

Call for Papers



www.igarss08.org

IGARSS 2008

GEOSCIENCE AND REMOTE SENSING: the next generation

July 6-11, 2008

Boston, Massachusetts, USA



General Co-Chairs' Welcome



*John Kerekes
General Co-Chair*



*Eric Miller
General Co-Chair*

On behalf of the IEEE Geoscience and Remote Sensing Society, the IGARSS 2008 Organizing Committee, and the New England area remote sensing and earth science communities, we are pleased to invite you to Boston for IGARSS 2008! IGARSS'08 will be the 28th annual symposium for GRSS and will continue the excellent tradition of gathering world-class scientists, engineers and educators engaged in the fields of geoscience and remote sensing to meet and present their latest activities. Truly an international event, we anticipate well over one thousand participants from all over the world to enjoy a week of technical sessions, tutorials, exhibits and social activities.

We are especially excited to be hosting IGARSS'08 in Boston, a city both steeped in American tradition and, with its world-class research universities, labs, and diverse industry, a city that is defining the future. In 2008, IGARSS will be taking place in the John B. Hynes Veterans Memorial Convention Center with the host hotel, the Sheraton Boston, located adjacent to the meeting space. Both the Hynes and the Sheraton are centrally located in Boston's Back Bay neighborhood. In addition to the many fine restaurants and shopping in Back Bay, you will be only a short walk from many Boston attractions including Faneuil Hall, the Museum of Fine Arts, Symphony Hall, the Boston Commons and Public Gardens, and historic Fenway Park. For those who wish to visit Cambridge, home to Harvard and MIT, an easy ride on America's first subway system will deliver you to these destinations in a matter of minutes. Just prior to IGARSS'08, the Independence Day July 4th celebrations throughout the city, including a Boston Pops concert on the Charles River Esplanade culminating in traditional fireworks, are among the most exciting in the United States. Within a few hours drive from Boston are the beaches of Cape Cod to the south, the mountains of New Hampshire and Vermont to the north, and the foothills of the Berkshires to the west; each of which offers a wide range of activities for people of all ages.

In Boston we anticipate a technical program encompassing traditional IGARSS topics as well as reflecting the timely theme of the 2008 symposium, "Geoscience and Remote Sensing: the Next Generation." This theme was selected to emphasize the opportunities for the next generation of remote sensing researchers and innovators specifically in the context of our next-generation challenges and global responsibilities to map, measure and monitor the Earth's environment, including the human impact on the planet. In this regard, we look forward to special sessions and other unique opportunities for participation at IGARSS by students and educators in the fields of remote sensing and related geoscience disciplines. At IGARSS'08 we shall also turn our collective attention to the next generation of multi-disciplinary challenges highlighting the future of remote sensing as a discipline that is integral to fields as diverse as meteorology, geography, urban planning, oceanography, water resources, and geophysics. As such, we are planning a technical program that reaches out to these communities in an effort to build the cross-disciplinary relationships needed to address the many challenging problems facing our world, in which remote sensing, geoscience and related disciplines play key roles. Thus IGARSS'08 promises to bring together a broad range of scientists and engineers, from students to senior decision makers, employed worldwide in leading academic institutions and government and industrial laboratories.

IGARSS is truly a crosscutting meeting. The list of topics in this Call for Papers provides a range of opportunities for your participation, with technical areas ranging from theoretical signal processing and modeling to sensor design and deployment to applications across a wide spectrum of Earth-related systems. Abstracts are invited for all topics related to the symposium, even if not specifically listed. We look forward to seeing you in Boston in the summer of 2008!

John Kerekes and Eric Miller
General Co-Chairs

Sponsoring Society



The IEEE Geoscience and Remote Sensing Society (GRSS) is pleased to sponsor the 28th International Geoscience and Remote Sensing Symposium (IGARSS) in Boston, Massachusetts, USA. IGARSS is the premier international symposium on remote sensing. Held annually in world-wide venues, this prestigious meeting has become an international focus for remote sensing theory, programs, applications and state-of-the-art technology. As a professional society, IEEE GRSS seeks to advance geoscience and remote sensing science and technology through scientific, technical and educational activities. The Society strives to promote a high level of technical excellence among its members by exchange of information through conferences, symposia, meetings, workshops, publications and through its committees to provide for the needs of its members.

IEEE GRSS Membership

Membership in the IEEE GRSS is open to professionals and students with varying degrees of academic accomplishment and work experience. Student memberships in any IEEE society are extremely economical, and the benefits are the same as regular members. For professionals interested only in the benefits of GRSS, affiliate membership meets the need. Regular memberships in IEEE provide additional benefits including the option to belong to more than one society and receive IEEE benefits such as *IEEE Spectrum* and insurance or credit cards offered through the organization. Regular members are also eligible for Senior Membership in the IEEE GRSS after a short period of professional experience in the field. Please visit the newly updated IEEE GRSS website: <http://www.grss-ieee.org> to explore details of qualifications and membership opportunities.

Student Activities

The 2008 IGARSS aims to emphasize the role of future generations in shaping the evolution of the field. Undergraduate and graduate students are particularly encouraged to present and or participate in the conference. The conference provides opportunities to apply for partial travel support and participate in a student paper competition. It is also anticipated that volunteer possibilities that will include a waiver of the the registration fee will be available. In addition, plans are under way for the organization of student focused activities such as networking and mentoring events.

Student Prize Paper Competition

All IEEE student members are invited and encouraged to enter the IGARSS Student Prize Paper Competition. Ten finalists will be selected by a committee to present their papers during a special session at the symposium in Boston. All finalists will be offered partial travel support funding. Three prizes will be presented: First Prize (Mikio Takagi Student Prize) US\$ 500.00, Second Prize US\$ 300.00, Third Prize US\$ 200.00, plus certificates for each. Following the special session at IGARSS, a complimentary ticket to the GRSS Annual Awards Banquet will be given to all ten finalists. Please refer to the instructions on the Student Prize Paper page of the symposium website www.igarss08.org to submit an extended abstract and travel support application to the competition committee.

Travel Support

IGARSS is a truly international event, and the IEEE GRSS will contribute limited funds to partially fund travel to Boston for members, students and underrepresented minorities. Strict criteria must be met to apply for these grants. Please refer to the Travel Support page of the symposium website, www.igarss08.org for guidelines, application form and evaluation criteria. The deadline for applications is January 7, 2008.

Abstract Submission

Participation in IGARSS is open to all individuals interested in or working in the fields of geoscience and remote sensing. Abstracts received by the deadline will be considered for program placement under the standard peer review process. Late abstracts cannot be accepted due to the large number of submissions and short review schedule. The IEEE IGARSS 2008 Technical Program Committee will organize all accepted abstracts into either oral or interactive poster sessions based upon their potential contribution to the symposium and the composition of high-quality sessions. **Attention publishing authors! Only accepted papers that are registered and presented at the symposium in Boston will be published in the symposium proceedings.**

Abstract Submission Instructions:

- Beginning November 16, 2007, you may log in to www.igarss08.org to submit abstracts (only on-line submissions will be accepted for review).
- Instructions on selecting topics for submissions will be included on the website.
- Abstract deadline is January 7, 2008.
- All abstracts must be written in English and contain a minimum of 500 words to be fairly reviewed.
- The maximum page limit for all abstracts is two, one-sided pages.
- Include paper title, presenting author name, affiliation and email address at the top of each abstract.
- Abstracts should clearly and concisely state the problem, methodology used and central conclusions.
- Abstracts should include a bibliography to help in an appropriate review by placing the contributions of this work into context.
- Abstracts need to be formatted using IEEE style as defined at <http://www.igarss08.org/papers/PaperKit.html>. Submission in PDF format is required.
- Each person may only submit up to three abstracts, including both general and invited sessions.
- Students paying a reduced student registration may only register one presentation at the symposium. Regular delegates will be allowed to register up to three presentations.
- Every author is responsible for checking the status of their abstract by visiting the symposium website: www.igarss08.org after March 17, 2008. Acceptance letters will be sent via email only, and the results posted on the website.

Symposium Proceedings

Presenting authors with accepted abstracts are encouraged but not required to publish their paper(s) in the symposium proceedings. Only papers submitted, registered and presented at the symposium will be published in the final IEEE-approved proceedings and hence will be citable and searchable by the Engineering Index. If an author chooses to publish in the symposium proceedings, the following instructions apply:

- Log in to the symposium website www.igarss08.org to follow instructions for submitting full paper(s).
- All papers must be submitted before the deadline of April 25, 2008.
- Student delegates paying a reduced student rate may only register one paper for the symposium. Regular delegates may register up to three papers. Co-authors may register and present papers on behalf of the first author.

Symposium Outreach Activities

In line with our symposium theme “Geoscience and Remote Sensing – The Next Generation,” IGARSS’08 will have a special focus on pre-university, undergraduate and community outreach and engagement. Session proposals are specifically invited on projects and approaches to engaging students at the primary, secondary and undergraduate levels in the science and technology of geoscience and remote sensing. Activities are also being planned to engage the community and excite younger students during the week of IGARSS’08 through demonstrations, projects and symposium participation for local students of regional summer programs and children of symposium attendees. Those interested in being involved in these activities should contact the Outreach Coordinators at outreach@igarss08.org

Topic List

Land	
L1	Land Use and Land Cover Change
L2	Soils and Soil Moisture
L3	Forests and Vegetation
L4	Wetlands and Inland Waters
L5	Agroecosystems
Oceans	
O1	Ocean Biology (Color) and Water Quality
O2	Ocean Surface Winds and Currents
O3	Ocean Temperature and Salinity
O4	Ocean Altimetry
Atmosphere	
M1	Precipitation and Clouds
M2	Numerical Weather Prediction and Data Assimilation
M3	Atmospheric Sounding
M4	Aerosols and Atmospheric Chemistry
Cryosphere	
C1	Land Ice and Snow
C2	Sea Ice
Analysis Techniques	
T1	Image Processing Techniques
T2	Data Assimilation and Inverse Problems
T3	Classification and Data Mining Techniques
T4	Geographic Information Science

Applications	
A1	Human Health and Landscape Epidemiology
A2	Urban and Built Environment
A3	Coastal and Wetlands
A4	Geology and Solid Earth
A5	Pollution and Contamination
A6	Unexploded Ordnance and Landmine Remediation
A7	Other
Electromagnetics and Radiative Transfer	
E1	Microwave Scattering and Propagation
E2	Optical and Infrared Modeling
Sensors and Platforms	
S1	SAR Instruments, Missions and Calibration
S2	SAR Processing
S3	Active Microwave
S4	Radiometer Instruments and Calibration
S5	Lidar Sensors
S6	Passive Optical and Hyperspectral Sensors
S7	UAV and Airborne Platforms
S8	Other
Education and Policy	
P1	Data Management and Systems
P2	Remote Sensing Data and Policy Decisions
P3	Education and Remote Sensing

Application Themes

The IGARSS'08 Technical Program will be highlighting four new and exciting application themes, for which remote sensing data have been transformational.

Numerical Weather Prediction (NWP) and Radiance Data Assimilation

Weather forecast accuracy depends on the coverage and quality of observational data used to initialize numerical prediction models. This panel will explore how satellite measurements, improved modeling capabilities and advanced data assimilation systems may enable revolutionary advances in forecasting weather and natural hazards.

Ocean Synoptics and Weather

Distinct from marine weather, ocean weather is a new field that recognizes the fundamental importance of ocean dynamics and turbulence. This panel session will examine both the basic principles underlying ocean weather and the wide range of ocean science application areas that have been impacted by the availability of ocean altimetry, ocean vector winds and ocean color satellite observations.

Baseline Climate Identification and Global Change

Assessment of global change risks due to anthropogenic greenhouse gas emissions and land conversion requires the identification of a baseline climate state. This panel session will focus on the use of satellite observations to provide the global coverage needed to establish such a baseline, to monitor environmental changes and to assess their impacts.

Environmental and Human Health

Landscape epidemiology is an emerging application area for the use of remote sensing data. This panel session will explore the ways in which measurements of specific environmental variables, which are important for the growth and dispersal of health risks, are used to predict and mitigate disease propagation and pandemics.

Each Symposium day will begin with a Panel Session with invited presentations on the topic. During the remainder of that day and in parallel with the regular Technical Program, invited and regular oral and poster sessions will build on the day's theme.

Proposed Tutorials

IGARSS'08 invites proposals for tutorial sessions to be held on July 6, 2008. Half-day and full-day tutorials will focus on a variety of topics with a wide appeal to the geoscience and remote sensing community. Sessions that align with the four topical themes of IGARSS'08 discussed on page 5 are particularly encouraged. Interested instructors should submit the following information to tutorials@igarss08.org by December 10, 2007:

- Course title
- Preference for half-day or full-day session
- Course outline and 250-word summary
- Instructor bio

Notification of accepted proposals will be made on or before February 18, 2008.

Registration

For information and to register on-line, visit the symposium website: <http://www.igarss08.org>. After registration is open, please complete the pre-registration form at your earliest convenience. Registration fees include admission to all technical sessions, the exhibit and break areas, and a copy of the proceedings.

Publishing authors must pre-register and remit payment before April 25, 2008. Presenting authors choosing not to publish must pre-register and remit payment before May 16, 2008 to secure their slot in the session. To take advantage of lower registration rates, early registration and payment must be received before May 16, 2008 for all attendees.

Category	On or before May 16, 2008	After May 16, 2008
IEEE or GRSS Member	\$625 USD	\$725 USD
Non-Member	\$815 USD	\$940 USD
Student Member *	\$200 USD	\$300 USD
Student Non-Member *	\$300 USD	\$400 USD
Retired/IEEE Life Fellow	\$225 USD	\$325 USD
One Day Pass	\$350 USD	\$350 USD
Accompanying Person**	\$50 USD	\$50 USD

*Student registrants must send the corresponding proof (student identification or letter from advisor) to the symposium management along with their registration.

**Accompanying persons registrants are limited to family members and does not allow attendance in Technical Sessions.

The online registration deadline is June 20, 2008. If unable to complete the registration by this date you will need to register at the symposium.

Accommodations

IGARSS'08 is arranging a number of accommodation options in Boston for our attendees. The reservation link will be posted on the symposium website by December 1, 2007. The host hotel, the Sheraton Boston, will provide standard accommodations at a rate of \$161 USD per night (single or double occupancy) plus applicable taxes for rooms blocked for IGARSS'08. The deadline for reservations at the Sheraton Boston hotel is June 13, 2008.

Host Hotel - Sheraton Boston



The Sheraton Boston Hotel is centrally located in Boston's popular Back Bay and is just steps from some of the city's most popular attractions. The hotel is connected to the Prudential Center and upscale Copley Place Mall, offering more than 200 shops and restaurants, and is also just one block from famed Newbury Street, known for its designer boutiques.

About Boston

The Hynes Convention Center and the Sheraton Boston Hotel are centrally located facilities right in the heart of Boston - easily accessible from the airport, metro, and major highways and roads. No other city in America is easier to get to - or easier to get around - than Boston. Boston is within two hours of Toronto, Philadelphia, Washington D.C., Montreal, New York and Detroit. Whether you are flying into Logan International Airport, driving via major interstate highways I-90, I-95 or I-93, which are just two minutes from the Hynes Convention Center, or taking the train or bus from and to South Station, getting to Boston is convenient and stress-free. With the completion of the Big Dig, Boston's major transportation and infrastructure project, the city features more convenience and ease for getting anywhere you want to go.



For the historian in you, the Freedom Trail will lead you through Boston, stopping at Paul Revere's House, Old North Church, Old South Meeting House and many other sites. The Aquarium, Museum of Fine Arts and the Museum of Science are also all nearby. Duck Tours can be arranged through the hotel concierge, and some of New England's most scenic beaches are only a short drive away.

Welcoming and accessible, the Boston area is a wonderful destination for a quick getaway weekend or a several day stay. Summertime means seasonal favorites such as harbor cruises and island hopping, street festivals and window shopping, open air markets, star-studded concerts and music under the stars. Dining al fresco is another summer treat, whether you're having a five-course dinner, a light repast after a day of sightseeing or simply enjoying a cup of clam chowder and a locally brewed beer. And of course, what summer would be complete without enjoying the world-champion Red Sox playing at venerable Fenway Park? There are walking trails for big feet and little feet and tours by land or by sea. For tired feet, trolley tours take you where you want to go. You can tour with period costumed guides or take a tour with your cell phone or MP3 player. In Boston, you can blaze your own trail with total summer freedom!

Hynes Convention Center

(approximately 4 miles)

Logan Airport



Image courtesy MassGIS and MIT



GEOSCIENCE AND REMOTE SENSING: the next generation

Important Dates

Abstract Submission System On-line	November 16, 2007
Tutorial Proposal Deadline	December 10, 2007
Abstract Deadline.....	January 7, 2008
Student Paper Competition Deadline.....	January 7, 2008
Travel Support Application Deadline	January 7, 2008
Tutorial Notification.....	February 18, 2008
Abstract Status Available On-line	March 17, 2008
Registration Opens.....	March 17, 2008
Full Paper Submission Deadline.....	April 25, 2008
Publishing Author Registration Deadline	April 25, 2008
Early Registration Deadline	May 16, 2008
Hotel Reservation Deadline	June 13, 2008
Online Registration Deadline.....	June 20, 2008

After June 20, 2008, you must register onsite at the symposium.

IGARSS'08 Organizing Committee

General Co-Chairs

John Kerekes
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Eric Miller
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Technical Program Co-Chairs

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Colorado State University

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For the most current information visit the
IGARSS 2008 website

www.IGARSS08.org