

4:00

5pBB6. Local inversion of transient shear-wave propagation for elasticity and viscosity mapping in soft tissues. Jeremy Bercoff, Mickael Tanter, and Mathias Fink (Laboratoire Ondes et Acoustique, ESPCI, 10 rue Vauquelin, 75005 Paris, France)

Observation of transient shear-wave propagation in soft tissue is of great interest for the study of tissue viscoelastic properties. In previous work, we introduced a technique, called Supersonic Shear Imaging (SSI), able to generate transient shear waves using the acoustic radiation force and image their propagation in real time in soft tissues. In this work, a

local inverse problem of the shear wave propagation permitting the recovery of shear elasticity and viscosity is presented. Compressional and shear waves are decoupled by applying the curl operator to the experimental 2-D displacement field. The role of viscosity on the accuracy of the elasticity estimation is studied. The influence of out of plane shear propagation on the inversion algorithm is discussed. Finally, in media presenting shear viscoelasticity heterogeneities, finite difference simulations are used to study the spatial resolution of the algorithm and its sensitivity to the signal-to-noise ratio. Experiments on calibrated tissue-mimicking phantoms presenting different viscoelastic properties are presented validating the simulation results. First *in vivo* results on female breasts are presented.

FRIDAY AFTERNOON, 20 MAY 2005

REGENCY F, 1:30 TO 4:45 P.M.

Session 5pNS

Noise and Psychological and Physiological Acoustics: Workshop on Methods for Community Noise and Annoyance Evaluation II

Brigitte Schulte-Fortkamp, Chair

Technical Univ. Berlin, Inst. of Technical Acoustics, Secr TA 7, Einsteinufer 25, Berlin 10587, Germany

Invited Papers

1:30

5pNS1. Auditorium Mundi soundscape in the narration of the world. Artistic and scientific aspects in the presentation of soundscapes. Harald Brandt (Philippsbergstrasse 40, D-65195 Wiesbaden, Germany, haraldbrandt@yahoo.fr)

Auditorium Mundi is a project for the exploration and presentation of sounds and soundscapes of the whole world. The aim is an installation of a museum of audible perception in interrelation with other senses. The concept of the museum is an acoustic planetarium in which the locations of the world are put in place of the stars. Also located here are world archives for sound in which the acoustic and musical multitude of this planet will be preserved. The archives of sound are available world-wide through the internet. The museum is, at the same time, a laboratory for the development of new formats in scientific definitions and the multimedia presentation of acoustic phenomena. It is a show-place for artistic programs and an auditorium where questions from the area of acoustic as well as new developments of industry will be accessible to a wider public. A place of innovation, where concepts for other museums, promoters and scientific institutions can be developed. The leitmotif of Auditorium Mundi is the question how man influences the soundscapes in which he lives and how strongly he himself is influenced by the noise, the resonance and the dissonance between various ways of life.

1:50

5pNS2. An L_{Aeq} is not an L_{Aeq} . Dick Botteldooren, Tom De Muer, Bert De Coensel (Acoust. Group, Dept. of Information Technol., Ghent Univ., St. Pietersnieuwstraat 41, B-9000 Ghent, Belgium), Birgitta Berglund (Stockholm Univ., SE-106 91 Stockholm, Sweden), and Peter Lercher (Univ. of Innsbruck, A-6020 Innsbruck, Austria)

Classical dose response relationships for environmental noise annoyance have been based on L_{dn} or L_{den} . These exposure measures are essentially based on an energy averaging measure, L_{Aeq} . Differences between groups of sources (e.g., continuous or event based) are accounted for by using separate dose-effect relationships. In society today, one often sees that event loudness is traded for number of events which is perfectly acceptable within the L_{Aeq} based annoyance concept. Clearly a more unified theory for noise annoyance is needed to fully account for the effect of such trade-offs. In this paper a model implementing such a theory is presented. The perceptual model starts from the premises that a sound event has to be noticed for it to contribute to overall annoyance. The model accounts for the fact that noticing a noise event not only depends on the level of the event itself but also on background noise, sound insulation and acoustic characteristics of the dwelling, level of attention, etc., the severity of the effect of a noticed sound on overall annoyance is assumed to primarily depend on the signal to noise ratio. The model allows to account for modifiers such as previous exposure, noise sensitivity, and coping. The model results are compared to the findings of a recent field experiment. Conclusions based on calculated and experimental trends will be presented.

149th MEETING OF THE ACOUSTICAL SOCIETY OF AMERICA

The 149th Meeting of the Acoustical Society of America (ASA) will be held Monday through Friday, 16–20 May 2005 in Vancouver, Canada. All Technical Sessions and most meeting events will be held at the Hyatt Regency Vancouver Hotel.

Registration will begin Monday, 16 May, at 7:30 a.m.

SECTION HEADINGS

1. HOTEL INFORMATION
2. TRANSPORTATION AND TRAVEL DIRECTIONS
3. ENTERING AND LEAVING CANADA
4. STUDENT TRANSPORTATION SUBSIDIES
5. MESSAGES FOR ATTENDEES
6. REGISTRATION
7. ASSISTIVE LISTENING DEVICES
8. TECHNICAL SESSIONS
9. TECHNICAL SESSION DESIGNATIONS
10. TOPICAL MEETING ON CLASSROOM ACOUSTICS
11. HOT TOPICS SESSION
12. TUTORIAL LECTURE ON AUTOMATIC SPEECH RECOGNITION
13. GALLERY OF ACOUSTICS
14. STUDENT DESIGN COMPETITION
15. WORKSHOP IN ACOUSTICS FOR MUSICAL INSTRUMENT BUILDERS
16. 1st ASA WORKSHOP ON SECOND LANGUAGE SPEECH LEARNING
17. CONFERENCE ON INDUSTRIAL RELATED ENVIRONMENTAL AND OCCUPATIONAL NOISE
18. MEDWIN PRIZE IN ACOUSTICAL OCEANOGRAPHY AND ACOUSTICAL OCEANOGRAPHY PRIZE LECTURE
19. TECHNICAL COMMITTEE OPEN MEETINGS
20. PLENARY SESSION
21. ANNUAL MEETING OF THE MEMBERSHIP
22. ANSI STANDARDS COMMITTEES
23. COFFEE BREAKS
24. A/V PREVIEW ROOM
25. ONLINE MEETING PAPERS
26. E-MAIL ACCESS
27. BUFFET SOCIALS
28. FELLOWS LUNCHEON
29. STUDENTS MEET MEMBERS FOR LUNCH
30. STUDENTS' RECEPTION
31. COMMITTEE ON WOMEN IN ACOUSTICS LUNCHEON
32. CHILD CARE
33. ACCOMPANYING PERSONS' PROGRAM
34. WEATHER
35. TECHNICAL PROGRAM ORGANIZING COMMITTEE
36. LOCAL MEETING COMMITTEE
37. PHOTOGRAPHING AND RECORDING
38. NOTE TO SMOKERS
39. ABSTRACT ERRATA
40. GUIDELINES FOR ORAL PRESENTATIONS AT MEETINGS OF THE ACOUSTICAL SOCIETY OF AMERICA
41. SUGGESTIONS FOR EFFECTIVE POSTER PRESENTATIONS
42. GUIDELINES FOR USE OF COMPUTER PROJECTION IN MEETING PRESENTATIONS
43. DATES OF FUTURE ASA MEETINGS

1. HOTEL INFORMATION

The Hyatt Regency Vancouver Hotel (655 Burrard Street, Vancouver, BC V6C 2R7, Canada) is the headquarters hotel where most meeting events will be held. The cut-off date for reserving rooms at special rates has passed. Please contact the hotel directly at 604-639-4820 (800-233-1234; Fax: 604-

639-4829) for information on availability of rooms. Special rates at the Hyatt were: \$160 USD/single or double.

2. TRANSPORTATION AND TRAVEL DIRECTIONS

The Vancouver International Airport (YVR) serves over 15 million passengers per year. More than 40 airlines operate 17 International and 22 U.S. scheduled flights per day. For comprehensive information on options for traveling to Vancouver by air, bus, train, ferry or car visit www.tourismvancouver.com/transportation/getting_here.cfm

There are several options for traveling from Vancouver International Airport to downtown Vancouver:

Public transit: From Airport Level 1 take Bus 424 to Airport Station and then Bus 98 to Burrard Station. Buses leave the airport every few minutes and take about 45 minutes to reach downtown Vancouver. Fares cost \$2 to \$3. For current details visit www.translink.ca

Airporter bus: This bus picks up passengers at several points in the Airport for transport to major downtown hotels. The service runs every half-hour and costs \$12 one-way, \$18 return. For current details visit www.yvrairporter.com

Taxis: Location of taxi-stands are posted in the Airport Terminal. The fare to the Hyatt is approximately \$22.

Car Rental: There are offices of major car-rental companies located both at the airport and downtown. For more details check http://www.tourismvancouver.com/transportation/getting_here.cfm#car

Driving and directions to hotel: For attendees who will be driving, parking is available at the Hyatt Regency Vancouver.

From Vancouver International Airport (14 miles) take Grant McConnachie Way over the Arthur Lang Bridge. Exit Granville Street, proceed north (54 blocks). Turn left at 16th Street. Go down two blocks and turn right on to Burrard Street. Proceed on Burrard and over Burrard Street Bridge to Georgia Street (10 blks). Hyatt Regency Vancouver is on your left.

3. ENTERING AND LEAVING CANADA

Information for US citizens and permanent residents: U.S. citizens and permanent residents require one of the following: 1) birth certificate, 2) resident alien card, 3) green card presented with photo I.D. or 4) a passport valid for at least 6 months after the date of return to the US. A driver's license alone is NOT accepted as proof of citizenship. U.S. Citizenship and Immigration Services <uscis.gov/graphics/index.htm> provides additional information about travel from the US to Canada.

Information for international visitors: Visitors entering Canada from countries other than the United States must have a valid passport, and may require other documentation such as visas. Visit www.cic.gc.ca/english/visit/index.html or check with the nearest Canadian Consulate well in advance of travel for visa requirements. For a list of Canadian Consulate offices visit www.cic.gc.ca/english/offices/missions.html

Citizenship and Visa Requirements for Travel to and from Canada: Information for students and postdocs with F-1 and