



International Union of Radio Science U.S. Commission B

S. Rengarajan, Chair  
J. Volakis, Vice-Chair  
J. Simpson, Secretary

**MINUTES      Commission B Business meeting**  
2012 URSI Meeting  
Boulder, CO, USA  
January 5, 2012

1. Meeting called to order at 5:10 pm.
2. Chair Sembiam Rengarajan welcomed the members and guests.
3. Commission B thanks Nader Engheta for leadership and outstanding service to the commission as the chair of the past triennium.
4. The minutes of the business meeting held in Spokane, WA in July 2011 was approved.
5. Website Information  
USNC-B: <http://www.ece.uic.edu/~URSICComm/>  
Minutes from the Business Meetings (back to 1997) are there.  
Other links:  
USNC: <http://www.usnc-ursi.org/>  
International URSI-B: <http://www.ursi.org/B/index.htm>  
International URSI: <http://www.ursi.org/>
6. Announcements:  
Officers of various URSI offices for the triennium 2012-2014 were reviewed.  
USNC Commission B:  
Sembiam Rengarajan (chair)  
John Volakis (vice-chair)  
Jamesina Simpson (secretary)  
Sharad Laxpati (webmaster)  
Edward Rothwell (membership)

Christos Christodoulou (technical activities)  
USNC/URSI:

Chair: Steven C. Reising  
Past-Chair: Yahya Rahmat-Samii  
Secretary and Chair-Elect: David Jackson  
Accounts Manager: Gary Brown

URSI International Commission B

Chair: Giuliano Manara (Italy)  
Vice-Chair: Ari Sihvola (Finland)

URSI International:

President: Phil Wilkinson (Australia)  
Past-President: François Lefeuvre (France)  
Vice Presidents:

Subra Ananthakrishnan (India)  
Makato Ando (Japan)  
Paul Cannon (UK)  
George Uslenghi (USA)

Secretary-General: Paul Lagasse (Belgium)  
Asst. Secretary-General (Publications): Ross Stone (USA)

7. Future meetings

- IEEE AP-S/URSI, Chicago, IL, July 8- 14, 2012 (paper submission deadline Jan. 17, 2012).
- 2013 URSI EM Theory Symposium, Hiroshima, Japan, May 20-23, 2013.
- USNC-URSI National Radio Science Meeting, Boulder, CO, Jan. 9-11 (or 10-12), 2013
- Additional future meetings may be found on the AP-S and URSI websites. (<http://www.ieeeaps.org/> and <http://www.ursi.org/>)

8. Prof. Uslenghi also mentioned the upcoming ICEAA – IEEE APWC to be held Sept. 2 – 7, 2012 in Cape Town, South Africa in conjunction with the first Electromagnetic Environment and Interference Symposium (EEIS 2012) organized by Commission E. The abstract submission deadline is March 3, 2012. [www.iceaa-offshore.org](http://www.iceaa-offshore.org)

9. Ross Stone added that the 10<sup>th</sup> ISAPE2012 will be held Oct. 22 – 26, 2012 in Xi'an, China. The full paper submission deadline is June 15, 2012. [www.isape.org](http://www.isape.org)

10. Items that require Commission discussion and/or input were covered:

(1) Do you have suggestions for USNC-URSI in handling authors who cannot attend the National Radio Science Meeting, but request to send pre-recorded video/audio presentations?

Prof. Uslenghi indicated that this happened quite a bit at the GA because of visa issues. He suggests we only permit pre-recordings for true emergencies at USNC-URSI meetings (such as illness, storms that disrupt air travel, etc.)

(2) Does Commission B have ideas for improving the status of membership in a USNC-URSI Commission, to make membership more valuable?

None, but there seemed to be a strong consensus that we should continue to support student travel to the USNC-URSI meetings.

(3) Does Commission B support the idea of creating a new status of “URSI Fellow,” analogous to IEEE Fellow? What about creating Distinguished Lecturers for each USNC-URSI Commission, analogous to IEEE Distinguished Lecturers?

Prof. Uslenghi mentioned that we cannot create an URSI Fellow without approval from URSI, but we could create an USNC Fellow.

Prof. Volakis suggested that we not emulate IEEE, but try to be unique.

The question was raised as to whether we could be permitted to nominate to the National Academy of Sciences.

Perhaps we could create Distinguished Lecturers who visit universities with low or no participation in USNC-URSI, and try to get the faculty and students there to start attending USNC-URSI meetings.

(4) Will Commission B participate in the 2013 IEEE AP-S/URSI Meeting to be held in Orlando from 7-13 July 2013? (In 2012 in Chicago, it has already been decided that Commissions A-G and K will participate.)

Yes. Commission B will participate in the joint summer meetings during the entire triennium. This includes the 2013 AP-S meeting in Orlando.

(5) Does Commission B have any comments on the URSI General Assembly and Scientific Symposia (GASS)? What about the number of invited versus contributed oral sessions at the GASS?

Prof. Uslenghi mentioned that for the URSI GA, oral sessions are decided 1.5 years in advance. After that all contributions are assigned to poster sessions. If we want more oral sessions, we will need parallel sessions and additional rooms. Right now there are no parallel sessions within each commission.

For China 2014 we won't have more than 10 rooms, and thus can't have parallel sessions. Perhaps we can request more rooms for 2017?

Those in attendance agree that we want more oral sessions.

(6) Does Commission B have suggestions for Plenary Session topics that you can lead along with another Commission? Topics should be timely and with potential for broad appeal among many URSI Commissions.

A metamaterials session with Commission D

Prof. Volakis suggested the topic of “Telemedicine” to be held with Commission K

(7) Does Commission B have a preference for the dates of the 2013 USNC-URSI National Radio Science Meeting? The options for technical sessions are Wednesday through Friday, January 9-11, or Thursday through Saturday, January 10-12.

Those in attendance voted unanimously for the meeting to be held Wed. – Fri. However, the suggestion was made that Commission J could have a workshop or events on Sat. on their own.

(8) Does Commission B have any comments for the USNC-URSI leadership, focused on how the National Radio Science Meeting is conducted?

None.

(9) Are there any comments for International URSI?

None.

## 11. Report of Technical Activities Committee

### Members

Shanker Balasubramanian - Michigan State  
Hossein Mosallaei - Northeastern Univ.  
Erdem Topsakal - Mississippi State Univ.  
Christos Christodoulou (Chair) – University of New Mexico  
Manos Tentzeris - Georgia Tech

John Volakis presented the Technical Activities Committee report. Overall in recent years the USNC – URSI meeting has been growing. 104 students received travel support this year. 99 Commission B papers were presented this year. The slides are included at the end of these Minutes.

## 12. Report of the Membership Committee.

### Members

Ed Rothwell (Chair) – Michigan State University  
George Hanson – University of Wisconsin -- Milwaukee  
Kathleen Melde – University of Arizona  
Don Wilton – University of Houston

Ed Rothwell presented the report for the committee. George Hanson has replaced Leo Kempel on the Membership committee. Full membership nominations of Majid Manteghi, William O’Keefe Coburn, Mark Mirotznik, and Filippo Capolino were all approved.

## 13. Old Business: None.

14. New Business: Prof. Warnick inquired about a joint B/J session that he thought would be covered during the meeting. There will be follow-up after the meeting adjourns.

15. Adjourned at 6:10 pm.

### **Guests in Attendance**

Ahmed Fouda (Ohio State University), Kyle Stewart (Ohio State University), Graeme Smith (Ohio State University), Filippo Capolino (University of California – Irvine), Keefe Coburn (Army Research Lab)

### **Members in Attendance**

Dr. Gary Brown, Dr. Roger H. Lang, Dr. Christopher Holloway, Dr. Gregory Huff, Dr. George Hanson, Dr. Joel Johnson, Dr. Yahya Rahmat-Samii, Dr. Ross Stone, Prof. Piergiorgio Uslenghi, Prof. Karl Warnick, Dr. Donald Wilton, Dr. Amir Zaghloul, Dr. William Davis, Dr. Danilo Erricolo, Dr. David Jackson, Dr. Edward Kuester, Dr. Edward Rothwell, Dr. John Volakis, Dr. Wasyl Wasylkiwskyj, Dr. Steven Weiss, Dr. Arthur Yaghjian, Prof. Jamesina Simpson, Prof. Sembiam Rengarajan

Respectfully submitted by  
Jamesina Simpson  
Secretary



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## **USNC Commission-B Business Meeting**

Thursday, January 5, 2012  
5:00 – 6:00 p.m.  
Room 1B40

2012 USNC-URSI National Radio Science Meeting,  
Boulder, CO, January 4-7, 2012



## AGENDA

USNC Commission-B  
Business Meeting

- Welcome to members and guests
- Approval of the minutes of the Spokane meeting, July 2011

### CHAIR REPORT

### COMMITTEE REPORTS

- Technical Activities Report (Christos Christodoulou/John Volakis)
- Membership Committee (Edward Rothwell)
- Old business
- New business
- Adjourn



## Chair Report

USNC Commission-B  
Business Meeting

Commission B thanks Nader Engheta for his leadership and outstanding service to the commission as the chair of the past triennium.



## Chair Report

USNC Commission-B  
Business Meeting

### USNC-B Officers 2009-2011

Chair: Nader Engheta

Vice-Chair: Sembiam Rengarajan

Secretary: Jamesina Simpson

Chair, TAC: John Volakis

Chair, Membership Committee: Edward Rothwell

USNC-B Webmaster: Sharad Laxpati



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Chair: Steven C. Reising

Past-Chair: Yahya Rahmat-Samii

Secretary and Chair-Elect: David Jackson

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Business Meeting

International URSI-B Officers 2012-2014

Chair: Giuliano Manara (Italy)

Vice-Chair: Ari Sihvola (Finland)



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Business Meeting

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President: Phil Wilkinson (Australia)

Past-President: François Lefeuvre (France)

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Subra Ananthakrishnan (India)

Makato Ando (Japan)

Paul Cannon (UK)

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## Chair Report

USNC Commission-B  
Business Meeting

### Upcoming URSI Meetings

(Current) USNC-URSI National Radio Science Meeting, Boulder, CO, Jan. 4-7, 2012

IEEE AP-S/URSI, Chicago, IL, July 8- 14, 2012 (paper submission deadline Jan. 17, 2012).

2013 URSI EM Theory Symposium, Hiroshima, Japan, May 20-23, 2013.

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1. Do you have suggestions for USNC-URSI in handling authors who cannot attend the National Radio Science Meeting, but request to send pre-recorded video/audio presentations?



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4. Will Commission B participate in the 2013 IEEE AP-S/URSI Meeting to be held in Orlando from 7-13 July 2013? (In 2012 in Chicago, it has already been decided that Commissions A-G and K will participate.)



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6. Does Commission B have suggestions for Plenary Session topics that you can lead along with another Commission? Topics should be timely and with potential for broad appeal among many URSI Commissions.



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### Items that require Commission discussion and/or input

7. Does Commission B have a preference for the dates of the 2013 USNC-URSI National Radio Science Meeting? The options for technical sessions are Wednesday through Friday, January 9-11, or Thursday through Saturday, January 10-12.



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### Items that require Commission discussion and/or input

8. Does Commission B have any comments for the USNC-URSI leadership, focused on how the National Radio Science Meeting is conducted?



## Chair Report

USNC Commission-B  
Business Meeting

### Items that require Commission discussion and/or input

9. Are there any comments for International URSI?



## Committee Report

USNC Commission-B  
Business Meeting

Technical Activities Report: Christos Christodoulou/  
John Volakis



## Committee Report

USNC Commission-B  
Business Meeting

Membership Committee: Ed Rothwell



## Chair Report

USNC Commission-B  
Business Meeting

- ❖ Old Business?
- ❖ New Business?
- ❖ Adjourn



# **URSI Commission-B**

## **Special Sessions & Paper Stats**

**January 4-7, 2012**  
**Boulder, Colorado**

**Christos Christodoulou**  
**University of New Mexico**

## 2012 URSI Boulder Commission-B Special Sessions (4 total)

Session Title	No. of papers	URSI Commission	Chairs
<i>Measurements and Numerical and Uncertainties</i>	5	B/A joint	Chris Holloway
Cognitive Radio and Radar	10	B	Christos Christodoulou Joel Johnson
Microstrip and Printed Antennas; Flexible Electronics	7	B	Yahya Rahmat-Samii, David Jackson,
Emerging Diagnostic and Therapeutic Applications in Electromagnetics	10	B/K joint	Mahta Moghaddam Susan Hagness

# All 2012 URSI-B Boulder Sessions

Session Title	Number of papers	URSI Commission	Chairs or Organizers
Antenna Arrays	9	B	John Volakis Gregory Huff
Metamaterials I	10	B	Piergiorgio Uslenghi, Christopher Holloway,
Guided Waves and Waveguiding Structures	4	B	Leo Kempe, Aly Fathy
Reflectarray antennas	5	B	Sembiam Rengarajan, Kamal Sarabandi
Cognitive Radio and Radar	10	B	Christos Christodoulou, Joel Johnson
Antenna Theory, Design and Measurement	9	B	Donald Wilton, Edward Rothwell
Metamaterials II	10	B	Arthur Yaghjian, Filippo Capolino
Microstrip and Printed Antennas; Flexible Electronics	7	B	Yahya Rahmat-Samii, David Jackson,
Numerical Methods	6	B	Gary Brown, Branislav Notaros,
Electromagnetic Interaction and Coupling	6	B	Edward Rothwell, David Jackson

# 2012 URSI-B Joint Sessions at Boulder

Session Title	Number of papers	URSI Commission	Chairs or Organizers
Emerging Diagnostic and Therapeutic Applications of Electromagnetics	10	B/K	Mahta Moghaddam, Susan Hagness
Measurement and Numerical Uncertainties	5	B/A	Amir Zaghloul, Roger Lang,
Computational Biophotonics and Nanophotonics	8	B/K	Jamesina Simpson, Ilker Capoglu

# 2012 URSI Boulder Summary

	Number of Sessions	Number of Papers
URSI Commission-B Total	10 (B) 1 (A/B joint) <u>2 (K/B joint)</u> <b>13 (Total)</b>	76 5 <u>18</u> <b>99</b>
URSI Total (All Commissions)	46	372

## 2012 URSI B Papers (Boulder, Colorado), attendance:

Total Papers (including joint) in all Sessions: 372 (99 URSI B, including Joint)

URSI B only papers : 76

Papers in joint sessions: 23

# 2012 IEEE Int. Symposium & USNC/URSI Meeting (13 total)

## PLANNED for July 8-14, 2012---Papers due on Jan 17

Session Title		Organizers
<i>Theoretical, Algorithmic, and Technological Advances in EM inverse scattering</i>		Andrea Massa, Aria Abubakar and Magda El-Shenawee
Advances in Commercial EM Simulation Tools		C.J. Reddy, Jay Kralovec and Aldo Petosa
Cognitive Radio: Improvements through the integration of electromagnetic and communication theory		Daniela Tuninetti, Natasha Devroye and Agostino Monochio
Electrodynamics and applications of carbon nanotube and graphene systems		George Hanson and Christophe Caloz
Terahertz technology		Hao Xin and Goutaum Chattopadhyay
AMTA Special Session –Advances in antenna and RCS measurement technology		Ivan J. Lahaie
Future trends in Radar		Lorenzo Lo Monte and Gary Scalzi
Challenging canonical scattering problems and new EM Problems involving Special Materials		Guido Lombardi and Andrea Alu
Flexible 2D and 3D printed Antennas		Reyhan Bakur and Cynthia Furse
Antenna Feed systems for space and terrestrial applications		Sudhakar Rao, Clency Lee-Yow and Isamu Chiba
The legacy of Harold Wheeler		Ted Simpson and Walter Kahn
Prof. Robert Kouyoumjian Memorial session: Asymptotic HF and Hybrid Methods		Prabhakar Pathak and Giuliano Manara
Evaluation Techniques for compact Multi Element Antennas For MIMO		Rodney Vaughan and Jane Yun

## Historical Data

2006	Albuquerque	330			
2007	Boulder	not held			
	Ottawa	239	(325 joint with other commissions)		
2008	Boulder	94 (315) papers in special sessions: 64 (B-only: 40, Joint: 24)	14		
	San Diego	201	12% of total	All URSI: 21% of total	
2009	Boulder	78 (291) papers in special sessions: (B-only: 10, Joint: 16, Total:26)	9		
	Charleston	221	16% of total	All URSI: 340 (24.8%)	
2010	Boulder	83 (344) papers in special sessions: (B-only: 16, Joint: 12, Total:28)	10		
2010	Toronto	URSI B only All URSI	269 405	17% of total conference papers 26% of total conference papers	
2011	Boulder	86 (356) papers in special sessions: (B-only: 5, Joint: 31, Total:36)	11		
2011	Spokane	URSI B only All URSI	313 442	23% of APS+URSI (259 B only _ 54 in SS) 33% of APS+URSI (348 URSI only+94 in SS)	
2012	BoI 76+23=99 Papers	(Total Meeting Papers=372)			