

SUNDAY, July 6 (Workshop on Auditory Displays In Assistive Technologies)

8:00 – 8:30 am Breakfast and Registration (Ziskind)

8:30 – 8:45 am Welcome and Announcements (Auditorium)

8:45 – 10:40 am Talks (Auditorium)

Ramani Duraiswami (chair)

8:45 – 9:35 Auditory assistive devices for the blind

R.W. Massof

9:35 – 9:55 Maximum listening speeds for the blind

C. Asakawa, H. Takagi, S. Ino, and T. Ifukube

9:55 – 10:15 3d audio interfaces for the blind

C. Frauenberger and M. Noisternig

10:15 – 10:35 Design guidelines for audio presentation of graphs and tables

L.M. Brown, S.A. Brewster, R. Ramloll, M. Burton, and B. Riedel

10:35 – 11:00 am Coffee Break (Ziskind)

11:00 – 12:30 pm Talks (Auditorium)

Catherine Plaisant (chair)

11:00 – 11:50 Smith-Kettlewell display kit: A sonification toolkit for Matlab

J.A. Miele

11:50 – 12:10 Perceptive study and recommendation for sonification categories

P. Susini, P. Gaudibert, E. Deruty, and L. Dandrel

12:10 – 12:30 Boardtalker: Initial experiences and open problems in prototyping a talking digital whiteboard to assist visually impaired students

D. Berque

12:30 – 1:40 pm Lunch (Ziskind)

1:40 – 3:35 pm Talks (Auditorium)

Bruce Walker (chair)

1:40 – 2:30 Basic and applied research relating to auditory displays for visually impaired people

J.M. Loomis

2:30 – 2:50 Soundview: Sensing color images by kinesthetic audio

K. van den Doel

2:50 – 3:05 A case study in the design of software that uses auditory cues to help low vision students view notes on a blackboard

D. Berque, T. Bonebright, S. Kinnett, N. Nichols, and A. Peters

3:05 – 3:20 Sonification of dynamic choropleth maps: Geo-referenced data exploration for the vision-impaired

H. Zhao, C. Plaisant, B. Shneiderman, D.N. Zotkin, and R. Duraiswami

3:20 – 3:35 Sonification of SQL constructs in multi-modal database interaction

T. Stockman

3:35 – 4:00 pm Coffee Break (Ziskind)

4:00 – 4:30 pm Talks (Auditorium)

John Neuhoff (chair)

4:00 – 4:15 WYSIWIH- What you see is what I hear: Giving blind users access to visual collaboration

F. Winberg

4:15 – 4:30 A game for visually impaired children with a 3-d virtual auditory display

M. Ohuchi, Y. Iwaya, Y. Suzuki, and T. Munekata

- 4:30 – 6:00 pm Round Table Discussion (Auditorium)**
Ramani Duraiswami (moderator)
Jonathon Berger (CCRMA, Stanford)
Barry Blesser (Blesser Associates)
Betty Davidson (Boston Museum of Science)
Jack Loomis (UC Santa Barbara)
Robert Massof (Whitmer Eye Institute, Johns Hopkins Medical School)
Josh Miele (UC Berkeley and Smith-Kettlewell Eye Research Institute)
- 6:30 – 8:30 pm Tucker-Davis Technologies Pizza and Beer Welcome Party (Ziskind)**

MONDAY, July 7

- 8:00 – 8:30 am Breakfast and Registration (Ziskind)**
- 8:30 – 8:45 am Welcome and Introductions (Auditorium)**
- 8:45 – 10:15 am Session I(a): Biological Communication Sounds (Auditorium)**
Barbara Shinn-Cunningham (chair)
- 8:45 – 9:30 Vocal Pedagogy and Pedagogical Voices (invited talk)
G. Wakefield
- 9:30 – 10:15 Information in animal sounds: An evolutionary perspective (invited talk)
T. Fitch
- 10:15 – 10:45 am Coffee Break (Ziskind)**
- 10:45 – 11:05 am Session I(b): Biological Communication Sounds (Auditorium)**
Beverly Wright (chair)
- 10:45 – 11:05 Discriminating visible speech tokens using multi-modality
C.S. Campbell, S.K. Lodha, M.M. Shafae, and D.W. Massaro
- 11:05 – 12:25 pm Session II: Spatial Auditory Perception (Auditorium)**
Beverly Wright (chair)
- 11:05-11:25 Two-point discrimination in auditory displays
V. Best, A. van Schaik, and S. Carlile
- 11:25 – 11:45 Identifying where you are in a room: Sensitivity to room acoustics
B. Shinn-Cunningham and S. Ram
- 11:45 – 12:05 A study on sound source apparent shape and wideness
G. Potard, and I. Burnett
- 12:05 – 12:25 Parameters for auditory display of height and size
D. Cabrera and S. Tilley
- 12:25 – 1:30 pm Lunch (Ziskind)**
- 1:30 – 3:15 pm Session III: Sound Design and Earcons (Auditorium)**
Stephen Barrass (chair)
- 1:30 – 2:15 Reality (sound)bites: Audio tricks from the film and TV studio (invited talk)
J. Rose
- 2:15 – 2:35 Combining speech and earcons to assist menu navigation
M.L.M. Vargas and S. Anderson
- 2:35 – 2:55 An investigation into the identification of concurrently presented earcons
D.K. McGookin and S.A. Brewster
- 2:55 – 3:15 Perceptively based design of new car horn sounds
G. Lemaitre, P. Susini, S. Winsberg, and S. McAdams

3:15 – 3:30 pm	Coffee Break (Ziskind)
3:30 – 5:00 pm	Session IV: Posters (Ziskind) <i>(see list of posters at end of document)</i>
5:00 – 5:30 pm	Distribute Box Dinners (Ziskind)
5:30 – 6:00 pm	Transport to Duck Tours (Meet in Ziskind)
6:30 – 7:50 pm	Boston Duck Tours (Prudential Center)
7:50 pm	Return to GSU and Dorms

TUESDAY, July 8

8:00 – 8:30 am	Breakfast and Registration (Ziskind)
8:30 – 8:35 am	Announcements (Auditorium)
8:35 – 10:20 am	Session V: Designing Effect Displays (Auditorium) <i>Thomas Hermann (chair)</i>
8:35 – 9:20	Sonification from a design perspective <i>(invited talk)</i> <i>S. Barrass</i>
9:20 – 9:40	Design process for auditory interfaces <i>S. Daudé and L. Nigay</i>
9:40 – 10:00	Audiocentric interface design: A building blocks approach <i>C. Thornton, A. Kolb, F. Gemperle, and T. Hirsch</i>
10:00 – 10:20	Acqua alta a Venezia: Design of an urban scale auditory warning system <i>F. Avanzini, D. Rocchesso, A. Dal Palù, A. Belussi, and A. Dovier</i>
10:20 – 10:50 am	Coffee Break (Ziskind)
10:50 – 12:30 pm	Session VI: Spatial Auditory Displays (Auditorium) <i>Virginia Best (chair)</i>
10:50 – 11:10	Optimizing the spatial configuration of a seven-talker speech display <i>D.S. Brungart and B.D. Simpson</i>
11:10 – 11:30	Using multi-channel spatialization in sonification: A case study with meteorological data <i>E. Childs and V. Pulkki</i>
11:30 – 11:50	Spatially-modulated auditory alerts <i>D.R. Begault, M.R. Anderson, and B.U. McClain</i>
11:50 – 12:10	Comparison of auditory, visual, and audio-visual navigation in a 3D space <i>M. Gröhn, T. Lokki, and T. Takala</i>
12:10 – 12:30	Effect of beacon sounds on navigation performance in a virtual reality environment <i>B.N. Walker and J. Lindsay</i>
12:30 – 1:30 pm	Lunch (Ziskind)
1:30 – 2:10 pm	Session VII: Sonification (Auditorium) <i>Eoin Brazil (chair)</i>
1:30 – 1:50	Broadcasting auditory weather reports: A pilot project <i>T. Hermann, J.M. Drees, and H. Ritter</i>
1:50 – 2:10	Educational testing of auditory display regarding seasonal variation of polar ice caps on Mars <i>J. Keller, E.E. Prather, W.V. Boynton, H.L. Enos, L.V. Jones, S.M. Pompea, T.F. Slater, and M. Quinn</i>

- 2:10 – 3:10 pm Session VIII: Auditory Display Examples (Auditorium)**
Matti Gröhn (chair)
- 2:10 – 2:30 Audio games: Fun for all? All for fun?
S. Targett and M. Fernström
- 2:30 – 2:50 "LISTENIN" to domestic environments from remote locations
C. Schmandt and G. Vallejo
- 2:50 – 3:10 Household appliances control device for the elderly
F.J. Sainz Salces, D. England, and P. Vickers
- 3:10 – 3:40 pm Coffee Break (Ziskind)**
- 3:40- 5:10 pm Panel Discussion: Science vs. Art in Auditory Displays (Auditorium)**
Gregory Wakefield (moderator)
Panelists: Perry Cook (Princeton)
Eric Somers (SUNY Dutchess)
Barry Vercoe (MIT)
Todd Winkler (Brown)
- 5:30 – 6:30 pm Cocktails (Faculty Dining Room)**
- 6:30 – 8:30 pm Banquet (Faculty Dining Room)**
- 7:15 – 8:30 After-Dinner Talk: Acoustic Forensics
Robert Berkovitz

WEDNESDAY, July 9

- 8:00 – 8:30 am Breakfast and Registration (Ziskind)**
- 8:30 – 8:35 am Announcements (Auditorium)**
- 8:35 – 10:20 am Session IX: Auditory Display Dimensions (Auditorium)**
Perry Cook (chair)
- 8:35 – 9:20 Sound-discrimination learning and auditory displays (*invited talk*)
B.A. Wright and M.B. Fitzgerald
- 9:20 – 9:40 Dynamic auditory cues for event importance level
J. Häkkinen and S. Ronkainen
- 9:40 – 10:00 A new experimental technique for gathering similarity ratings for sounds
E. Brazil, L. Ottaviani, and M. Fernström
- 10:00 – 10:20 Sonification of absolute values with single and multiple dimensions
A. Sandor and D.M. Lane
- 10:20 – 10:50 am Coffee Break (Ziskind)**
- 10:50 – 11:30 am Session X: Auditory Display System Architecture (Auditorium)**
William Martens (chair)
- 10:50 – 11:10 Interactive visualization and sonification for monitoring complex processes
T. Hermann, C. Niehus, and H. Ritter
- 11:10 – 11:30 NeMoS: Network monitoring with sound
D. Malandrino, D. Mea, A. Negro, G. Palmieri, and V. Scarano
- 11:30 – 12:50 pm Session XI: Spatial Auditory Synthesis (Auditorium)**
Elizabeth Wenzel (chair)
- 11:30 – 11:50 Perceptual spatial-audio coding
C. Jin, A. van Schaik, V. Best, and S. Carlile
- 11:50 – 12:10 Subjective selection of non-individual head-related transfer functions

	<i>B.U. Seeber and H. Fastl</i>
12:10 – 12:30	Individualized and generalized earphone correction filters for spatial sound reproduction <i>W.L. Martens</i>
12:30 – 12:50	A spatial audio user interface for generating music playlists <i>J. Hiipakka and G. Lorho</i>
12:50 – 2:00 pm	Lunch (Ziskind)
2:00 – 3:15 pm	Annual Meeting / Open-Mic Session (Auditorium) <i>Barbara Shinn-Cunningham (chair)</i>
3:15 – 3:30 pm	ICAD 2004 Down-Under (Auditorium) <i>Stephen Barrass</i>
3:30 – 4:00 pm	Transportation to MIT (in front of George Sherman Union)
4:00 – 6:00 pm	MIT Media Lab Open House (20 Ames St., Cambridge)
4:00 – 6:00	Wine and cheese reception in the lobby
4:30 – 5:30	Oral presentations in the auditorium

Monday Poster Session

Poster Titles	Poster Number
Session IVa: Perception in Auditory Display	
Increasing effectiveness of train horns without increasing intensity <i>F.A. Russo, M.E. Lantz, G. English, and L.L. Cuddy</i>	1
Auditory displays on the depth of hypertext <i>J.H. Lee, M.H. Jeon, and M.S. Kim</i>	2
Do location and content operate independently? <i>PMC. Lemmens, A. de Haan, and G.P. van Galen</i>	3
Focalisation on the temporal context of complex sequences <i>A. Guillaume and C. Drake</i>	4
Session IVb: Perception in Spatial Auditory Displays	
Where's that sound? Exploring arbitrary user classifications of sounds for audio management <i>E. Brazil and M.Fernström</i>	5
Augmented intelligibility in simultaneous multi-talker environments <i>N. Mesgarani, K. Grant, S. Shamma, and R. Duraiswami</i>	6
Perceptual consequences of including reverberation in spatial auditory displays <i>S. Devore and B. Shinn-Cunningham</i>	7
A physics-based approach to the presentation of acoustic depth <i>F. Fontana and D. Rocchesso</i>	8
A spatial auditory display for the prevention of pedestrian-motor vehicle collisions <i>J.G. Neuhoff and J. Preston</i>	9
A three-dimensional virtual simulator for aircraft flyover presentation <i>S.A. Rizzi, B.M. Sullivan, and C.A. Sandridge</i>	10
An investigation into a background auditory display to aid pilot situation awareness <i>M.L.N. Kazem, J.M. Noyes, and N.J. Lieven</i>	11
Session IVc: Spatial Auditory Display Technology	
Extending SMIL with 3D audio <i>K. Pihkala and T. Lokki</i>	12
An independent declarative 3D audio format on the basis of XML <i>H. Hoffmann, R. Dachselt, and K. Meissner</i>	13
The spatial sound lab at Fraunhofer IMM.VE <i>J. Gofmann and F. Dombois</i>	14

A 3D real time rendering engine for binaural sound reproduction	15
<i>M. Noisternig, T. Musil, A. Sontacchi, and R. Höldrich</i>	
Latency measurement of a real-time virtual acoustic rendering system	16
<i>J.D. Miller, M.R. Anderson, E.M. Wenzel, and B.U. McClain</i>	
Extracting significant features from the HRTF	17
<i>V.C. Raykar, R. Duraiswami, L. Davis, and B. Yegnanarayana</i>	
Measurement of head-related transfer functions based on the empirical transfer function estimate	18
<i>E. Grassi, J. Tulsı, and S. Shamma</i>	
Session IVd: Display Systems and Technology	
D'groove: A haptic turntable for digital audio control	19
<i>T. Beamish, K. van den Doel, K. MacLean, and S. Fels</i>	
The IEM-Cube: A periphonic re-/production-system	20
<i>J.M. Zmöltnig, W. Ritsch, and A. Sontacchi</i>	
Instrument timbre models with noisy partial inclusion	21
<i>C. O'Sullivan and M. Fernström</i>	
Narrowcasting operations for mobile phone CVE chatspace avatars	22
<i>M. Cohen and M. Kawaguchi</i>	
Session IVe: Auditory Display Examples	
Auditory icon support for navigation in speech-only interfaces for room-based design metaphors	23
<i>D. Skantze and N. Dahlbäck</i>	
POSTER WITHDRAWN: The use of walking sounds in supporting awareness	(24)
<i>K. Mäkelä, J. Hakulinen, M. Turunen</i>	
Evaluating soundscapes as a means of creating a sense of place	25
<i>P. Turner, I. McGregor, S. Turner, and F. Carrol</i>	
Session IVf: Sonification Approaches	
Drawing by ear: Interpreting sonified line graphs	26
<i>L.M. Brown and S.A. Brewster</i>	
Sonification of statistical data	27
<i>S.C. Peres and D.M. Lane</i>	
Sonification sandbox: A graphical toolkit for auditory graphs	28
<i>B.N. Walker and J.T. Cothran</i>	
Session IVg: Algorithmic Composition	
Ocean buoy spectral data sonification: Research update	29
<i>B.L. Sturm</i>	
For those who died	30
<i>M. Quinn, W. Quinn, and B. Hatcher</i>	