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APSAR 2013 Tsukuba, Japan—Report

I. INTRODUCTION

The 2013 Asia-Pacific Conference on Synthetic Aperture Radar (<http://www.apsar2013.org/>) was held by IEEE Geoscience and Remote Sensing (GRSS) Japan Chapter and Institute of Electronics, Information and Communication Engineers (IEICE) Electronics Society on September 23–27, 2013, with a key phrase of “Overcoming the Hardships: Responding to Disasters with SAR.” APSAR is an international conference series devoted to the development and applications of synthetic aperture radar (SAR) and other radar technology. With the dramatic increase of the number of operational SAR systems in recent years, there is now a strong demand for more gatherings where the regional SAR and radar communities can share their technical expertise. Every other year, APSAR provides experts of SAR and related fields with an opportunity to present their latest research and development. It is an intensive forum for discussion with colleagues gathering from many countries in the Asia-Pacific region and beyond. The conference covers a wide variety of SAR and radar related topics including SAR system design and concepts, signal processing, analysis techniques and SAR applications.

II. APSAR 2013 TSUKUBA WITH THE MAIN THEME “DISASTER MONITORING”

Over the last decade, the world has experienced the phenomenal power of Mother Nature through a number of catastrophes striking the Asia-Pacific and other regions. After such events, we rebuild our lives and infrastructure, and pose questions of how we could have been better prepared for them and how we might better respond as they unfold. Radar is known not only for its utility in situations where darkness, clouds, or smoke would obscure the view of optical sensors, but also for its abil-

ity to gather various kinds of data such as phase and polarization besides intensity. Then it is quite natural to ask how best to utilize SAR and other radar technologies in preparing against and responding to disasters.

The answers involve scientific and technical innovations in diverse areas such as information extraction from radar data, new imaging techniques, new issues on observation modalities and strategies, and constellation coordination for pre- and postevent acquisition and analysis of data. To meaningfully address these issues, SAR/radar scientists and engineers in this region need to strengthen the partnership with first responders and various agencies responsible for safety and security, and work together in the development efforts.

The main theme of APSAR 2013 was “Disaster Monitoring.” Papers relating to the use of SAR for disaster monitoring were especially encouraged for submission. In addition to the regular sessions, APSAR 2013 offered a special session on this issue. The Conference provided attendees with an opportunity to think about how each of us can contribute through SAR technology to “overcome the hardships” after natural disasters to brighten our future.

III. PLENARY TALKS AND TECHNICAL SESSIONS

Participants in APSAR 2013 Tsukuba enjoyed active discussion widely on SAR, its applications and future technology. On the first conference day, keynote lectures were given by Dr. Masanobu Shimada of JAXA, Prof. Wen Hong of MITL-IECAS, Prof. Young Kil Kwag of Korea Aerospace University, Dr. Manfred Zink of DLR, Mr. Robertus Heru Triharjanto of LAPAN and Prof. Wolfgang-Martin Boerner of UIC as priming stimuli on technology advancement as well as scientific/engineering policy. Fig. 1 shows the attendees gathering after the keynote plenary session on September 24, 2013, at Tsukuba Epochal Main Lobby (All photos: Manabu Watanabe, JAXA).

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FIGURE 1. Attendees gathering after the Plenary Session on September 24, 2013, at Tsukuba Epochal Main Lobby.



FIGURE 2. Finalists of the Student Paper Award, APSAR 2013 Tsukuba.



FIGURE 3. Finalists of the Young Scientist Award, APSAR 2013 Tsukuba.

The following technical sessions were running in a 3 or 4-parallel style. They included 7 special sessions of SAR Applications—Natural Disaster Monitoring I, II, ALOS-2 Global Observation I, II, Polarimetric SAR Methods and Applications I, II, and Tandem-X and Next Generation SAR, as well as 22 regular sessions on various SAR and radar areas such as systems, applications (vegetation, ocean, soil, etc.), signal/information processing and data analysis.

IV. STATISTICS

Table 1 shows the detailed statistics. Total submissions were 233, out of which manuscripts 128 oral and 43 poster papers were selected through a review process. There were only 6 noshows in oral and 2 in poster presentations.

TABLE 1. COUNTRY/REGION STATISTICS SHOWING PARTICIPANTS AND ORAL/POSTER PRESENTATIONS IN APSAR 2013 TSUKUBA, JAPAN.

PARTICIPANTS		ORAL PRESENTATIONS	
Japan	144	Japan	73
China	28	China	14
Korea	10	Germany	7
Germany	7	India	4
The Netherlands	6	Korea	4
India	5	Brazil	3
Canada	4	USA	3
USA	4	Canada	2
Singapore	3	Russian Federation	2
Switzerland	3	Sweden	2
UK	3	Taiwan	2
Russian Federation	2	UK	2
Sweden	2	Malaysia	1
Taiwan	2	The Netherlands	1
Australia	1	Norway	1
Brazil	1	Switzerland	1
Estonia	1	Total	122
France	1	POSTER PRESENTATIONS	
Indonesia	1	China	23
Italy	1	Japan	10
Malaysia	1	India	2
Norway	1	Korea	2
Total	231	Brazil	1
from 22 countries/regions		Italy	1
		The Netherlands	1
		Sweden	1
		Total	41

Proceedings were published by the APSAR 2013 organizing committee (IEEE GRSS Japan Chapter/IEICE Electronics Society), which are accessible in the IEEE *Xplore*. Worldwide 17 companies and institutes participated in Exhibition and gathered repeated visits of most active and global scientists and engineers.

V. STUDENT PAPER AWARD AND YOUNG SCIENTIST AWARD

The two awards caused extremely keen competitions. Finalists of the Student Paper Award (SPA) presented their works on the first day just before the welcome reception to make appeals at the international evaluation board. Finalists are: Ryo Natsuaki (1st Prize), Fang Shang (2nd), Masato Watanabe (3rd), Gang Liu, Daisuke Sato, KunWu, and Junjun Yin. Fig. 2 is a SPA award ceremony photo at the conference banquet. In parallel, the Young Scientist Award (YSA) finalists were evaluated through their presentations and questions/answers in respective sessions. Tough questions attacked the young elites. The finalists are: Minh Phuong Nguyen (1st Prize), Yu Morishita

(2nd), Martin Pfitzner (3rd), Yoshifumi Aoki, Tomohito Asaka, Ram Avtar, Gen Oshiyama, Guang-Cai Sun, and Masumi Yamada. Fig. 3 shows the YSA finalists at the award ceremony.

VI. SUMMARY AND THE FORTHCOMING APSAR

The smallness of the above noshow number indicates the high consciousness of the participants, resulting in proactive discussion in each session. Many attendees expressed the plentifulness of inspirations in the discussion. Besides the technical sessions, researchers and accompanying persons enjoyed "Happi" (Japanese festival costume) banquet with the participatory play of "Taiko" (Japanese giant drums) and a variety of Japanese foods. On the last day, many people, some with their families, visited the Japan Aerospace Exploration Agency (JAXA) to look into several types of satellite as well as experience the international space station with its facilities. In summary, all the events seemed resonating with the participants. The next APSAR will be held in Singapore in 2015.

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GRS

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 (in conjunction with ICPR 2014)
 August 24, 2014
 Stockholm, Sweden



PRRS 2014 Chairs:

Jenny Q. Du, Mississippi State University, USA
 Eckart Michaelsen, Fraunhofer IOSB, Germany
 Bing Zhang, Chinese Academy of Sciences, China

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Web Address:

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