Techne/Live Electronics, 5 credits

Techne/Live Electronics

Intended Learning Outcomes

On completion of the course, the student is expected to:

- be able to build personal complex applications with punctual and general control on audio and midi data flows in connection with external machines,
- be able to structure a full functioning algorithm for live electronics dealing with complex and precise control and simple user interface,
- be able to write clear documentation and instructions about the DSP applications.

Content

The following content is included in the course:

- collective lessons (both theoretical and practical),
- DSP programming with particular focus on live electronic treatments that concerns directly interface concept and usability,
- research on the formalization of documentation and transmission of composition that includes live electronics,
- theoretical and practical lesson on different aspects of sound treatment based on Max 6 from a simple delay effect to complex standalone application – including among others: complex filtering, granular synthesis, real time sampling, FFT analysis and re-synthesis,
- exploration of new paradigms regarding interaction between men and
  machines based on both concept of Meta-instruments and Hyper-instruments.

Literature and Other Teaching Aids

Giri, M. & Cipriani, A. (2010). *Electronic Music and Sound Design – Theory and Practice with Max/Msp I* and *II*. Rome: ConTempoNet.

Puckette, M. (2007). *The Theory and Technique of Electronic Music*. World Scientific Press.

Roads, C. (1996). *The Computer Music Tutorial.* Cambridge: MIT Press.

Entry Requirements

Admitted to the joint Masters programme CoPeCo in one of the partner institutions.

Examination

The course is assessed by regular programming exercises.

Grades

Pass, Fail.