



Institute of Electronic Music and Acoustics Graz

## Science by Ear - Fitting the Pieces of the Puzzle An Interdisciplinary Sonification Workshop

Date: March 16-18 2006

Location: IEM Graz, Inffeldgasse 10

A 3-day interdisciplinary workshop on sonification will be held at the Institute of Electronic Music and Acoustics in Graz / Austria (IEM) from March 16-18, 2006. This workshop will bring together international experts in the area of sonification with distinguished scientists from sonification application domains. Researchers from such diverse areas as quantum physics, neurology, social sciences, assistive technologies and nonlinear signal processing will have the opportunity to make firsthand experiences with sonification for research questions from their fields; sonification experts will receive valuable feedback on their sonification design approaches. Furthermore, we hope to gain insights on interdisciplinary collaboration processes.

Whereas statistical data analysis as well as data perceptualization by visualization data renditions are accepted standards, the logical complement, sonification, is not as well-established, and not readily available as a technology. The technical and conceptual development of sonification into an equal alternative and complement is being addressed in a number of research projects; among others, the SonEnvir project hosted at IEM, which forms the context of this workshop. The crucial issue in sonification research is its interdisciplinary nature: audio experts need to understand the domains for which they design auditory displays and their requirements more deeply. Scientists in these target domains need to understand sound as an information carrier, and its benefits for them, more profoundly. Both need to learn to communicate effectively for such an interdisciplinary venture to succeed - this is what the workshop aims to achieve.

Finally, the workshop aims at exploring new application fields of sonification, demonstrating and discussing the current state of the art in sonification research, and encouraging the knowledge transfer among sound experts and application domain experts. The latter are strongly encouraged to submit data sets from their current research problems and a short description to the workshop organizers prior to the workshop. By preparing initial sonification designs for these data sets, we expect to generate interesting material for experimentation and discussion during the workshop.

Hosting organization: IEM (<http://iem.at>)  
Organizing committee: Gerhard Eckel, Graz  
Tony Stockman, London  
Thomas Hermann, Bielefeld  
Workshop coordination: Christopher Frauenberger, Graz  
Alberto de Campo, Graz  
Contact: [workshop@sonenvir.at](mailto:workshop@sonenvir.at)

## **Programme:**

### **Wednesday, March 15**

Arrival, informal get-together

### **Thursday, March 16**

- 9:30 Welcome, Introduction round
- 10:00 Greg Kramer - "Context, Purpose and Values for Talking About Sonification"
- 10:30 Break
- 10:45 Problem set 1
- 12:45 Lunch (CUBE, Buffet)
- 13:45 Sound Digestives
- 14:00 Terri Bonebright - "Auditory Perception and Sonification"
- 14:45 Break
- 15:00 Problem set 2
- 17:00 Closing get-together
  
- 19:30 Optional Dinner: table reserved at restaurant Don Camillo, Franziskanerplatz 11, second floor, see downtown map

### **Friday, March 17**

- 9:30 Good Morning
- 9:45 Florian Dombois - "Interdisciplinary Interests in Sonification (1878-now)"
- 10:15 Break
- 10:30 Problem set 3
- 12:30 Lunch (CUBE, Snacks)
- 13:30 Sound Digestives
- 13:45 Problem set 4
- 15:45 Closing get together
  
- 16:00 Leave for Graz City & Kunsthaus
- 19:30 Invited Dinner at restaurant Maroni, Mehlplatz 1, second floor, see downtown map

### **Saturday, March 18**

- 9:30 Good Morning
- 9:45 Thomas Hermann – "Model-based Sonification for Interacting with Data"
- 10:15 Break
- 10:30 Problem set 5
- 12:30 Lunch
- 14:00 Sound Digestives
- 14:15 Tony Stockman – "Sonification in Assistive Technology"
- 14:45 Break
- 15:00 Problem set 6
- 17:00 Final discussion & Farewell

Recommended: "Hörfest, Forum Stadtpark"(experimental music festival)