulation
 - **Palma, E. D., Matano, R. P. and Piola, A. R.** “A numerical investigation of the Southwestern Atlantic Continental Shelf Circulation”.
 - **Piola, A. R., Palma, E. D. and Matano, R. P.** “The effect of the Plata outflow in el Niño years”.
- **II Meeting Bi-National of Ecology.** Mendoza. Argentina. 2004:
 - **Barría, M. S., Parodi, E., Píccolo, M. C. and Beigt, D.** “Seasonal variation of ciliates mix-trophic cilliads in Bahía Blanca estuary”.
- **X Argentinean Meeting of Sedimentology.** San Luis. Argentina. 2004:
 - **Bidart, S. M., Rodríguez, M. L. And Píccolo, M. C.** “Distribution of land particle size from the atmospheric powder in the southern coastal area of Buenos Aires Province. Influence of the meteorological conditions”.
 - **Ginsberg, S. S., Cuadrado, D. G. and Gómez, E. A.** “Relationship between the sediment dynamics and the asymmetry of tide currents”.
 - **Minkoff, D. R., Escapa, C. M., Ferramola, F. E. and Perillo, G. M. E.** “Model and study of an erosive process due to physical-biological interactions based upon automate cells”.
 - **Pérez, D. E., Minkoff, D. R. and Perillo, G. M. E.** “Relationship between the suspended sediment over a tide plain at Puerto Cuatros, Bahía Blanca”.
 - **Perillo, G. M. E., Pérez, D. E., Perillo, M. M. and Arias, G.** “Selective transport of gravels on a sand beach, Pehuén Co.

- **XXII Scientific Meeting of the Argentinean Association Geophysics and Geodesy (AAGG).** Military Geographic Institute. Buenos Aires. 2004:
 - **Campos de Ferreras, A., Piccolo, M. C., Ramos, M. B. and Campo, M. I.** “Respiratory illness related to the dominant wind at Punta Alta (Buenos Aires)”.
 - **Cuadrado, D. G., Gómez, E. and Ginsberg, S. S.** “Dynamic processes in a nearby artificial coastal structure”
- **V National Congress of Physical Geography.** Catholic University of Santa Fe. 2004:
 - **García, M. C. and Piccolo, M. C.** “Summer sea breezes at Mar del Plata and Necochea. Buenos Aires Province”.
 - **Geraldi, A. M. and Piccolo, M. C.** “Spatial variations of Malaver lagoon, Buenos Aires”.
 - **Piccolo, M. C. and Mundiñano, A.** “The synoptic situations that generate rains at Marisol, during 2002. Buenos Aires”.
- **89ª Meeting of Argentinean Physics Association.** Bahía Blanca. Argentina. 2004:
 - **Palma, E. D. and Sitz, L.** “Influence of different forcings on the dynamics of floating plumes”.
 - **Pérez, D. E., Perillo, M. M., Arias, G. and Perillo, G. M. E.** “Dynamics of gravel translation over a sandy beach, Pehuén Co”.
 - **Perillo, M. M., Pérez, D. E., Arias, G. and Perillo, G. M. E.** “Initiation of gravel movement over a sandy beach”.
- **IV International Symposium on Environmental Geochemistry in Tropical Countries.** Universidade Federal Fluminense (UFF), Buzios, Brazil. 2004:
 - **Amin, O. A., Gil, M. N., Willers, V., Botte, S. E., Del Blanco, L., Chiarello, M. N., and Marcovecchio, J.** 2004. “Heavy metal distribution trends in sediments from the Beagle Channel, Tierra del Fuego (Argentina): results of the 1993-2003 decade”.
 - **Beltramé, M. O., De Marco, S. and Marcovecchio, J.** “Nutrients and organic matter distribution in Mar Chiquita coastal lagoon tidal plains. The tide effect”.
 - **Botté, S. E., Delucchi, F., Grecco, M. L., Marcos, A., Freije, R. H., and Marcovecchio, J.** “Cadmium, lead and manganese in tidal flats sediments of the Bahía Blanca estuary, Argentina”.
 - **Del Blanco, L., Botté, S. E., Chiarello, M. N., Arlenghi, J., Freije, R. H. and Marcovecchio, J.** “Sauce Chico river and Napostá Grande stream as a potential source of heavy metals to Bahía Blanca estuary”.
 - **Delucchi, F., Tombesi, N. B., Freije, R. H. and Marcovecchio, J.** “Organotin compounds occurrence in surface sediments from Bahia Blanca estuary, Argentina”.
 - **Marcovecchio, J.** “Heavy metals distribution and accumulation trends in Bahía Blanca estuary, Argentina: a historical analysis”.
 - **Spetter, C., Asteasuain, R., Arlenghi, J., Freije, R. H., Marcovecchio, J.** “Assessment of dissolved inorganic nutrient levels in water and pore-water of Bahía Blanca estuary, Argentina”.

- **International Coastal Symposium.** Itajaí, SC, Brazil. 2004:
 - **Cuadrado, D. G., Gómez, E. A., Pierini, J. O. and Federici, G. A.** “A possible solution to Rosales Harbour excessive siltation rate (Bahía Blanca) estuary, Argentina”.
 - **Gómez, E. A., Amos, C. L., and Li, M. Z.** “Evaluation of sand transport models by in situ observations under unidirectional flow”.
 - **Gómez, E. A., Martínez, D., Borel, C. M., Guerstein, G. R. and Cusminsky, G.C.** “Negative sea-level oscillation at the Bahía Blanca estuary related to a ca. 2650 yr BP global climatic change”.
 - **Grecco, L. E., Marcos, A. O., Gómez, E. A., Botté, S. and Marcovecchio, J.** “Natural content and anthropogenic input of heavy metals in sediments from Bahía Blanca Estuary (Argentina)”.
 - **Natali, M., Gómez, E. Angeles, G. R., and Cuadrado, D. G.** “Submarine shore-connected sand bank monitored by means of satellite images in the external zone of Bahía Blanca Estuary, Argentina”.
- **Science, Technology and Society. Module: Human Health. Workshop: Effects of contaminants on the environment and the human health.** Ministry of Education, Science and Technology of the Nation - Argentinean Association for the Progress of the Science (AAPC)- Ministry of Science and Technology (Brazil) – Sociedade Brasileira para o Progresso da Ciência (SBPC). Buenos Aires (Argentina). 2004:
 - **Botté, S. E., Asteasuain, R. and Marcovecchio, J.** “Total mercury levels in tidal flats and salt marshes from an estuarine environment, in Argentina”.
 - **De Marco, S., Botté, S. E., Marcovecchio, J.** “Mercury bioaccumulation and biomagnification processes within coastal marine trophic webs. Several study cases in Argentina”.
 - **Marcovecchio, J., De Marco, S., and Botté, S. E.** “An assessment of mercury exposure of the human population from Argentina. A quantitative approach”.
- **IV Meeting of Regional Palaeontology.** Punta Alta. Buenos Aires Province. 2005:
 - **Farinati, E., Spagnuolo, J. O. and Aliotta, S.** “Effects bio-erosive on valves and boulders at the coast of Punta Alta”.
- **IX Argentinean Congress of Meteorology. (CONGREMET IX).** Buenos Aires. 2005:
 - **Marino, B. M., Piccolo, M. C. and Thomas, L. P.** “Detection of marine breeze fronts in the coast of Buenos Aires Province”.
- **VII National Congress and I International Symposium of Research-Tourist action.** 2005:
 - **Geraldi, A. M., Piccolo, M. C. and Perillo, G. M. E.** “Lago Epecuén: A lake with tourist features and stories”
 - **Melo, W. D., Piccolo, M. C. and Perillo, G. M. E.** “Proposal of tourist development in the beaches of Bahía Blanca estuary: Beautiful Mont Buoy and Green Island”.

- **XI Latin-American Congress of Marine Sciences - COLACMAR XI - and XXV Congress of Marine Sciences of Chile.** Viña del Mar. Chile. 2005:
 - Fernández, M. D., Hoffmeyer, M. S., **Marcovecchio, J.** and Menéndez, M. C. “First evaluation of heavy metals concentration in the meso-zooplankton in the inner zone of Bahía Blanca estuary”.
- **Gómez, E. A.,** Martínez, D. E., Borel, G. C., Cusminsky, G. C and Guerstein, G. R. “Sea level oscillations related with sun activity changes during Holocene”.
- **VI National Congress of Physical Geography.** 2006:
 - **Cuadrado, D. G., Ginsberg, S. S. and Gómez, E. A.** “Submarine Geomorphology of the Principal Channel of Bahia Blanca estuary”.
 - **Ginsberg, S. S. and Cuadrado, D. G.** “Evaluation of materials of coastal erosion of the destiny (Bahía Blanca estuary, Argentina)”.
 - Pizani N., **Cuadrado, D. G.** and Parodi, E. “Preliminary study of tides plains”.
- **II International Meeting TAPHOS'05 and IV Meeting of Taxonomy and Fossilisation.** Barcelona, Spain. 2005:
 - Farinati E., **Spagnuolo, J.** and **Aliotta, S.** “Comparative taxonomy of in the coast of Bahía Blanca estuary, Argentina”.
- **First International Congress on Ichnology.** Trelew, Chubut, Argentina. 2005:
 - Farinati, E., **Aliotta, S.** and **Spagnuolo, J.** “Borings y etchings of Holocene micro-molluscs in the Bahía Blanca Estuary, Argentina”.
- **Holocene environmental catastrophes in South America.** IGCP 490 III Joint Meeting. Córdoba. Argentina. 2005:
 - **Gómez, E. A.,** Martínez, D. E. and Cusminsky, G. C. “A cycle in solar irradiance as trigger of abrupt Holocene global climatic changes y negative sea level oscillations: From the lowlys to the Yes, ICSU dark Nature
- **Symposium on Geo-Science Education and Outreach in the Americas .** AGU-NABS-SEG-SPD/AAS Joint Assembly: Opportunities for North-South Collaboration. New Orleans.USA. 2005:
 - **Perillo, G. M. E. and Piccolo, M. C.** “Why there is no oceanography teaching in Argentina? A possible N-S collaboration”.
- **LOICZ II Inaugural Open Science Meeting.** Egmond aan Zee. Netherlands. 2005:
 - **Perillo, G. M. E., Bohn, V. Y.,** Geraldí, A. and **Piccolo, M. C.** “Shallow Ponds as Sediment and Nutrients retainers, Buenos Aires province, Argentina”.
- **VIII International Conference on gas in marine sediments.** Vigo. Spain. 2005:
 - Weschenfelder, J., Corrêa, I., Ayup-zouain, R., **Aliotta, S.,** Pereira, C. and De Vasconcellos, V. “Gas accumulations revealed by high-resolution seismics in the Patos Lagoon, southern Brazil”.
- **IX Iberian-American Congress on Environmental Physics and Chemistry.** Cáceres. Spain. 2006:

- Borrelli, N., Oyarbide, F., Osterrieth, M. and **Marcovecchio, J. O.** "Effects of the vegetal cover and the calcium bio-minerals production on the bio-chemical cycle of calcium".
- **VI International Meeting on Phytolith Research.** Barcelona. Spain. 2006:
 - Borrelli, N., Osterrieth, M. and **Marcovecchio, J. E.** "Calcium oxalate crystal content in native and exotic vegetal species of the Southeast of the Buenos Aires Province, Argentina".
- **International Congress of Science and Food Technology.** Córdoba. Agencia Córdoba Ciencia S.E. 2006:
 - Caldironi, H., Borges, M. E., **Piccolo, M. C.** and Barrantes, F. "Determination of amnesiac toxin of the molluscs in Argentina".
- **IX Argentinean Congress on Palaeontology and Bio-Stratigraphy.** Córdoba. Argentina. 2006:
 - **Aliotta, S., Spagnuolo, J. O.** and Farinati, E. (2006): "Evaluation of taxonomic and sedimentologic parameters associated to the transgressive-regressive marine Holocene process, Bahía Blanca estuary".
- **International Conference on the Humboldt Current System.** Lima. Peru. 2006:
 - **Matano, R. P.** and **Palma, E. D.** "A numerical study of the ocean circulation in the South-eastern Pacific".
- **IX Argentinean Congress on Palaeontology.** Córdoba. Argentina. 2006:
 - Farinati, E., **Spagnuolo, J. O.** and **Aliotta, S.** "Dissolution, an important taxonomic attribute in the Holocene deposits of Bahía Blanca estuary".
 - Farinati, E., **Spagnuolo, J. O.** and **Aliotta, S.** "Bio-erosive traces on a hard substrate in a coastal environment".
- **IV Latin-American Congress on Sedimentology and XI Argentinean Meeting of Sedimentology.** 2006:
 - **Cuadrado, D. G.,** Pizani, N. V. and Parodi, E. R. "Loss of cohesiveness in sediments as a consequence of dredging".
 - **Cuadrado, D. G.,** and **Gómez, E. A.** "Accumulation in tides plains caused by vegetation".
 - Da Rodda, M.C., and **Parodi, E. R.** "Understanding the interactions between salt marsh sediments and microphybenthos successions as support for substrate structure".
 - **Ginsberg, S. S., Cuadrado, D. G.,** and **Gómez, E. A.** "Geomorphologic control about formation of underwater dunes".
 - **Gómez, E. A.,** Grecco, L. E., Botté, S., Marcos, A. O., **Marcovecchio, J. E.** and **Cuadrado, D. G.** "Cohesive sediments as natural source of heavy bio-available metals".
 - **Gómez, E. A.** and Amos, C. L. "Erosion of Cohesive Sediments: A conceptual error in its formulation".

- **Gómez, E. A. and Maraschin, S. D.** “bathymetric Sonar by Phase Measurement: new tool to study morphology and underwater sedimentology”.
- **Gómez, E. A., Aguirre, M. L. and Borel, C. M.** “Uncertainties in radio-carbon dating of transition and continental shelf environments”.
- **Sassi, M. G., Maraschin, S. D., Cuadrado, D. G. and Perillo, G. M. E.** “Effects of a threshold on the dynamics of tide channels”.
- **International Conference on the Humboldt Current System.** Lima, Peru. 2006:
 - Strub, T., Matano, R. P. and **Palma, E. D.** “A satellite study of the surface circulation in the South-eastern Pacific”.
- **IV Congress on Ecology and Management of “Pampeanos” Ecosystems.** IIB-INTECH. Chascomús. Buenos Aires. Argentina.
 - **Bohn, V. Y., Piccolo, M. C. and Perillo, G. M. E.** “Evaluation of Unamuno lagoon quality. Consequences on edafic proprieties”.
- **IV Interdisciplinary Congress from the South-west of Buenos Aires Province** Southern National University. Buenos Aires. Argentina. 2006:
 - **Bértola, G. R., Piccolo, M. C. and Merlotto, A.** “Effect of the storm occurred on 25 June 2006 on Wind Bay beach”. Argentina.
- **XXVI Argentinean Congress of Chemistry.** San Luis. Argentina. 2006:
 - Arias, A., Tombesi, N., Freije, R. H. and **Marcovecchio, J. E.** “Presence of aromatic poli-cycle hydrocarbons (PAHs) in surface sediments of Bahía Blanca estuary”.
- **23rd Scientific Meeting of the Argentinean Association of Geophysics and Geodesy (AAGG).** Bahía Blanca, Buenos Aires, Argentina. 14 – 18 August, 2006.
 - **Aliotta, S. and Zibecchi, R. O.** “Geophysical control of the subfluvial gas pipeline of Río de la Plata, Argentina-Uruguay”. ISBN 987-22912-0-9.
 - **Aliotta, S., Ginsberg, S. S., Briceño, W., Vecchi, L.G. and Giagante, D. A.** “Shallow gas deposit in the marine sub-bottom in Bahía Blanca region”. ISBN 987-22912-0-9.
 - **Bohn, V. Y., Piccolo, M. C. and Perillo, G. M. E.** “Application of the precipitation standard index in the south-west of Buenos Aires Province. Relationship with the hydro-situation of Unamuno lagoon”. ISBN 987-22912-0-9.
 - **Carbone, M. E., Perillo, G. M. E. and Piccolo, M. C.** “Morphologic dynamics of coastal environments of San Antonio bay, Río Negro Province”. ISBN 987-22912-0-9.
 - **Cervellini, P. M., Piccolo, M. C. and Perillo, G. M. E.** “Annual variation of crawfish and shrimp’s fishing at Bahía Blanca estuary”. ISBN 987-22912-0-9.
 - **García, M.C. and Piccolo, M. C.** “Maxima precipitation in the south-east of Buenos Aires Province” ISBN 987-22912-0-9.
 - **Geraldi, A. M., Piccolo, M. C. and Perillo, G. M. E.** “Multi-temporal analysis of the soil uses through the tele-detection application”.
 - **Jordán, M. A., Murray, F. and Piccolo, M. C.** “Re-production of Lorenz modified equation in a convection cycle: analysis of stationary orbits and equilibrium points”.

- **Melo, W. D. and Piccolo, M. C.** “Cartography Bahía Blanca estuary”.
- Menéndez, M. C., Vitale, A. J., **Piccolo, M. C.** and Hoffmeyer, M. S. “Hydrography of the water column in relation with the tides cycle in the inner zone of Bahía Blanca estuary”.
- Perillo, M. M. and **Perillo, G. M. E.** “Waves and currents analysis of a marsh in Bahía Blanca estuary”.
- **Perillo, G. M. E.** 2006. “Tides trenches: The circulatory system of the coastal marshes”.
- **Piccolo, M. C.**, Pizarro, N., Conde, A., Baldini, M., Cubito, M. and Chiarello, M. N. “Analysis of Maldonado bathing resort for its recreative use”.
- **Pierini, J. O.** and **Perillo, G. M. E.** “Analysis of temporal series upon the basis of fractal theory”.
- Pizani, N. V., **Cuadrado, D. G.** and Parodi, E. R. “Preliminary study of dredging effects on the bio-sedimentologic aspects of tide plains”.
- **Schillizzi, R. A., Spagnuolo, J. O., and Gelós, E. M.** “Evolutive processes in the northern Patagonia steeps. Argentina”.
- **Spagnuolo, J. O.**, Farinati, E. A. and **Aliotta, S.** “Marine deposits in the northern coast of Bahía Blanca estuary”.
- Torrero, M., **Piccolo, M. C.** and **Campo de Ferreras, A.** “Day-degrees of refrigeration and heating in the micro-centre of Bahía Blanca”
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006:
 - Arias, A., Tombesi, N., Freije, H. R. and **Marcovecchio, J. E.** “Presence, origin and distribution of aromatic poli-cycle hydrocarbons (PAHs) in surface sediments of Bahía Blanca estuary”.
 - Beltrame, M. O., De Marco, S. and **Marcovecchio, J. E.** “Salinity effect on the lethal toxicity of cadmic and zinc in the crab: *Chasmagnathus granulatus*. Presence of these heavy metals in the coastal lagoon of Mar Chiquita”.
 - Botté, S. E., Asteasuain, R. O., Chiarello, M. N., Arlenghi, J. H., Freije, R. H. and **Marcovecchio, J. O.** “Bio-availability of essential elements from marshes vegetation in the Bahía Blanca estuary”.
 - Botté, S. E., Asteasuain, R. O., Chiarello, M. N., Arlenghi, J. H., Freije, R. H. and **Marcovecchio, J. O.** “Importance of marine plants as accumulators of heavy metals in the marshes of an estuary in Buenos Aires Province”.
 - **Carbone, M. E.**, del Río, J. L., **Perillo, G. M. E.** and Martínez Arca, J. “Preliminary evolutionary scheme of coastal lagoons at the northern coast of San Matías gulf”.
 - **Cuadrado, D. G., Gómez, E. A.**, Pizani N. V. and Parodi, E. R. “Bio-stabilisation of sediments in tide plains”.

- **Cuadrado, D. G., Ginsberg, S. S. and Gómez, E. A.** “Formation of large slant dunes in the Bahía Blanca estuary”.
- Del Blanco, L., Asteasuain, R., Arlenghi, J., Avena, M. and **Marcovecchio, J. E.** “Nutrients distribution in interstitial water in tide plains of Bahía Blanca estuary”.
- Delucchi, F., Tombesi, N., Narvarte, M., Nogueira, L., Arias, K., Freije, H. R. Fernández Severini, M. D., **Marcovecchio, J. E.**, Hoffmeyer, M. S. “Heavy metals in the zooplankton of Bahía Blanca estuary (Argentina)”.
- Dos Santos, E. P., **Piccolo, M. C.** and Parodi, E. R. “Biomass developing of fouling organisms related to environmental parameters”.
- **Gómez, E. A. and Cuadrado, D. G.** “New tool to “see” the sea bottom: the bathymetric sonar operating by phase measurement ”.
- González Trilla, G., **Marcovecchio, J. E.**, Kandus, P., Vicari, R. and De Marco S. 2006. “Allometric relationship between biomass and *Spartina densiflora* tillers’ length in Mar Chiquita, Buenos Aires”.
- Hempel, M., Botté, S. E., Chiarello, M. N. and **Marcovecchio, J. E.** “Content of heavy metals in *Spartina alterniflora* and sediments at Villa del Mar, Bahía Blanca estuary, Argentina”.
- Martínez, A., Belloni, N., Asteasuain, R., **Marcovecchio, J.** and Freije, H. R. “Aporte fluvial de nutrientes al estuario de Bahía Blanca”.
- Menéndez, M. C., Hoffmeyer, M. S., **Piccolo, M. C.**, Biancalana, F. “Middle-zooplankton vertical distribution in relation with a tide cycle in the inner zone of Bahía Blanca estuary”.
- Molina, L. M., Pérez, D. E., Hoffmeyer, M. S. and **Perillo, G. M. E.** “Re-suspension of copepods’ eggs and sediments in a tide plain, Bahía Blanca estuary”.
- Negrin, V. L., Botté, S. E., Spetter, C. V., Villalobos, A. de, Asteasuain, R. O., **Perillo, G. M. E.** and **Marcovecchio, J. E.** “Preliminary study of nutrients and organic material dynamics in the Bahía Blanca estuary marshes”.
- **Palma, E. D.** “Numerical modelling of slight dense plumes”.
- **Pérez, D. E.**, Lagunas, M., Hernández, K., **Perillo, G. M. E.**, **Piccolo, M. C.**, **Marcovecchio, J. E.**, Goncalves, R., Farias, M. E., Villafañe, V., Helbling, E. W. “Stratification of the estuary of Chubut river during a complete tide cycle”.
- **Pierini, J. O.** and **Perillo, G. M. E.** “Estimation of the fractal dimension over the Atlantic coast”.
- **Pierini, J. O.** and **Perillo, G. M. E.** “Temporal series analysis upon the basis of fractal theory”.
- Piola A. R., Martínez Avellaneda, N., Romero, S. I., Guerrero, R. A. and **Palma, E. D.** “Malvinas current intrusions in the northern Patagonia continental shelf”.
- Pizani, N. V., **Cuadrado, D. G.**, Spetter, C., Parodi, E. R., Arlenghi, J., Asteasuain, R. and **Marcovecchio, J.** “Effects of dredging in a channel of Bahía Blanca estuary”.

- Pons, J. and **Gómez, E. A.** “Signal Digital Processing Techniques applied to sonar equipment”.
- Tonini, M. H., **Palma, E. D.** and Rivas, A. R. “Circulation and Dynamics of Patagonia Gulfs: 3D Barotropic Model”.

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Instituto Nacional de Investigaciones Pesqueras (INIDEP)

– *National Institute of Fisheries Research* –

Mission: It is in charge of formulating, executing and controlling the research projects on fisheries' prospecting, evaluation and developing of acuiculture technologies, fishing arts, technological processes and fishery economy, according to the guides and priorities set by the corresponding authorities.

3.- NAMES: Members of CNIAPSO that work at this institution:

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Adrián Madirolas (MD in Engineering)

adrian@inidep.edu.ar

4.- FIELD WORK:

GUERRERO, Raúl

Physical Oceanography

MADIROLAS, Adrián

Underwater Acoustics

5.- PUBLICATIONS:

Articles in International and National Journals.

- Alvarez Colombo, G., **Madirolas, A.** and Mianzan, H. (2003): "Acoustic characterisation of gelatinous plankton: Four study cases from the Argentinean continental shelf". *ICES Journal of Mar. Sci.*, 60, 650-657.
- Macchi, G. J., Pájaro, M. and **Madirolas, A.** (2005): "Can a change in the spawning pattern of Argentine hake (*Merluccius hubbsi*) affect its recruitment?". *Fish. Bull.* 103, 445-452.
- Martos P., Hansen, J. E., Negri, R. M. and **Madirolas, A.** (2005): "Oceanographic factors related to the relative abundance of little anchovy over the shelf of Buenos Aires Province (34°S - 41°S) during spring-time". INIDEP, *Journal of Fishing Research and Development*, N° 17 (In press).

- Cabreira, A. G., **Madirolas, A.**, Alvarez Colombo, G., Acha, E. M., and Mianzan, H. W. (2006). “Acoustic study of the Río de la Plata estuarine front”. *ICES Journal of Marine Science*, 63, 1718 -1725.
- Baigun C., Oldani, N., **Madirolas, A.** and Alvarez Colombo, G. (2007): “Assessment of fish yield in Patagonia lakes (Argentina): Revisiting empirical model application and development”. *Transactions of American Fisheries Society*. (In press).

Technical Reports.

- Hernández D. and **Madirolas, A.** 2003. “Geo-statistical analysis applied to acoustical estimation of little anchovy’s abundance (*Engraulis anchoita*)”. INIDEP Tech. Rep. N° 69, 12 pp.
- **Madirolas, A.** and J. Hansen. 2003. “Acoustic target intensity of little anchovy (*Engraulis anchoita*): Preliminary results of *in-situ* measurements”. INIDEP, Tech. Rep. N° 70, 9 pp.
- Perrotta, R. G., Viñas, M. D., **Madirolas, A.**, Reta, R., Akselman, R., Castro Machado, F., Garciarena, A. D., Macchi, G., Moriondo Danovaro, P., Llanos, V. and Arteaga, J. R. 2005. “The horse mackerel (*Scomber japonicus*) and the environmental conditions in ‘The Rincón’ area (39° 40’ S and 41° 30’ S) at the Argentinean Sea”. INIDEP, Tech. Rep. N° 54.
- Casarsa L. and **Madirolas, A.** 2005. “Observations of merluce behaviour (*merluccius hubbsi*) during haulage fishing”. INIDEP series “Technical Reports”, N° 66 (In press).
- Alvarez Colombo, G., **Madirolas, A.**, Hernandez, D., Castro Machado, F. and Macchi, G. 2006. “Monitoring of the reproductive of the common merluce, *Merluccius hubbsi*, in Hidden Island region: A comparative analysis between acoustic and side scan evaluations”. INIDEP, Tech. Rep., AUG/2006.
- Cabreira, A., **Madirolas, A.**, Perrota, R. and Garciarena, A. D. 2006. “Acoustical distribution and evaluation of horse mackerel (*Scomber japonicus*). Results of the research cruise conducted on December 2005”. (pp. 6).
- Álvarez Colombo, G., **Madirolas, A.**, Hernández, D., Castro Machado, F. and Macchi, G. 2006. “Monitoring of the reproductive stock of the common merluce, *Merluccius hubbsi*, in the northern area of Patagonia: A comparative analysis between the acoustic evaluation and the scanned area evaluation”. (pp. 20).
- **Madirolas, A.**, Alvarez Colombo, G., Vértelo, M., Castro Machado, F. and Cabreira, A. 2006. “Assembly and at-sea tests of a towing system for SIMRAD ES38-12 acoustic transducer”. (pp. 10).
- **Madirolas, A.**, Alvarez Colombo, G., and Cabreira, A. 2006. “Acoustic prospection under Uruguay river (INIDEP-CARU, February 2003)”. (pp. 15).
- **Madirolas, A.**, Trípode, M., Alvarez Colombo, G. and Cabreira, A. 2006. “Topographic scanning of the entrance to Mar del Plata harbour”. (pp.7).
- **Madirolas, A.** 2006. “Topographic scanning of the seabed in the fishing banks of scallop: Southern management unit” (pp.12).

6.- CONGRESS:

- **ICES-Working Group on Fisheries Acoustics Science and Technology**, Bergen, Norway. 18 – 21 June 2003:
 - **Madirolas, A.** “The role of commercial fleets in providing key data for the planning of scientific surveys: The hoki fisheries in Argentina”.
- **V National Congress on Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Pcia. de Buenos Aires, Argentina, 8 – 12 December, 2003:
 - **Madirolas, A.** “Recent advances in fisheries acoustics”.
- **FEMME 2005**. Dublin, Ireland. 26 – 29 April 2005:
 - **Madirolas, A.**, Isla, F., Tripode, M., Alvarez Colombo, G. and Cabreira, G. “First results from the multibeam surveys carried out over the Argentinean continental shelf”.
- **VI National Congress on Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006:
 - **Madirolas, A.** “‘Seeing’ under the sea-surface with multibeam echosounder technology”. Invited Talk.
 - Pons, C. F., Christiansen, E. and Madirolas, A. **Madirolas, A.** “Anatomic and histological study of the gaseous bladder of the common merluce (*Merluccius hubbsi*): Possible implications in the ‘nictemeral’ migrations”.
 - **Madirolas, A.**, Pons, C. F., Alvarez Colombo, G., Venere, M., Damato, J., del Fresno, M., Capiel C. and Alvarez, H. “Detailed morphometry and 3D models development of the of fishes gaseous bladder: Application of computed tomography techniques on several species from the Argentinean Sea”.
 - Alvarez Colombo, G. L., Derisio, C., Betti, P., Castro Machado, F., Machinandiarena, L., **Madirolas, A.**, Acha, E. M. and Mianzan, H. W.. “Hydroacoustic study of the daily vertical migration of the common merluce’s larvae in the northern Patagonia area”.
 - Alvarez Colombo, G. L., Madirolas, A. **Madirolas, A.**, Hernandez, D., Castro Machado, F. and Macchi, G. “Monitoring of the reproductive stock of the common merluce, *Merluccius hubbsi*, in the northern area of Patagonia: A comparative analysis between the acoustic evaluation and the scanned area evaluation”.
 - Alvarez Colombo, G. L., **Madirolas, A.** and Tripode, M. “Zooplanktonic aggregations in the slope-front: simultaneous scanning of the submarine topography and the plankton using different acoustic technologies”.
 - Gagliardini, D., Williams, G., Karszenbaum, H., Grings, F. and **Madirolas, A.** “Seabed irregularities detected LANDSAT-TM and ERS-SAR images in the external and adjacent zones of San Matías Gulf”.
 - **Madirolas, A.**, Lasta, M., Trípodé, M., Alvarez Colombo, G., Iantanos, N. and Isla, F. “Morphological characteristics of submarine canyons at the northern Patagonia”.

9.- ADDRESS:

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ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Servicio Naval de Investigación y Desarrollo (SENID)

– *Naval Service of Research and Development* –

Underwater Sound Division

Acoustic Systems Division

Mission: SENID's general objective is to conduct Research and Development Projects related to maritime interests.

Its two main areas of research are: Radio Propagation and Underwater Sound Propagation. It is precisely through the latter area that SENID is mainly related to the International Association for the Physical Sciences of the Oceans –IAPSO–.

Sound Propagation in a variable medium like the ocean, as well as its interaction with the boundaries (sea-surface and seabed) and the biologic organisms, suspended particles, bubbles, submarine vehicles, etc. that are present in its volume, is a relevant area of research in Oceanography. Therefore, it turns out to be within the scope of Physical Oceanography.

3.- NAMES: Members of CNIAPSO that work at this institution:

Michèle BAQUÉS	(MD in Oceanography)	mbaques@yahoo.com
Silvia BLANC	(MD in Physics)	silblanc@yahoo.com
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Daniel César VARA	(MD in Physics)	cdvara@fibertel.com.ar

4.- FIELD WORK:

BAQUÉS, Michèle	Acoustical Oceanography
BLANC, Silvia	Acoustical Oceanography. Volume Scattering. Bottom acoustics interaction.
MILOU, M. I. E. de	Underwater Sound. Acoustic propagation.
PIZZONI, Juan Carlos	Acoustic Signals Processing

SALVADORES, S. R. Acoustic propagation modelling. Numerical simulation.

VARA, Daniel César Remote Sensors – SAR- (Currently, retired)

5.- PUBLICATIONS:

Articles in International and National Journals.

- **Baqués, M. and Blanc, S.** (2004): "Oceanographic and acoustic measurements in Drake Passage". *GAYANA, International Journal of Biodiversity, Oceanology and Conservation*, Vol. 68, N° 2, I, 22-29.
- **Blanc, S., Mosto, P., Milou, M. I. E. de, and Benítez, C. E.** (2004): "An alternative proposal: acoustic techniques to asses detection and monitoring of toxic algal blooms." *GAYANA, International Journal of Biodiversity, Oceanology and Conservation*, Vol. 68, N° 2, I, 54-60.
- **Milou, M. I. E. de, Salvadores, S. R. and Blanc, S.** (2004): "Using updated parabolic equation codes to examine acoustic transmission losses measurements over the Argentinean continental slope". *GAYANA, International Journal of Biodiversity, Oceanology and Conservation*, Vol. 68, N° 2, II, 385-389.
- **Salvadores, S. R. and Milou, M. I. E. de.** (2004): "Multimodal analysis of the acoustic field at the Río de la Plata estuary". *Journal of Coastal Research*, Vol. 20, No. 3, pp. 655-661.

Other published articles.

- **Blanc, S. and Milou, M. I. E. de.** "Estimating biomass of biological indicators of marine pollution with ultrasound". *Journal of the Argentinean Naval League*, N° 581, 13-18, NOV/2003.
- **Blanc, S.** "National Committee for the International Association of Physical Sciences of the Oceans". *Journal of the Argentinean Naval League*, N° 589, 26-28, JUL/2005.

Technical Reports.

- **Baqués, M.** 2003. "About Scientific Observations in the Drake Passage and the Antarctic Peninsula on board the Icebreaker Lawrence M. Gould, December 2001". Tech. Rep. AS 1/03, SENID.
- **Salvadores, S. R. and Milou, M. I. E. de.** 2003. "Acoustic field computation in range independent oceanic environments using the Gaussian Beam Method through the BELLHOP program implementation". Tech. Rep. AS 2/03. SENID.
- **Blanc, S., Baqués, M. and Milou, M. I. E. de.** 2004. "Variability of the Acoustic Response by planktonic organisms at 150 kHz along the Drake Passage". Tech. Rep. AS 1/04, SENID.
- **Milou, M. I. E. de and Salvadores, S. R.** 2005. "Acoustic modelling in waters off the Southwest Atlantic Shelf-", included in the NICOP Project of the ONRGlobal: "*Synoptic characterisation of the Southwest Atlantic Shelf*", Tech. Rep. AS 1/05. SENID.

- **Pizzoni, J. C.** and Marrero, H. R. 2005. “Selective DEMON with capture in low frequencies between 800 and 1600 Hz”. Tech. Note 01/05. SENID.
- **Salvadores, S. R.** and **Milou, M. I. E. de.** 2005. “Acoustic field computation in range dependent oceanic environments using the Gaussian Beam Method through the GAUSSRD program implementation”. Tech. Rep. AS 2/05. SENID.
- **Baqués, M.** 2006. “Oceanographic cruise on board the R/V L. M. Gould (USA) held between the 1st January and 9th February 2006. -ACTIVITY REPORT-. Produced by the scientific observer on board”. Tech. Rep. AS 1/06, SENID.

6.- CONGRESS:

- **V Argentinean Symposium and 1st. Latin-American Symposium on Antarctic Investigations**, organised by the Argentinean Antarctic Institute. Buenos Aires, Argentina, 30 August - 3 September, 2004:
 - **Baqués, M., Blanc, S. and M. I. E. de Milou.** “Exploring Sound Backscattering with an Acoustic Doppler Current Meter: PART I. Oceanographic and Acoustic Measurements in Drake Passage.”
 - **Blanc, S., Milou, M. I. E. de and Baqués, M.** “Exploring Sound Backscattering with an Acoustic Doppler Current Meter. PART II: Acoustic Response of Plankton at 150 kHz across the Drake Passage”.
- **PORSEC2004** (Pan Ocean Remote SEnsing Conference), Univ. de Concepción, Chile, 2004:
 - **Baqués, M., and Blanc, S.** “Oceanographic and acoustic measurements in Drake Passage”.
 - **Blanc, S., Mosto, P., Milou, M. I. E. de and Benítez, C. E.** “An alternative proposal: acoustic techniques to asses detection and monitoring of toxic algal blooms”.
 - **Milou, M. I. E. de, Salvadores, S. R. and Blanc, S.** “Using updated parabolic equations codes to examine acoustic transmission losses measurements over the Argentinean continental slope”.
- **IAG/IAPSO/IABO Joint Assembly “Dynamic Planet 2005: Monitoring and Understanding a Dynamic Planet with Geodetic and Oceanographic Tools”**, Cairns, Australia, 2005:
 - **Blanc, S., Baqués, M. and Milou, M. I. E. de.** “An acoustical insight into Drake Passage oceanography”.
- **IV Inter-American Naval Conference Specialised on Science and Technology**, Lima, Peru. 2006.
 - **Blanc, S., Baqués, M. and Milou, M. I. E. de.** “Acoustic description of oceanography across Drake Passage”.
- **VI National Congress on Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.

- **Blanc, S., Baqués, M. and Milou, M. I. E. de.** “Acoustic alternative methodology to estimate Numerical Abundance of zooplankton across the Drake Passage”. ”.
- **Salvadores, S. R. and Milou, M. I. E. de.** “A description of the acoustic field in the Drake Passage”.

7.- COURSES:

- 2003: September. Course attended by **M. Baqués**: “Underwater Acoustics”, by Prof. W. Kuperman and Dr. P. Roux with the Marine Physical Laboratory, Scripps Institute of Oceanography, University of California, San Diego. University of Concepción, Chile.
- 2003: October 8. Seminar on: “Optimum acoustic frequency of propagation at the marine front of the Río de la Plata estuary”, by **S. Salvadores**. Smith Lab. Woods Hole Oceanographic Institution (WHOI), MA, USA.
- 2003: October 14. Seminar on: “Activities performed at WHOI. State-of-art”, by **S. Salvadores**. Woods Hole Oceanographic Institution (WHOI), MA, USA.
- 2003: October 16. Seminar on: “Topics of underwater acoustic modelling and factors affecting the value of the optimum frequency of propagation under positive sound velocity gradient conditions and strong changes in sea water salinity”, by **S. Salvadores**. Ocean Acoustics Dept., Massachusetts Institute of Technology (MIT), MA, USA.
- 2004: June 2-3. “Conference on Updated topics on Underwater Sound”, by **M. Milou, S. Salvadores and S. Blanc**. Antisubmarine Warfare Commission. Bahía Blanca, Pcia. de Buenos Aires. Argentina.
- 2006: February. Talk on “Activities at the Underwater Sound Division of the Naval Service of Research & Development ” by **M. Milou** at the Applied Research Laboratory (APL), University of Washington, Seattle, WA, USA.
- 2006: February. Talk on “Some current investigations on acoustic volume scattering at the Underwater Sound Division of the Naval Service of Research & Development” by **S. Blanc** at the Applied Research Laboratory (APL), University of Washington, Seattle, WA, USA.
- 2006: February. Talk on “Activities at the Underwater Sound Division of the Naval Service of Research & Development” by **M. Milou** at the Naval Research Laboratory (NRL), Washington DC, USA.
- 2006: February. Talk on “Remarks on updated acoustic databases” by **S. Blanc** at the Naval Research Laboratory (NRL), Washington DC, USA.
- 2006: April 19-20. “Activities of the Underwater Sound Division of SENID (*Service Naval of Research & Development*)” by **M. Milou**. Workshop on Tactic Oceanography. Mar del Plata, Buenos Aires. Argentina.
- 2006: April 19-20. “Acoustic Propagation Modelling. Updated applications”, by **S. Salvadores**. Workshop on Tactic Oceanography. Mar del Plata, Buenos Aires. Argentina.
- 2006: April 19-20. “Systems of Acoustic Information. Recent advances”, by **S. Blanc**. Workshop on Tactic Oceanography. Mar del Plata, Buenos Aires. Argentina.

9.- ADDRESS:

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10.- WEB PAGE: www./ara.mil.ar/serv_servnaval.asp#02

ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Servicio de Hidrografía Naval - SHN -

– Hydrographic Naval Service –

Department of Oceanography

Mission: The mission of the Oceanography Department is to carry out and encourage studies, explorations, works and investigations about physical oceanography, marine geology, geophysics and chemistry and any other ocean science related to maritime activities that contribute to the economical and scientific development of the country, functioning as a research centre of ocean sciences.

3.- NAMES: Members of CNIAPSO that work at this institution:

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Andrés Lusquiños	(MD in Oceanography)	<i>(Retired)</i>
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Ariel Troisi	(MD in Oceanography)	atroisi@hhidro.gov.ar
Roberto Violante	(PhD in Geology)	violante@hidor.gov.ar

4.- FIELD WORK:

BALESTRINI, Carlos	Physical Oceanography.
BIANCHI, Alejandro A.	Physical Oceanography.
CAVALLOTTO, José Luis	Coastal and Marine Geology.
CHARO, Marcela	Regional oceanography and western boundary currents. Processing of ocean colour images (SEAWIFS) and hydrographic data (CTD, XBT) design; Data Bases updating.
DE ABELLEYRA, Juan	Physical Oceanography. Continental shelf.
DRAGANI, Walter C.	Physical Oceanography.
FIORE, Mónica	Tides.
JANIOT, Lucio J.	Marine Chemistry and Marine Pollution
LUSQUINOS, Andrés	Physical Oceanography (<i>Currently, retired</i>)
MAZIO, Carlos	Tide-Driven Currents. Waves. Hydrodynamic Models
PARKER, Gerardo	Marine Geology (<i>Dead</i>)
PATTERLINI, Marcelo	Marine Geophysics
PIOLA, Alberto R.	Physical Oceanography
REYNOSO PERALTA, Walter L.	Marine Geophysics and Geology, Geomorphology, Seafloor Characterisation and Ocean Bathymetry.
ROMERO, Silvia Inés	Ocean Colour - River Plumes - Oceanic Fronts - Biophysical Interactions
TROISI, Ariel	Physical Oceanography
VIOLANTE, Roberto	Marine Geology

5.- PUBLICATIONS:

Articles in International and National Journals.

- **D' Onofrio, E. E., Dragani, W. C., Speroni, J. O. and Fiore, M.** (2003): "Propagation and amplification of tide in the north-western Weddell Sea. An observational Study". *Polar Geosciences*, (16), 53-60.
- **Janiot, L. J., Sericano, J. L. and Marcucci, O.** (2003). "Evidence of Oil Leakage from the Bahía Paraíso Wreck in Arthur Bay, Antarctica". *Marine Pollution Bulletin*, Volume 46, Issue 12, pp 1619-1622.
- **Cavallotto, J. L., Violante, R. A. and Parker, G.** (2004). "Sea level fluctuation during the last 8600 yrs in the Río de la Plata (Argentina)". *Rev. Quaternary International*, 114 (1), 155-166.

- **Dragani, W. C. and Romero, S. I.** (2004): "Impact of a possible local wind change on the wave climate in the upper Río de la Plata". *International Journal of Climatology*, 24(9), 1149-1157.
- **Dragani, W. C., Drabble, M. R., D' Onofrio, E. E. and Mazio, C. A.** (2004): "Propagation and amplification of tide at Bransfield and Gerlache Straits, Northwestern Antarctic Peninsula. An Observational Study". *Polar Geosciences*, (17), 156-170.
- **Mazio, C. A., Dragani, W. C., Caviglia, F. J. and Pousa, J. L.** (2004): "Tidal hydrodynamics in the Golfo Nuevo (Argentina) and the adjacent continental shelf". *Journal of Coastal Research*, (20) 4, 1000-1011.
- **Palma, E. D., Matano, R. P. and Piola, A. R.** (2004). "Three dimensional barotropic response of the south-western Atlantic shelf circulation to tidal and wind forcing". *Journal of Geophysical Research*. 109, C08014, doi:10.1029/2004JC002315 (ISSN 0148-0227).
- **Palma, E. D., Matano, R. P., Piola, A. R. and Sitz, L. E.** (2004). "A comparison of the circulation patterns over the South-western Atlantic Shelf driven by different wind climatologies". *Geophys. Res. Lett*, 31, L24303, doi:10.1029/2004GL021068, (ISSN 0094-8276).
- **Piola, A. R., Campos, E. J. D., Martinez, C. M., Möller, Jr. O. O., and Wesson, J.** (2004). "Observing the Plata influence on the western South Atlantic shelf". *IAI Newsletter*, 34, 8-11 (<http://www.iai.int/newsletter/issue34/issue34.pdf>) (ISSN: 1526-3225).
- **Piola, A. R., Möller Jr, O. O. and Palma, E. D.** (2004). "Río de la Plata impact over the Atlantic Ocean", *Current Science*, 14, 28-37 (ISSN 1666-5171).
- **Piola, A. R. and Romero S. I.** (2004). "Analysis of Space-time Variability of the Plata River Plume". *Gayana*, 68, Number 2, Proceedings of the Pan Ocean Remote Sensing Conference 2004, ISSN 0717 –652X, 482-486.
- **Saraceno, M., Provost, C., Piola, A. R., Gagliardini, A. and Bava, J.** (2004). "The Brazil Malvinas Frontal System as seen from nine years of AVHRR data". *Journal of Geophysical Research*, 109, C5, C05027, 10.1029/2003JC002127 (ISSN 0148-0227).
- **Simionato, C. G. Dragani, W. C., Meccia, V. L. and Nuñez, M. N.** (2004): "A numerical study of the barotropic circulation of the Río de la Plata estuary: sensitivity to bathymetry, earth rotation and low frequency wind variability". *Estuarine, Coastal and Shelf Science*, (61/2), 261-273.
- **Simionato, C. G. Dragani, W. C., Nuñez, M. N. and Engel, M.** (2004): "A set of 3-d nested models for tidal propagation from the Argentinean Continental Shelf to Río de la Plata estuary". *Journal of Coastal Research*, (20) 3, 893-912.
- **Violante, R. A. and Parker, G.** (2004). "The post-Last Glacial Maximum transgression in the de la Plata river and adjacent inner continental shelf, Argentina". *G. Rev. Quaternary International*, 114 (1), 167-181.
- **Violante, R. A. and Cavallotto, J. L.** (2004). "Evolution of the semi-enclosed basins and surrounding coastal plains adjacent to the Pampean region, Argentina". *Proceedings of the Conference "Rapid Transgressions into Semi-enclosed Basins"*, Polish Geological Institute, Special Papers, 11, 87-102.

- **Bianchi, A., Bianucci, L., Piola, A. R.,** Ruiz Pino, D., Schloss, I., Poisson, A. and **Balestrini, C.** (2005) “Vertical stratification and air-sea CO₂ fluxes in the Patagonia shelf”. *Journal of Geophysical Research*, 110, C07003, doi:10.1029/2004JC002488.
- **Cavallotto, J. L., Violante, R. A** and Colombo, F. (2005). “Evolution and environmental changes at the coastal plain of the Río de la Plata river head”. *Argentinean Geological Journal -Revista Asociación Geológica Argentina-*, 59 (2): 353-367.
- Coakley, B., Kristoffesen, Y., **Reynoso-Peralta, W. et al.** (2005): “A cross-Arctic geophysical transect collected from US Coast Guard Icebreaker Healy”. *American Geophysical Union Journal*.
- **Dragani, W. C., D’ Onofrio, E. E., Speroni, J., Fiore, M.** and Borjas, R. (2005): “A numerical study of the ocean circulation around the northern Antarctic Peninsula: barotropic response to tidal forcing”. *Polar Geosciences*, 18, 83-100.
- Glorioso, P. D., **Piola, A. R.** and Leben, R. R. (2005). “Mesoscale eddies in the Subantarctic Front - Southwest Atlantic”. *Scientia Marina*, 69, Suppl. 2, 7-15 (ISSN 0214-8358).
- Haarsma, R. J., Campos, E. J. D., Hazeleger, W., Severijns, C., **Piola, A. R.** and Molteni, F.(2005). “Dominant modes of variability in the South Atlantic: A study with a hierarchy of ocean-atmosphere models”. *Journal of Climate*, 18, 11, 1719-1735 (ISSN 1520-0442).
- Osterrieth, M., **Violante, R. A.** and Borrelli, N. (2005). “Silicophytoliths in sediments from submarine cores in the northern region of the Argentine Continental Shelf”. *The Phytolitharien, Bulletin of the Society for Phytolith Research*, 17 (2), 18-19.
- Pimenta, F. M., Campos, E. J. D., Miller, J. and **Piola, A. R.** (2005). “Numerical study of the river discharge and wind effects over the Plata River plume intrusion the south-eastern South American Shelf”. *Brazilian Journal of Oceanography*, 53 (3-4), 129-146 (ISSN 1679-8759).
- **Piola, A. R.,** Matano, R. P., Palma, E. D., Möller, O. O. and Campos, E. J. D. (2005). “The influence of the Plata River discharge on the western South Atlantic shelf”. *Geophys. Res. Lett.*, 32, L01603, doi:10.1029/2004GL021638 (ISSN 0094-8276).
- **Piola, A. R.,** Möller, Jr. O. O. and Palma, E. D. (2005). “O impacto do rio da Prata no oceano Atlântico”. *Ciencia Hoje*, 216, 30-37 (ISSN: 0101-8515).
- **Rivas, A. L. and Piola, A. R.** (2005). “Near-inertial oscillation on the continental shelf off northern Patagonia”. *Atlântica*, 27(2), 75-86 (ISSN 0102-1656).
- Saraceno, M., Provost, C. and **Piola, A. R.** (2005). “On the relationship of satellite retrieved surface temperature fronts and chlorophyll-a in the Western South Atlantic”. *Journal of Geophysical Research*, 110, C11016, doi:10.1029/2004JC002736 (ISSN 0148-0227).
- Simionato, C. G., Meccia, **Dragani, W.** and Núñez, M.(2005): “Barotropic tide and baroclinic waves observations in the Río de la Plata estuary”. *Journal of Geophysical Research*, 110, C06008, doi: 10.1029/2004JC002842.
- Campagna, C., **Piola, A. R.,** Marin, M. R., Lewis, M. and Fernández, T. (2006). “Southern elephant seal trajectories, ocean fronts and eddies in the Brazil/Malvinas Confluence”. *Deep-Sea Research I*, 53, 1907-1924, doi:10.1016/j.dsr.2006.08.015.

- Campetella, C. M., **D' Onofrio, E. E.**, Cerne B. S., **Fiore, M. M. E.** and Possia, N. E. (2006). "Negative storm surges in the port of Buenos Aires city". Accepted for its publication, with some modifications, in the *International Journal of Climatology*.
- **D' Onofrio, E. E.**, **Fiore, M. M. E.**, Pousa, J. L. (2006). "Changes in the regime of storm surges in Buenos Aires, Argentina". Accepted for its publication in the *Journal of Coastal Research*.
- **Dragani, W. C.**, **D' Onofrio**, Grismeyer, W. and **Fiore, M. M. E.** (2006): "Tide gauge observations of the Indian Ocean tsunami, December 26, 2004, at the Buenos Aires coastal waters, Argentina". *Continental Shelf Research*, 26, 1543-1550.
- Hurrell, J. W., Visbeck, M., Busalacchi, A., Clarke, A., Delworth, T., Dickson, R., Johns, W., Koltermann, K. P., Kushnir, Y., Marshall, D., Mauritzen, C., McCartney, M., **Piola, A. R.**, Reason, C., Reverdin, G., Schott, F., Sutton, R., Wainer, I., Wright, D. (2006). "Atlantic variability and predictability: progress and challenges for a CLIVAR perspective". *Journal of Climate*, 19, 5100-5121.
- Karlapati, S., Monahan, D., Montoro, H., Morishitqa, T., Mustapha, A., **Reynoso Peralta, W.**, Sharma, S. and Angweryi, C. (2006): "Capacity Building in Ocean Bathymetry". *International Hydrographic Review*, Vol. 7, N° 1.
- Lanfranchi, A. L., Menone, M. L., Miglioranza, K. S. B., **Janiot, L. J.**, Aizpún, J. E. & Moreno, V. J. (2006). "Striped weakfish (*Cynoscion guatucupa*): a bio-monitor of organ-chlorine pesticides in estuarine and near-coastal zones. *Marine Pollution Bulletin*. Vol. 52, pp 74-80.
- **Piola, A. R.** (2006). "Antarctic Intermediate Water", in *Encyclopaedia of the Antarctic*, B. Riffenburgh Ed. Routledge, N Y. <http://www.routledge-ny.com/ref/antarctic/index.htm> 1., ISBN 0415970245.
- **Piola, A. R.** (2006). "South Atlantic biological productivity: physical mechanisms at work and their potential response to global change". *IAI Newsletter*, 2-2006, 4-6.
- **Romero, S. I.**, **Piola, A. R.**, **Charo, M.** and Garcia, C. A. E. (2006): "Seasonal to interannual variability along the Patagonia shelf and shelf-break based on satellite ocean colour data". *Journal Geophysical Research*, 111, C05021, doi:10.1029/2005JC003244.
- Signorini, S. R., Garcia, V. M. T., **Piola, A. R.**, Garcia, C. A. E., Mata, M. M. and Mc Clain, C. R. (2006). "Seasonal and interannual variability of coccolithophore blooms in the vicinity of the Patagonia shelf break (38°S – 52°S)". *Geophysical Research Letters*, 33, L16610, doi:10.1029/2006GL026592.
- Simionato, C. G. Meccia, V., **Dragani, W.** and Núñez, M. (2006): "On the use of the NCEP/NCAR surface wind for modelling barotropic circulation in the Río de la Plata estuary". *Estuarine, Coastal and Shelf Science*. (70), 195-206.
- Simionato, C. G. Meccia, V., **Dragani, W. C.** Guerrero, R. and Núñez, M. (2006): "The Río de la Plata estuary response to wind variability in synoptic to intra-seasonal scales. part 1: Barotropic response". *Journal of Geophysical Research*, (2005JC003297).
- Simionato, C. G. Meccia, V., Guerrero, R., **Dragani, W.** and Nuñez, M. (2006). "The Río de la Plata estuary response to wind variability in synoptic to intra-seasonal scales. part 2: baroclinic response and its implications on the salt wedge structure". (accepted in *Journal of Geophysical Research – Ocean*).

- **Dragani, W. C.** (2007): “Numerical experiments of the generation of long ocean waves in coastal waters of the Buenos Aires province, Argentina”. *Continental Shelf Research*, 27, 699-712.
- Laprida, C., García Chaporí, N., **Violante, R. A.** and Compagnucci, R. H. (2007). “Late Holocene evolution and paleoenvironments of north-eastern Argentine shoreface-offshore transition: new evidences based on benthic foraminifers” . *Marine Geology*. In press.
- Schloss, I. R., Ferreyra, G. A., Ferrario, M., Almandoz, G., Codina, R., **Bianchi, A. A., Balestrini, C. F.,** Poisson, A. (2007). “Role of plankton communities in pCO₂ sea-air exchange in the south-western Atlantic Ocean”. *Journal of Marine Ecology*, in press.

Technical Reports.

- Simionato, C. G., Meccia, V., **Dragani, W. C.** and Nuñez, M. N., 2003. “Model HamSOM/CIMA: Seasonal Circulation and plumes from the principal tributaries in the Río de la Plata”. Rep. CIMA/CONICET-UBA, Oct-03-01, 48 pp. (CD).
- Speroni, J., **Dragani, W.** and **Mazio, C.** 2003. “Measurements of currents at Paso Mackinlay, Canal de Beagle, Tierra del Fuego”. SIHN, Dept. of Oceanography. Tech. Rep. N° 01/03, 10 pp.
- Busalacchi, A., Boscolo, R., Dickson, R., **Piola, A. R.,** Servain, J. and Zeng, N. 2004. “Climate Observing System for the Atlantic Sector”. *Clivar Exchanges*, 31 (9-3), 8-11+16 (ISSN 1026-0471).
- Speroni, J. O., **Dragani, W. C.** and **Mazio, C. A.**, 2004. “Measurements of currents at San Antonio, Golfo San Matías, Río Negro”. SIHN, Dept. of Oceanography. Tech. Rep. N° 02/04, 8 pp.
- Speroni, J. O., **Dragani, W. C., Mazio, C. A.** and Antonietti, S., 2005. “Measurements of oceanographic parameters at Puerto Quequén, Buenos Aires”. SIHN, Dept. of Oceanography. Tech. Rep. N° 01/05, 12 pp.
- Speroni, J. O., **Dragani, W. C. and Mazio, C.** 2005. “Study of currents at Puerto Deseado, Santa Cruz”. SIHN, Dept. of Oceanography. Tech. Rep. N° 02/05, 21 pp.
- **D' Onofrio, E. E., Fiore, M. M. E.,** Stadelmann, M. A. 2006. “Computation of heights and extreme amplitudes of astronomic tide in San Sebastián bay, Province of Tierra del Fuego”. SIHN, Dept. of Oceanography. Tech. Rep. N° 02/06, 7 pp.
- Stadelmann, M. A., **D' Onofrio, E. E., Fiore, M. M. E.,** 2006. “Computation of heights and extreme amplitudes of astronomic tide in the Atlantic coast of the Province of Buenos Aires”. SIHN, Dept. of Oceanography. Tech. Rep. N° 01/06, 11 pp.

Other published articles.

- **D' Onofrio, E. E., Fiore, M. M. E.** and Ruiz, E. H. (2003). “Relative tendency of Río de La Plata medium level, in Buenos Aires harbour”. *Contributions to Geodesy's applications. Publication of the Institute of Geodesy – Faculty of Engineering – University of Buenos Aires*, 1/2003, 7 - 14.
- **D' Onofrio, E. E., Fiore, M. M. E.,** Pardo, J., Ruiz, E. H. (2004). “Computation of geodetic heights and average sea surface for applying to a numerical model of Río de la

Plata's levels". *Contributions to Geodesy's applications. Publication of the Institute of Geodesy – Faculty of Engineering – University of Buenos Aires*, 1/2004, 9-18.

- Moreno, V. J., Iribarne, O. O., Escalante, A. H., Aizpún, J. E., **Janiot, L. J.**, Heras, H., Menone, M. L., Miglioranza, K., Pérez, C., Isacch, J. P., Aviv, A. E. and Canepuccia, A. E. (2004). "Monitoring Coastal Río de la Plata Oil Spillage". 20 pp., CD. In Proceedings of Interspill 2004. International Conference & Exhibitions on Oil Spill Technology. Trondheim, Norway. 14-17 June 2004.
- **Cavallotto, J. L.** and **Violante, R. A.** (2005). "Geology and Geomorphology of Río de la Plata", in Special Issue: Geology of Buenos Aires Province. (*Proceedings of XVI Argentinean Geological Congress*), La Plata, Chapter XIV, pp. 237-254.
- **D' Onofrio, E. E.**, **Fiore, M. M. E.**, Ruiz, E. H. (2005). "New temporal scales for tides prediction and gravimetric measurements". *Contributions to Geodesy's applications. Publication of the Institute of Geodesy – Faculty of Engineering – University of Buenos Aires*, 1/2005, 15-25.
- **Janiot, L. J.**, Molina, D. A. and Goransky, R. (2005). "Assessment of Water Quality in the South Coastal Margin of Río de la Plata based on Water Quality Indexes". Published in the web page of Sub-Secretary of National Water Resources, Argentine: <http://www.rekursoshidricos.gov.ar>
- Campagna, C., **Piola, A. R.** and Marin, M. R. (2006). "Round and Round They Go, Elephant seals are riding eddies in the Patagonia sea". *Wildlife Conservation Magazine*, Nov-Dec, 40-45.
- **Violante, R. A.**, **Cavallotto, J. L.** and Patricia Kandus. (2007). "Río de la Plata and Paraná delta", In *Sites of Geological interest in Argentina*, Ed. SEGEMAR, Buenos Aires. Argentina.(In press).

6.- CONGRESS:

- **CLIVAR/OOPC/IAI Workshop on the South Atlantic Climate Observing System (SACOS)**, , Angra dos Reis – Brazil, 31-38. 6 – 8 February, 2003.
 - de Ruijter, W., P. M., Cunningham, S. A., Gordon, A. L., Lutjeharms, J. R. E., Matano, R. P. and **Piola, A. R.** "South Atlantic inter ocean exchanges".
 - Garzoli, S. L., Johnson, M., **Piola, A. R.**, Provost, C. and Goñi, G. "South Atlantic Ocean observing system for climate".
 - **Piola, A. R.**, Campos, E. J., Donners, D. J., Gordon, A. L. and Nof, D. "The South Atlantic contribution to the global thermohaline circulation".
- **Continental Shelves during the last Glacial Cycle.** 2003.
 - **Cavallotto, J. L.** and **Violante, R. A.** "Late Pleistocene and Holocene transgressions in the northern Patagonia gulfs, Argentina". (IGCP No 464, Gdansk, Poland).
 - **Cavallotto, J. L.** "Late Cenozoic sea level highstands in the coastal plain of the Rio de la Plata". (IGCP No 437. Abstracts: 57-59. Puglia, Italy).

- **24th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC)**, Austin, Texas, USA, 9 -13 November 2003.
 - **Janiot, L. J.**, Sericano, J. L. and Marcucci, O. “Evidence of Oil Leakage from the Bahía Paraíso Wreck in Arturo Bay, Antarctica”.
- **V National Congress of Marine Sciences and XIII Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Mar del Plata, Buenos Aires, Argentina, 8 – 12 December, 2003.
 - Allegrino, J., Saenz, G., **Dragani, W. C.**, Schmidt, S. and Meccia, V. “Waves prediction for the coasts of the Province of Buenos Aires using different Data Bases of Meteorological Data”. (Poster).
 - **Bianchi, A. A., Bianucci, L. and Piola, A. R.** “Climatology of the Argentinean Continental Shelf’s fronts and its relation with carbon dioxide balance”.
 - **Bianchi, A. A.**, Schloss, I. R., Ruiz Pino, D., **Balestrini, C.**, Ferrario, M., Poisson, A., Ferreyra, G. and **Piola, A. R.** “Carbon fluxes in the Argentinean Continental Shelf and in Weddell Sea: Influence of the environmental variables”.
 - **Balestrini, C., Bianchi, A. A.**, Ferrario, M., Ferreira, G., **Piola, A. R.**, Poisson, A., Schloss, I. R. “ARGAU Project: Measurements of CO₂ and the associated physical, chemical and biological parameters in the Southern Atlantic Ocean and Antarctica”.
 - **D’ Onofrio, E. E., Fiore, M. M. E.** “Estimation of extreme levels at Buenos Aires’ harbour taking into account the increment of the average level”.
 - **Janiot, L. J.**, Sik, E., Marcucci, O., Gesino, A., Molina, D. A., Martínez, L. L. and Marcucci, P. “Persistent Organic Pollutants and Heavy Metals in Water and Sediments from Río de la Plata and its Maritime Front”. Symposium CARP-COFREMAR.
 - Meccia, V., **Dragani, W. C.**, Schmidt, S. and Pousa, J. “Beach profile evolution during intense wind wave events at Pinamar”.
 - Meccia, V., Simionato, C. G., **Dragani, W.** and Núñez, M. “Seasonal circulation and flux corridors at the Río de la Plata’ estuary based upon HamSOM/CIMA model”. FREPLATA Symposium.
 - Natali, M. P., **Fiore, M. M. E., D’ Onofrio, E. E.**, Brunini, C. A. “First results of absolute tide measurement in Mar del Plata”.
 - Paparazzo F. E., Schloss I., Solis M., Ruiz-Pino D., Poisson A., **Bianchi, A. A.**, **Balestrini, C.**, Esteves, J. L.. “Nutrients concentration in the Argentinean Continental Shelf at the south of parallel of 42°S”.
 - Simionato, C. G., **Dragani, W. C.** Núñez, M. and Meccia, V. “Currents and heights simulation at Río de la Plata using Hamsom/Cima model forced by the re-analysis of NCEP and comparisons with observations”. FREPLATA Symposium.
 - Simionato C. G., **Dragani, W. C.** and Núñez. “Propagation of the principal moon semidiurnal tide wave in the South-eastern South American continental shelf and Río de la Plata”. FREPLATA Symposium.
 - Speroni, J., **Dragani, W. C.** and **Mazio, C.** “Currents Measurements Programme in the Beagle Channel”. (Poster).

- **Continental Shelves during the last Glacial Cycle.** IGCP No 464, Rome, Italy. 2004.
 - **Cavallotto, J. L.** “Sea-level and environmental changes since the LGM in the Río de la Plata (Argentina).”
- **Aquarius / SMOS / Hydros Joint Science Meeting.** AOML/NOAA, Miami, April 20-22 2004. (Sponsored by NASA and CONAE).
 - **Piola, A. R. and Romero, S. I.** “Space Time variability of the Plata River plume inferred from ocean colour”
- **II Simpósio Brasileiro de Oceanografia,** Instituto Oceanográfico da Universidade de São Paulo, São Paulo, Brazil. June, 2004.
 - **Bianchi, A. A., Bianucci, L., Piola, A. R., Ruiz Pino, D., Schloss, I. R., Poisson, A. and Balestrini, C.** “The key role of vertical stratification and air-sea CO₂ fluxes in the Patagonia shelf”.
 - **Romero, S. I. and Piola, A. R.** “Spatial and temporal variability of Rio de la Plata’s plume”.
- **International Conference & Exhibitions on Oil Spill Technology.** Trondheim, Norway. 14-17 June 2004.
 - Moreno, V. J., Iribarne, O. O., Escalante, A. H., Aizpún, E., **Janiot, L. J.**, Heras, H., Menone, M. L., Miglioranza, K., Pérez, C., Isacch, J. P., Abib, A. E. and Canepuccia, A. E. “Monitoring Coastal Río de la Plata Oil Spillage“. 20 pp. en CD. Inter spill 2004.
- **2nd AIACC Regional Workshop for Latin America and the Caribbean.** Buenos Aires. Argentina. 24 - 27 August 2004.
 - Kokot R., Menéndez A., **D’ Onofrio E. E.**, Barros V. and **Fiore, M. M. E.** “Return periods of floods over the coastal lands of the Río de la Plata (AIACC Project No. LA26)”.
- **V Argentinean Symposium and 1st. Latin-American Symposium on Antarctic Investigations,** organised by the Argentinean Antarctic Institute. Buenos Aires, Argentina, 30 August - 3 September, 2004.
 - **Bianchi, A., Charo, C., Bianucci, L., Balestrini, C., Schloss, I. and Ferreyra, G.** “Spatial and inter-annual variability of CO₂ fluxes in the Weddell Sea. It relation with the environmental variables”.
 - **Dragani, W. C., D’ Onofrio, E. E., Fiore, M. M. E.** and Speroni, J. O. “Tide Propagation and Amplification in the northern region of Antarctic Peninsula”.
 - **Romero, S. I. and Charo, M.** “Seasonal and inter-annual variability of chlorophyll-A in the Atlantic Ocean using ocean (SeaWiFS)”.
- **22nd Scientific Meeting of the Argentinean Association of Geophysics and Geodesy (AAGG).** Buenos Aires, Argentina. 6 – 10 September, 2004.
 - Borjas, R. and **Dragani, W. C.** “Digital bathymetry generation for mathematical modelling of the coastal oceanic circulation in Patagonia”.
 - **Dragani, W. C. and Romero, S. I.** “Impact of an eventual local wind change on the waves weather at the upper Río de la Plata”.

- **D' Onofrio, E., Fiore, M. M. E.,** Ruiz, H. E. "Influence of the new temporal scales on oceanic tides prediction and corrections to gravimetric measurements".
- Natali, M. P., Brunini, C. A., Drewes, H., Kaniuth, K., **Fiore, M. M. E. and D' Onofrio, E. E.** "Sea absolute level determination along the Argentinean coast".
- **NASA Ocean Colour Research Team Meeting**, Portland, Oregon, USA. 12-14 April 2005. (Sponsored by Ocean Biology and Biogeochemistry Programme, Science Mission Directorate, NASA Headquarters).
- Garcia, C. A. E., Garcia, V. M. T., Mata, M. M., **Romero, S. I.,** Signorini, S. and McClain, Ch. "The Patagonia Experiment (PATEX)".
- **XVI Argentinean Geological Congress**. La Plata. Acta III: 817-824. 2005.
- **Parker, G., Paterlini, C. M., Violante, R. A.,** Costa, I. P., Marcolini, S. and Cavallotto, J. L. "Submarine geology: Argentinean continental shelf in front of Mar del Plata, Buenos Aires".
- **Continental Shelves during the last Glacial Cycle**. IGCP No 464, St. Petersburg. Russian. Abstracts: 88-91. 2005.
- **Cavallotto, J. L. and Violante, R. A.** "Post-LGM evolution of the inner coastal plain of the Río de la Plata (Argentina)."
- **XI Latin-American Congress on Marine Sciences**. Viña del Mar, Chile. 16 – 20 May 2005.
- Simionato C. G, Meccia V. L., **Dragani, W. C.** and Nuñez, M. N. "Observations of internal waves in the estuary of Río de la Plata".
- **The 2005 Joint Assembly**. (Sponsored by AGU, SEG, NABS and SPD/AAS). New Orleans, Louisiana, USA. 23-27 May 2005.
- **Piola, A. R. and Romero, S. I.** "Space -Time Variability of the Plata Plume Inferred From Sea Spectral Reflectance Data (Ocean Colour)".
- **IX Argentinean Congress on Meteorology (CONGREMET IX) "WHETHER, CLIMATE, WATER AND SUSTAINABLE DEVELOPMENT"**. Buenos Aires, Argentina. 3 – 7 October, 2005.
- Cerne, B., Possia, N., Campetella, C., **D' Onofrio, E. E., Fiore, M. M. E.,** Saurral, M., Bertolotti, M. "The lowest low water level at Río de la Plata. Extreme cases".
- **D' Onofrio E. E., Fiore, M. M. E.,** Campetella, C., Possia, N., Cerne, B., Bertolotti, M., Saurral, M. "Negative storm waves at Buenos Aires harbour".
- Simionato, C. G., Meccia, V., **Dragani, W. C.,** Guerrero, R. and Núñez, M. "Río de la Plata's estuary barotropic response to wind variability at synoptic and inter-seasonal scales".
- **IX Argentinean Congress on Meteorology**. Buenos Aires, Argentina, 3 - 17 October 2005.
- Simionato C. G, Meccia V. L., **Dragani, W. C.,** Guerrero R. A. and Núñez M. N. "Barotropic response of the estuary of Río de la Plata to wind variability in the synoptic and Inter.-seasonal scales".

- **IV International Workshop on Regional Approach for Development and Management of Dams in the del Plata Basin.** Salto Grande, Entre Ríos, Argentina. 29 November - 2 December 2005.
 - **Janiot, L. J.**, with the Administrative Commission of the Uruguay River. “Environmental Protection Plan for the Uruguay River”.
- **8th International Conference on Southern Hemisphere Meteorology and Oceanography**, Foz do Iguazú, Brazil, 23 – 28 April, 2006.
 - Simionato, C. G., Meccia, V. L., **Dragani, W. C.**, Guerrero, R. and Núñez, M. “Recent advances in the knowledge of the Río de la Plata estuary circulation, forcing and variability”.
- **XI Meeting of the International South Atlantic Buoy Program**, Technical Workshop, Buenos Aires, 30 May – 2 June, 2006:
 - **Dragani, W. C.** “The coastal environmental buoy”.
- **23rd Scientific Meeting of the Argentinean Association of Geophysics and Geodesy (AAGG)**. Bahía Blanca, Buenos Aires, Argentina. 14 – 18 August, 2006.
 - Di Biase, F., **D’Onofrio, E. E.** and **Dragani, W. C.** “New charts of coranges and cotidals for the Río de la Plata”.
 - **Dragani, W. C.**, Speroni, J., **D’ Onofrio’ E. E.**, **Mazio, C. A.**, Simionato, C. G., **Fiore, M. M. E.**, Grismeyer W., Meccia, V., Núñez, M., Di Biase, F., Antonietti, S., Demilio, G., Stadelmann, M., Borjas, R. and Sobre Casas, M. M. “Circulation study of San Matías Gulf’s waters applying hydrodynamic numerical models forced with tide and wind. Sub-project a-b-30 (GEF-Patagonia)”.
 - Grismeyer, W, **Dragani, W. C.**, **D’ Onofrio, E. E.** and **Fiore, M. M. E.** “First recorded evidence of a tsunami-wave in the coast of Buenos Aires province”.
 - **Mazio, C.** “Tidal structure at Northern Patagonia using WqMap model”.
- **VI National Congress of Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.
 - **Bianchi, A. A.**, Osiroff, A. P. and Isbert, I. G. “Fluxes of CO₂ in the Patagonia sea. Period: October 2005 and March 2006”.
 - **Bianucci, L.**, Ianson, D. and **Bianchi, A.** “A bio-chemical boxes model of the Patagonia tides fronts”.
 - **Cavallotto, J. L.** and **Violante, R. A.** “Paleoclimatic, paleoceanographic and tectonic influence during Mar del Plata submarine canyon evolution”.
 - **Charo, M.**, **Romero, S. I.**, **Piola, A. R.**, **Bianchi, A. A.**, **Balestrini, C.**, Lutz, V. and Ruiz Pino, D. “Bio-physical interactions in zones of high satellite chlorophyll in the southern Argentinean Continental Shelf at the south off 50°S”.
 - **D’ Onofrio, E. E.**, **Fiore, M. M. E.** and Mediavilla, D. “Storm waves evolution at Mar del Plata during the period 1956-2005”.

- **Dragani, W. C.**, Grismeyer, W. H., **D' Onofrio, E. E.**, **Fiore, M. M. E.**, Vetere, F. "Indian Ocean tsunami -26 December 2004- in coastal waters of the Argentinean Atlantic shore".
- **Fiore, M. M. E.**, Stadelmann, M., **D' Onofrio, E. E.** "Astronomic tide propagation from Buenos Aires harbour to Zárate".
- Isbert, H. G., **Bianchi, A. A.**, Ruiz Pino, D. and **Balestrini, C. F.** "Relation among the environmental variables and the sea-atmosphere fluxes of CO₂ at Weddell Sea".
- Meccia, V. L., Simionato, C. G., Guerrero, R. A., **Dragani, W. C.** and Núñez, M. N. "Currents and vertical structure in the estuary of Río de la Plata: Variability in the synoptic and inter-seasonal scales and its implications in the stratification".
- Moira L. C., **Bianchi, A. A.**, Isbert, I. G., Osiroff, A. P., **Balestrini, C. F.** "Influence of the different products utilisation representing the wind when estimating sea-atmosphere fluxes of CO₂".
- **Violante, R. A.**, **Paterlini, M.**, Costa, P., I., Segovia, L., **Cavallotto, J. L.**, Marcolini, S., Laprida, C., Garcia, N., Watnabe, S., Totha, V. "Evolution of the continental slope that is adjacent to Buenos Aires' shore during Cenozoic: Relation with paleoceanographic and paleoclimatic variability".

7.- COURSES:

- 2003. As part of the Third Austral Summer Institute on Ocean Observing Systems, organised by the University of Concepción, Woods Hole Oceanographic Institution and Andes Foundation. Concepción, Chile, the three following course were attended by **S. I. Romero**:
 - "Application of Acoustical and Optical Methods for Plankton Monitoring", by Dr. Mark C. Benfield (Dept. of Oceanography & Coastal Sciences/Coastal Fisheries Institute, Louisiana State University).
 - "Observing the large-scale Ocean Circulation", by Dr. Detlef Quadfasel (Dept. of Geophysics and Danish Center for Earth System Science, University of Copenhagen).
 - "Coupled physical-biological and biogeochemical time series and advanced technologies", by Francisco P. Chávez (Monterey Bay Aquarium Research Institute).
- 2003: "Processes and sediments recordings in coastal regions and submarine continental shelves", by **J. L. Cavallotto**, organised by the Superior Council of Geology and the Argentinean Geological Association. Buenos Aires, Argentina.
- 2003: 27 – 29 May. Course attended by **W. C. Dragani**: Design and Protection of river banks and coasts. School of Hydraulic Engineering – School of Harbour Engineering, Faculty of Engineering, University of Buenos Aires. Buenos Aires, Argentina.
- 2004: Post-Graduate course "Processes and sediments recordings in coastal regions and submarine continental shelves", by **R. A. Violante** and **J. L. Cavallotto**, Faculty of Natural Sciences and Museum. National University of La Plata, La Plata, Buenos Aires province. Argentina.
- 2004: 19 – 23 April. Course attended by **W. C. Dragani, M. M. E. Fiore**: "Training on the System of Modelling of Water Quality: WQMap and CoastMap (Applied Science

Associates)", under the frame of the Project "Prevention of coastal pollution and management of marine biologic diversity", SayDS – Donación finam n° 28385 – AR - PNUD/GEF ARG/02/018. Hydrographic Naval Service. Buenos Aires, Argentina.

- 2004: 21 – 22 April. Course attended by **L. J. Janiot**: "Course: Scientific and Technology Basis for the Eco toxicological Characterisation of Sediments", under the frame of the Project "Environmental Protection of the Rio de la Plata and its Maritime Front: Pollution Prevention and Habitats Restoration", UNEP GEF – RLA/99/G31. Montevideo, Uruguay.
- 2004: 14 May. Seminar attended by **L. J. Janiot**: "New Technologies in GC-MS-Instrumentation and Applications." JENCK Inc. by Megumi Hiirooka. SHIMADZU Co. Buenos Aires, Argentina.
- 2004-2006: Postgraduate Programme in Ocean Bathymetry. Nippon Foundation/GEBCO Training Program at the Centre for Coastal and Ocean Mapping/Joint Hydrographical Centre of the University of New Hampshire, USA, attended by **W. Reynoso Peralta**.
- 2005: 4 – 8 April. Course attended by **M. Charo, W. C. Dragani**: "Satellite altimeters", under the frame of the Project "Prevention of coastal pollution and management of marine biologic diversity", SayDS – Donation finam n° 28385 – AR - PNUD/GEF ARG/02/018. EXO Training Centre, Buenos Aires, Argentina.
- 2005: Course attended by **S. I. Romero, M. M. E. Fiore, M. Charo**: "Computation of Tides from Satellite Altimetry". Professor: Dr. Victor Zlotnicki (Jet Propulsion Laboratory California Institute of Technology Pasadena, California, USA). Buenos Aires, Argentina.
- 2005: Course attended by **S. I. Romero**: "XIII Course on Synthetic Aperture Radar (SAR) and its applications. Remote Sensing" Centre of Argentinean Air Force Operations. Buenos Aires, Argentina.
- 2005: Course attended by **J. L. Cavallotto**. "Seismic stratigraphy and its application to marine sedimentary media evolution", by Dr F. J. Hernández Molina (Faculty of Marine Sciences - University of Vigo), F. J. Lobo Sánchez (Andalusian Institute of Earth Sciences - University of Granada) and L. M. Fernández Salas (Spanish Institute of Oceanography in Málaga). Superior Professional Council of Geology.
- 2006: "Coastal and marine sedimentary environments: Geoforms; stratigraphical processing and recording", by **R. A. Violante** and **J. L. Cavallotto**, organised by the Oceanographic Institute of Ecuador Republic Navy –INOCAR– Guayaquil, Ecuador.

8.- ADDRESS:

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9.- WEB PAGE: www.hidro.gov.ar

ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION:



Rowan University

Dr Patricia Mosto

3.- NAME: Patricia Mosto (PhD in Biology)

mosto@rowan.edu

4.- FIELD WORK:

MOSTO, Patricia Water Quality and Water Pollution/ Engineering Education

5.- PUBLICATIONS:

Articles in International and National Journals.

- Hecht, G., **Mosto, P.** and Slater, S. (2003): "Establishment of an Introductory Biology/Microbiology Course for Undergraduate Chemical Engineer Major". *Microbiological Education* 4:13-22.
- Hollar, K., Farrell, S., **Mosto, P.** and Hecht, G. (2004): "Integrating Biology and Chemical Engineering at the Freshman and Sophomore Levels". *Chemical Engineering Education*. Vol 38 (2):108-112.
- Jahan, K., **Mosto, P.** and Derchak, L. (2004): "Metal Uptake by Algae". *Proceedings of the Second International Conference on Waste Management and the Environment*.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W., Farrell, Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.** and Miller, D. (2004): "Research Experiences in Pollution Prevention and Sustainability for Undergraduates". *Proceedings of the ASEE Mid-Atlantic Section*.
- Blanc, S., **Mosto, P.**, Milou, M. I. E. de, and Benítez, C. E. (2004): "An alternative proposal: acoustic techniques to assess detection and monitoring of toxic algal blooms." *GAYANA, International Journal of Biodiversity, Oceanology and Conservation*, Vol. 68, N° 2, I, 54-60.

- Jahan, K., **Mosto, P.**, Mattson, C. and Frey, E. (2004): "Metal Removal by Microorganisms". *Proceedings of the Annual AWRA Conference*.
- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E. and Derchak, L. (2004): "Microbial Removal of Arsenic". *Proceedings of the 36th Annual Mid-Atlantic Industrial and Hazardous Waste Conference*.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W. , Farrell, S., Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.** and Miller, D. (2004): "Research Experiences in Pollution Prevention and Sustainability". *Proceedings of the 36th Annual Mid-Atlantic Industrial and Hazardous Waste Conference*.
- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E., Castano, L. and Derchak, L. (2005): "Arsenic Removal by Microorganisms". *Proceedings of the 8th International In-Situ and On-Site Bioremediation Symposium*.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W., Farrell, S., Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.** and Miller, D. (2005): "Pollution Prevention and Sustainability Initiatives for Undergraduates". *Proceedings of the Engineering Sustainability Conference*.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W., Farrell, S., Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.** and Miller, D. (2005): "Undergraduate Research Experiences in Pollution Prevention and Sustainability". *Proceeding of the Annual ASEE Conference*.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W., Farrell, S., Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.** and Miller, D. (2005): "Environmental Education in Pollution Prevention and Sustainability Development". *Proceedings of the Annual AWMA Conference*.
- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E., Castano, L. and Derchak, L. (2005): "Arsenic Removal using Wastewater Bacteria and Algae". *Proceedings of the Annual WEF Conference*.
- Hong Z., Tang, G., Richmond, C. and **Mosto, P.** (2006): "Building an interactive mobile aqua probe system". *Proceeding of the ASEE Annual Conference*.
- Hong Z., Tang, G., Richmond, C. and **Mosto, P.**, (2006): "Robotic aqua sensor – an multidisciplinary project". *Proceeding of the ASEE Annual Conference*.
- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E., Castano, L. and Derchak, L. (2006): "Arsenic Removal using Wastewater Bacteria and Algae". *Proceedings of the Annual WEF Conference*.
- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E. and Derchak, L. (2006): "Microbial Removal of Arsenic", in *Water, Air and Soil Pollution, Springer Netherland Pub.*, 1567-7230.
- Jahan, K., Savelski, M., Orlins, J., Mehta, Y., Riddell, W., Farrell, S., Tang, G., Marchese, A., von Lockette, P., Richmond, C., Yang, C., Sukumaran, B., **Mosto, P.**, and Miller, D. (2006): "Sustainability Research for Undergraduates". *Proceedings of the 3rd WSEAS/IASME International Conference on Engineering Education*.

- Jahan, K., **Mosto, P.**, Mattson, C., Frey, E. and Derchak, L. (2006): “Microbial Removal of Arsenic” *Water, Air and Soil Poll.* Springer Netherlands Publisher. ISSN: 1567-7230 (Paper) 1573-2940 (Online).
- Dorland, D. and **Mosto, P.** (2006): “The Engineering Clinics at Rowan University: A Unique Experience”. *Proceeding of the International Congress of Chemical and Processing Engineering*.
- Zhang, H., Tang, Y., Courtney, R., and **Mosto, P.** (2006): “Interactive Mobile Aqua Probe & Surveillance (IMAPS) – a multidisciplinary design project” . *World Transactions on Engineering and Technology Education Vol. 5, No. 3*, pp 425-428.
- **Mosto, P.** and Rosado, M. (2007): “Effectiveness of an Interdisciplinary Course Designed for Freshman”. *Practicing Anthropology Vol. 29 (2)*.
- **Mosto, P.**, Savelski, M., Farrell, S. and Hecht, G. (2007): “Future of Chemical Engineering: Integrating Biology into the ChE Curriculum”. Accepted to *Chemical Engineering Education* (2006)
- Zhang, H., Tang, Y., Courtney, R. and **Mosto, P.**, (2007): “IMAPS —a multidisciplinary aquatic robot project”. Accepted in *Proceedings to the ASEE Annual Conference*.

Other published articles.

- **Mosto, P.**, 2004. “Honing the Skills of Department Chairs at Rowan University.” *ACE Department Chair Online Resource Center*.

Technical Reports.

- Grove, M., **Mosto, P.** and Richmond, C. 2003. “Development of a water quality /aquatic biota study of a selected area in the Great Egg Harbour River”. Palace Outfitters Final Report. 02/03.
- **Mosto, P.** 2003. “Biotic Indicators of Atmospheric N Deposition - Water Component – Year 2”. New Jersey Department of Environmental Protection. Final Report 02/03.

6.- CONGRESS:

International Presentations (out of USA).

- **16th International Congress of Chemical and Processing Engineering (CHISA)**, Prague, Czech Republic. 2004:
 - **Mosto, P.** “Future of Chemical Engineering: Integrating Biology into the ChE Curriculum”.
- **Invited Conference.** Ankara University, Turkey. 2005:
 - “Innovation in Engineering Education”.
- **Invited Conference.** Ataturk University, Turkey. 2005:
 - “New Innovations in Engineering Education – Rowan Clinics: A Case Study and Integrating Biology in the Engineering Curriculum at Rowan University”.

- **International Botanical Conference.** Vienna, Austria. 2005:
 - “Green algae from Cryptogamic Crusts, Santa Fe, New Mexico”.
- **17th International Congress of Chemical and Processing Engineering (CHISA)** – 2006:
 - “The Engineering Clinics at Rowan University: A Unique Experience”.

Presentations in USA.

- **3rd Annual Hawaii International Conference on Arts and Humanities.** Honolulu, Hawaii. 2005:
 - **Mosto, P.** "Effectiveness of an Interdisciplinary Course Designed for Freshman".
- **102nd General Meeting of the American Society for Microbiology.** Chicago, Il., 2003:
 - **Mosto, P.** “Establishment of an Introductory Biology/Microbiology Course for Undergraduate Chemical Engineer Major”.
- **89th Annual Meeting of the Association of America Colleges and Universities.** Seattle, WA, 2003:
 - **Mosto, P.** “Designing a Workshop to Develop Team Taught Interdisciplinary Courses to Address Issues of Diversity and Democracy in America”.
- **2003 Annual AAHE Conference.** Washington, DC, 2003:
 - **Mosto, P.** “All Together Now: How student learning is enhanced by working in collaboration with faculty. Learning to Change”.
- **Phycological Society of America 56th Annual Conference.** Salishan, Oregon, 2003:
 - **Mosto, P.** “Periphytic Algae as indicators of Nitrogen Enrichment in New jersey Lakes”.
- **AICHE Annual Conference.** San Francisco, CA. 2003:
 - **Mosto, P.** “Introducing Students to the Link Between Biology and Chemical Engineering in the Freshman and Sophomore Curriculum”.
- **2004 Annual AAHE Conference.** San Diego, CA. 2004:
 - **Mosto, P.** “Interdisciplinary collaboration: a key component in improving students' learning. Learning in 3D”.
- **The teaching Professor Conference.** Cherry Hill, NJ. 2004:
 - **Mosto, P.** “Changing in the Context of Learning”. “If you build it – They will come”.
- **AIChE Annual Meeting.** Austin, Tx. 2004:
 - **Mosto, P.** "Integrating Biology into the Upper Level ChE Curriculum".
- **ASEE Midatlantic Section Fall Meeting.** Washington D.C. 2004:

- **Mosto, P.** “Research Experiences in Pollution Prevention and Sustainability for Undergraduates”.

Regional Presentations

- **6th Rowan STEM Symposium.** Glassboro, NJ. 2003:
 - **Mosto, P.** “PSI- Pond Scum Investigation: Periphytic Algae as Bioindicators of Nitrogen Inputs in Lakes”.
 - **Mosto, P.** “To Kayak or Not to kayak”.
- **34th Mid Atlantic Industrial and Hazardous Waste Conference.** New Brunswick, NJ, 2003:
 - **Mosto, P.** “Metal Uptake by Algae for Remediation of Hazardous Wastes”.
- **Scholarship Night. Rowan University.** N.J. 2004:
 - **Mosto, P.** “Bildner Project”.
- **ESA – Mid Atlantic Ecology Conference.** Lancaster, PA, 2004:
 - **Mosto, P.** “Ecological Indicators of River Health on two tributaries of the Maurice River, NJ”.
- **Delaware Valley Chapter, Society for Conservation Biology, Annual Meeting.** Villanova, PA. 2004:
 - **Mosto, P.** “Water Quality Indicators of two tributaries of the Maurice River, NJ”.
- **7th Rowan STEM Symposium.** Glassboro, NJ. 2004:
 - **Mosto, P.** “Isolation of Ethanol-Resistant Mutants of E. coli FBR5 for Fermentation of Corn Stover to Ethanol”.
 - **Mosto, P.** “Microbial Uptake of Arsenic”.
 - **Mosto, P.** “Myth Busters: Do Algae Grow in the Desert?”.
 - **Mosto, P.** “*Haematococcus pluvialis* growth for optimum astaxanthin production”.
 - **Mosto, P.** “Water Quality indicators of river health on two tributaries of the Maurice River, NJ”.
- **8th Rowan STEM Symposium.** Glassboro, NJ. 2005:
 - **Mosto, P.** “Water Quality indicators of two tributaries of the Maurice River, NJ”.
 - **Mosto, P.** “Myth Busters Revisited: Which Algae Grow in the Desert?”.
- **9th Rowan STEM Symposium.** Glassboro, NJ. 2006:
 - **Mosto, P.** “Design of a lab module incorporating the IMAPS unit into the classroom”
 - **Mosto, P.** “Measurement of water quality parameters on Rowan Pond” .

7.- COURSES:

Courses by **P. Mosto** at Rowan University, NJ, USA on the following topics:

- Spring 2003: Environmental Sciences and Biology Senior Seminar. Natural Resources.
- Fall 2003: Ecology and General Biology Environmental Focus.
- Spring 2004: Limnology and Natural Resources.
- Fall 2004: Environmental Toxicology and Honors Environmental Ethics.
- Spring 2004: Honours Human Ecology.
- Spring 2006: Issues on Sustainability.

8.- ADDRESS:

Rowan University
201 Mullica Hill Rd,
Glassboro, NJ 08028
USA

PONE: 00 1 856-256-4012

FAX: 00 1 856-256-4912

9.- WEB PAGE: <http://www.rowan.edu/provost/staff/#mosto> and

<http://users.rowan.edu/~mosto/>

ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION: Argentinean Navy

3.- NAME: Juan Carlos Pons (MD in Computing Sciences, Magister in Engineering)
juan.pons@yahoo.com

4.- FIELD WORK : Underwater communications, side scan sonar, magnetometers.

5.- PUBLICATIONS:

- Pons, J., Cousseau, J. E., Doñate, P. (2003): "Small-Scale Fading Model for an underwater acoustic communication channel". RPIC 2003. Conference Proceedings, Vol. 1, pp. 411-416.
- Pons, J. and Masson, F. (2004): "Spatial diversity using hydrophones: performance comparison". AADECA 2004 Conference Proceedings.

6.- CONGRESS:

- **VI National Congress on Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006.
 - Pons, J. and **Gómez, E. A.** "Signals Digital Processing Techniques applied to sonar equipment".

7.- COURSES:

- Engineering Magíster (finished on March 2006), National Southern University, Bahía Blanca, Argentina.

8.- ADDRESS:

Home address: Holdich 564.
(8200) Bahía Blanca.
Argentina
PHONE: 00 54 (0291) 4 557 371

9.- WEB PAGE: none

ARGENTINEAN NATIONAL REPORT 2003-2007

XXIV IUGG GENERAL ASSEMBLY

Perugia (Italy), July 2 - July 13, 2007

1.- ASSOCIATION: IAPSO

2.- INSTITUTION: - Argentinean Navy, Secretary for Maritime Affairs (Currently, in process of retirement).

- Vice-Chairman of the Intergovernmental Oceanographic Commission (IOC) from UNESCO
- Freelance oceanographer and advice in oceanic issues in the Argentinean Secretary of Science, Technology and Productive Innovation.

3.- NAME: Javier Armando Valladares (MD in Oceanography) javieravalladares@yahoo.com

4.- FIELD WORK : Sciences management

5.- PUBLICATIONS:

- Technical Reports and internal publications (classified material) within the Argentinean Navy.

6.- CONGRESS:

- **GRASP (GOOSE Regional Alliance for the Southeast Pacific).** Guayaquil, Ecuador. 15-17-June, 2006:
 - Participation in the role of Vice-Chairman of IOC.
- **COI Executive Council.** Paris, France. 21-28 June, 2006:
 - Participation in the role of Vice-Chairman of IOC.
- **VI National Congress on Marine Sciences and XIV Colloquy of Oceanography** (organised by the Argentinean National Committee of IAPSO), Puerto Madryn, Chubut, Argentina, 4 – 8 December, 2006:
 - **Valladares, J. A.** “Activities of the Intergovernmental Oceanographic Commission - IOC-”. Invited Conference.

7.- COURSES:

8.- ADDRESS:

Home address: Jonas Salk 3267
Olivos –Buenos Aires
Argentina

PHONE: 00 54 11 4313-1477/1484

FAX: 00 54 11 4312-8364

9.- WEB PAGE: none

XIII COLLOQUY OF OCEANOGRAPHY

joint with

V National Congress of Marine Sciences

4– December 2003

Mar del Plata, Buenos Aires, Argentina



UNIVERSIDAD NACIONAL
DE MAR DEL PLATA

.....

organised by the Argentinean National Committee of IAPSO (CNIAPSO).

Gerardo M. Perillo

PRESIDENT
2000-2004

Marta I. E. de Milou

SECRETARY
2000-2004

Diana Cuadrado

CO-SECRETARY
2000-2004



XIV COLLOQUY OF OCEANOGRAPHY

joint with

VI National Congress of Marine Sciences



4 – 8 December 2006

Puerto Madryn, Chubut, Argentina

organised by the Argentinean National Committee of IAPSO (CNIAPSO).

Silvia Blanc
PRESIDENT
2004-2008

Walter Dragani
SECRETARY
2004-2008





ARGENTINA



CHUBUT Province



Península de Valdés



Puerto Madryn city



The National Committee of IAPSO –CNIAPSO– welcomes you to the website of the XIV Colloquy of Oceanography that will be held jointly with the VI National Congress of Marine Sciences. The aim of this event is to provide a unique “space” and “time” within a unique natural environment to Argentinean scientific investigators as well as foreign ones, working in Oceanography. Here, they will be able to share topics, problems, results, advances, discussions, updating and current and further projects, related to their field of work. Thus, it is expected to encourage the continuous growth of the whole scientific community that has a strong commitment with the oceans in Argentina.

- **What does CNIAPSO mean in Argentina?**

CNIAPSO identifies a non-governmental association, a non-lucrative one, namely, “**Comité Nacional**” (*National Committee*) of IAPSO (*International Association for the Physical Sciences of the Oceans*), whose origin in Argentina corresponds to the end of the sixties.

Its mission is set in the first Article of its Internal Statute:

“To promote the study of the scientific problems related with the ocean and the interaction that takes place in its boundaries, taking into account the contribution of marine geophysics, marine geology, marine chemistry, physical oceanography, meteorology and hydrology; to organise scientific meetings and to report the corresponding results of the scientific activity in this field.”

Currently, CNIAPSO is composed by eighty five members. They are Argentinean scientific researchers that live either in Argentina or abroad, who have a great interest in common, namely, the scientific knowledge of the oceans. They are researchers working in different areas, such as oceanographers, physicists, chemists, geologists, biologists, geographers, mathematicians, meteorologists, hydrologists, engineers, Argentinean Navy Officers, retired or in service, experts in computing sciences. CNIAPSO's activities are also spread and sometimes even shared with undergraduate and graduate students of oceanography studying at the Faculty of Sciences, University of Buenos Aires, or at other private and public universities.

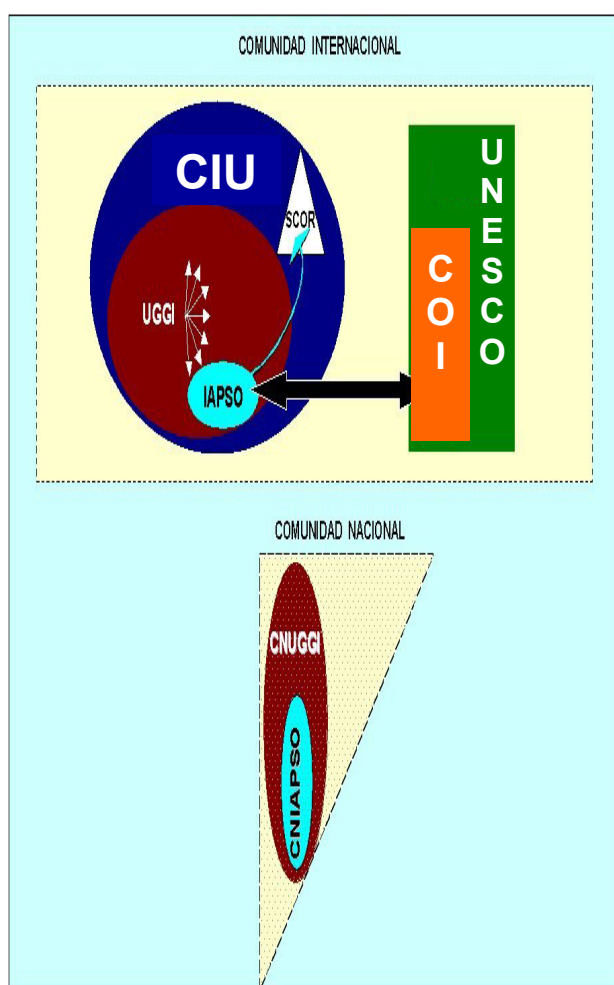
- **Brief history:**

Historically, when CNIAPSO arose in Argentina, at the beginning of the seventy-decade, it had the objective of “opening” a space, that did not exist up to that moment. It was oriented to consolidate an incipient community who was interested in studying the sea (including its boundaries and habitants), contributing to solve scientific-technological problems related to it.

Within CNIAPSO, that scientific community finds a “site-in-common”:

- For publishing. Thus, it follows the creation of a national journal with anonymous reviewers, namely, “ACTA OCEANOGRAPHICA”. It stands for quite a long time till its edition had to be finished after some years mainly because of the lack of financial support.
- For sharing, problems, efforts and projects with other colleagues working in related areas.
- For interacting with other researchers from the national community, and doing so, to benefit themselves with constructive and useful judgements derived from the fact that submission of their own work to evaluation by equals finally enriches the own intellectual knowledge of any subject.
- For joining efforts that lead to optimise the scarce available resources and to avoid unnecessary superposition of tasks.

▪ **Relationships with other organisms:**



Regarding the **international** scientific community, we may mention the *International Association for the Physical Sciences of the Oceans* (IAPSO) whose mission is analogous to the one of CNIAPSO, concerning the national scientific community, and whose history comes from the beginning of the XX century.

IAPSO is one of seven Associations of the International Union of Geodesy and Geophysics (IUGG), scientific organisation devoted to promote and coordinate studies about the Earth and its environments, which, in turn, is one of the Unions of the International Council for Science (ICSU), that was created in 1931. IAPSO participates in ICSU's Scientific Committee on Oceanic Research (SCOR) which is a non-governmental organism created by ICSU. IAPSO interacts with UNESCO's Intergovernmental Oceanographic Commission (IOC). Member Countries of IAPSO (more than fifty) are the same as the member countries of the International Union of Geodesy and Geophysics (IUGG).

National Committees or equivalent organisations within member countries may appoint national correspondents who normally serve as national delegates to the IAPSO business meetings held in conjunction with General Assemblies of IUGG.

Regarding the **national** scientific community, there is a National Committee of the International Union of Geodesy and Geophysics (CNUGGI) whose principal objective is representing Argentina at IUGG. Its Members are divided in seven Sub-Committees. One of them is the corresponding to Physical Sciences of the Oceans. Each Sub-Committee, in turn, represents the Argentina Republic at the respective IUGG International Association. Accordingly, the Sub-Committee of the Physical Sciences of the Oceans –CNIAPSO– represents Argentina at IAPSO.

On the other hand, IAPSO interacts with the Intergovernmental Oceanographic Commission –IOC– of UNESCO (United Nations Organisation for the Education, the Science and the Culture) since 1960, that provides Member States of the United Nations with an essential mechanism for global co-operation in the study of the ocean. The IOC assists governments to address their individual and collective ocean and coastal problems, through the sharing of knowledge, information and technology and through the coordination of several national programmes. The enclosed figure schematically shows the above mentioned relationships.

▪ **Colloquies of Oceanography in Argentina.**

I	09-1972	Naval Observatory, Buenos Aires
II	10-1973	Naval Observatory, Buenos Aires
III	06-1975	Naval Observatory, Buenos Aires
IV	11-1976	B. Rivadavia. National Museum of Natural Sciences, Bs. Aires
V	10-1977	B. Rivadavia. National Museum of Natural Sciences, Bs. Aires
VI	10-1979	Technological Institute of Buenos Aires, Buenos Aires
VII	05-1982	Argentinean Institute of Oceanography, Bahía Blanca
VIII	10-1991	Technological Institute of Buenos Aires, Buenos Aires
IX	09-1994	Southern National University, Bahía Blanca
X	19-1997	Argentinean Institute of Oceanography, Bahía Blanca
XI	10-1999	CRIBABB, Bahía Blanca
XII	10-2001	Sheraton Hotel, Mar del Plata
XIII	12-2003	University of Mar del Plata, Mar del Plata
XIV	12-2006	National Patagonia Centre, Puerto Madryn

▪ **Activities proposed, organised and performed by CNIAPSO.**

1. SYMPOSIA with their respective Invited Talks:

1. 1. Oceanic circulation and processes at oceanic fronts.

Chairpersons: A. Piola (SIHN/UBA/CONICET, Argentina) – A. Rivas (CENPAT, Argentina).

Invited Talks:

- “Dynamics of light dense discharges”. Lecturer: Dr Elbio Palma, Dept. of Physics -Universidad Nacional del Sur, Bahía Blanca, Argentina.
- “Tracing the Plata waters on the South American continental shelf. The La Plata Project”. Lecturer: Dr Osmar Möller, Dept. of Physics, Fundação Universidade Federal do Rio Grande, Brazil.

1. 2. Coastal circulation, its interaction with the open ocean and the continent, and with the chemical, biological and geological associated processes.

Chairpersons: W. Dragani (SIHN, Argentina) – A. Bianchi (SIHN, Argentina).

Invited Talks:

- “Recent advances in the knowledge of the Río de la Plata estuary circulation, forcing and variability”. Lecturer: Dr Claudia Simionato (CIMA-UBA-CONICET, Argentina).

1. 3. Physical and Biological Controls on Coastal Wetland Elevation.

Chairpersons: G. Perillo (IADO, Argentina) – O. Iribarne (UNMdP, Argentina)

Invited Talks:

- “Physical and Biological Controls on Coastal Wetland Elevation and Sustainability”. Lecturer: Dr Donald R. Cahoon. (Patuxent Wildlife Research Centre, USA.).

1. 4. Sea-Atmosphere interaction.

Chairpersons: C. Piccolo (IADO, Argentina) – C. Simionato (CIMA-CONICET-UBA, Argentina).

Invited Talks:

- “Global Climate Change and its regional effects”. Lecturer: Dr Mario Núñez, Dept. of Marine and Atmospheric Sciences, University of Buenos Aires, Argentina.

1. 5. Current alternative methodologies and techniques applied to oceanographic research.

Chairpersons: V. Zlotnicki (JPL, USA) – M. E. Milou (SENID, Argentina).

Invited Talks:

1. “Satellite Sensors for Oceanography, present and future”. Lecturer: Dr Víctor Zlotnicki (Jet Propulsion Laboratory, California Institute of Technology, USA).
2. “Surveying with multibeam echosounders or “watching” into the ocean: Case studies from Argentinean waters”. Lecturer: Ms in Engineering Adrián Madirolas. (INIDEP, Argentina).

2. Plenary Conference:

- “Activities of the Intergovernmental Oceanographic Commission -IOC-”. Lecturer: CN Lic. Javier Valladares (IOC, Argentina).

3. Debate:

- “Oceanographic Operative Research and Marine Scientific Research? or Oceanographic Operative Research versus Marine Scientific Research?”. Co-ordinated by J. Valladares (COI, Argentina).

4. Antarctic Activity:

Antarctic Glaciology and associated oceanographic processes. Chairpersons: G. Tosonotto (IAA-DNA, Argentina) – A. Curtosi (IAA-DNA, Argentina).

Invited Talk:

- “Impact of the climate change on the coast of Antarctic Peninsula due to the disintegration of the ice barriers”. Lecturer: Pedro Skvarca

6. CNIAPSO General Assembly:

- Some relevant considerations commented during the CNIAPSO General Assembly:
 - Currently, the small but active Argentinean oceanographic community, that belongs to the respective National Committee of IAPSO, is composed by 87 Members.
 - The Members of the Argentinean National Committee of IAPSO presented: 114 contributions (47 oral presentations and 67 posters) at the XIV Colloquy of Oceanography.
 - There were more than 1.100 participants in the XIV Colloquy of Oceanography, joint to VI National Congress of Marine Sciences. In particular, this latter meeting, mainly devoted to Marine Biology, is traditionally attended by a significant number of researchers (about 700 on 2003).
 - The funds provided by the National Secretary of Science, Technology and Innovative Production to financially contribute with the XIV Colloquy of Oceanography, organised by the Argentinean National Committee of IAPSO, namely, \$ 6.300 (about US\$ 2100) were used as follows, among Invited Lecturers, Convenors and Members of CNIAPSO:
 - 5 air-tickets: Buenos Aires-Puerto Madryn-Buenos Aires.
 - Costs due to 2 trips by car (Buenos Aires-Puerto Madryn-Buenos Aires and Mar del Plata-Puerto Madryn-Mar del Plata).
 - Hotel Accommodation for 10 participants (equivalent to 36 nights at a hotel).
 - 4 transfers Trelew airport- Puerto Madryn- Trelew airport.
 - Dinner and lunch vouchers (about 50).
 - Many local and regional newspapers included several articles devoted to the scientific event.