

Institut National de la Recherche Scientifique  
Centre Eau Terre Environnement

# **IGARSS 2014 / 35<sup>th</sup> CSRS**

## **Post Symposium Report**

Present to Canadian Space Agency

by

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and

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**Happy members of the Local Organizing Committee after the transfer of responsibilities to the IGARSS 2015 team for Milano!**

1<sup>st</sup> Row: Dirk Werle, Derek Peddle, Danielle De Sève, Monique Bernier, and Josée Lévesque

2<sup>nd</sup> Row: Yannick Duguay, Tom Lukowski, Francois Vachon, Jean-Marc Garneau, André Morin, Nellie Lapointe and Daniel De Lisle

### 1. Introduction

The joint IGARSS 2014 /35<sup>th</sup> Canadian Symposium on Remote Sensing is a partnership between the IEEE Geoscience and Remote Sensing Society (GRSS) and the Canadian Remote Sensing Society (CRSS) / Société canadienne de télédétection (SCT). It was the fourth time in 25 years that these two organizations have held joint symposia.

IGARSS 2014 /35<sup>th</sup> CSRS was very successful. We received many positive comments about the symposium organization, the site and the city. A total of 1928 participants from 63 countries were registered. This number includes more than 500 students which is on the order of the expected (budgeted) percentage of attendees from this group (25%).

First, I would like to thank all of the CRSS Executive Committee members and all of the GRSS AdCom members for their confidence in the IGARSS/35<sup>th</sup> CSRS 2014 team. In particular, I thank the current GRSS president, Dr. Melba Crawford, the Vice President for Meetings and Symposia, Dr. Adriano Camps and the Education Director, Dr. Michael Inggs.

The success of IGARSS 2014 /35<sup>th</sup> CSRS is the result of a team effort. Over 30 volunteers from the Local Organizing Committee (LOC) and the Technical Program Committee (TPC) have worked very hard, especially over the last two years. There have been 23 teleconferences of the LOC, 11 teleconferences of the TPC, plus the TPC meeting in Washington (March 2014) and other small meetings. There was hard work, but there has been a lot of laughter too.

In particular, I would like to acknowledge the immense contributions of my three Canadian colleagues who served as the Co-Chairs of the Technical Program Committee: Dr. Josée Lévesque, Dr. Jean-Marc Garneau, both from Defence Research and Development Canada Valcartier Research Centre near Québec City, and Dr. Ellsworth LeDrew from the University of Waterloo, Ontario. I would like also to highlight the contributions of Tom Lukowski, for his support to the three Co-Chairs. I also thank all Chairs and members of the committees (Education, Exhibits, Finance, Local Program, Publications, Publicity, Plenary Session and Students Program) who took their responsibilities seriously and worked tirelessly to make the symposium a success. As for previous IGARSS, the 2014 symposium would not have become a reality without the dedication of a team of volunteers forming the Technical Program Committee, and the large number of GRSS and CRSS volunteers who participated last winter in reviewing abstracts and arranging the technical sessions.

I would like also to acknowledge the professional and technical support of Conference Management Services (CMS, Texas) and Conférium Inc. (Québec City). The professional personnel of the two companies worked together over the last year to support the organization of this symposium. Both of them had a representative at each LOC teleconference. More specifically, the CMS team supported the Technical Program Committee Co-Chairs, the Exhibits Chair, the Finance Chair and constructed and managed the symposium website and registration. Conférium was responsible for the local administration, accommodation management, and the organization of the local activities. Conférium supported the General Chair and the Finance Chair

on a day to day basis. The mix of the CMS expertise of IGARSS events with the local expertise of Conférium and their willingness to work together was a key to the success of the event.

The symposium theme was “Energy and our Changing Planet”. On behalf of the LOC, I would like to thank the speakers at the plenary: Dr. Gaétan Lantagne, Hydro-Québec Research Institute, Canada; Dr. Matthieu Le Lay, Électricité de France; Dr. Stan Benjamin, NOAA Earth Systems Research Laboratory, USA and Prof. Trevor Gaunt, University of Cape Town, South Africa. They accepted the challenge to give insight as to how current and future remote sensing technologies can be used by energy resource managers around the world. To our knowledge, it was the first time that all the plenary speakers were talking about the user’s point of view. This was unique to IGARSS 2014.

An innovation of this IGARSS was the participation of two high school students in the exhibit area. A detailed report is given in a following section. We recommend that GRSS and future IGARSS LOCs pursue such contact with high school science fairs in other countries. It is a good way to promote remote sensing and earth observation programs to teenagers and to encourage their interest in engineering and geosciences.

The Québec City LOC made social activities available to delegates and their guests on the Sunday (July 13) and each evening during the symposium including the traditional soccer game (Wednesday) and Awards Dinner (Thursday). Tours to the Charlevoix Region were also offered on the Saturday after IGARSS. All of these activities were generally well received. The number of participants was not as large as planned for some of the evening events but they were costed on a “break-even” basis for a minimum numbers of participants so that there would be no deficit. In some cases, there were fewer participants then the minimum number of attendees required to cover the transportation cost to the site but the small loss was covered by the small surplus of popular events. It would have been preferred to have an additional social event (like a cruise) sponsored by the conference but the LOC did not find a private sponsor. Also, at the time of announcing the activities on the website (at the opening of registration), it was not expected that the conference would have a surplus to subsidize such an event.

All of the professional luncheons were well attended and proved successful. Two new events bringing together students and industry participants were found useful by the former in particular, but more students could have benefited from them. Such events need to be more highly publicized if they are organized at a future IGARSS or Canadian Symposium on Remote Sensing.

The LOC is also grateful for the financial support received from our corporate partners Hydro-Québec, ABB Analytical - Measurement Products, MacDonald, Dettwiler and Associates Ltd., Intergraph, and our institutional partners, the Canadian Space Agency, Tourism Québec, the City of Québec, the Institut national de la recherche scientifique (INRS), the Québec Remote Sensing Association and the National Aeronautics and Space Administration (NASA). The support of Tourism Québec and the City of Québec was essential for the preparation of publicity materials and the promotion of IGARSS 2014/35<sup>th</sup> CSRS in Melbourne in 2013. We would like to also acknowledge the contributions of the Canadian Space Agency and Hydro-Québec to the technical

program, the opening session, the plenary session and the contribution of ABB to tutorials. Thank you also to all other institutions and corporations who were exhibitors.

The 3rd GRSS Summer School was hosted by the *Institut national de la recherche scientifique* (INRS) whose students participated in the organization of the Summer School social events and the building of the website. Positive comments on the Summer School were received from both lecturers and students. Specific comments for the organizers of future summer schools are given later in this report.

Another unique feature of IGARSS 2014 /35<sup>th</sup> CSRS is that the LOC offered a book illustrating Quebec City to each attendee with their registration kit. Unfortunately, we did not receive much feedback about this. Some attendees were disappointed by the bag provided with the registration materials which was planned to not take much place in their luggage but not for long-term use. It is recommended that the LOC of the next IGARSS consider a different type of bag for the materials handed out at the registration desk.

Finally, IGARSS 2014 /35<sup>th</sup> CSRS was recognized as an Eco-Friendly Event by the Québec City Convention Centre; for example, coffee was served in glass cups instead of paper cups, use of water stations instead of single-use water bottles was encouraged, and recycling and compostable waste were valorized.

The next sections of this report present the lessons learned for each aspect of the conference during this successful IGARSS.

In concluding, it was an honour and a great pleasure to chair an IGARSS in my home town. Good luck to the teams organizing future IGARSS!

Monique Bernier, General Chair  
IGARSS 2014 / 35<sup>th</sup> CSRS





### 2. Symposium Committees

#### IGARSS 2014 / 35th CSRS team

##### General Chair

Dr. Monique Bernier, INRS, Québec City, QC

##### Technical Program

Dr. Josée Lévesque, DRDC Valcartier Research Centre, Québec City, QC

Dr. Jean-Marc Garneau, DRDC Valcartier Research Centre, Québec City, QC (retd)

Dr. Ellsworth LeDrew, University of Waterloo, Waterloo, ON

##### Education Committee

Dr. Richard Fernandes, Canada Centre for Remote Sensing, Gov. of Canada, Ottawa, ON

Dr. Sylvie Daniel, Laval University, Québec City, QC

Dr. Michael Inggs, University of Cape Town, South Africa

Dr. Brigitte Leblon, University of New Brunswick, Fredericton, NB

Dr. Anita Simic, G-Eco Research, Toronto, ON

##### Student Program Committee

Dr. Brigitte Leblon, University of New Brunswick, Fredericton, NB

Dr. Bob Ryerson, Kim Geomatics Corporation, Ottawa, ON

Mr. Gordon Staples, MDA GSI, Vancouver, BC

##### Exhibits

Mr. Gordon Staples, MDA GSI, Vancouver, BC

##### Finance

Mr. Dirk Werle, Ærde Environmental Research, Halifax, NS

##### Local Arrangements

Dr. Karem Chokmani, INRS-ETE, Québec City, QC

##### Publications and Special Advisor

Mr. Tom Lukowski, DRDC Ottawa Research Centre, Ottawa, ON (retd)

##### Publicity

Mr. André Morin, Optelis, Québec City, QC

### **Special Activities**

Dr. Danielle De Sève, IREQ, Hydro-Québec, Varennes, QC  
Dr. François Vachon, IREQ, Hydro-Québec, Varennes, QC

### **Special Advisors**

Dr. Daniel De Lisle, Canadian Space Agency, Montréal, QC  
Dr. Derek Peddle, University of Lethbridge, Lethbridge, AB

### **Website Local Committee**

Mr. Yannick Duguay, PhD candidate, INRS-ETE, Québec City, QC  
Mr. Charles Gignac, PhD candidate, INRS-ETE, Québec City, QC

### **Web Master**

Mr. Lance Cotton, Conference Management Services (CMS), Bryan, TX

### **Professional Conference Organizers**

Ms. Billene Cannon, Conference Management Services, Inc. (CMS), Bryan, TX  
Mr. Pierre Bolduc, Conférium Inc., Québec City, QC

## **Technical Program Committee**

Dr. Monique Bernier, INRS-ETE, Québec City, QC (General Chair)  
Dr. Josée Lévesque, DRDC Valcartier Research Centre, Québec City, QC (Co-Chair)  
Dr. Jean-Marc Garneau, DRDC Valcartier Research Centre, Québec City, QC (retd) (Co-Chair)  
Dr. Ellsworth LeDrew, University of Waterloo, Waterloo, ON (Co-Chair)  
Mr. Tom Lukowski, DRDC Ottawa Research Centre, Ottawa, ON (retd) (Special Advisor)  
Dr. Irena Hajnsek ETH Zürich, Switzerland, DLR Oberpfaffenhofen, Germany (Advisor)

Dr. Riadh Abdelfattah, COSIM Lab – SUPCOM, University of Carthage, Tunis  
Dr. Joseph Buckley, Royal Military College, Kingston, ON (retd)  
Dr. Sylvie Daniel, Université Laval, Québec, QC  
Dr. Jean-Pierre Dedieu, CNRS-UJF-IRD, Grenoble  
Mr. Daniel De Lisle, Canadian Space Agency, St-Hubert, QC  
Dr. Danielle De Sève, IREQ, Hydro-Québec, Varennes, QC  
Dr. Richard Fernandes, Canada Centre for Remote Sensing, Ottawa, ON  
Dr. Brigitte Leblon, University of New Brunswick, Fredericton, NB  
Dr. Joseph Piwowar, University of Regina, SK  
Mrs. Carla Schmitt, Canada Centre for Remote Sensing, Ottawa, ON  
Dr. Ahmed Shaker, Ryerson University, Toronto, ON  
Dr. Anita Simic, G-Eco Research, Toronto, ON  
Dr. Anne Smith, Agriculture and Agri-Food Canada, Lethbridge, AB  
Dr. Francois Vachon, IREQ, Hydro-Québec, Varennes, QC  
Dr. Peter White, Canada Centre for Remote Sensing, Ottawa, ON

## Theme Coordinators

The coordinator for each theme and sub-theme is listed in the above table (Table1).

Tom Ainsworth	Analysis Techniques Group	AG1	Analysis Techniques -SAR (A.1,A.2,A.3, A.4, A.12)
Jocelyn Chanussot		AG2	Analysis Techniques - Optics and hyperspectral (A.5, A.6, A.7)
Lorenzo Bruzzone		AG3	Analysis Techniques - Image analysis (A.8, A.9, A.10, A.11)
Monique Bernier	Cryosphere	C	Cryosphere
Adriano Camps	Sensor & Platform Group	SG1	Sensors and Platforms - Microwaves (S1, S.2, S.3)
Steve Reising		SG2	Sensors and Platforms - Optics (S5)
Shannon Brown		SG3	Sensors and Platforms - Others (S.4, S.6, S.7)
Al Gasiewski	Atmosphere	M	Atmosphere
Ellsworth LeDrew	Land Group	LG1	Land use, land cover change, urban environment (L.1, L.4)
David Goodenough		LG2	Forest and vegetation
Tom Jackson		LG3	Agriculture and soil (L.3, L.6)
Irena Hajnsek		LG4	Geology, geomorphology, inland waters (L.5, L.7, L.8)
David Weissman	Oceans	O	Oceans
David Kunkee	Data management, dissemination, education and policy	D	Data management, dissemination, education and policy



### 3. Technical Program

Building the symposium program was a wonderful experience that allowed the Technical Program Committee members, co-chaired by Dr. Josée Lévesque, Dr. Jean-Marc Garneau and Dr. Ellsworth LeDrew, to appreciate the magnitude of such an international event. The CMS system and the support of their staff have contributed significantly to reducing the workload of the TPC Co-Chairs. Thank you very much to the CMS team!

Of the 79 invited session proposals received, 74 were accepted and they accounted for 34% of the oral program. We received 2425 abstracts from 63 countries including the invited papers. Of these, 231 (9.5%) were rejected during the revision process and 353 accepted papers (14.5%) were withdrawn by the end of the Symposium. The oral program was built for a 4.5 day week with 12 parallel sessions which sums to 216 oral sessions (1080 papers) along with 4 days of poster sessions. Initially, 1075 papers of the 1840 accepted papers were allocated to oral presentations and 765 to poster presentations. During the week of the symposium, there were 35 oral and 55 poster presentations “no-shows” which yields an overall no-show rate of 4.66%. The countries of origin of the largest number of no-show papers were China (33%), United States (20%) and Canada (9%).

The five most popular general themes in order of popularity were:

- Image Processing Techniques
- InSAR and High Resolution SAR
- Forests and Vegetation
- Hyperspectral Techniques
- Synthetic Aperture Radar

The five most popular conference special themes in order of popularity were:

- Temporal Analysis: Techniques and Applications
- Oil, Gas and Mineral Exploration
- Remote Sensing in Developing Countries
- Dynamics of Earth Processes and Climate Change
- Environmental Remediation and Assessment

#### ***On the Positive Side***

No major problems were encountered during the process of forming the program and during the unfolding of the Symposium. Building the “Big Board” during the TPC in Washington went very well and we very much appreciated the level of participation of all those present.

We used a list of „friend“ reviewers who were willing to review after the submission deadline. This was particularly useful for the invited sessions where papers are sometime withdrawn and replaced by new ones. Similarly, we built a list of alternate Session Chairs prior to the Symposium. They were mainly local participants who were willing to chair sessions on a last minute call.

### *On the “To improve” Side*

Here are some areas where we believe there is space for improvement:

- Making clear deadlines for responding to invitation

The most important problem encountered was people not responding to invitations whether to be a reviewer, a Session Organizer (SO), Theme Coordinator (TC) or a Session Chair. It slowed down the process unnecessarily. This can be easily avoided by setting clear deadlines to respond after which the invitation is no longer valid. Thus the TPC Co-Chairs know exactly how many people they still need to reach when the deadline occurs. This is much easier to manage compared with having pending invitations remaining at these various steps in the process.

- Making clear instructions to the Invited Session Chairs

After the TPC evaluated and accepted the proposals of the invited sessions (IS) the IS session organizers were told how many sessions they were allocated. Most requested one 5 paper session but some asked for two 5 paper sessions. After the submission deadline we were surprised to see some IS with more papers than what they were told they were allowed. An example: a “two 5 paper session” (should be 10 papers) received 24 submissions. The IS organizer (ISO) invited too many papers in their session. It should be clear in the Instructions to ISO that they should remain with the papers they proposed and that any changes they want to make should go through approval by the TPC. We found this practice quite unfair for the persons submitting an invited paper who saw their paper removed from the session.

Many Invited Session Chairs did not know what their management task in the IGARSS system was supposed to be. The TPC Co-Chairs ended up doing most of the work.

- Use of an informal deadline to review abstracts

Some reviewers accepted to review abstracts but did not perform the work. One way to avoid this situation could be to use an informal deadline (TPC choice) by which reviewers who did not start their revisions are sent a specific reminder asking them to re-commit to review by accepting again. It is then not too late to find replacements.

- Adding a simple routine in the system not allowing simultaneous presentation by the same author

On occasion, we had a presenter scheduled to present two papers at the same time or too close in time to allow him/her to move to another room. Similarly, some presenters ended up having to present two posters in two different locations during the same poster period. The presenters should be responsible to verify that they are not in such situation. This could be easily solved by adding a simple routine in the CMS software system that does not allow it to happen.

- Interdiction of Skype presentations and the like

Unfortunately some recorded presentations were accepted by some of the session chairs even though they were instructed that it was not accepted by IGARSS.

- 10 paper oral sessions would make it easier to manage session chairs

It was very difficult to find enough session chairs. This seems to be a recurring problem. Ideally we want 2 co-chairs per session. This year it translated into a total of 432 co-chairs for the oral sessions (216 oral sessions) and 266 for the poster sessions (133 sessions) for a grand total of 790 co-chairs. Many people rejected the invitations to co-chair for various reasons which made it even more difficult. Fortunately, we did not experience any sessions without co-chairs. At least one co-chair accepted and “showed up” for each of the sessions. We used a Co-Chair backup list of volunteers willing to fill in for a “last minute” no-show. It worked very well. However, 10 paper oral sessions would be much easier to manage. If two 5 paper sessions are really Part 1 and Part 2 on the same topic and with the same name, then they should be combined directly into a single 10 paper session, hence with only 2 Co-Chairs.

- Room sizes

Once the Big Board was posted on the Review System, some Session Organizers took too long to send their comments or requests for changes. Sometimes the impact of these changes on other sessions was very important since we had to deal with room sizes according to potential number of attendees based on previous IGARSS and schedule. As a result, room overflow was reported on 2 occasions. It would ease the process if all rooms were about the same or at least close in size.

- Clear deadlines and clearer instructions sent to participants

Instructions to reviewers, SO, TC, and Session Chairs could be improved as many questions received by the TPC were from people verifying that they understood well what they read. What seems obvious to those who are not participating for the first time may not be so for newly involved people. Clear deadlines and important information could be highlighted in the messages.

It was not clear to some Session Chairs how to deal with no-show papers, whether oral or poster. The limits of what is acceptable/not acceptable to an IGARSS for presentations were not clear to some, as demonstrated by the 2 accepted Skype oral presentations and the posters recorded as having no presenter but attributed an evaluation score.





### 4. Professional Conference Organizer

The professional personnel of the two companies worked together over the last year to support the organization of the symposium: Conference Management Services (CMS), Texas and Conférium, Québec City. Both PCOs enjoy the experience of working together. They each had a delegate at all of the LOC teleconferences. Conférium wishes to thank the whole IGARSS team for having them on board for such a great event.

The CMS team mainly supported the Technical Program Committee Co-Chairs, the Exhibits Chair, the Finance Chair and constructed and managed the web site and the registration. CMS had the necessary background experience for this event, so they were in control of the organization of the scientific program process and they were able to transfer their experience to the Local PCO.

Conférium was responsible for the local administration and the organization of the local activities. Conférium supported the General Chair and Finance Chair on a day to day basis. The mix of the CMS expertise of IGARSS events with the local expertise of Conférium and their willingness to work together was a key to the success of the event.

CMS was responsible for the on-line registration form/web page and gathering registrant information (including contact information, registration category and any additional items). Conférium was responsible for collecting the actual payments. This separation of responsibilities created some issues like payment information which was not accurately reflected in the CMS registration system. CMS and Conférium spent one afternoon/evening reconciling the two accounts before the symposium began.

Credit card declines (AMEX more than others) or crashes in the payment system caused registrants to register again. However, issues such as these were resolved because of the close cooperation of both of the PCOs.

#### *On the Positive Side*

- CMS handled the online and on-site registration through Conférium 's merchant services account.
- The overall registration went smoothly as symposium participants were attended to and served in a timely manner.
- It was quite a challenge to involve two PCOs on the same contract, but it was a good choice to have a local PCO involved for a few reasons:
  - The local PCO has the legal ability to recover taxes for International Conferences. For this symposium, \$CAD 55 000 were recovered taxes. Otherwise, these monies would have been included in the expenses.
  - The local PCO knows all of the suppliers and can easily negotiate with them for fair rates. They want to participate in our next event, so they “treat us well”.
  - The local PCO is certainly an asset for the participants on site, helping them with tours and local attractions, restaurants and hotels.

- A local PCO gives constant support to the General Chair.
- Hiring a local PCO gives some economic benefits back to the community.
- The availability of a visa for entrance to Canada was not an issue except for a few persons for which the visa was delivered late (due to late submission) or refused. As requested by Immigration Canada, the Local Organizing Committee (LOC) provided detailed information about the symposium to Canadian embassies and consulates in the fall of 2013. Furthermore, the Letter of Invitation sent to the authors who were requesting visas included all of the necessary information required by the Canadian Government.
- One new CMS project that worked very well was our new session form scanning, printing, and status system. CMS was able, at a glance to see which forms from Session Chairs were missing, and to reprint individual session forms when they had been misplaced.
- The Session Recordings are online and available for the public. The recording went smoothly. About 5% of the recordings were lost when the session chair or presenter accidentally cancelled the recording. The audio/visual technicians that were hired did a good job.

### *On the “To improve” Side*

- To help the Technical Program Committee to identify papers which are not presented by the official authors, i.e. to prevent others from “presenting” their paper, it is recommended that participants be required to present their passport or a photo ID card at the registration desk to avoid people picking up registration materials for friends or colleagues. This should be advertised at the time of the on-line registration to make it clear that registration materials will only be given to a participant “in person”.
- For future conferences, CMS would need to have some kind of real-time view of the bank account showing incoming wire transfers and credit card charge attempts, and any results codes that might explain why the issuing bank denied a transaction.



The PCOs team in the registration hall.

- Pierre Bolduc from Conférium and Billene Cannon from CMS
- Billene Cannon and Alexis Lévasseur from Conferium taking a break for the photograph.
- Billene Cannon and Julie Gandre from CMS showing
- Pascale Boudreault Poney from Conférium and Michael Simon from CMS taking payment.



### 5. Student Volunteers

A volunteers schedule was prepared and managed online by CMS. Julie Gandre from CMS coordinated the volunteers. According to the CMS online schedule, the LOC had volunteers for all of the sessions just before the conference. However, starting a couple of weeks before the conference, we began to see volunteers change their mind. There were a number of reasons: they had decided not to come, their schedule had changed, or they had decided to go to a different session and could not volunteer. We had volunteers tell us that they needed to work in their lab or with their professors. We had a few volunteers that did not show up at all which left us without staff. However, we did have a couple of volunteers sign up for extra shifts.

#### *On the Positive Side*

Those volunteers who participated were responsible and did a great job; they were pleasant and very helpful. As an example we had two individuals who stayed after their assigned shifts to help with evaluation of poster papers.

#### *On the “To improve” side*

Volunteers are always a concern as they are "volunteers" and if something happens, we cannot guarantee that there will be someone to take their place. This is one of the reasons why CMS always recommends using paid staff for critical positions. In such a case, the LOC and the PCO know that when someone cannot come, the agency will find a replacement.



IGARSS 2014 /35<sup>th</sup> CSRS responsible volunteers



IGARSS 2014 /35<sup>th</sup> CSRS volunteers at work on Saturday 12, 2014

### 6. Finance Chair

This is the Finance Chair's preliminary report as final accounting and auditing procedures are still underway as of November 28<sup>st</sup>. The following report includes in summary form, activities; status; and the positive experiences.

#### Activities

The commitment of the Finance Chair, Dirk Werle, from the inception of the idea to host IGARSS 2014/35th CSRS in Quebec City to the anticipated closing of symposium-related accounts stretches over a period of five years. The work was done in close cooperation with the General Chair, Monique Bernier. The main activities included the following:

- Familiarization with the IGARSS budgeting process, procedures, and the main actors on the financial side of the symposium organization; Dirk Werle (DW) and Monique Bernier (MB) received excellent orientation and support from Adriano Camps (GRSS AdCom) and Billene Cannon (CMS). This process was initiated early and provided the necessary transparency for operations on the part of GRSS, CRSS, the LOC, and for setting up and administering both USD and CAD accounts for IGARSS 2014/35th CSRS.
- Preparation and revision of draft budgets at various stages of bid preparation and actual symposium organization; DW and MB received and used experience from previous IGARSS finance chairs, received and included previous IGARSS budget spread sheets and organization documents; IGARSS 2014/35th CSRS budgets were drawn up with various attendance scenarios at various stages of symposium preparation and discussed openly and regularly with the LOC and GRSS AdCom; close cooperation with the CRSS Treasurer and Executive Committee to discuss loan arrangements and to finalize risk and benefit agreements (50-50) with IEEE GRSS.
- Interaction with the General Chair, Monique Bernier, members of the local organizing committee, conference management service providers (Billene Cannon, CMS and Pierre Bolduc, Conférium and their diligent co-workers, IEEE-GRSS treasurer (Jim Smith), CRSS treasurer (Joe Piwowar), various GRSS and CRSS officers, and IEEE HQ staff; transparency of operation and good communication were two important elements to keep the financial organization of the event on an even keel. The cooperation of all involved in the process was essential and appreciated by all.
- Reporting and presentation of finance related issues at LOC meetings; there were several key milestones and issues of note. These included reasonable assumptions in the budgeting process for the main revenue items (registration, exhibitors, partners, grants); selection of local conference management services in Quebec; consideration of currency exchange impact on budget and accounting matters; loans and cash flow requirements and solutions through pre-arranged IEEE US \$ loan and Canadian Remote Sensing Society (CRSS) CAD\$ loan.
- General accounting and reporting tasks on the financial state of IGARSS 2014 /35th CSRS in cooperation with professional service providers. These tasks were divided between the USD and CAD accounts and the US-based CMS and the Quebec-based Conférium, respectively, in cooperation with GRSS, the General Chair, Finance Chair,



and IEEE HQ. Apart from the core IGARSS 2014 / 35th CSRS budget line items, there were several items that required separate treatment (e.g. CRSS AGM expenses, and GRSS student travel grants).

### Status:

As of November 1st, 2014, the overall financial management and accounting activities include final disbursements for GRSS travel grants (from USD account, by CMS) as well as final payments of invoices/expenses in Quebec (from CAD account, by Conférium ) and IEEE and CRSS loans. The accounts will soon be closed and reconciled before a general audit is conducted and surplus monies are disbursed to IEEE GRSS and CRSS.

### *On the Positive Side*

- The Finance Chair relied on good cooperation and communication with all actors involved in the organization and financial management of IGARSS 2014/35th CRSS, and this process worked well. Dirk Werle appreciated the thoughtful discussion and experience at various levels, especially at the LOC, with the General Chair, financial officers of GRSS and CRSS, and the conference management companies.
- CMS and Conférium staff provided a wealth of experience, and the LOC were able to rely on their professional excellence and dedication.
- The loan support of the GRSS and CRSS societies (financial and otherwise) was essential and timely, and it spared us any cash-flow problems.
- The financial management process of IGARSS 2014/35th CRSS went very well considering the fact that several administrative layers were involved at IEEE-GRSS, two service companies operating in two different countries, with two currencies, and principal actors were in dispersed locations. Cooperation and communication among the Societies and the mainly US and Canadian actors in all financial matters was excellent.
- Overall, the financial situation of IGARSS 2014/35th CRSS is very positive..

### **IGARSS 2014 Final Budget**

Table 2 gives the final revenues and expenses as November 28, 2014. The budget for the Symposium was based on conservative assumptions and on a "good-value-for-money" proposition. The surplus was secured mainly by a higher than expected number of participants, by a good estimation of the USD/CAD exchange rate at the time of the symposium, by the participation of 22 exhibitors, and by the generous support of partners. Except for the governmental subsidies (Canadian Space Agency, Quebec Tourism) which were received and managed by INRS on behalf of the Organizing Committee, the others incomes were received and deposited in an account in trust by Conférium (Quebec City) which also paid the majority of the suppliers on behalf of the Organizing Committee.



## IGARSS 2014 / 35th CSRS

**Table 2 IGARSS 2014/ 35<sup>th</sup> CSRS Final Budget November 28, 2014**

<b>REVENUES</b>		<b>Canadian Dollars</b>	
	<i>Registrations</i>		<b>1 101 381.50</b>
1.	Registrations - Symposium	1 046 554.50	
2.	Tutorials	17 300.00	
3.	Registrations - Social activities	32 427.00	
4.	Registrations - excursions	-	
5.	Registrations -Accompanying persons	5 100.00	
	<i>Sales</i>		<b>161 692.68</b>
6.	Exhibit / Trade Show	69 981.50	
7.	Sponsorships	35 961.18	
8.	Publicity	5 750.00	
	<i>Other revenues</i>		<b>162 750.00</b>
9.	Grants Gov.	73 000.00	
10.	Loans	139 750.00	
<b>TOTAL REVENUES</b>			<b>1 425 824.18</b>
<b>EXPENSES</b>			
Management			<b>384 221.49</b>
1.	Administration	352 021.49	
2.	Committees	32 200.00	
Publicity			<b>68 609.00</b>
3.	Promotional activities	36 500.00	
4.	Website	-	
5.	Printed matter	22 740.00	
6.	Mailing	5 469.00	
7.	Publicity / Press	3 900.00	
Operation & logistics			<b>215 314.00</b>
8.	Convention Center	78 932.00	
9.	Audiovisual	110 625.00	
10.	Simultaneous translation	-	
11.	Equipment rental	-	
12.	Exhibition floor	17 248.00	
13.	Signage	-	
14.	Registration	4 174.00	
15.	Personnel	1 600.00	
16.	Transportation	-	
17.	Communication	2 735.00	
Social activities			<b>182 308.82</b>
18.	Catering	104 241.27	

## IGARSS 2014 / 35th CSRS

19.	Welcoming soiree	18 868.05	
20.	Poster sessions	7 392.00	
21.	Banquet dinner	51 807.50	
Program			<b>16 547.02</b>
22.	Lecturer fees and travel expenses	6 302.02	
23.	Services to Lecturers	10 245.00	
24.	Scientific Management	-	
Special events			<b>1 931.00</b>
25.	Soccer Game	1 931.00	
26.	Closing ceremony	-	
27.	Special event A	-	
28.	Exhibitors reception	-	
Special program			-
29.	Accompanying Person Program	-	
30.	Pre and post convention excursions	-	
Services to participants			<b>29 180.00</b>
31.	Convention material	27 180.00	
32.	Welcoming	-	
33.	Lodging	2 000.00	
Miscellaneous			<b>89 657.47</b>
34.	Contingencies	78 138.63	
35.	Taxes	11 518.84	
36.	Royalties	-	
<b>TOTAL EXPENSES</b>			<b>987 768.80</b>
<b>SURPLUS / (DEFICIT)</b>			<b>438 055.38</b>
Less			
CRSS Loan			<b>42 000.00</b>
IEEE/GRSS Loan (85k US\$)			<b>97 750.00</b>
<b>SURPLUS</b>			<b>\$ 298 305.38</b>

Some expenses were paid directly by Conference Management Service (CMS, Texas) in US Dollars (USD). On December 2, 2014 a sum of 395,000.00 CAD was transferred to an IEEE trust account in the United States in order to refund the IEEE loan of USD 85,000.00, the expenses incurred by CMS, and to pay CMS for the management of the conference. This sum includes the surplus which will be disbursed to GRSS when the official audit by IEEE will be completed. Also, a sum of CAD 259,000.00 had been deposited in a second IEEE trust account in a Canadian Bank in Toronto, from which the loan of CAD 42,000.00 from the Canadian Remote Sensing Society was refunded. Upon completion of the IEEE audit in the spring or summer 2015, the CRSS share of the conference surplus will be disbursed to CRSS from this account.

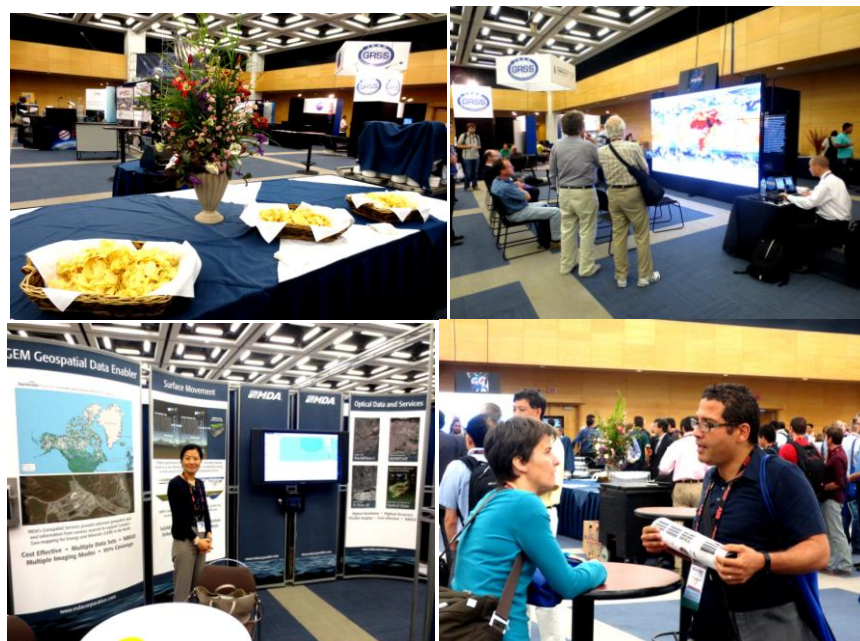
### 7. Exhibitions and Sponsorship

The IGARSS 2014/35th CSRS Local Organizing Committee (LOC) under the leadership of Gordon Staples (Exhibition Chair) and CMS jointly contacted about 320 organizations to assess interest in exhibiting at IGARSS 2014/35th CSRS. The organizations included government agencies, universities, and industry. The contacts were drawn from previous IGARSS exhibitors, organizations who had previously exhibited at Canadian events (e.g. Canadian Symposium on Remote Sensing), and personal contacts from members of the LOC. Of the 36 available exhibit spaces, 33 were taken, which resulted in revenue of CAD \$ 83,216.50.

#### *On the Positive Side*

Informal discussions with many of the Exhibitors provide common, positive comments as summarized below:

- Layout of the exhibit hall;
- Location of the food and beverage that helped to draw people into the exhibition area;
- The overall good volume of people in the exhibition area;
- Logistics with-respect-to set-up and tear-down



**The main Exhibition Hall before and during the coffee break**

### *On the “To improve” side*

A number of exhibitors suggested the following as a process-improvement:

- The exhibit hall was supposed to be open from 10:00 – 7:00 pm, but attendees were being allowed in before 9:00 am and stayed till well after 8:00 pm; this was good on one hand, but it made for a very long day since the exhibitors started to arrive early to ensure that there was someone in the booth;
- The morning coffee breaks were very busy, but due to the fact that lunch was not provided in the exhibit hall, it was „dead” from 10:45 until the 2 pm coffee break. Something (e.g. lunch, coffee, snacks) to draw people into the exhibit area from mid-morning to early afternoon would have increased the traffic through the exhibit area. Note that the issue of providing lunch/refreshments relative to conference budgets was understood. (The reason why lunch boxes were not available is that it is usually difficult to keep the delegates in the Convention Centre in July. If the conference had been held in fall or winter, a lunch box option would have been provided).

### **Sponsorships:**

The conference attracted one Gold partner and 4 Silver partners for CAD \$48,750.00. The conference also received grants for the publicity from Tourism Québec and the City of Québec for a total of CAD \$23,000.



**Welcome Reception, Sunday July 13, 2014**

### 8. Canadian Space Agency (CSA) contribution

As reported by Daniel De Lisle, the financial contribution of CSA at the symposium is:

- |                                 |            |
|---------------------------------|------------|
| • Grant                         | CAD \$ 50K |
| • Delegation of 15 participants | CAD \$ 16K |
| • Government of Canada Booth    | CAD \$ 14K |
| Total investment:               | CAD \$ 80K |

#### Visibility

- Considered as IGARSS 2014 Partner
- CSA Logo displayed on Convention Centre screens and printed material
- Premium location in the exhibit hall
- Welcome from CSA President during the Opening Ceremony

#### Issues

- Sponsoring events by the Federal Government, including CSA, is hard to manage. Federal rules have changed and financial commitments are difficult to obtain. For this IGARSS, it took time to get the approval and CSA was added at the last minute as a partner even if it was represented on the LOC.
- The LOC had to submit a Grant & Contribution proposal with detailed budget and activities to be supported, which took time and effort. The grant was approved the week before the conference and funds were transferred after the event. The LOC provided a financial report to CSA in October. Table 3 gives a summary of the expenses.
- Ministerial approval was necessary for each department to attend the conference. A total of 73 participants from the Government of Canada attended IGARSS 2014/35th CSRS.
- For CSA, ministerial approval was required not only for the delegation to attend the event but also for the grant and the booth. The CSA approval process resulted in last minute activities from the LOC to include CSA as an official partner and for the delegation to prepare for the event.

#### ***On the Positive Side***

Even if delays were tight, CSA was able to honour its commitments. The visibility was excellent and the CSA President's welcome was appreciated. CSA provided coordination for a Canada Booth. Other departments and agencies were invited to participate and to provide material to promote their activities at the booth.

#### ***On the "To improve" Side***

Commitments should be made early. Support from Space Agencies should not be taken for granted. It requires time and effort by the LOC and a lot of justifications.

## **IGARSS 2014 / 35th CSRS**

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**Table 3: Grant/contribution of Canadian Space Agency to IGARSS 2014**

<b>Admissible Expenses</b>	<b>Amount CAD</b>
<b>Travel expenses for Invited lecturers and Organizing Committee</b>	<b>5 411</b>
<b>Contribution to renting of the Québec Convention Center</b>	<b>25 000</b>
<b>Students Scholarship</b>	<b>5 089</b>
<b>Contribution to Management Service (Conférium, Québec)</b>	<b>14 500</b>
<b>CSA Contribution</b>	<b>\$ 50 000</b>

### 9. Publicity and Media

This committee was lead by André Morin. Other members were Monique Bernier, Daniel De Lisle, Danielle De Sève and Nellie Lapointe.

Activities consisted of the following:

- Production of general publicity material (corporate image and logo, Call for Papers, venue material for inclusion in program and website, etc.);
- Promotion during previous IGARSS: Publicity (booth) at IGARSS 2013 and promo material at IGARSS 2012;
- Articles and advertisements in journals, newsletters, and e-newsletters (GRSS magazine, CRSS and IEEE Canada newsletters, IEEE Canadian Review, etc.);
- Presence in social media, email lists;
- Support to other initiatives (Canada-Wide Science Fair, GRSS Data Fusion contest).
- The symposium was publicized on the Canadian Remote Sensing Society website and the Canada Wide Science Fair website.

Most of the activities were “smooth sailing” with few hiccups to report. The most time-consuming and probably most important activity was the presence at IGARSS 2013. Given that the 2013 conference was held far away from Québec City we felt that it was a good opportunity to entice attendees from these locations to attend IGARSS 2014/35<sup>th</sup> CSRS. To lower the cost, the booth was permanently staffed by a locally recruited person who had lived in Quebec City as well as by committee members. The promotional material (maple syrup) was a sure teaser and the booth quickly became popular. Other promotional vehicles used included videos, flyers, and a sweepstakes. The draw which offered various prizes including trips to whale watching, one week free hotel accommodation at the Château Frontenac (Québec City) as well as free registrations to IGARSS 2014, was set up as a means to collect participant information so that they could be added to our mailing lists. This method was used as a means to collect information as the Canadian Anti-Spam Law (CASL) mandates an express opt-in regime for solicitation by electronic means.

#### *On the positive Side*

- The publicity booth at IGARSS 2013 was well prepared and fostered more interest than what is typically the case in other conferences (IGARSS or others). This is probably due to the presence of individuals dedicated to manning of the booth and the prizes offered, including a round trip tour to La Grande (Hydro-Québec Hydro-Electric Complex) about 1000 km north of Québec City.
- In general, social media were the least exploited means of publicity, with the exception of the LinkedIn [\*IEEE Geoscience & Remote Sensing Society Data Fusion Discussion Forum\*](#) group (1138 followers) where all contest announcements were made.



### *On the “To improve” Side*

- In order to improve the publicity, the website should be linked to social media at various sites from the very inception of the website, and most particularly on pages with no content during the early stages of site deployment. For example, see the site [www.icip2015.org](http://www.icip2015.org) or [www.webmonde.ca/ICIP2015/index.html](http://www.webmonde.ca/ICIP2015/index.html).
- Furthermore, the publicity committee should include a person dedicated to “feeding” the media. Ideally, there should be a SINGLE channel, such as a dedicated email address, to which all committees should send their news so that they could be effortlessly reported in the social media (i.e. Committees “pushing” news rather than the Publicity Chair having to “pull” news from other Committees).
- Another area where things could be improved is general public awareness. While a press release was indeed sent out shortly before the conference by the INRS communications office, there was no “media information” section on the website and this aspect was somewhat neglected. While this bears no impact on the attendance, it is, in the mind of the Publicity Chair, an aspect that deserves attention.



**Happy winners of the round trip tour to La Grande (Hydro-Electric Complex) offered by Hydro-Québec who participated in the Early Registration contest. The first winner from the drawing at IGARSS 2013 in Australia did not travel to Canada.**



### 10. Social activities (Banquet, Soccer, Tours,...)

Conférium handled the IGARSS 2014 /35<sup>th</sup> CSRS Social Activities under the leadership of the General Chair. All the members of the LOC were consulted for the selection of the social and tour programs. CMS had an advisory role providing history and current information on attendees. Table 1 lists the social activities and tour program.

**Table 1: IGARSS 2014 /35<sup>th</sup> CSRS Social Activities and Tours**

Activities	Dates	Number of participants
Welcome Reception	Sunday evening	Over 700
Les Sept Chutes Centennial Power Plant Tour	Sunday	21
Walking Tour of Old Quebec, World Heritage City,	Sunday	24
Sugar Shack Dinner : La Sucrierie Blouin	Monday evening	35
Visit and dinner at a Traditional Huron Site	Monday evening	25
St-Lawrence River Cruise on the AML Louis Jolliet - Gourmet Getaway (5-course)	Tuesday evening	40
St-Lawrence River Cruise on the AML Louis Jolliet - Evening Cruise	Tuesday evening	20
Soccer Game Players	Wednesday 19h.	39
Awards Ceremony and Banquet	Thursday evening	311
Tadoussac Bus-Whale Express Package	Saturday July 19	13
Tour by Train to Charlevoix	Saturday July 19	8

#### *On the Positive Side*

At least 311 persons attended the 2014 Awards Ceremony and Banquet at the Château Frontenac Ballroom on Thursday evening. Everyone really enjoyed the banquet - the food was wonderful, the venue beautiful, and the entertainment by the Painchaud family “could not be beat”.

All of the social activities went well, without problems.



**The Painchaud Family entertains during the Banquet Evening**

## 10.1 IGARSS Indoor Soccer World Cup

The IGARSS 2014 soccer games were held at the Stade TELUS-Université Laval on Wednesday evening (with the first game kick-off at 19:00). The activities were planned for eight teams with two groups of four teams each (1: ABCD and 2: EFGH). Table 2 give the planned schedule. Each team was made up of a maximum of 10 players (7 players on the field and 3 on the bench). Each game ran for 8 minutes per half (16 minutes game time) with a two minute break between halves and two minute breaks between games. All games were refereed. Fair play was mandatory!

Each team was given colourful T-shirts to wear at the tournament. Each player brought his own shorts and sports shoes. Shin pads were recommended. Transport by bus from and back to the Convention Centre and complimentary food and drinks were provided for all participating players and spectators.

There were 39 players who were divided into five teams. The five teams played against each other in a round robin arrangement until late in the evening. Then, the first and the fourth place teams played in one semi-final and the second and third place teams in the other. The final was between the Green and the Orange team and the Green team won the 2014 competition. The Blue team finished third. The players and the spectators enjoyed their evening. More than 200 photographs were taken of the event!

**Table 2: IGARSS 2014 Soccer World Cup (as planned)**

Game	Start Time	Team	Field
1	19h00	A vs. B	1
2	19h00	C vs. D	2
3	19h00	E vs. F	3
4	19h20	A vs. C	1
5	19h20	E vs. G	2
6	19h20	F vs. H	3
7	19h40	A vs. D	1
8	19h40	B vs. C	2
9	19h40	G vs. H	3
10	21h00	B vs. D	1
11	21h00	E vs. H	2
12	21h00	F vs. G	3
Semi-final 1	21h20	1 <sup>st</sup> group1 vs. 2 <sup>nd</sup> group 2	1
Semi-final 2	21h20	2 <sup>nd</sup> group 1 vs. 1 <sup>st</sup> group 2	2
Third place playoff	21h40	Loser of semi-final 1 vs. Loser of semi-final 2	1
Final	22h00	Winner of semi-final 1 vs. Winner of semi-final 2	1



**IGARSS 2014 Soccer Cup: Final Game**



**First Place: Green team**



**Second Place: Orange team**



**Third Place: Blue team**

### 11. Professional luncheons

Conférium handled the IGARSS 2014 Professional Activities, including the Editors Lunch, under the leadership of the General Chair. CMS had an advisory role providing history and current information on attendees.

Table 1 gives the number of participants for each luncheon. Most of the luncheons were held in the Les Plaines Room on the 23<sup>rd</sup> floor of the Hilton Hotel. The Industry Student Lunch was at the Convention Centre.

#### *On the Positive Side*

All events ran very smoothly.

**Table 3: Professional luncheons and dinner**

Activities	Numbers of participants
Women in Geosciences, Remote Sensing and Engineering Lunch	70
Technical Committee and Chapter Chairs Dinner	80
Industry Student Lunch	64
Young Professionals Lunch	80
Canadian Remote Sensing Society (CRSS-SCT) AGM Lunch	34



**Women in Geoscience and engineering**



**Young Professionals Lunch**





### 12. Tutorials

The tutorial programme included five half day tutorials and five full day tutorials. A broad range of topics was covered with only one pair being somewhat similar (both on thermal hyperspectral). The registration costs of tutorials was lower than the two previous IGARSS symposiums but the gross revenue was ~CAD \$17,000 and even with a catered lunch and honorariums the expenses were ~CAD \$13,000. However, it is noteworthy that if we factor in the lost revenue due to provision of free registration to the symposium for some of the lecturers, the tutorials would essentially have made a small (~10%) profit.

Total attendance was 133 including 40 students with only 14 on-site registrants. Attendance ranged from 7 to 14 for full day tutorials and from 9 to 31 for half day ones. The low proportion of student registration indicates that more work could have been done to advertise tutorials to students – after all they have more time to come a day earlier and will potentially get more from the experience. Two things to consider are advertising tutorials via university networks and emphasizing the networking possibilities for students during the tutorials.

We had 15 tutorial proposals and accepted 11 of them. One tutorial was dropped due to illness of the instructor. Ideally, the tutorial proposals should have been more actively solicited. One possibility would be to tap into new mission science teams who have already developed a fair bit of cutting edge material for justifying their missions. Additionally, these teams would have a vested interest in presenting their work to the community.

This year was the first time that private industry was allowed to present tutorials. We received two proposals, one from each of two Québec City companies and both were accepted. Incidentally, both were presenting on a similar topic on hyperspectral thermal infrared. In order to avoid the introduction of selling material in their tutorial, proper instructions were given to the presenters and their proposals and summaries posted on the web site were reviewed accordingly. Two participants unknown to the presenters, one attending each tutorial, kindly accepted to report on the content of the two tutorials. They were instructed before the tutorial took place to take note of any deviation towards marketing content. Both reported that the instructors were excellent and focused on the material, not on advertising the company. The presenters obviously mentioned what the company does and the characteristics of the instruments they manufacture, which was expected as they used data examples acquired with their instruments.

The options for provision of an honorarium or free registration in consideration for presenting should be simplified and advertised during the tutorial call. Nevertheless, it is essential that presenters have the option since government employees cannot usually accept an honorarium

Presenters wanted to provide material to attendees in an efficient manner. The LOC was able to provide paper copies but it would make sense to also have IGARSS set up a password protected site where material can be provided for distribution.

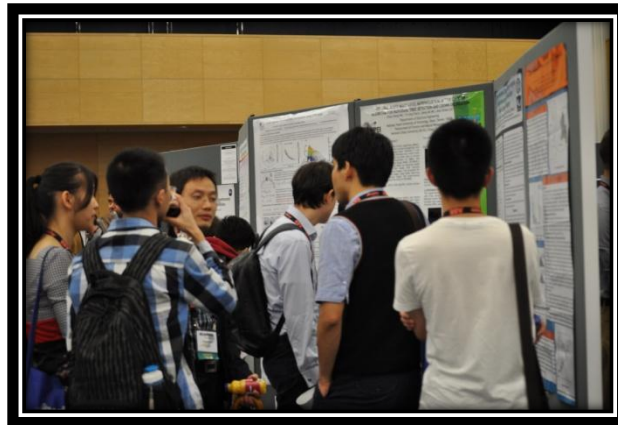
Logistics on the tutorial day were not ideal due to incompatible computer and missing pointers. Ideally, a dry run of logistics should be done with a local tutorial presenter.

### *On the Positive Side*

- The accessible cost and the high level of expertise of presenters allowed for a successful set of tutorials.
- Two private companies presented tutorials. Instructors were excellent and focused on the material, not on advertising the company.
- IGARSS has a strong brand and the CMS staff managed the tutorial registration and announcements well.

### *On the “To improve” Side*

- More aggressive solicitation of tutorial presenters and advertisement of tutorials to students is recommended.
- A simplified policy for honorariums and free registration for presenters should be developed by IGARSS to have year-to-year consistency and to allow it to be communicated at the time of tutorial solicitation.
- A sharepoint or wiki site for each tutorial would facilitate providing pre-tutorial information and discussion and post-tutorial exchanges.
- On-site logistics (computers, laser pointers, lunch) have to be carefully specified to the local conference facility.



**Student attendees at the Thursday Poster Session**



### 13. Student Program

This program is new at IGARSS. It was put in place by Brigitte Leblon, Gordon Staples and Bob Ryerson. It gives general information to students about the job market in remote sensing, not only in Canada, but also in other parts of the world. It consisted of two major events.

The first one occurred on Tuesday from 2:00 to 4:00 pm. It was a Q & A session with a panel of industrial participants. The panel was chaired by Professor Leblon and had the following industrial participants: Gordon Staples (MDA, Canada), Bob Ryerson (Kim Geomatics, Canada), Steve Volz (NASA, USA), François Vachon (Hydro-Québec), and David Kunkee (GRSS). A total of over 35 students attended. A number of students from Africa, Europe and North America have since followed up with the panelists.



**Dr. Bob Ryerson in conversation with students at the buffet luncheon.**

The second event was a reception-style buffet luncheon that gave students the opportunity to make valuable connections with industry professionals as well as their peers. There was a random draw of door prizes. The industry participants were as follows:

Canadian Space Agency (CSA)  
Intergraph  
MDA Corporation  
NASA  
PCI Geomatics  
SeaSpace Corporation  
C-Core  
Spectral Evolution  
Kim Geomatics  
Hydro-Québec

Daniel DeLisle  
Desmond Khor  
Gordon Staples  
Winnie Humberson  
Kevin Jones  
Kota Prasad  
Des Power  
Nate Bloomingdale  
Bob Ryerson  
François Vachon

Over 40 students attended.

### *On the Positive Side*

The positive side of this program was that these new activities at IGARSS were appreciated by both the students and the industrial participants. Recommendations have been made by both the students and the industrial participants to pursue such activities at future IGARSS and at the next Canadian Symposium on Remote Sensing.

### *On the “To improve” Side*

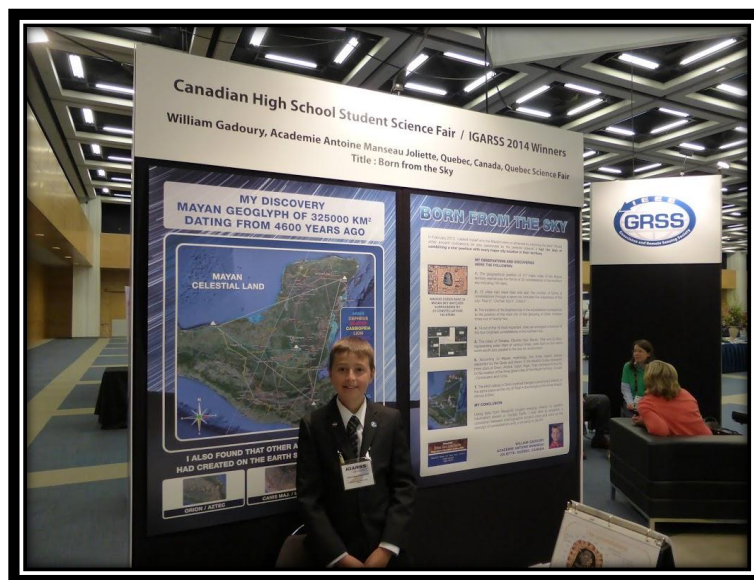
The student attendance can be improved in future symposia as fewer than 10% of the student conference participants took part in these events.

### 14. High School Science Fair

The High School Science Fair was a new initiative put in place by the Technical Program Committee to respond to a request from the AdCom to complement its current efforts to reach future geoscience researchers. The approach was to make contact with the two organizations in charge of the Quebec Science Fair and Canada Wide Science Fair. Participants in these science fairs are selected from regional competitions for the quality and originality of their research work conducted during the school year. We thank the *Conseil du Développement du Loisir Scientifique du Québec* and *Youth Science Canada* for their enthusiastic response and outstanding collaboration.

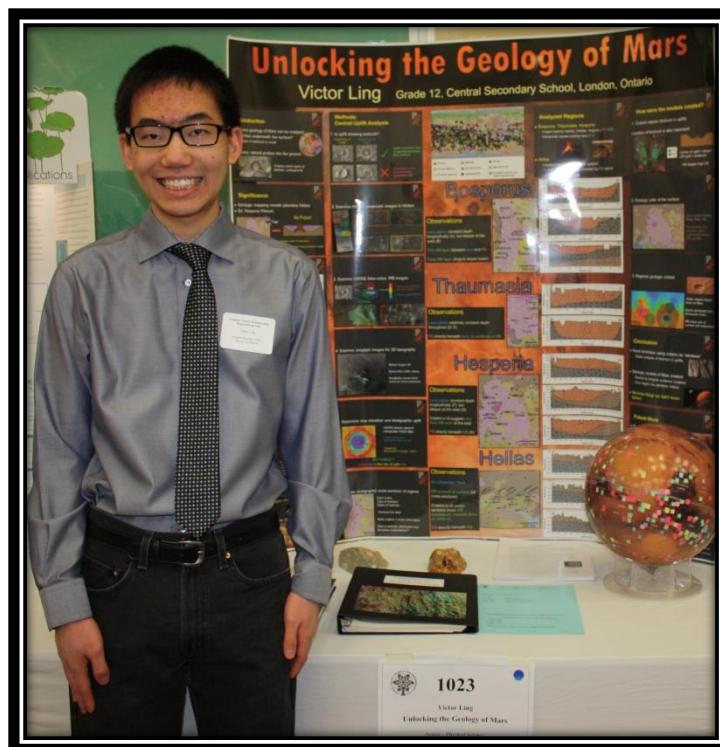
Two young students were selected for their geoscience-related projects. They were awarded an invitation to attend IGARSS 2014/35th CSRS from Monday through Thursday, accompanied by one adult and free of charge.

Danielle De Sève attended the Quebec Science Fair and with the help of Josée Lévesque selected the winner among pre-selected candidates. The winner was William Gadoury, 13 years old, from the Académie Antoine Manseau, Joliette, Québec for his project “Born from the Sky”.



**William Gadoury for his project “Born from the Sky”.**

Dr. Ellsworth LeDrew attended the Canada Wide Science Fair and selected the winner, Victor Ling from Thames Valley Secondary School, Thames Valley, ON, for his project “Unlocking the Geology of Mars”.



**Victor Ling for his project “Unlocking the Geology of Mars”**

The two winners very much appreciated their experience. Victor Ling wrote: *“it was fun interacting with other researchers in fields such as geology or satellite image processing... IGARSS was a very rewarding experience”*

The young William Gadoury, 13 years old, seemed to enjoy most his first experience in such an event. He wrote the following comments (translated from the French): *“This experience provided me with new knowledge in the fields of space research and space vehicles, and moreover IGARSS showed me the importance of remote sensing in the day-to-day life, from security to meteorology, to forests, to oceans and to many more other fields.”*

He was invited by Dr. De Sève to visit the Hydro Québec Research Institute and present his research project. The Canadian Space Agency invited him to visit CSA and offered to acquire two new radar images of the Maya territory from RADARSAT to augment his database. Furthermore, he was invited by Mrs Billene Cannon from CMS to attend the Meeting Maya 2015 that will be held in Austin Texas. Finally he received several business cards from IGARSS participants willing to help him in his actual research or his scientific carrier.

### ***On the Positive Side***

Overall, we can conclude that this new initiative was a success story for IGARSS 2014/ 35<sup>th</sup> CSRS and we encourage the Technical Program Committees of future IGARSS to repeat this activity in order to pursue GRSS efforts to reach out to future geoscience researchers.

### 15. Summer School

The 2014 IEEE Geoscience and Remote Sensing Society Summer School (GR4S) was successfully held at the National Institute of Scientific Research (INRS), conveniently located in downtown Québec City on July 10-11, 2014. This event was organized under the responsibility of Michael Inggs by a team of Canadian academics and one Ph.D. student (Charles Gignac). 37 students coming from every corner of the world (Brazil, Germany, Estonia, Finland, Japan, China, Austria, Australia, USA and Canada) attended the lectures by eight renowned experts in remote sensing. The 2014 GRSS Summer School was supported and advertised by the following partners: GRSS, INRS, Quebec Remote Sensing Society (L'AQT), the Canadian Remote Sensing Society (CRSS) and Slashgeo (media).

The 2014 Summer School was focused on topics related to sustainable natural resources, since the theme of IGARSS 2014 /35<sup>th</sup> CSRS was “Energy and our Changing Planet”.

The comments shared by the students during the school were very positive and enthusiastic. The usefulness of the Summer School and an overall positive impression about the event were in general acknowledged, even strongly acknowledged!

A survey was conducted by Michael Inggs and Sylvie Daniel (2014 co-chair) after the Summer School to gather feedback from the attendees, in order to improve the content of this event in the future. Unfortunately, only a third of the students completed the form. The excellent quality of the organization and the opportunity to meet experts from around the world are clearly underlined in the attendees' comments. The material presented was considered at the right level of complexity and detail.

Many thanks to the instructors for their outstanding lectures and the time they freely invested to prepare them. Thanks to the attendees as well, for their diligence and participation.

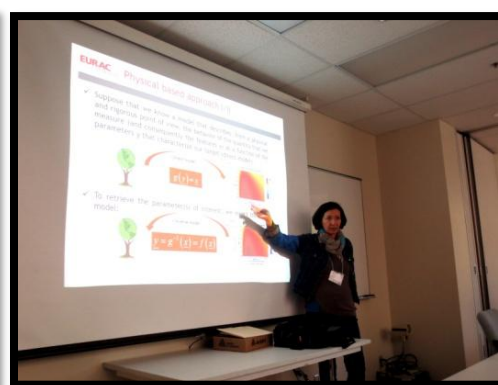
#### *On the Positive Side*

- Two new initiatives were well received in the third edition of the Summer School:
  - (a) Presentation of the Geoscience and Remote Sensing Society at the start of the Summer School by Dr. Wooil Moon, GRSS VP - Professional Activities, before his lecture on Earth Observation and Geophysical Application of Remote Sensing Radars.
  - (b) A round table with lecturers at the end of each day. The discussions during the two round-tables were particularly lively and great questions were asked of the lecturers.
- At the national level, promotion of the Summer School was carried out through local remote sensing associations and geomatics social media and was successful in attracting students.
- INRS-ETE provided rooms and audio-visual material at no-cost. It is clearly an advantage to host the Summer School on a university campus, as was previously noted for the Summer School in 2013.

- On the last day of the Summer School, a social event was held for all of the student participants during which posters of remote sensing projects at INRS-ETE were presented. This event was organized by the INRS students and financially supported by the INRS.
- All eight of our lecturers were invited by the chair of the Summer School and not via an online application form. This approach seemed really efficient in our case.
- The students received the lecture material in the form of printed notes (slides) and on an electronic key.
- The round table period at the end of each day gave rise to highly interesting debates and should be kept on future Summer School agendas.
- As in 2013, a free registration to IGARSS 2014 /35th CSRS was offered to invited lecturers as an incentive to participate in the Summer School. An additional thank you gift, with a “local flavor”, was given to each of them as well.

### *On the “To improve” Side*

- Many times, the question "Is there a travel support grant for students available?" was asked. We think that consideration of this issue should occur before the Summer School in 2015.
- It should be decided early in the organizing process if the school is aimed only at graduate students or if it is open to the participation of professionals. We had to refuse an applicant due to his professional status and, after discussion and considering that there were still places available, decided to offer him a place.
- One difficult task is ensuring that the expectation of every student regarding the level of difficulty of topics covered during the Summer School is met. The academic background of every student should be asked, on registration, in order to give the Organizing Committee a better overview of the acceptable level of difficulty of course material.



2014 GRSS Summer School attendees



### 16. Regional impacts

IGARSS 2014/ 35<sup>th</sup> CSRS, the larger scientific congress in the field of Remote Sensing and Geoscience gathered some 1,900 researchers coming from 63 countries from July 13 to 17, 2014. The presence of these visitors in Quebec City generated more than 5.000 nights for the hotels and 4.3 M\$ of tourist expenditures. Beyond the economic contribution, IGARSS 2014/35th CSRS radiates the expertise and the know-how of Québec City and Canada on the international scene.

This contribution was acknowledged by the local institutions. Last January 16<sup>th</sup>, the conference received the *Event of the Year Award* given by the *Cercle des Ambassadeurs* of Québec region. On March 12, 2015, in front of nearly 600 business people of the great area of Quebec, the President- Director General of the Quebec Convention Center, M. Michel Bouchard, was pleased to give, the *Fidéide Business Event of the Year* to the joint event IEEE International Geoscience and Remote Sensing Symposium 2014 and 35<sup>th</sup> Canadian Symposium of Remote Sensing.



The President - Director General of the Convention Center of Quebec, M. Michel Bouchard, was pleased to give, the *Fidéide Business Event of the Year* to Mrs. Monique Bernier, professor at the Institute National of Scientific Research (INRS), and Mrs. Josée Lévesque, Defence Scientist at the Research Center for the Defence of Valcartier.