

#### **Dear Fellow PORSEC Members,**

In this issue of the PORSEC Bulletin we tell you about a very successful Conference in Kochi, India, November 5-9, 2012, and about the Tutorial that was offered in association with the conference. We also had a kick-off meeting for a new Mentoring Program. Other highlights include a message from our newly elected President of the PORSEC Association, Dr. Lingzis Tang, and Vice-President, Gad Levy. Full report on the Scientific Organizing Committee meeting will come in issue 7.1. An op-ed piece about the possible future venues of our conferences is offered by out-going president, Jim Gower. How can we include the full Pan-Ocean in our name? Can we go to South America and Africa for conferences in the future? Please voice your opinions!

As we write this letter, it is exactly 8 years since the Sumatra earth quake and the devastating tsunami that attacked many coastal areas in South Asia; Indonesia, Sri Lanka and Thailand, with many, many deaths and much damage. We have since had the terrible Japanese tsunami, where the area was not spared even though much preparatory effort had been expended to protect against such devastation. There are many other hazards near the ocean, tropical cyclones for sure. There was the strong Typhoon Bopha that hit the Philippines in the beginning of December and Tropical Storm Nilam made landfall on the Tamil Nadu coast in southern India during the PORSEC tutorial (in the afternoon of October 31), with lots of rain even as far as Kochi. In the US we had hurricane Sandy that went along a great length of the US East coast and wreaked havoc in so many places.

Our professions using Remote Sensing to document, study, learn about and possibly predict events that are dangerous for human beings, give us special challenges and responsibilities. Let us determine to continue to work hard in 2013 to build on the advances already made and enlarge our knowledge about the oceans and remote sensing from space.

We send you the best wishes for your work and personal situations and appreciate every time that we may hear from you directly in 2013 with some interesting scientific material or ideas for this Bulletin!

Yours, Gad Levy and Kristina Katsaros Co-editors

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# PRESIDENT AND VICE PRESIDENT ADDRESS

Dear PORSEC Member,

It was very good to see old friends and colleagues and many new ones at our PORSEC 2012 meeting in Kochi, India. In a future PORSEC, we hope to see those of you who could not come to Kochi.

Our Association is a very unique one and we are growing. In fact, PORSEC 2012 was one of the largest ever, with 544 delegates attending. We are truly international in our membership with no particular alliance to one country. Over the past 22 years of PORSEC's existence more countries have come into the fold of "remote-sensing nations" with their own space agencies, and more smaller countries are now engaged in using remote sensing for environmental research and monitoring. We are committed to continue this - keeping PORSEC international.

At the Scientific Organizing Committee (SOC) meeting in Kochi it was recommended that PORSEC be held in South America again, and we have started efforts and contacts to possibly bring PORSEC to Brazil in 2016. I (Tang) have also just come back from Bali, Indonesia, the site of our upcoming PORSEC 2014, where I met with Prof. Made Mahendra of Udayana University. We will report on progress in coming bulletins.

The PORSEC Mission strongly emphasizes capacity building. To this end we had a very large attendance by students (almost 40% of the delegates were students); held another successful tutorial course in the days preceding the conference; and launched a new mentoring program, with an overwhelming response, during the conference. Capacity building also means communication of scientific knowledge and facts and the editors of the PORSEC special issue of the International Journal of Remote Sensing report that as of January 15, 2013, over 60 papers were submitted to the special issue.

We would like to commend and give special thanks to Dr. Satheesh C. Shenoi, Director of the Indian National Centre for Ocean Information Services (INCOIS) and chairman of the PORSEC2012 Local Organizing Committee (LOC) and the entire LOC for making PORSEC 2012 such a success.

Yours truly,





DanLing Tang, President Gad Levy, Vice President



Jim Gower handing over responsibilities for the presidency of PORSEC Association to Danling Tang in Kochi.

# Synopsis of the PORSEC 2012 in Kochi, India

Satheesh Shenoi

PORSEC 2012 held at Kochi, India, during 5-9 November 2012 was a huge success by all possible measures. PORSEC 2012 saw the largest ever gathering of scientists. There were 544 participants that included 200 students. They came from 19 countries (Australia, Canada, China, Croatia, France, Germany, India, Indonesia, Israel, Italy, Japan, Malaysia, Norway, Russia, South Korea, Spain, Taiwan, Ukraine and USA). The conference was inaugurated by Dr. K. Radhakrishnan, Chairman, Indian Space Research Organisation and Secretary, Department of Space, Government of India and Dr. Shailesh Nayak, Cha-

irman, Earth System Science Organisation (ESSO) and Secretary, Ministry of Earth Sciences, Government of India. The dignitaries highlighted the plans of Government of India in ensuring the continuity of data through the launch of remote sensing satellites dedicated to ocean research and monitoring. They also highlighted the need for international collaboration in utilizing the full potential of remote sensing for the benefit of society. Dr. Jim Gower, President of the PORSEC Association reminded the delegates about the dangers of global warming and necessity of utilizing the remote sensing technology to understand the warming trends and possible mitigation. Dr. S.S.C. Shenoi, Chair of Local Organizing Committee, LOC, welcomed the delegates and Dr. V.N. Sanjeevan, Vice-chair of LOC offered the vote of thanks. The pro-

ceedings were initiated with the ceremonial lighting of the lamp, a symbol for the enlightenment to come during the conference. The accompanying page of pictures shows this ceremony and some illustrations of the activities and gives the statistics of the event as pie-charts.

The participants presented 275 research papers spread over 25 technical sessions. In addition to the oral talks, participants summarized their posters at the end of each technical session and displayed the posters for detailed discussions and viewing. Altogether 78 posters were displayed during the conference. The plenary talks delivered by Dr. R. Navalgund, Dr. Shuba Satyendranath, Dr. S.R. Shetye, Dr. Timothy Liu, Dr. Toshio Yamagata and Dr. R. Krishnan attracted much attention and interest.

The pre-conference tutorial conducted during October 30 - Nov 3, 2012 at the Central Institute for Fisheries Technology (CIFT) in Kochi, was attended by 30 students

from 7 countries. Dr. Srinivas Gopal, Director, CIFT inaugurated the training programme in the presence of Prof. Trevor Platt, Executive Director, POGO, Plymouth Laboratory, UK, Prof. Jim Gower, President PORSEC and Dr. S.S.C. Shenoi, Director, INCOIS. The tutorial, consisting of lectures and hands-on training including field data collection onboard boats, stimulated much interest in the minds of students in applying remote sensing in their research. Dr. Anantha Narayanan, Director, Naval Physical Oceanographic Laboratories, Kochi distributed the certificates to students who completed the tutorial programme.

The Mentorship Programme conducted by Dr. Gad Levy and Dr. Stephany King attracted more than 200 students. International Ocean Color Coordination Group (IOCCG) conducted a special session during the conference.



The Ministry of Earth Science (MoES), Indian Space Research Organization (ISRO), Department of Science and Technology (DST), Indian Council of Agricultural Research (ICAR) and Council of Scientific and Industrial Research (CSIR) were the major sponsors of the conference. IBM India, State Bank of India and Andhra Bank also supported the conference financially. The Indian National Centre for Ocean Information Services (INCOIS), Hyderabad hosted the entire event. In addition, Centre for Marine Living Resources (CMFRI), National Institute of Technology (NIOT), Chennai, National Centre for Antarctic and Ocean Research (NCAOR), Goa, Indian Institute of Tropical Meteorology (IITM), Na-

tional Institute of Oceanography (NIO-Kochi), Naval Physical Oceanographic Laboratory (NPOL), Central Institute of Fisheries Technology (CIFT), Central Marine Fisheries Research Institute (CMFRI), Cochin University of Science and Technology (CUSAT), NODPAC and Nansen Environmental Research Centre India (NERCI) from Kochi and Centre for Earth Science (CESS), Thiruvanandapuram supported the event through their active participation in organizing the event. Some of them also set up exhibitions at the venue of conference to exhibit their activities to the participants. Distributors of scientific equipments, SeaSpace USA, TSK Japan and SWAN India also set up exhibition stalls at the venue.

The cultural evening organized during the first day of the conference highlighted the uniqueness of Indian culture and local traditions through dance forms was spectacular and memorable. We include here the lead dancer representing a local mythical person (possibly real), who oversaw the proceedings with his image at the back of the stage.

#### **OPENING CEREMONIES**



# Lighting the candles for enlightenment, hearing the conch blown



From left: Dr. S.S.C. Shenoi, Dr. K. Radhakrishnan, Dr. Shailesh Nayak, Dr. V.N. Sanjeevan, Dr. Jim Gower)

#### **Dignitaries greeting the Participants**



Dr. Shailesh Nayak, Chairman, Earth System Science Organisation and Secretary, Ministry of Earth Sciences



Dr. Radhakrishnan, Chairman, Indian Space Research Organisation and Secretary, Department of Space



Drs. Jim Gower, President of PORSEC Association and Dr. Shatheesh Shenoi, Chair of the Local Organizing Committee.

#### Old friends meet again and new and old PORSEC members get acquainted





Left: Drs. Shailesh Nayak, Trevor Platt, Shuba Satyendranath and others.

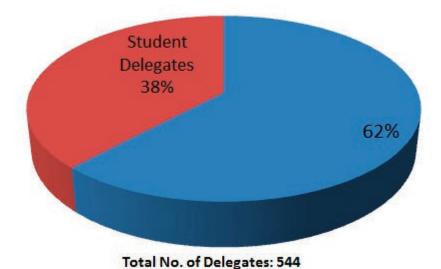
#### The whole crowd attending the opening ceremonies and plenary session into one picture!



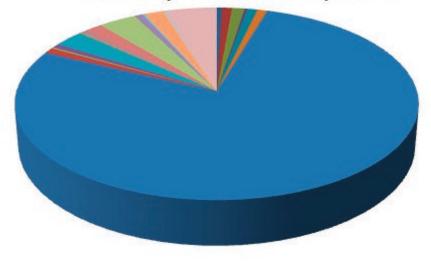
PORSEC Banner is handed over to the hosts of PORSEC 2014 from Bali



## Conference Participation



Country-wise Participation



Total No. of Delegates: 544

The big blue wedge represents Indian participants, many of whom were students, while the 2 green wedges stand for Russian and Chinese and the wide pink wedge for USA representatives. The other 16 wedges represent delegates from: Canada, Croatia, France, Germany, Italy, Indonesia, Japan, Malaysia, New Caledonia, Norway, Mexico, Israel, South Korea, Spain, Taiwan and Ukraine.

# Sessions and Papers

· Sessions: 25

· Special Sessions: 2

- Mentorship Programme

- IOCCG

# **Education and Training Activities at PORSEC 2012**

Stephanie King

The PORSEC education and training program is becoming one of the major highlights of the PORSEC meetings. At PORSEC 2012 the local organizers arranged a program that that attracted many students and young scientists. The pre-conference tutorial was held from Oct. 30 to Nov. 3 and the Mentorship Program kicked-off with a meeting during the main conference. Almost 40% of the delegates attending the main conference were students.

#### **Pre-Conference Tutorial**

PORSEC has a tradition of organizing tutorials that aim to bring a unique experience to young scientists from the host country. he PORSEC 2012 pre-conference tutorial was held from October 30 to November 3, 2012 at the Central Institute of Fisheries Technology (CIFT) in Kochi, Kerala, India.

The organizing committee reviewed over 50 applications and in the end 31 participants were selected based on experience, education and interest. Students applied to either the microwave or the ocean colour section, with an equal number selected for each. There were 10 foreign students from Indonesia, Malaysia, Russia, Japan, China and the USA, and 21 students from universities and institutes all over India. Many of the tutorial participants were PhD students or young scientists already working in a research environment.

The instruction was given by 12 senior scientists who volunteered their time for the 5-day tutorial. The local organizers arranged funding so there was no registration fee for the students. They were also able to arrange travel support and lodging for many students. The United States Office of Naval Research Global (ONRG) supported travel of 8 foreign students, 3 lecturers and 1 organizer.

The first day was a plenary session with general lectures aimed at all of the students. In the following four days students were split into either the ocean colour or microwave groups. Emphasis was put on practical exercises based on a recommendation from students in previous tutorials. Activities included an expedition on a boat with instrument demonstrations, SAR image interpretation exercise, and exercises in the computer lab. The students worked in groups on miniprojects that were presented to the group on the last day.

The tutorials provide valuable interaction between senior researchers and students. This interaction is encouraged by a social program, which in Kochi included two evenings hosted by the local organizers. On the free day between the tutorial and the start of the conference many of

the students and lecturers went on a sight-seeing day trip to local waterfalls and villages.

We welcome feedback from students and strive to continue to improve the tutorial experience. Feedback from the 2012 tutorial was overwhelmingly positive and suggestions included increasing the length of time for the tutorial, allowing more time for practical exercises, and giving more examples of remote sensing data sources and how to use them. Students attending the main conference after the tutorial described their conference experience as 'enriching' because of the materials learned and relationships developed at the tutorial.

The 2012 tutorial was a complete success as a result of the dedication and hard work of the organizing committee members (T. Srinivas Kumar, Raj Kumar, K. Hanumantha Rao, Tune Usha, R. Sajeev, G.V.M. Gupta, C. Revichandran, Aneesh Lotlikar, Stephanie King and P. Muhamed Ashraf) and many local volunteers.

#### **Mentorship Program**

The PORSEC Mentorship program was initiated at a meeting on November 8 during the main PORSEC conference. The program aims to pair experienced scientists with new scientists who need help with developing scientific ideas, research projects and papers. It is an activity that fits well with PORSEC's mandate of helping developing nations to stimulate their science programs.

Close to 200 people attended the meeting and most signed up to participate in the program. This level of attendance is an exciting show of interest and support for the program. A lecture prepared by Arthur Cracknell, co-chief editor of the International Journal of Remote Sensing was given by Jim Gower and Gad Levy. The lecture was on publishing in English in an international journal. After the lecture the organizers asked for suggestions on how the program should be structured. uggestions included starting an online discussion forum and website. Another comment was on the importance of encouraging productive relationships between mentors and mentees that go beyond simple editing exercises.

The next steps are to communicate with the mentor and mentee participants and to make matches. We hope to use the interest in the program to seek out funding support.

If you have comments or would like to participate please contact one of the organizers Stephanie King (kingstepha at gmail.com), Gad Levy (gad at nwra.com), Ajit Subramaniam (ajit.subramaniam at moore.org), Jim Gower (jim.gower at dfo-mpo.gc.ca) or Gang Pan (gang.pan at 126.com).

#### **TUTORIAL ACTIVITIES**



Students and lecturers depart on day trip to make oceanographic measurements in the Kochin Harbour.







Animated instruction about what will be done with instruments. Measurements being taken.







Discussion of data in lab on ship and writing of reports in groups and teams.





Proud students, receivers of Certificates!

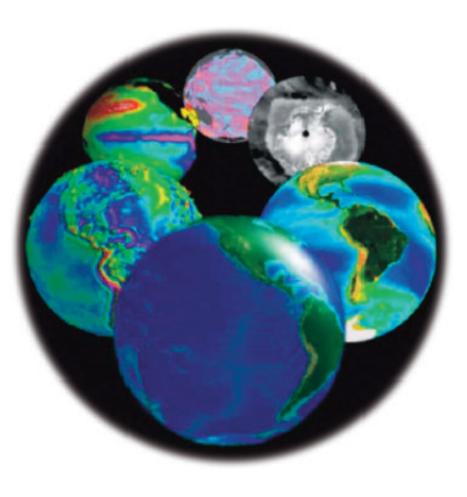
Dinner Party hosted by the Local Organizing Committee.

#### PORSEC 2014, 2016, 2018?

James Gower

We will report more fully on the POR-SEC 2012 Scientific Organizing Committee (SOC) meeting in the next bulletin, but present one topic here. Probably the most important decision that PORSEC has to make, is where to hold future meetings. We have held our meetings in Japan, Australia and Canada, where POR-SEC has difficulty competing with better established conferences, and in Chile, where distance reduced our numbers. The decision to hold recent meetings in Korea, China and India has allowed us to benefit from the rapid expansion of scientific work and infrastructure (satellites and universities) in these countries, and to meet some of the large number of enthusiastic local students.

For PORSEC 2014 we have taken the decision to go to Bali to take advantage of similar growth in Indonesia. We were there in 2002, and have an added reason for returning in that Yasuhiro Sugimori, our founder, started CReSOS (the Centre for Remote Sensing and Ocean Science) at Udayana University in 2001. We are lucky to have skilled local organizers with good support. However, Bali itself is not a major centre, and we should expect to find this meeting smaller than PORSEC 2012.



For 2016, we agreed at the SOC meeting last November, that South America would be an interesting target location. The drawback for us is our lack of present participants by scientists in South America, although several countries are now active in remote sensing. We would need to have a significant contingent at PORSEC 2014 to make Brazil, Argentina or Chile possible in 2016. I note however, that a single person could form the required "contingent" if they had enough energy and skill. Another suggestion made at the SOC was to hold a meeting in Africa. Some areas are politically stable enough, and some have significant interest in oceans. Morocco was mentioned.

# **NOTICES**

# Announcements, News, and Opportunities of Interest to the PORSEC Community:

### **ANNOUNCEMENT**

Submitted to by PORSEC member: Andrei Kostianoy

There are various Symposia of interest to PORSEC Association Members planned for the joint IAPSO/IHS/IAS-PEI (all part of IUGG) meeting to be held in Gothenburg, Sweden 22-26 July 2013. The website is http://iahs-iapso-iaspei2013.com/sciprog.asp

While there are several specialized sessions (listed below), there is a more general one, for work not appropriate to the specialized sessions. I encourage you to consider submitting an Abstract to this session:

**P01:** General topics on ocean physics and chemistry Organiser: IAPSO. Lead Convener: Silvia Blanc (Argentina) Co-Conveners: Andrey G. Kostianoy (Russia), Victor Zlotnicki (USA)

**Description:** The symposium is planned to discuss the new results of research in physical and chemical oceanography concerning meso- and small-scale circulation and eddies, water masses and their interaction, coastal currents, frontal zones and fronts, coastal upwellings and filaments, as well as SST, SSS and sea level variations, wind waves and storm surges, internal waves and tides, and other phenomena in different regions of the ocean. The topics of the symposium also include key problems in ocean color (suspended matter, chlorophyll concentration and algal bloom), oil pollution, carbon cycle, acidification, and various extremes in the sea. Special symposiums are planned to discuss remote sensing applications, numerical and laboratory modeling, and marine chemistry. The symposium will also welcome presentations on ocean regions and inland seas, as well as subjects not covered by other symposia.

For completeness, these are the other IAPSO symposia during that week, with their Lead Conveners:

P02 Baltic and other regional seas, Markus Meier

<mailto:markus.meier@smhi.se>

P03 Ocean Mixing, Toshiyuki Hibiya

<mailto:hibiya@eps.s.u-tokyo.ac.jp>

P04 Oceanic Boundary Current Systems, Magdalena

Andres <mailto:mandres@whoi.edu

P05 Arctic Ocean, Göran Björk

<mailto:gobj@gvc.gu.se

P06 Investigating the Southern Ocean what have we learnt 5 years on from IPY?

Isabelle Ansorge <mailto:isabelle.ansorge@uct.ac.za>

P07 Bio-physical and -geochemical interactions in the marine environment,

Adrian Martin <mailto:adrian.martin@noc.ac.uk

**P08** Thermohaline Circulation and Deep Currents Christopher Meinen

<mailto:Christopher.Meinen@noaa.gov>

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**P09 Ocean observations and climate change,** Satheesh C. Shenoi <mailto:shenoi@incois.gov.in>

**P10** North Atlantic and climate change, Monika Rhein <mailto:mrhein@physik.uni-bremen.de>

P11 Integrated Environmental Modeling: Regional Climate and Ocean Modeling,

Elfatih Eltahir <mailto:eltahir@mit.edu>

And these are some relevant Joint symposia:

HP1 Deltas: landforms ecosystems and human activities

Gordon Young & Gerardo M.E. Perillo

HP2 Land-ocean interaction, Christophe Cudennec HP3 Implications of sea level change for the coastal zone - A symposium to mark the 80th anniversary of the Permanent Service for Mean Sea Level (PSMSL), Dan Rosbierg

PS1 Extreme waves, Efim Pelinovsky

SP1 Tsunamis, particularly due to submarine slides: cases, experiments, observations and warning,

Alexander Rabinovich

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# WE WISH YOU A HAPPY NEW YEAR 2013

#### **PORSEC Database**

For our database of the PORSEC Association members we would like you to enter your information directly into our web membership form, if you haven't already done so: http://porsec.nwra.com/membershipform.php

Please fill this form even if you have already given the information to us in any other format since we may not have all that information down correctly. **Please use this form to update your information whenever you have any changes.** It can also be used to pay your membership fee.

This form is also accessible through our main page (http://porsec.nwra.com) by clicking on "Join the PORSEC Association".

Please work on getting us more members; use the PORSEC home page and the above links for information. The prospective member provides us with the same information through the form. We will bill the person for the membership fee, which can now be paid via "Pay Pal" on the Internet.

#### Information

For information about the association and links to Newsletters from the president and Bulletin issues go to: http://porsec.nwra.com/. To join the PORSEC Association go to membership on the web site or contact one of us directly. The Bulletin of the PORSEC Association is edited by Gad Levy and Kristina B. Katsaros. Production Editor Susanne Öhrvik. We welcome contributions about your work and about any activities of our PORSEC members that may be of interest to other members for future issues of the Bulletin. To submit articles for this Bulletin of the PORSEC Association, please contact gad at porsec.nwra.com or katsaros at porsec.nwra.com.