



International Association
for the Physical Sciences of the Oceans

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

<http://iapso.iugg.org>

INTRODUCTION

IAPSO has the prime goal of ‘promoting the study of scientific problems relating to the oceans and the interactions taking place at the sea floor, coastal, and atmospheric boundaries insofar as such research is conducted by the use of mathematics, physics, and chemistry.’ IAPSO works mainly through 1) biennial scientific assemblies; 2) working groups; 3) commissions; 4) services; and 5) website information. Of special importance to IAPSO is the involvement of early career scientists as well as those from least developed countries.

IAPSO maintains formal liaison with other scientific commissions and committees. These include the ISC's Scientific Committee on Oceanic Research (SCOR), and UNESCO's Intergovernmental Oceanographic Commission (IOC). For more information see <http://iapso.iugg.org/>.

ADMINISTRATION

The IAPSO Bureau was renewed in July 2019 during the IUGG General Assembly in Montreal. It comprises:

President: Trevor McDougall (Australia)
Past President: Denise Smythe-Wright, (UK)
Secretary General: Stefania Sparnocchia (Italy)
Treasurer: Ken Ridgway (Australia)

The Executive Committee comprises the Bureau members and

Vice-Presidents: Agatha de Boer (Sweden)
Hans van Haren (The Netherlands)

Members: Edmo Campos (Brazil)
Juliet Hermes (South Africa)
Yukio Masumoto (Japan)
Jae-Hun Park (Republic of Korea)
Christa von Hildebrandt-Andrade (USA and Puerto Rico)
Peter Zavialov (Russia)

The IAPSO office is located at the Institute of Marine Science of the National Research Council of Italy, Trieste and day-to-day business is managed by Secretary General (SG), Stefania Sparnocchia. The SG is responsible for the IAPSO website. A page on the Facebook social network is also active with the aim of

facilitating the spreading of information in the community (see <https://www.facebook.com/iapso.iugg.org>). Together with the President, the SG also prepares and distributes a bi-annual Newsletter to IAPSO delegates and interested parties.

IAPSO finances are managed by the Australian-based Treasurer, Ken Ridgway.

IAPSO business meetings were conducted in July 2019, during the IUGG General Assembly in Montreal, Canada. These included three meetings of the Executive Committee, on 8, 9 and 14 July, and one General Business meeting also involving National Correspondents or their Delegates on 11 July. No formal business meetings have been arranged for 2020 and any business will be conducted by email and Zoom where appropriate.

ACTIVITIES

2019 Assembly

The principal activity during 2019 was the IUGG 2019 General Assembly held in Montreal, Canada, from 8-18 July, 2019. The IAPSO scientific sessions were held from 9-14 July and included 11 IAPSO symposia (216 oral presentations and 94 posters) and 5 IAPSO-lead Association Joint symposia (111 oral presentations and 51 posters). IAPSO also co-sponsored 12 Joint symposia led by another Association (189 oral presentations and 104 posters). The program details can be found on the Assembly's website: <http://www.iugg2019montreal.com/p.html>. Approximately 4000 participants attended this General Assembly, of which 359 registered as IAPSO. There were many quality presentations together with much networking in the corridors.

The IAPSO highlight during the assembly included

- the Union Lecture 'The Ocean's Role in Atmospheric Carbon Dioxide Changes During Ice Age Cycles' given by Prof. Karen Kohfeld (Simon Fraser University, Canada);
- the Prince Albert I, 2019 lecture 'Decadal variability in the ocean CO₂ sink' given by Prof. Corinne Le Quéré (University of East Anglia, United Kingdom), who was awarded the Prince Albert I Medal in connection with the lecture;
- the ECS Medal in Physical Oceanography, 2019 talk 'Overturning variability with observations' given by Gerard McCarthy (Maynooth University, Ireland);
- the ECS Medal in Chemical Oceanography, 2019 talk 'Nitrogen fixation across scales' given by Mar Benavides (Mediterranean Institute of Oceanography, France).

IAPSO also awarded a further medal, the Eugene Lafond Medal, to a developing world scientist who gave a notable paper at an IAPSO sponsored or co-sponsored symposium. Following the procedure, presentations (oral or poster) of self-nominating candidates were attended by a subset of the IAPSO Executive Committee and the Eugene LaFond Medal, 2019 was awarded to Mr. Rohith Balakrishnan, for his oral presentation 'Basin-wide sea level coherency in the tropical Indian Ocean driven by Madden-Julian oscillations' delivered on July 11, 2019 within the IAG-IAPSO joint symposium 'Monitoring Sea Level Changes by Satellite and In-Situ Measurements'.

2021 Assembly

IAPSO has been actively organizing the IAPSO-IAMAS-IACS Joint Assembly in Busan, South Korea, 18-23, July 2021, but in early June 2020, in a Zoom meeting held between the Local Organizing Committee and the Presidents and Secretary Generals of IAPSO, IAMAS and IACS, we decided to cancel this in-person joint assembly, due to the COVID-induced uncertainty surrounding international travel. We are now in active discussions regarding what IAPSO on-line activity might occur on these same dates in 2021,

and/or whether the meeting in Busan might simply be postponed by twelve months. These decisions are expected to be made in July 2020.

2023 General Assembly

The next General Assembly of IUGG is scheduled for Berlin, 12-19 July 2023.

IAPSO Early Career Scientist Working Group

The IAPSO Early Career Scientist (ECS) Working Group was established in 2018, chaired by Alejandra Sanchez-Franks (United Kingdom) and co-chaired by Malin Ödalen (Sweden). The first IAPSO ECS networking event was organized on 9 July, 2019, during the IUGG 2019 General Assembly, with about 30 early career scientists participating. This IAPSO ECS group has now produced a website (<https://www.iapsoecs.org>) and a twitter account (https://twitter.com/iapso_ecs?s=20) for this working group, where the newsletters, job and research cruise opportunities and ECS-related events get routinely updated. There are now over 100 members in the IAPSO ECS network signed up to the mailing list. The IAPSO ECS Working Group organized and submitted a review of the Second Order Draft of the Working Group I (WG1) contribution to the sixth IPCC Assessment Report.

IAPSO Best Practice Study Groups

IAPSO has begun to fund IAPSO Best Practice Study Groups, expecting to fund one of these per year. An IAPSO Best Practice Study Group will address an issue whose resolution will assist in the conduct of oceanographic research. In carrying out oceanographic research, a choice must frequently be made between a few options for measuring data, analysing data, processing software, or modelling a system. The reasons for choosing between competing methods are often not well documented and the relative strengths and weaknesses of these routes are usually not published or well known. Each Best Practice Study Group will receive up to US\$10,000 towards the costs of a meeting. In January 2020 we chose the first two such IAPSO Best Practise Study Groups (out of nine quality applications), one concerned with the use of data from moored CTD instruments, and the other with the measurement accuracy and interpretation of pH measurements.

SCOR Administration

IAPSO has maintained its formal relations with SCOR during the year. The EC members were involved in the evaluation of the 2019 SCOR Working Group proposals and the President, Trevor McDougall, attended the 2019 SCOR Annual Meeting in Japan.

IUGG 100 years anniversary

Formed in Brussels (Belgium) on 28 July 1919, the International Union of Geodesy and Geophysics (IUGG) celebrated its 100th anniversary in 2019. At the meeting in Brussels in 1919 a Section of Physical Oceanography was also formed, which gave birth to the current IAPSO. The centennial year marks an important milestone for IUGG. Since its inception as a union of international scientific associations, IUGG has developed into a prominent scientific organizations promoting Earth and space sciences worldwide in the complicated political, economic and scientific landscapes of the 20th and the beginning of the 21st centuries. To celebrate the centenary of the IUGG and its Associations, various initiatives were implemented including:

- the implementation of a website that traces the history: <http://100.iugg.org/index.php>;
- the publication of the special issue of History of Geo- and Space Sciences (HGSS), 'The International Union of Geodesy and Geophysics: from different spheres to a common globe',

https://www.hist-geo-space-sci.net/special_issue996.html, including the paper “IAPSO: tales from the ocean frontier”, <https://www.hist-geo-space-sci.net/10/137/2019/>;

- the event ‘Centennial International Cooperation in Earth and Space Sciences at the UNESCO Headquarters, Paris, FRANCE, 29 July 2019, program: http://100.iugg.org/events/IUGG_program_Paris_Jul_29_2019.pdf.

The Guest of Honour was HMSH Prince Albert II of Monaco and he made reference to the work of his great great grandfather who was the first President of IAPSO and applauded IAPSO’s work. In turn Denise Smythe-Wright was able to thank him personally for his support of IAPSO and the IAPSO Prince Albert I medal.

IUGG/IAPSO support to scientific meetings

IAPSO endorsed the following two scientific meetings that were supported by IUGG:

- Workshop on Sea Level Data Archaeology, which took place in Paris, France, 10-12 March 2020.
- Tsunamis in Latin America and the Caribbean: Recent Developments and Plans for the Future, Quito, Ecuador, 3-5 August 2020. This meeting has been postponed due to the covid pandemic.

Submitted by
Trevor McDougall, IAPSO President
Denise Smythe-Wright, IAPSO Past President
Stefania Sparnocchia, IAPSO Secretary General
(June 2020)