

HELSINKI November 15th & 16th 2007

Thursday, November 15th

Physical Modeling Synthesis - Modalys

Morning

Physical modeling introduction

- classical method
- waves guides
- modal synthesis

Modalys

- Modalys and cursus of composition's composers
- overview of the different graphical interfaces (Lisp, OpenMusic, Max/MSP)
- overview of the different possible interactions (pluck, strike, bow, etc.)

Physical models control

- use of human gesture recording (OM)
- gesture generation (OM)
- mapping of parameters (Max/MSP)
- gesture interfaces (Wacom, Carl)

Afternoon

Modalys workshop on the new Max/MSP mlys library:

- introduction to the main concepts of the library
- conception of a "filtering" instrument
- conception of a set of MIDI controlled percussions

Technical needs

Video projector and stereo speakers setup for the teacher.

Mac computers (PPC or Intel, 1.5 Ghz minimum) or students own laptops with Max/MSP 4.6.3 installed (the 1 month demo mode is OK) to run mlys in Max.

Friday, November 16th

Improvisation with Computer

The morning will feature a presentation of the theory of the ideas and technologies used to understand the following issues:

- modeling styles
- modeling sequences
- statistical modeling
- notion of an instrumental clone
- cognitive aspects of musical memory
- models for interaction: short-term and long-term interaction
- the architecture of OMax

The afternoon will be spent in a hands-on session during which the musicians can improvise with OMax:

- as a duo (instrument-computer)
- as a group (with an instrument cloned by the computer)

During this workshop, and in collaboration with Jean, the students will also have the possibility of hearing the physical models studied the day before using a connection between OMax and Modalys RT.

Practical Aspects:

Musicians that are ready to improvise must be enrolled and motivated.

OMax works with wind instruments, voice, percussions, MIDI keyboards (or other instruments) or a real piano equipped with Moog Piano Bar. While we have not yet tested string instruments, there is no reason to assume that they will not work.

For acoustic instruments, the following is necessary:

- 1 overhead microphone for recording
- 1 microphone for close recording (wafer) that does not pick up too much background noise

It is also necessary to provide a system to hear the audio results from the computer output.