

# Announcement and Call for Papers



21<sup>st</sup> International Congress on Acoustics

165<sup>th</sup> Meeting of the Acoustical Society of America

52<sup>nd</sup> Meeting of the Canadian Acoustical Association

Palais des congrès de Montréal  
Montréal, Québec, Canada  
2–7 June 2013



Deadline for receipt of ASA abstracts: Thursday, 15 November 2012

## CALL FOR PAPERS

ICA 2013 will be held Sunday through Friday, 2–7 June 2013 at the Palais des congrès, Montréal, Québec, Canada. This modern convention center is ideally located in downtown Montréal. Many local attractions, including Old Montréal, restaurants, and shops are nearby, within easy walking distance. There is convenient access to parking, subway, and hotels. Room blocks have been reserved at a variety of hotels nearby or within easy walking distance of the Palais at special meeting rates.

Information about the meeting also appears on the ICA 2013 website at [www.ica2013montreal.org](http://www.ica2013montreal.org). See page 22 for registration information.

There are several important points that should be noted:

1. A **Proceedings** containing papers for each presentation will be published in Proceedings of Meetings on Acoustics (POMA), the ASA's online proceedings journal. A 200-word abstract must be submitted first. THE DEADLINE FOR RECEIPT OF ABSTRACTS IS 15 NOVEMBER 2012.

2. A manuscript must be submitted for each paper to be presented at the meeting and for publication in the Proceedings. If a manuscript is not received by 22 January 2013, the abstract will not be scheduled for presentation nor will it be published in the meeting program. THIS DEADLINE WILL BE STRICTLY ENFORCED.

3. **Preregistration** is required from the corresponding author of each abstract. The preregistration fee must be received by 22 January 2013. Multiple submissions are permitted, but a \$100 publication fee will be charged for each additional paper submitted by the same corresponding author.

4. Hotel accommodations should be made early. The International F1 Grand Prix event will be held in Montréal immediately following ICA 2013.

### Important Dates

<b>Deadline for Receipt of Abstracts:</b> .....	<b>15 November 2012</b>
<b>Invitations to Submit Manuscripts sent to Corresponding Authors:</b> .....	<b>1 December 2012</b>
<b>Deadline for Receipt of Manuscripts and Mandatory Payment of Registration Fee by Corresponding Authors:</b> .....	<b>22 January 2013</b>
<b>Deadline for Preregistration:</b> .....	<b>1 May 2013</b>
<b>Presentation management system opens for uploading presentations:</b> .....	<b>April 2013</b>

### ICA 2013 Organizing Committee

General Chair .....	Michael R. Stinson
Vice Chairs .....	Gilles A. Daigle and Charles E. Schmid
Technical Program Chair .....	Luc Mongeau
CAA Technical Program Coordinators .....	Tim Kelsall and Kathy Pichora-Fuller
CAA Liaison .....	Christian Giguère
Exposition Manager .....	Richard J. Peppin
Local Committee .....	Alayne Moody, Douglas O'Shaughnessy, Linda Polka, Annie Ross, Gary Scavone, Jérémie Voix
Logistics .....	NRC Conference Services Office
Secretariat .....	ASA Melville Office

See inside back cover for listing of Scientific Advisory Committee and the organizations of the ICA, ASA, and CAA.

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# TECHNICAL PROGRAM AND SPECIAL SESSIONS

## TECHNICAL PROGRAM

Contributed papers are welcome in all branches of acoustics. The technical program will consist of lecture and poster sessions. Technical sessions will be scheduled Monday through Friday, 3–7 June 2013.

Every effort will be made to schedule contributed abstracts in accordance with author and Technical Committee preferences. However, authors should be prepared to accept assignment to poster sessions. Assignments will take into account: a) author preference, b) program balance, and c) Technical Committee instructions. Abstracts will be rejected if they do not comply with the instructions.

The special sessions described below will be organized by the Technical Program Committee. Authors of invited papers must indicate on their abstracts the title of the special session in which they have been invited to participate. Authors of contributed papers have the option to request placement of their abstracts in these sessions. If no special session placement is requested, contributed papers will be scheduled in sessions with abstracts of similar technical content.

## SPECIAL SESSIONS, ORGANIZERS, AND DESCRIPTIVE SENTENCES

### ACOUSTICAL OCEANOGRAPHY (AO)

Estuarine Acoustics  
Organized by: Andone C. Lavery

Seismic Oceanography  
Organized by: Warren Wood, Josette P. Fabre

### ANIMAL BIOACOUSTICS (AB)

Animal Vocal Modification in Noise  
Organized by: Susan E. Parks

Conditioning, Segmentation, and Feature Extraction in Bioacoustic Signals  
(Joint with Signal Processing in Acoustics)  
Organized by: David K. Mellinger

Listening in the Natural Environment  
(Joint with Psychological and Physiological Acoustics, Signal Processing in Acoustics, and Noise)  
Organized by: Cynthia F. Moss, Peter M. Narins

Metrics, Units, and Noise Criteria  
(Joint with Noise and ASA Committee on Standards)  
Organized by: Michael Stocker

Perceiving Objects  
(Joint with Psychological and Physiological Acoustics)  
Organized by: Caroline M. DeLong, Eduardo Mercado III

### DESCRIPTIVE SENTENCES

Estuaries are areas of intense human settlement and use, are typically heavily populated, and can have significant commercial value. Papers are invited in which acoustic instruments and/or techniques are developed and used to address physical oceanographic processes occurring in estuaries and/or the unique ecosystems estuaries support.

Seismic oceanography signals are 20-200 Hz (generally air gun) signals that reflect coherently from thermal-haline contrasts in the water column at lateral resolution of 5-10 m, and can be used to observe internal waves, track thin dense water layers near the seafloor, and identify narrow sound channels.

Implications for the ways animals change their vocalizations in increased background noise from abiotic, biotic, and anthropogenic sources and whether these modifications improve signal detectability.

Processing of a bioacoustic signal needed before a classification algorithm is applied.

Research presented in this session will contribute to our understanding of auditory information processing and perception of communication signals in natural environments.

How to measure sound and noise, how to express the measurements, and how to use these tools to establish noise exposure criteria.

Current theories and empirical findings related to understanding how organisms identify objects using sound.

## ARCHITECTURAL ACOUSTICS (AA)

Adapting, Enhancing, and Fictionalizing Room Acoustics  
(Joint with Psychological and Physiological Acoustics and Signal Processing in Acoustics)  
Organized by: K. Anthony Hoover, Alex U. Case

Advanced Analysis of Room Acoustics: Looking Beyond ISO3382  
(Joint with Signal Processing in Acoustics)  
Organized by: Michael Vorländer, Boaz Rafaely, Samuel W. Clapp

Balancing Risk and Innovation in Acoustical Consulting  
Organized by: Eric L. Reuter

Cultivating the Sustainable in Architectural Acoustics  
(Joint with Noise)  
Organized by: Jesse J. Ehnert

Dah-You Maa: His Contributions and Life in Acoustics  
(Joint with Noise)  
Organized by: Ning Xiang, Jing Tian

Footstep Noise Control for Multi-Family Floors  
Organized by: Lin Hu, Ciprian Pirvu

New Materials for Architectural Acoustics  
(Joint with Noise and Physical Acoustics)  
Organized by: Matthew V. Golden

Room Acoustics Computer Simulation  
Organized by: Diemer de Vries, Lauri Savioja

Senior and Hearing Impaired Room Treatments  
(Joint with Psychological and Physiological Acoustics)  
Organized by: Bonnie Schnitta

Vibration in Music Performance  
(Joint with Musical Acoustics)  
Organized by: Clemeth L. Abercrombie

Virtual Concert Hall Acoustics  
(Joint with Musical Acoustics)  
Organized by: Sungyoung Kim, Wieslaw Woszczyk

## BIOMEDICAL ACOUSTICS (BA)

Acoustic Microscopy: Biomedical Applications  
Organized by: John S. Allen

Biophysical Mechanisms of Sonoporation  
(Joint with Physical Acoustics)  
Organized by: Richard Manasseh

## DESCRIPTIVE SENTENCES

Rooms, systems, and techniques for adapting, enhancing, and fictionalizing acoustic performance through audio and architectural acoustics.

Advanced techniques of measurement and analysis of sound fields in rooms, including complex sensors such as arrays or intensity probes, and the corresponding signal processing and analysis techniques, as well as aspects of their application for describing room responses and room acoustic quality.

How consultants determine when to choose innovative new techniques and products over the application of traditional, low-risk solutions.

Exploration of new and novel green methods, means, and materials used to exploit synergies and address conflicts in new and reused buildings.

Celebrating Dah-You Maa's life and his over seven decades of contributions to architectural acoustics, noise control, and physical acoustics.

Identify challenges of and solutions for controlling footstep noise transmission through lightweight floor-ceiling assemblies and heavy concrete floors with various types of tiles.

Review of new materials and new applications of old materials for use in architectural acoustics and noise.

Covers all room acoustics simulation methods including wave models, geometrical acoustics, and hybrid techniques with special emphasis on boundary conditions.

Correct room acoustics is a critical criterion for maintaining quality of life for rapidly growing aging population. This session is a presentation and discussion of research and case studies of methods and materials that improve speech intelligibility for elderly and hearing impaired in all rooms, i.e., senior facilities, offices, museums, restaurants.

Mechanical vibration is responsible for both audible and tactile stimulation in music performance. This session will explore the role that vibration plays in musical communication, sound radiation, listener experience, and other topics.

In-depth discussion on artistic and technical challenges in virtual recreation and/or active enhancement of a performing space. Topics cover, but are not limited to, psychological effects on performers and audiences, new methods and peripherals, and acoustical archeology.

Use of high frequency ultrasound (100 MHz and above) for the characterization and investigation of biological cells and tissue.

Processes responsible for the passage of large molecules across cell membranes or endothelial layers under the influences of ultrasound and microbubbles will be debated.

## **BIOMEDICAL ACOUSTICS (BA) (cont)**

Delivery of Nucleic Acids (DNA, siRNA, antisense oligos)  
Organized by: Tyrone M. Porter

High-Frequency Ultrasound (20-80 MHz)  
Organized by: Michael L. Oelze

Ultrasound Tomography  
Organized by: Yun Jing

## **EDUCATION IN ACOUSTICS (ED)**

Take 5's  
Organized by: Andrew C. Morrison

Tools for Teaching Advanced Acoustics  
Organized by: David T. Bradley

Listen Up and Get Involved  
(Joint with Women in Acoustics)  
Organized by: Marcia J. Isakson, Tracianne B. Neilson

## **ENGINEERING ACOUSTICS (EA)**

Acoustics for Navigation  
Organized by: Rob White

Active and Passive Control of Fan Noise  
Organized by: Anthony Gérard, Alain Berry

Computational Methods in Transducer Design, Modeling,  
Simulation, and Optimization  
Organized by: Daniel M. Warren

Directional and Non-Directional Microelectromechanical  
Microphones  
Organized by: Gary W. Elko

Fiber Optic Sensors for Seismic Sensing  
(Joint with Underwater Acoustics)  
Organized by: R. Daniel Costley, Daniel Finfer

Harmonic Distortion Measurements  
Organized by: Allan J. Zuckerwar

Non-Contact Ultrasonic Methods  
Organized by: Michael Haberman, Nico Declercq

## **DESCRIPTIVE SENTENCES**

Novel ultrasound-based technologies, techniques, and vehicles for noninvasive ultrasound-mediated delivery of nucleic acids for modification of cells, protein expression, and signal pathways at the genetic level.

Specific clinical and pre-clinical applications of high frequency ultrasound along with descriptions of the latest technologies.

Recent theoretical and experimental efforts that develop ultrasound tomography for medical imaging.

For a Take-5 session no abstract is required. We invite you to bring your favorite acoustics teaching ideas. Choose from the following: short demonstrations, teaching devices, or videos. The intent is to share teaching ideas with your colleagues.

Animations, demonstrations, and other educational approaches for teaching acoustics at the advanced undergraduate and graduate level.

Acoustic demonstrations for middle- and high-school aged Girl Guides of Canada.

Systems and methods for using acoustics, whether actively generated or passively sensed, to assist in navigation of autonomous, semi-autonomous, or human controlled robots and vehicles. Papers are invited that explore transducers, algorithms and signal processing methods, or fully integrated systems.

Fan noise is one of the most challenging and ubiquitous of noise sources. Active and passive control approaches have been proposed during the last decades to overcome this problem. Analytical, numerical and experimental works are welcome.

Novel and unique applications of computation and simulation for improved understanding of electroacoustic transducers and their interaction with their acoustic environment.

Overview of needs, requirements and techniques for directional MEMS microphones.

Fiber optic sensing including, but not limited to, Rayleigh backscatter configurations. Topics of interest include transduction mechanisms, sensitivity, comparisons of different fiber optic cable configurations, and new developments.

Techniques and applications of harmonic distribution measurements in loudspeakers, microphones, and underwater transducers

Contributions from those researching novel non-contact ultrasonic sensors and methods for material characterization and inspection of structures.

## ENGINEERING ACOUSTICS (cont)

Sound Field Control in the Ear Canal  
Organized by: Pablo Hoffman

## MUSICAL ACOUSTICS (MU)

Aeroacoustics of Wind Instruments and Human Voice  
(Joint with Signal Processing in Acoustics)  
Organized by: Shigeru Yoshikawa, Xavier Pelorsen

Measurements, Modeling, and Simulations of Brass Instruments  
Organized by: James W. Beauchamp, Wilfried Kausel, Thomas R. Moore

Perception and Orchestration Practice  
(Joint with Psychological and Physiological Acoustics)  
Organized by: Stephen McAdams

Player/Instrument Coupling  
(Joint with Psychological and Physiological Acoustics)  
Organized by: Gary P. Scavone,

Transient Phenomena in Wind Instruments: Experiments and Time Domain Modeling  
Organized by: Murray Campbell, Stefan Bilbao

## NOISE (NS)

Advanced Hearing Protection and Methods of Measurement  
Organized by: Jérémie Voix, Christian Giguère, Elliott H. Berger

Children's Perception of Noise  
Organized by: Kerstin Persson Waye, Janina Fels

Community Noise  
Organized by: Eric L. Reuter

Community Response to Low-Amplitude Sonic Booms  
Organized by: Alexandra Loubeau, Juliet Page

Current US and Canadian Noise Standards  
(Joint with ASA Committee on Standards)  
Organized by: Richard L. McKinley

## DESCRIPTIVE SENTENCES

Focused on state-of-the-art techniques for recording and controlling sound pressure at the eardrum and along the ear canal, this session encompasses measurement techniques, modeling and numerical simulations of ear canal acoustics, and research on middle ear functioning that may be informed from ear canal measurements.

Simulations, visualizations, and measurements of aeroacoustic phenomena in wind instruments such as flutes, pipe organs, reed woodwind, and brasswinds, as well as in human voice (speech and singing).

All aspects of measuring, modeling, and simulation of brass wind instruments, with an emphasis on comparing the results of models and simulations with measurements.

Survey of different perceptual approaches that could contribute to a psychoacoustic foundation for a theory of orchestration practice. Issues include the perception of instrumental blends, the role of timbre in auditory scene analysis, timbre as a structuring force in musical form, and the role of orchestration in evoking emotion.

Analyses of the interaction of music instrument players and their instruments, such as upstream/downstream air column coupling in wind instruments or hand/bow/string interactions in string instruments.

Experimental and computational studies of non-stationary aspects of wind instrument behavior, including starting and ending transients, opening and closing finger holes, using piston or rotary valves, vibrato, lip slurs and glissandos.

Current research activities on hearing protection from engineering and design to field studies on their performance, including advanced acoustical test fixtures (ATFs), measurements for impulsive noise conditions, recent MIRE technology, regulatory matters, and related issues.

Emerging results on children-specific aspects of perception and reaction to noise.

Policy, research, and case studies related to the evaluation and abatement of community noise.

All aspects of planning, execution, and data analysis for NASA's WSPR (Waveforms and Sonic Boom Perception and Response) project on community response to low-amplitude sonic booms. Topics include low-boom flight planning and execution, subject recruitment and subjective data collection, sonic boom measurements, subject noise exposure prediction and experimental design, and subjective data analysis.

Noise and noise measurement standards are important tools in noise control and mitigation. Papers in this session will present and review current US and Canadian noise standards and their application and use.

## **NOISE (NS) (cont)**

Effects of Noise on Human Performance and Comfort  
(Joint with Architectural Acoustics and Psychological and  
Physiological Acoustics)  
Organized by: Lily M. Wang

Future of Acoustics  
(Joint with Animal Bioacoustics, Acoustical Oceanography,  
Underwater Acoustics, and Signal Processing in Acoustics)  
Organized by: Brigitte Schulte-Fortkamp, Michael J. Buckingham

International Aviation Noise Standards  
(Joint with ASA Committee on Standards)  
Organized by: Victor W. Sparrow

Soundscape and Its Application  
(Joint with Architectural Acoustics)  
Organized by: Brigitte-Schulte-Fortkamp

Urban Acoustics  
Organized by: J. L. Bento Coelho, Christian Popp

Wind Turbine Noise  
(Joint with ASA Committee on Standards, Engineering Acoustics,  
and Structural Acoustics and Vibration)  
Organized by: Nancy S. Timmerman, Paul Schomer, Sheryl  
Grace

## **PHYSICAL ACOUSTICS (PA)**

Acoustics in Microfluidics and for Particle Separation  
(Joint with Biomedical Acoustics)  
Organized by: Lawrence A. Crum, Michel Versluis, Yong-Joe Kim

Borehole Acoustics Logging for Hydrocarbons Reservoir  
Characterization  
Organized by: Said Assous, Weichang Li

Nanoacoustics  
Organized by: Srikar Vegallatore

Chemical and Non-Medical Biological Effects of Ultrasound  
Organized by: Kenneth Suslick, Hao Feng

## **PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS (PP)**

Binaural Hearing and Binaural Techniques  
Organized by: Janina Fels, Pablo Hoffmann

Biomechanics of Hearing  
(Joint with Animal Bioacoustics)  
Organized by: Sunil Puria

Celebrating a "Long" Career: Explorations of Auditory Physiology  
and Psychoacoustics  
Organized by: Jungmee Lee, Elizabeth A. Strickland

## **DESCRIPTIVE SENTENCES**

Recent work on the effects of noise on human performance and comfort, in communities and built environments such as offices, hospitals, schools, etc.

The future of acoustics is a challenge for internationality and interdisciplinarity in science, advanced techniques, and applications regarding ecology and economy.

Lectures on the development of standards for the International Civil Aviation Organization's Committee on Aviation Environmental Protection (CAEP).

Considering the soundscape approach in community noise regulations, city planning and product evaluation.

Assessment and management of the acoustic environment in urban areas, dealing with approaches and solutions to reduce, control and manage noise in cities.

Explore what is known about wind turbines and their audible and non-audible noise effects on humans and other creatures, and the governmental regulations which govern their siting.

Aims to gather researchers in acoustics and in microfluidics around fundamental questions on acoustic actuation of fluids. Typical themes are: ultrasonic standing waves, surface acoustic waves, particle and cell separation, radiation pressure and acoustic streaming, acoustic cleaning, medical therapy with acoustic forces. Industrial applications are particularly desired.

Hydrocarbon reservoir characterization using active borehole acoustic techniques, including modeling, measurements, processing, interpretation, applications and future developments.

Acoustics and vibrations of microscale and nanoscale materials and structures, ranging from fundamental physics to technological applications.

State of the art for applications of high intensity ultrasound to chemical and bio- processing, from cavitation driven chemistry to biomass beneficiation to industrial food processing.

Determination (individual measurements/simulation) of head-related transfer functions (near and far field) and individual cues in binaural hearing and their effect on perception and on psychoacoustic effects. Calibration and effects of near-to-head sources (hearing aids, headphones) on the acoustic properties in the ear canal.

The sensation of hearing is one of the most remarkable examples of biomechanics and this session will bring together many of the top scientists from the different areas of biomechanics in hearing.

A celebration of the retirement of Glenis Long, covering topics from her wide-ranging career, including otoacoustic emission (OAE) measurements and behavioral measurements in humans and animals.



## **PSYCHOLOGICAL AND PHYSIOLOGICAL ACOUSTICS (PP) (cont)**

Computational Modeling of Sensorineural Hearing Loss: Models and Applications  
(Joint with Speech Communication)  
Organized by: Michael G. Heinz, Torsten Dau

In Memory of Bertram Scharf: Five Decades of Contributions to Auditory Perception  
Organized by: Mary Florentine, Huanping Dai

Learning by Listening: Education in Acoustics Based on Listening  
Organized by: Kaoru Ashihara, Akira Nishimura

Multimodal Influences on Auditory Spatial Perception  
Organized by: Shuichi Sakamoto, William L. Martens

Recent Trends in Psychoacoustics  
Organized by: Hugo Fastl, Sonoko Kuwano

## **SIGNAL PROCESSING IN ACOUSTICS (SP)**

Array Signal Processing for 3-D Audio  
Organized by: Yang Hann Kim, Jung-Woo Choi

Methods and Applications of Time-Frequency Analysis  
(Joint with ASA Committee on Standards)  
Organized by: Leon Cohen, Patrick J. Loughlin

Nearfield Acoustic Holography (NAH) Measurements and Applications  
(Joint with Structural Acoustics and Vibration, Engineering Acoustics, and Physical Acoustics)  
Organized by: Christopher Barber, Brian Fowler

Sampling Methods for Bayesian Analysis and Inversions in Acoustic Applications  
(Joint with Acoustical Oceanography and Architectural Acoustics)  
Organized by: Cameron Fackler, Ning Xiang

## **SPEECH COMMUNICATION (SC)**

Auditory Feedback in Speech Production.  
Organized by: Anders Lofqvist, Chuck Larson

Autocorrelation-Based Features for Speech Perception  
Organized by: Yoichi Ando, Peter Cariani

Components of Informational Masking  
Organized by: Gaston Hilkuhuysen

## **DESCRIPTIVE SENTENCES**

Computational models of the physiological and psychophysical effects of sensorineural hearing loss, as well as their use in translational applications.

Celebration of the life of Professor Bertram Scharf and his contributions to psychological acoustics, including loudness, detection, masking, selective attention, and context effects over more than five decades.

Unique tools and methods that are available online and can be used for hearing research and acoustic education will be introduced.

Auditory spatial perception is influenced by multimodal processing that includes interactions between auditory, visual, vestibular, and other sensory information. This session will focus on these multimodal sensory influences on auditory spatial information processing.

Recent psychological studies including both basic study of hearing and its application to noise evaluation.

Array signal processing techniques and loudspeakers, microphone array design methods for 3-D audio.

Following the development of the speech spectrogram at AT&T Bell Labs in the 1940s, time-varying spectral analysis (or time-frequency analysis) has become prevalent in many areas, including acoustics, optics, speech analysis, marine mammal and other animal sounds, biomedical signal analysis, and fault detection, among others. This special session will emphasize methods for time-frequency analysis and its applications in a variety of areas.

Experimental measurements and computational studies of nearfield acoustic holography (NAH) measurements of vibrating structures in air or underwater; methods for estimating interior or exterior radiated noise fields from NAH results; comparison of NAH-based acoustic field estimates to experimental results.

Theory and application of sampling methods used in Bayesian inference, especially as applied to data analysis and other inverse problems in acoustics.

Recent advances in studying the role of auditory feedback in speech production: Effects of subject populations, individual differences, neural mechanisms, and issues in signal processing.

Short-time running temporal autocorrelation representations for speech perception and recognition: Temporal codes, central processing mechanisms, and observable neural correlates (single unit, FFR/EEG/MEG).

Rather than opposing informational masking to energetic masking, this session attempts to detail its components.

## **SPEECH COMMUNICATION (SC) (cont)**

Distinguishing Between Science and Pseudoscience in Forensic Acoustics  
Organized by: Geoffrey Stewart Morrison, Joseph Campbell

Flow, Structure, and Acoustic Interactions During Voice Production  
Organized by: Scott Thomson

Imitation, Accommodation, and Convergence in Speech Communication  
Organized by: Molly E. Babel, Kuniko Nielsen

Mixed Effects Modeling: Applications and Practice in Speech Research  
Organized by: Christian DiCanio, Benjamin Munson

Variability in Speech Intelligibility: Behavioral and Neural Perspectives  
Organized by: Rajka Smiljanic, Bharath Chandrasekaran

## **STRUCTURAL ACOUSTICS AND VIBRATION (SA)**

Acoustic Metamaterials  
(Joint with Noise, Engineering Acoustics and Physical Acoustics)  
Organized by: Dean E. Capone, Yun Jing

History and Application of Constrained Layer Damping  
Organized by: Benjamin M. Shafer

Measurement and Modeling of Structures with Attached Noise Control Materials  
Organized by: Nouredine Atalla, Franck Sgard

Memorial Session in Honor of Miguel Junger  
Organized by: David Feit, Joel M. Garrellick

Noise Control Methods for Composite Structures  
(Joint with Engineering Acoustics and Noise)  
Organized by Gopal P. Mathur

## **UNDERWATER ACOUSTICS (UW)**

Arctic Acoustics and Applications  
(Joint with Acoustical Oceanography)  
Organized by: Juan I. Arvelo, Stan E. Dosso

## **DESCRIPTIVE SENTENCES**

All aspects of forensic acoustics, including distinguishing between science and pseudoscience.

Recent advances towards improving our understanding of the mechanics of phonation, including measurements, models, simulations, and other analysis methods.

Coordination of speech behavior across talkers and listeners through the investigation of imitation, accommodation, and convergence in speech communication.

Discussion of the benefits and potential pitfalls of using mixed effects models in spoken language research, along with a discussion of 'best practices' for model fitting and reporting.

Different approaches for investigating mechanisms that underlie processing of variation in speech intelligibility.

Recent experimental and theoretical work in acoustic metamaterials.

A discussion and exploration of the theoretical and pragmatic development, sound and vibration control impact, and unexplored possibilities of constrained-layer damping in a wide variety of applications.

Covers modeling and measurements methods for structures with attached noise control materials (foams, fibers, damping) under various types of excitations.

Session honoring significant contributions of Miguel Junger in the field of structural acoustics and vibration.

Composite structures are used extensively in a variety of industrial applications due to their excellent mechanical properties such as high stiffness-to-weight ratio. Noise control of composite structures presents a significant technical challenge as the main advantages afforded by these structures, such as low weight and high strength, must not be compromised by added treatments. Research papers dealing with noise control treatments for composite structures and with design of such structures for low noise.

Physical mechanisms and model validation of sound and seismic interactions with the Arctic ice cap. Ice rheology factors affecting sound and sea surface wave interactions with the marginal ice zone. Acoustic applications include under-ice resource exploration, geophysical surveys, acoustic navigation and communications, environmental monitoring and remote sensing.

## **UNDERWATER ACOUSTICS (UW) (cont)**

Distributed Acoustic Sensing (DAS) via Fiber Optic Cable  
(Joint with Engineering Acoustics)  
Organized by: Daniel Finfer, Emery Ku, R. Daniel Costley

Seabed Scattering: Measurements, Modeling and Mechanisms  
Organized by: Charles Holland, Gavin Steininger

Sparse Process Modeling Techniques for Acoustic  
Signal Processing  
(Joint with Signal Processing in Acoustics)  
Organized by: Geoffrey F. Edelmann, Paul J. Gendron

Using Graphic Processing Units for Computationally Intensive  
Applications in Acoustic Modeling and Signal Processing  
(Joint with Signal Processing in Acoustics)  
Organized by: Paul Hursky

## **DESCRIPTIVE SENTENCES**

Distributed acoustic sensing (DAS) makes it possible to perform vibroacoustic measurements using only fiber optic cable; this is done in the absence of discrete sensing stations. This session will explore emerging applications for this exciting new technology.

Scattering from the seabed, either from its interface or volume, affects sonar performance, as well as complicates seabed parameter estimation using acoustic methods. This session features measurement and modeling advances over a wide range of frequencies, including ability to separate scattering mechanisms.

Models and methods that leverage sparsity either for computational savings or for parsimonious statistical representation are explored for their improvements to acoustic signal processing. Applications range from sparse sampling and acoustic field encoding to spectral estimation, array processing, component analysis, and broadband multipath channel estimation.

New multi-core hardware architectures and software infrastructures to support them are making parallel computing very accessible at modest cost. This session will feature work on adapting computationally demanding modeling and signal processing tasks to take advantage of various parallel architectures, such as cloud computing, computing clusters, multi-core CPUs, multi-core graphic processing units (GPUs), DSP chips, and FPGAs.

## OTHER TECHNICAL EVENTS AND INFORMATION

### PLENARY LECTURES

Five plenary lectures will be scheduled, one on each day of the meeting. Details about the lecturers and the titles of their presentations will be provided online when they become available.

### EXPOSITION

An extensive exposition will showcase the latest products in all fields of acoustics. The exposition will be held in a large, centrally-located ballroom of the Palais des congrès, opening with a reception on Monday evening, 3 June, and closing on Wednesday afternoon, 5 June. Contact the Exposition Manager for information about participating in the exhibit: Richard J. Peppin, c/o Scantek, Inc., 6430 Dobbin Rd #C, Columbia, MD 21045 USA; Tel: +1 410-290-7726; Cell: +1 301-910-2813; Fax: +1 410-290-9167; E-mail: PeppinR@ASME.org.

### TECHNICAL TOUR

A technical tour of La Maison Symphonique is planned for Monday morning, 3 June 2013. This concert hall opened in September 2011 with a total capacity of 2100 seats. The hall is home to the Montréal Symphony Orchestra, and regularly hosts performances of the Orchestre Métropolitain, I Musici de Montréal, and Les Violons du Roy, as well as the Montréal Jazz Festival and other amplified music events. The tour will be led by a representative of Artec Consultants Inc. La Maison Symphonique is approximately 1 km from the conference center with a walking time of 15 minutes. Bus transportation will be available for those not desiring to walk or in the event of rain. The cost to participate in the tour is \$15.00. Register online at <http://AcousticalSociety.org>. Space is limited; early registration is encouraged.

### STUDENT DESIGN COMPETITION

The 2013 Student Design Competition will be displayed and judged at the Montréal meeting. This competition is intended to encourage students in the disciplines of architecture, engineering, physics, and other curriculums that involve building design and/or acoustics to express their knowledge of architectural acoustics and noise control in the design of a facility in which acoustical considerations are of significant importance. The competition will be a poster session.

Entries may be submitted by individual students or by teams of a maximum of three students. Undergraduate and graduate students from all countries are encouraged to participate. Students must be enrolled in either the fall term of 2012 or the spring term of 2013 (or equivalent if a particular school does not operate on a spring and fall term basis) to be eligible for the competition. It is not necessary to attend the Montréal meeting to participate in the competition although attending the meeting is encouraged.

All competition entries will respond to a design scenario that will be announced by approximately 1 November 2012. Information about the design scenario and registration for the competition will be available on the website of the Newman Fund, [www.newmanfund.org](http://www.newmanfund.org). Additional information may be obtained by contacting Bob Coffeen, [coffeen@ku.edu](mailto:coffeen@ku.edu). The Student Design Competition is sponsored by the ASA Technical Committee on Architectural Acoustics, with support from the Wenger Foundation, the Robert Bradford Newman Student Award Fund, and the National Council of Acoustical Consultants.

## **OPEN MEETINGS OF TECHNICAL COMMITTEES**

ASA Technical Committees will hold open meetings on Tuesday, Wednesday, and Thursday evenings at 7:30 p.m. These are working, collegial meetings. Much of the work of the Acoustical Society of America is accomplished by actions that originate and are taken in these meetings including proposals for special sessions, workshops and technical initiatives. All meeting participants are cordially invited to attend these meetings and to participate actively in the discussions.

## **PROCEEDINGS OF ICA 2013**

The Proceedings of ICA 2013 will be published as a separate volume of the online journal Proceedings of Meetings on Acoustics (POMA). This is an open access journal, so that its articles are available in pdf format without charge to anyone in the world for downloading. Authors who have had their abstracts accepted for inclusion in the technical program will be invited to prepare a manuscript that will appear in POMA. Deadline for submission of manuscripts is 22 January 2013. The POMA online site for submission of papers and the format requirements will be provided in the authors' invitation letters. Further information regarding POMA can be found at the site <http://asa.aip.org/poma.html>.

## **MEETING PROGRAM**

A complete meeting program will be mailed as Part 2 of the May issue of JASA. Abstracts will be available on the ASA Home Page <<http://www.acousticalsociety.org>> in April.

An online itinerary planner with mobile device access will also be available.

## ABSTRACT AND MANUSCRIPT SUBMISSION GUIDELINES

To be included in the ICA 2013 technical program, authors need to complete three steps for each presentation: (a) submit the abstract, (b) prepare and submit a Proceedings manuscript, and (c) pay the preregistration fee and extra paper fee if applicable. Please note that without both submission of the manuscript and payment of the preregistration fee, the abstract will not be scheduled for presentation nor included in the meeting program.

### ABSTRACT SUBMISSION GUIDELINES

An abstract of not more than 200 words is required for each paper, whether invited or contributed. **Abstracts longer than 200 words will be edited or truncated.** Authors must submit abstracts online (see page 12).

**All abstracts must be submitted online by 15 November 2012.** This deadline will be strictly enforced. **Abstracts submitted via postal mail, fax, or e-mail will not be accepted.**

### ABSTRACT LIMITATIONS

- A contributor in Speech Communication may be the principal author of only one paper, and, subject to time and space limitations, may be the co-author of only one additional paper. Authors contributing papers in Speech Communication are also encouraged to select poster-style presentation.
- Contributed papers in Psychological and Physiological Acoustics and Underwater Acoustics may be scheduled for lecture or poster presentation.
- While authors may indicate a preference for presentation style, it may not always be possible to honor the request. Authors should be prepared to accept assignment of their abstracts to either lecture or poster presentation.

### ACKNOWLEDGMENT OF RECEIPT OF ABSTRACTS SUBMITTED ONLINE

Contributors submitting abstracts online will receive an automated e-mail message confirming that their abstracts have been received.

### AUTHOR MANUSCRIPTS AND PREREGISTRATION

Invitations to prepare manuscripts for inclusion in the ICA 2013 Proceedings will be sent to corresponding authors by 1 December 2012 and will include detailed instructions for the preparation of the full manuscripts and the procedure for submission. A manuscript must be submitted for each paper to be presented at the meeting and for publication in the Proceedings. If a manuscript is not received by 22 January 2013, the abstract will not be scheduled for presentation nor will it be published in the meeting program. This deadline will be strictly enforced.

**Payment of the Preregistration** fee by the corresponding author of each abstract is required. The preregistration fee must also be received by 22 January 2013. Multiple submissions are permitted, but a \$100 publication fee will be charged for each additional paper submitted by the same corresponding author.

## BEST PAPER AWARDS FOR STUDENTS AND YOUNG PRESENTERS

The ASA Technical Committees on Acoustical Oceanography, Animal Bioacoustics, Architectural Acoustics, Biomedical Acoustics, Engineering Acoustics, Musical Acoustics, Noise, Signal Processing in Acoustics, Speech Communication, Structural Acoustics and Vibration, and Underwater Acoustics offer Best Paper Awards to students or young presenters who present papers at Society meetings. Authors need not be members of ASA to qualify. **If you want your paper to be considered for an award, you must indicate this when you submit your abstract.** Please read the entry qualifications to be sure that you are eligible and follow the instructions for entering the individual Technical Committee competitions that appear on page 23.

## INSTRUCTIONS FOR SUBMITTING ABSTRACTS ONLINE

Complete instructions for the preparation and submission of abstracts are provided online.

Acknowledgment that your abstract has been received will be sent by e-mail. **Please note that if you do not receive an email message your abstract has not been entered into the database.**

1. Online Abstract Submission site is accessed on the ASA Home Page at <http://AcousticalSociety.org>
2. Click "Submit Abstract for the Montréal meeting" from the main page
3. If this is your first visit to the site, you must create an account and set up a username and password. If you have submitted an abstract on this site for the last meeting, use the username and password that you created at that time. If you do not remember your password, use the "Forgotten Password" link on the left navigation menu.
4. After logging into the submission site, click the "Submission" tab.
5. To begin a new abstract click "Create a New Abstract" in the sidebar located on the left-hand side of the screen.
6. If at any time during the submission process you need technical support click the "Get Help Now" button at the top of the screen. Printed and video help is available.
7. Abstracts are limited to 200 words (approximately 1500 characters).
8. The body of the abstract can be cut and pasted into the submission site. Note that LaTeX coding must be entered using the Special Character palette which appears on the Title/Body Screen.
9. Enter all authors and their affiliations in the order they should appear in the abstract.
10. Carefully check the proof of your abstract. Make sure all special characters and formatting are displaying properly and that the authors and affiliations are listed in the proper order.
11. When all the required information for your submission is entered, the "Submit Abstract" button will appear at the Proof and Submit stage. Click the "Submit Abstract" button to submit the abstract.
12. Upon submission of your abstract you will receive an e-mail confirmation.
13. To view or edit an existing submission click "View Submissions" in the sidebar located on the left-hand side of the screen.
14. To edit an existing submission you must select "Return to Draft" and then select "Edit." All abstracts that are returned to draft must be resubmitted to be entered into the system. If not, the submission will remain in the Drafts table.

## AUDIO-VISUAL AND SPECIAL EQUIPMENT AND SOFTWARE

### PRESENTATION MANAGEMENT SYSTEM

ICA 2013 will make use of a presentation management system to facilitate the audio-visual operations for the technical program. In the months before the meeting, a website will be made available for authors to upload their presentations. During the ICA 2013 meeting, authors will be able to upload their presentations from their laptops (PC or Mac), CD ROM, or USB in the Audio/Visual Preview room. Authors will be able to review and to make changes to their presentation up until shortly before the start of the sessions in which their presentations are scheduled.

**Authors will not be able to use their personal laptops for their presentations.** Use of the presentation management system eliminates the disruption caused by switching computers in the middle of a session. Similarly, authors will not be able to upload their presentations from a memory stick during their technical session.

All presenting authors should have their presentations uploaded no later than the day before their session is scheduled.

### AUDIO-VISUAL EQUIPMENT

PC computers with stereo audio playback capability, computer projectors, and laser pointers will be provided in all lecture sessions. All other equipment is considered to be special equipment. Requests for special equipment (e.g., overhead transparency projectors, VCR's and monitors, CD players, etc.) must be specified at the time of abstract submission. Provision of unusual special equipment will depend upon availability and cost. Special software requests should also be made, if required. Please be specific about your audio needs, including number of channels and preferred loudspeaker arrangement.

Guidelines for use of computer projection will be supplied with acceptance notices.

### POSTER SESSION BOARDS

Poster boards (size 4' x 8' mounted horizontally) and fastening materials will be provided. If your poster needs to be located adjacent to a power outlet and/or you require the use of a table, please request these items when you submit your abstract.

### AUDIO/VISUAL PREVIEW ROOM

Computer presentations and other audio/visual materials can be reviewed by authors in the Audio/Visual Preview room at the meeting.



## **SPECIAL MEETING FEATURES**

### **STUDENT TRANSPORTATION SUBSIDIES**

A student transportation subsidies fund has been established to provide limited funds to students to partially defray transportation expenses to meetings. Students are not required to be members of the Acoustical Society of America to be eligible to receive subsidies. Students presenting papers who propose to travel in groups using economical ground transportation will be given first priority to receive subsidies, although these conditions are not mandatory. No reimbursement is intended for the cost of food or housing. The amount granted each student depends on the number of requests received. To apply for a subsidy, submit a proposal by e-mail to be received by 1 May to: Jolene Ehl, [jehl@aip.org](mailto:jehl@aip.org). The proposal should include your status as a student; whether you have submitted an abstract; whether you are a member of ASA; method of travel; if traveling by auto; whether you will travel alone or with other students; names of those traveling with you; and approximate cost of transportation.

### **ICA-ASA YOUNG SCIENTIST CONFERENCE ATTENDANCE GRANTS**

The Board of the International Commission for Acoustics (ICA) with the support of the Acoustical Society of America (ASA) has established the ICA-ASA Young Scientist Conference Attendance Grants (YS Grants) Programme to help young acousticians attend International Congresses on Acoustics. Each grant is currently up to 500 EUR from which a portion will be used to cover the conference registration and the remainder provided at the time of the conference. The receipt of the award of the prestigious YS Grant may be used by the young acoustician to assist with obtaining additional funding from other sources. Candidates must be under 35 years on the day of the opening ceremony of the Congress and may be either undergraduate or postgraduate students, postdoctoral or young acousticians. Special attention will be given to applicants from developing countries. The deadline for applications is 15 November 2012. The application form can be found at the ICA website: [www.icacommission.org/YSgrants.html](http://www.icacommission.org/YSgrants.html).

### **YOUNG INVESTIGATOR TRAVEL GRANT**

The Committee on Women in Acoustics (WIA) is sponsoring a Young Investigator Travel Grant to help with travel costs associated with presenting a paper at the Montréal meeting. Young professionals who have completed their doctorates in the past five years are eligible to apply if they plan to present a paper at the Montréal meeting, are not currently students, and have not previously received the award. Each award will be of the order of USD\$600 with two awards anticipated. Awards will be presented by check at the WIA luncheon at the meeting. Both men and women may apply. Applicants should submit a request for support, a copy of the abstract for their presentation at the meeting, and a current resume/vita which includes information on their involvement in the field of acoustics and in the ASA. Submission by e-mail is preferred to Dr. Marcia Isakson <[misakson@arlut.utexas.edu](mailto:misakson@arlut.utexas.edu)>. Deadline for receipt of applications is 22 April 2013.

### **STUDENTS MEET MEMBERS FOR LUNCH**

Students Meet Members for Lunch, which operates regularly at ASA Meetings, will be expanded for ICA 2013. All attending students, not just ASA-affiliated students, may participate. The purpose of the program is to make it easier for students to meet and interact with established acousticians in the profession. The student meets one-on-one with the established acoustician over lunch. Each lunch pairing is arranged separately. Students who are interested should contact Dr. David T. Blackstock, University of Texas at Austin, by e-mail <[dtb@austin.utexas.edu](mailto:dtb@austin.utexas.edu)>. Please provide your name, university, department, degree you are seeking (BS, MS, or PhD), research field, acoustical interests, your supervisor's name, days you are free for lunch, abstract number (or title) of any paper(s) you will present, and any special requests. The sign-up deadline is May 20, 2013, but an earlier sign-up is strongly encouraged. Each participant pays for his/her own meal.

### **WOMEN IN ACOUSTICS LUNCHEON**

The Women in Acoustics luncheon will be held on Wednesday, 5 June. Those who wish to attend this luncheon must register online at <<http://acousticalsociety.org>> or use the form on page 23. space is limited The early fee is USD\$20 (students USD\$10) if pre-registered by 1 May and USD\$25 (students USD\$10), after 1 May, space permitting.

## PLENARY SESSION AND AWARDS CEREMONY

A joint ASA/CAA/ICA Plenary session will be held Wednesday afternoon, 5 June. ASA awards will be presented and recognition of newly-elected Fellows will be announced; CAA and ICA awards will be presented.

## ICA GENERAL ASSEMBLY AND CAA ANNUAL GENERAL MEETING

The General Assembly of the International Commission for Acoustics (ICA) will be held Wednesday afternoon, 5 June, following the Plenary session. This meeting will be followed by the Annual General Meeting of the Canadian Acoustical Association (CAA).

## OPENING CEREMONIES, CLOSING CEREMONIES, SOCIALS, OTHER EVENTS

Various events are being organized for ICA 2013:

- The Opening Ceremony will be held on Sunday afternoon 2 June 2013, followed by a Welcoming Reception.
- An evening concert at the historical Église Saint-Jean-Baptiste is planned for Monday, 3 June 2013. The concert will start at 8:00 p.m. The church is in the village Le Plateau-Mont-Royal, noted for its trendy restaurants and cafés. The well known classical chamber orchestra *I Musici* will perform under the direction of conductor Jean-Marie Zeitouni. Special assistance for transportation to and from the concert venue will be available, and announced on the conference web site. Tickets are USD\$20 (USD\$25 when purchased onsite) and can be purchased online when you preregister or use the printed form on page 23.
- Buffet socials with cash bar will be held on Tuesday and Thursday at the Palais des congrès.
- The ICA 2013 meeting will conclude with a Closing Ceremony on Friday afternoon, 7 June 2013, followed by a Farewell Reception.

## SATELLITE SYMPOSIUM

### *International Symposium on Room Acoustics (ISRA 2013)*

9–11 June 2013  
Royal Conservatory of Music  
273 Bloor St. West  
Toronto, Canada

[www.caa-aca.ca/conferences/isra2013/](http://www.caa-aca.ca/conferences/isra2013/)

Symposium Chairs  
John Bradley  
John O'Keefe

For further information visit: [info@isra2013.com](mailto:info@isra2013.com)

## TRANSPORTATION

### AIR TRANSPORTATION

Greater Montréal is served by approximately 40 air carriers connecting Montréal to 130 destinations around the world. **Montréal-Trudeau International Airport** is located 15 minutes from downtown Montréal. Information about Montréal-Trudeau International Airport may be found at [www.admtl.com/Passengers/Home.aspx](http://www.admtl.com/Passengers/Home.aspx).

### GROUND TRANSPORTATION

You can get a taxi or limousine at the arrivals level near the central exit located in front of the cloakroom, where a dispatcher will assist you. No reservation is required. All taxi and limousine operators working out of Montréal-Trudeau are required to have a permit and to comply with its terms and conditions.

The fixed fare of CDN\$40.00 applies to a taxi trip from the Airport to downtown Montréal (one-way). The same trip with Limousine service costs CDN\$49.50. A number of adapted taxis, for passengers with reduced mobility, are available at the Airport; please ask the dispatcher for this service. Visa, MasterCard and American Express credit cards are accepted. Some drivers accept U.S. currency but provincial regulations require customers to pay in Canadian currency.

The 747 bus line service runs 24 hours a day, 7 days a week, between the Montréal-Trudeau airport and downtown. All conference hotels are within a few blocks walking distance from stop #7, located at the corner of Rene Levesque Boulevard and Jeanne Mance Street. Consult the map on page 20. Travel time may vary between 45 to 60 minutes, depending on traffic conditions. Wi-Fi service is available on most 747 buses. The fare is \$8, and includes unlimited travel throughout STM bus and métro networks during 24 consecutive hours. Tickets can be purchased at an easily identified airport booth using credit cards. The \$8 fare can also be paid in cash with exact change on board the bus, but only coins are accepted (no bank bills) so it is much better to buy a round trip ticket at the airport terminal. There are departures approximately every 10 minutes.

### DRIVING INFORMATION

For people driving to Montréal, there is a variety of routes that may be taken to enter the city depending on the point of departure. Useful route planners may be found at <http://www.congresmtl.com/en/informations/driving.aspx>.

### PARKING AT THE OFFICIAL HOTELS

All the hotels offer parking except for the Hôtel Le Dauphin. Parking rates are available by contacting each hotel.

## VISITOR INFORMATION

### WEATHER

You should come prepared for cool weather as well as some warm sunny days. Daytime highs of 18°C - 26°C (64°F - 79°F) can be expected in early June; nighttime lows are 7°C – 15°C (45°F - 59°C). Expect some rain during your stay in Montréal. To find the current weather conditions in Montréal and a forecast for upcoming days, visit Environment Canada: <http://weatheroffice.ec.gc.ca>.

### ENTRY FORMALITIES

You must have a valid passport, and in some cases, you may need a visa. To find out more, visit the Citizenship and Immigration Canada website ([www.cic.gc.ca/english/visit/visas.asp](http://www.cic.gc.ca/english/visit/visas.asp)). You can also consult the nearest Canadian embassy, high commission, consulate, customs agent, or your travel agent. **You should allow a minimum of 30 days for visa delivery.** For details on what you are allowed to bring in your baggage (gifts, merchandise, etc.), go to the Canada Border Services Agency ([www.cbsa-asfc.gc.ca/travel-voyage/menu-eng.html](http://www.cbsa-asfc.gc.ca/travel-voyage/menu-eng.html)).

If you are a citizen of the United States, you will need a passport to enter Canada. However, if you do not have a passport, you must carry proof of your citizenship, such as a birth certificate, certificate of citizenship or naturalization, as well as photo identification. If you are a permanent resident of Canada or the U.S, you should bring your Permanent Resident Card with you. Please note that there are new requirements in effect for all United States nationals returning home. For more information, consult the U.S. Department of State website (<http://travel.state.gov/>).

The organizers will be pleased to provide an official letter of invitation to help potential attendees obtain travel funds or a visa. Contact Mireille Giroux at [mireille.giroux@nrc-cnrc.gc.ca](mailto:mireille.giroux@nrc-cnrc.gc.ca). The letter does not constitute any financial commitment on the part of the Congress.

### LANGUAGES

French is Québec's official language but English is widely spoken in Montréal. The city has more than 80 cultural groups and over 20% of the population speaks three languages. The language of ICA 2013 will be English only.

### CURRENCY AND BANKING

Travelers' checks can be cashed at numerous banks, currency exchange locations and stores (with purchases). There are numerous Automatic Teller Machines in downtown Montréal. Most banks are closed on Saturdays and Sundays in Canada.

Canadian currency is the dollar, which is divided into 100 cents. There are 5, 10, 20, 50, and 100 dollar bills. One and two dollar bills have been replaced by coins, sometimes referred to as "Loonies" (the bird on the \$1 is a loon) and "Toonies" (\$2).

### TIPPING IN CANADA

Service is not included in restaurants, so it is customary to add a 15% tip to the total before taxes (if you're with a group, 15% for service may be automatically added to your bill). Taxi drivers, hairdressers, etc. are also normally tipped 15%. Bellhops, porters, doormen, etc. generally receive at least CDN\$1 per suitcase or per service rendered.

### GOODS AND SERVICES TAX

A federal Goods and Services Tax (GST) of 5% is charged on most goods and services in Canada. A Québec provincial tax (TVQ) of 9.5% is added to all goods and services purchased in the province of Québec. No tax refund is granted to leisure travelers.

## HEALTH INSURANCE

Visitors are NOT covered by the Canadian Health Insurance Plan. It is recommended that participants arrange their own health and accident insurance. This can be done before leaving home through a local travel agent or medical association.

## EMERGENCY CONTACTS

You may dial **9-1-1** at any time. The service is free from a pay phone and available in French and English. Operators are in contact with emergency firefighter, police and ambulance services at all times. For less serious illness, you can see a doctor at a community health centre called a CLSC. These are smaller clinics, and there is one in every neighborhood. In case of a non-urgent problem, you may contact Info-Santé (Health Info) by dialing **8-1-1** to reach a health professional easily.

## ELECTRICAL

If your laptop or other appliance runs on 220V, you need to ensure that it can plug into the North-American type 110V outlets used in the US and Canada. An adapter that allows you to do this is best purchased prior to leaving your country of residence.

## DRIVING IN QUÉBEC

Visitors may drive a car for a maximum of six consecutive months without having a Québec driver's license. However, a valid driver's license corresponding to the vehicle category is required. If your driver's license is neither in English or French, getting an International Driver's Permit is highly recommended. You must apply for a permit in the country that issued your driver's license, before your arrival in Canada. While driving:

- In Canada, one drives on the right-hand side of the road
- Canada uses the metric system, so speeds are indicated in kilometers (100 km/h = 62 mph) and gas is sold in liters (3 3/4 liters = 1 US gallon). Even though road signs in Québec are in French, most of them use international symbols.
- Although turning right on a red light is authorized in the province of Québec, right turns on red lights are strictly prohibited on the island of Montréal.
- Use of a hand-held cell phone that does not have a "hands-free" function is prohibited while driving.

## BUS AND METRO RATES

Public transit in Montréal is operated by Société de transport de Montréal (STM) and includes both buses and subway (the métro). Fares for 2013 are not yet available, so the current 2012 rates are quoted here. The cost for one trip is CDN\$3.00, but you need to have exact change on the bus. A 1-day card can be purchased for CDN\$8.00. You can also purchase a 3-day card for CDN\$16.00. Cards are available at transit stations and many stores. For further information on transportation in Montréal, go to the STM website at: <http://www.stm.info/>.

## VISITING CANADA

Those wishing to plan excursions in Canada before or after the Congress can obtain maps, accommodation lists and descriptions of sites of interest from the tourism services of each Canadian province:

Province	North America ONLY	Website Address
Alberta	1-800-252-3782	<a href="http://www.travelalberta.com">www.travelalberta.com</a>
British Columbia	1-800-435-5622	<a href="http://www.hellobc.com">www.hellobc.com</a>
Manitoba	1-800-665-0040	<a href="http://www.travelmanitoba.com">www.travelmanitoba.com</a>
New Brunswick	1-800-561-0123	<a href="http://www.tourismnbcanda.com">www.tourismnbcanda.com</a>
Newfoundland & Labrador	1-800-563-6353	<a href="http://www.newfoundlandlabrador.com">www.newfoundlandlabrador.com</a>
Northwest Territories	1-800-661-0788	<a href="http://www.explorenwt.com">www.explorenwt.com</a>
Nova Scotia	1-800-565-0000	<a href="http://www.novascotia.com">www.novascotia.com</a>
Nunavut	1-866-686-2888	<a href="http://www.nunavuttours.com">www.nunavuttours.com</a>
Ontario	1-800-668-2746	<a href="http://www.ontariotravel.net">www.ontariotravel.net</a>
Prince Edward Island	1-800-463-4734	<a href="http://www.peisplay.com">www.peisplay.com</a>
Saskatchewan	1-877-237-2273	<a href="http://www.sasktourism.com">www.sasktourism.com</a>
Québec	1 877 266-5687	<a href="http://www.bonjourquebec.com">www.bonjourquebec.com</a>
Yukon	1-800-661-0494	<a href="http://www.travelyukon.com">www.travelyukon.com</a>

Please check the website at: [www.travelcanada.ca](http://www.travelcanada.ca) for more information.

## HOTEL RESERVATION INFORMATION

Blocks of guest rooms at discounted rates have been reserved for meeting participants at six nearby hotels. **Early reservations are strongly recommended** – June is the beginning of the peak tourist season and the Montréal International F1 Grand Prix race will be held immediately following ICA 2013. Note that the special ASA meeting rates are not guaranteed after the cut-off dates shown in the table below.

Tourisme Montréal's reservation service will handle accommodation requests for all six hotels. Please visit the following website to make your reservations: <https://resweb.passkey.com/go/Acoustical>.

(Daily rates are in Canadian dollars, but do not include the rooming tax of 3% per day, the federal sales tax (GST) of 5% and the Provincial Sales Tax (QVT) of 9.5%)

Official Hôtels	Rate	Included	Cut-off dates
Embassy Suites	\$219.00	Daily breakfast	May 2
Holiday Inn Select	\$179.00		May 2
Hyatt Regency	\$199.00		May 1
InterContinental	\$199.00		May 2
Le Dauphin	\$175.00	No parking available	---
Westin Montréal	\$227.00		May 3



The Palais des congrès is located at the Place d'Armes station of the Metro subway.

### ROOM SHARING

ASA will compile a list of those who wish to share a hotel room and its cost. To be listed, send your name, telephone number, e-mail address, gender, smoker or nonsmoker preference, not later than 15 April 2013 to the Acoustical Society of America, by e-mail, [asa@aip.org](mailto:asa@aip.org). The responsibility for completing any arrangements for room sharing rests solely with the participating individuals.

## **GENERAL INFORMATION**

### **COMMITTEE MEETINGS**

Meetings of Administrative, Technical and Standards Committees, including Working Groups, will be announced in the printed program if requests are received no later than 22 January. Requests for meeting space, special luncheons, etc., should be made as early as possible to: Mireille Giroux, NRC Conference Services Office; fax: 613-993-7250; e-mail: mireille.giroux@nrc-cnrc.gc.ca.

Requests should be made by fax or e-mail, and should specify the committee's needs for space, room arrangement, furnishings, catering, and any special equipment. Reservations will not be taken by phone. Requesters should note that space is limited, and that late requests can be filled only on a space-available basis.

### **ASSISTIVE LISTENING DEVICES**

Anyone planning to attend the meeting who will require the use of an assistive listening device is requested to advise the Society in advance of the meeting: Acoustical Society of America, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502, asa@aip.org.

### **ACCOMPANYING PERSONS PROGRAM**

Spouses and other visitors are welcome at ICA 2013. The registration fee is USD\$175 for preregistration by 1 May 2013 and USD\$200 at the meeting.

A hospitality room for accompanying persons will be open at the Palais des congrès from 8:00 a.m. to 10:30 a.m., Monday through Friday. The following events will be available to accompanying persons:

- Opening Ceremony and Welcome Reception, Sunday, 2 June 2013
- A speaker from Tourisme Montréal will present local attractions, events and a brief history of Montréal on Monday morning. Visit <http://www.tourisme-montreal.org/> for additional information about Montréal.
- City bus tour, Monday 3 June
- Tuesday and Thursday buffet socials
- Closing Ceremony and Farewell Reception, Friday, 7 June

A couple other events are being planned; please visit the ICA 2013 website ([www.ica2013montreal.org](http://www.ica2013montreal.org)) for updates.



## REGISTRATION INFORMATION

The registration desk at the meeting will open on Sunday afternoon, 2 June 2013, at the Palais des congrès. Register online at [www.acousticalsociety.org](http://www.acousticalsociety.org) or use the form on page 23.

**If your registration is not received at the ASA headquarters by 1 May 2013 you must register on-site.**

Registration fees in US dollars (USD) are as follows

Category	Preregistration by 1 May 2013	Registration after 1 May and Onsite
Full Registrant	\$545	\$645
One-Day Attendance*	\$270	\$320
Student (with current ID cards)	\$50	\$100
Emeritus/Retired Member (must hold this membership status in an ICA Member Society)	\$175	\$200
Accompanying Person (Registrants who will not participate in the technical sessions)	\$175	\$200

\*One-day registration is for participants who will attend the meeting for only one day. If you will be at the meeting for more than one day either presenting a paper and/or attending sessions, you must register and pay the full registration fee.

**Please note:**

- **Invited speakers are expected to pay the registration fee.**
- **A \$25 fee will be charged for cancellations after 1 May.**
- The corresponding authors of each paper must preregister by the earlier date of 22 January 2013 in order that their papers be included in the ICA 2013 technical program and in the Proceedings. Multiple submissions are permitted but a \$100 publication fee will be charged for each additional paper submitted by the same corresponding author.

# MONTREAL, CANADA, 2-7 JUNE 2013

# REGISTRATION FORM

Check (voluntary survey):  Female  Male

\_\_\_\_\_  
Last Name (Surname)

\_\_\_\_\_  
First Name Middle Initial

\_\_\_\_\_  
Name as it should appear on your badge

\_\_\_\_\_  
Company/Organization (will be printed on badge)

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State/Province Zip/Postal Code

\_\_\_\_\_  
Country

**Corresponding authors only.** Enter the control ID of  
your first abstract: \_\_\_\_\_

\_\_\_\_\_  
Telephone Number Fax Number

\_\_\_\_\_  
E-mail address

\_\_\_\_\_  
Name of Accompanying Guest (for badge)

## in U.S. dollars

up to after  
1 May 1 May

Full Registrant \$545 \$645 \$ \_\_\_\_\_

One-Day Attendance \$270 \$320 \$ \_\_\_\_\_

Student (with current ID card) \$50 \$100 \$ \_\_\_\_\_

Emeritus Member (must  
(hold this membership status  
in an ICA Member Society) \$175 \$200 \$ \_\_\_\_\_

Accompanying Person  
(Will not participate in  
Technical sessions) \$175 \$200 \$ \_\_\_\_\_

### **Technical Tour, Mon., 3 June**

La Maison Symphonique \$15 \$15 \$ \_\_\_\_\_

### **Evening Concert, Mon., 3 June**

St. Jean Baptiste Church \$20 \$25 \$ \_\_\_\_\_  
Concert by *I Musici*

### **Women in Acoustics Luncheon**

Students \$10 \$10 \$ \_\_\_\_\_

Nonstudents \$20 \$25 \$ \_\_\_\_\_

### **MULTIPLE PAPER PUBLICATION FEE(s)**

Corresponding authors of multiple  
submissions are required to pay a \$100  
fee for each additional submission.

# of additional papers \_\_\_\_\_ @ \$100 each \$ \_\_\_\_\_

Enter control ID of extra abstracts:  
\_\_\_\_\_  
\_\_\_\_\_

**TOTAL REMITTANCE (U.S. Dollars)** \$ \_\_\_\_\_

### **PAYMENT METHOD**

Check or money order payable to the Acoustical  
Society of America (Note: Checks must be drawn on a  
U.S. bank in U.S. dollars. Non-U.S. bank drafts and wire  
transfer will not be accepted)

Visa  MasterCard  American Express

\_\_\_\_\_  
Card Number Exp. Date Security Code

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print name above as it appears on card

Mail form with payment to:  
Acoustical Society of America  
Suite 1N01

2 Huntington Quadrangle  
Melville, NY 11747-4502

FAX (payment by credit card only): 516-576-2377

**If you registration is not received at the ASA  
headquarters by 1 May you must register on-site.  
Preregistrations received after 1 May will not be  
processed.**

## ASA BEST PAPER AWARDS FOR STUDENTS AND YOUNG PRESENTERS

Several of the ASA Technical Committees offer Best Paper Awards to students and young presenters who present papers at Society meetings. If you want your paper to be considered for an award, you must indicate this when you submit your abstract. Follow the instructions for the appropriate technical area that appear below.

### ASA BEST STUDENT PAPER AWARDS

#### COMMITTEES OFFERING THESE AWARDS:

Acoustical Oceanography, Animal Bioacoustics, Architectural Acoustics, Engineering Acoustics, Musical Acoustics, Speech Communication, Structural Acoustics and Vibration, and Underwater Acoustics

#### AWARD AMOUNTS:

For each of the Technical Committees granting awards, up to two awards will be presented to students presenting papers in sessions organized by the specific Technical Committee: USD\$300 for first prize and USD\$200 for second prize.

#### QUALIFICATIONS:

To qualify for these awards, an author must:

- ▶ be enrolled as a student at least half-time (graduates are eligible if the work being presented was performed as a student within one year of the meeting). Note that you do not need to be a member of the ASA to qualify.
- ▶ be listed as the first author on the submitted abstract
- ▶ present the paper at the meeting

#### SELECTION:

The award winners will be selected by a subcommittee of each of the Technical Committees granting awards, based upon the quality of both the content of the paper and its presentation. The awards will be announced either at the meeting of the Technical Committee or after the close of the meeting.

#### APPLICATION:

All those who wish to participate in the competition for these awards must indicate their intention to enter the competition during the abstract submission process by clicking the entry box on the online submission form.

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### BIOMEDICAL ACOUSTICS STUDENT PAPER AWARD

The ASA Technical Committee on Biomedical Acoustics offers a Best Student Poster Award to students who present at spring meetings. Students who enter the competition are expected to give an oral presentation in a regular/special session and defend a poster in a separate student poster session. Only the poster presentation will be judged for the competition. Abstracts submitted by students who elect to participate in the competition will be listed in the program in appropriate oral sessions. Please read the entry qualifications that appear below to be sure you are eligible and follow the instructions for entering the competition.

#### AWARD AMOUNTS:

Up to three awards will be presented to students presenting papers in sessions organized by the Technical Committee on Biomedical Acoustics and participating in the special student poster session: USD\$500 for first prize, USD\$300 for second prize, and USD\$200 for third prize.

#### QUALIFICATIONS:

To qualify for an award, a student must:

- ▶ be enrolled as a student at least half-time (graduates are eligible if the work being presented was performed as a student within one year of the meeting). Note that you do not need to be a member of the ASA to qualify.
- ▶ be listed as the first author on the submitted abstract
- ▶ present the paper in an oral session
- ▶ defend the poster at a special student poster session, which will be open to all attendees.

#### SELECTION:

The awardees will be selected by a panel of judges, based upon the quality of the content of the poster and a brief presentation to the judges during a designated poster session. The award winners will be announced either at the meeting of the Biomedical Acoustics Technical Committee or after the close of the meeting.

#### APPLICATION:

All those who wish to participate in the competition must indicate their intention by clicking the entry box on the online abstract submission form. Additional details will be sent to entrants after the program has been organized.

## **ASA BEST "OUTSTANDING PAPER BY A YOUNG PRESENTER" AWARDS**

Note that you need not be a student to qualify for these two awards.

### **COMMITTEES OFFERING THESE AWARDS:**

Noise and Signal Processing in Acoustics

### **AWARD AMOUNTS:**

Noise: Up to three awards of up to USD\$250 each will be given for outstanding papers presented in sessions organized by the Technical Committee on Noise.

Signal Processing in Acoustics: One award of USD\$500 will be given for outstanding paper presented in a session organized by the Technical Committee on Signal Processing in Acoustics.

### **QUALIFICATIONS:**

To qualify for an award, the paper author must:

- ▶ be under 30 years of age as of 1 January 2013
- ▶ be listed as the first author of the paper and actually present the paper

### **SELECTION:**

Selection of the award winners will be based on the quality of the presented paper, comprising both the content and its delivery. The award winners will be chosen by a subcommittee of the Technical Committee and will be announced after the close of the meeting.

### **APPLICATION:**

The Award Subcommittees would like to consider papers by all authors who meet the eligibility criteria. Neither membership in the Acoustical Society, nor previous experience in the ASA, is required. Because the committees have no other way to identify eligible authors, however, it is essential that eligible authors indicate their intention to enter the competition during the abstract submission process by clicking the entry box on the online submission form.

## INTERNATIONAL CONGRESS ON ACOUSTICS

The International Congress on Acoustics is held every three years under the aegis of the International Commission for Acoustics (ICA). The present commission members, who represent acoustics around the world, are listed below. The mission of the ICA is to promote international development and collaboration in all fields of acoustics including research, development, education, and standardization. The ICA is an Affiliated Commission of the International Union of Pure and Applied Physics (IUPAP), an Affiliated Organization of the International Union of Theoretical and Applied Mechanics (IUTAM), and a Scientific Associate of the International Council for Science (ICSU).

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ICA 2013 is co-hosted by the Acoustical Society of America (ASA) and the Canadian Acoustical Association (CAA).

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