MUCP 4680 Topics in Electroacoustic Music
MUCP 5680 History and Technology of Electroacoustic Music
Spring 2007

Time and place: MWF 3:00 – 3:50, MU 2009
Instructor: Dr. Andrew May
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Office hours: TBA, MU 1003
Final exam: Wednesday, May 9, 1:30 – 3:30 pm
(will be final project presentations in MEIT, MU 1001)

Course Description

Overview

Theme: Interaction, Instrumentality, and Live Performance in Electroacoustic Music

Since the days of Theremin's Aetherophone, performance and interactivity have been an important part of the history of electroacoustic music. This course will trace the history of the ideas, aesthetics, technologies and techniques involved in live electroacoustic performance. The course will culminate in software environments, original compositions, and/or performances. Prerequisite: MUCP 4670/5670 or equivalent.

The practicum portion of this course will focus on interactive computer music software techniques. These will be explored through analysis of existing repertoire, techniques, and tools, which will serve as the springboard for students to create their own. In addition to regular practicum assignments, students will carry out research projects and develop their own creative projects throughout the term.

Materials
CD-R or -RW media are indespensible for backup of your work (particularly audio files). Portable flash drives are highly recommended.
You will be given access cards for CEMI studios 2009 and 2010. You are encouraged to use them, as they have many advantages over home systems.
The primary software environment for the class will be PureData, available free of charge from http://crca.ucsd.edu/~msp/software.html. It runs on all modern operating systems. You may also wish to purchase a copy of the Max/MSP software. See http://www.cycling74.com/products/discount_student.html for student pricing.

Texts
All the required texts for this course are available free of charge on the web:
Miller Puckette, *Theory and Techniques of Electronic Music*
     http://www-crca.ucsd.edu/~msp/techniques.htm
————, *Pure Data Repertory Project*
     http://crca.ucsd.edu/~msp/pdrp/latest/
     http://crca.ucsd.edu/~msp/pdrp/latest/doc/
Documentation for Max and pd:
Dobrian, Lippe, Settel, Zicarelli, et al., *Max/MSP Documentation and Tutorials*
     http://www.cycling74.com/products/dldoc.html
Puckette, Miller, *pd Documentation.*
     http://www.crca.ucsd.edu/~msp/Pd_documentation/index.htm
http://at.or.at/hans/pd/installers.html
http://puredata.org/dev/pddp
Other readings, both on-line and on reserve, will be assigned periodically during the semester, some of them from the bibliography below; this is also a good resource for your own research, and most of the materials are in our library collection.

Coursework

Assignments
Several assignments will be made, exploring practical tasks in reading and writing interactive computer music software. These will be pedagogically oriented: by persevering and accomplishing the assignment, you will learn more than you can possibly learn in class!

Papers and presentations
Papers and presentations are practice for your careers, and a chance to learn about specific topics in depth. For 5680 students, this is also a chance to share your research.
MUCP 4680: students will write two brief essays of 3-4 pages (***due Monday, February 5 and Monday, April 9***) on historical/theoretical subjects, and present their final projects informally during the final exam time.
MUCP 5680: students will write two substantial research papers of 6-8 pages for this class: one on a historical/theoretical subject (***due Monday, April 2***) , and the other describing the final project and its context within existing research. Both will be presented in a 20-minute paper session format (the second during the final exam time).
Essays and papers will be concise, well-written, and to the point. This means:
     - a clear thesis will be presented and supported through reasoned argument
     (no unprovable assertions, sweeping generalizations, irrelevant comments ...)
     - context will be provided from the literature on the field, ***with footnotes***
          (see bibliography for a model of format—or just be consistent...)
     - diagrams, code, musical examples, etc. will be used as needed
Formal paper sessions will be clear, concise, condensed presentations of the papers. These will be formal and rehearsed performances. The 20-minute limit will be strictly enforced, as in a professional paper session.

Midterm project: *due Monday, March 5, 3:00 pm*
This will be a sketch of the final project, including:
- project goals / applications / artistic intentions
- top-level outline of software structure
- draft of user interface
- assessment of data and audio routing / structure
- inventory of needed modules and tools

Final project: *due Wednesday, May 9, 1:30 pm*
The most important part of the project is that it should ***do something you consider worth doing***. This could take many forms: an interactive composition, a fixed-media composition created with "homemade" interactive tools, an interactive environment for teaching / learning, an environment for improvisation, a virtual and/or haptic "instrument," a software environment for compositional / signal processing tasks, a system for real-time sonification of data, an interactive assistive tool for people with a particular disability, a music /video game, an algorithmic composition tool, etc. The second most important element is that it should be ***clear, usable, and well designed for its purpose***. The third most important part—which is necessary to demonstrate that the first two parts have been accomplished—is that it should ***work reliably***.

Course Policies

Grading
Attendance and participation	10%
Assignments	20%
Papers and presentations	20%
Midterm project	20%
Final project	30%

Attendance policy
This course will move fast; we will not backtrack to accommodate a student's unexcused tardiness or absence. This means that you will become *very confused* if you do not attend regularly. Attendance will also be part of your grade. Students with more than six unexcused absenses (or the equivalent: 3 late arrivals = 1 absence) are subject to failure at the instructor's discretion.

Academic dishonesty (http://www.unt.edu/policy/UNT_Policy/volume3/18_1_11.html)
1) Academic dishonesty - cheating. The term "cheating" includes, but is not limited to:
(a) use of any unauthorized assistance in taking quizzes, tests, or examinations;
(b) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
(c) the acquisition, without permission, of tests, notes or other academic material belonging to a faculty or staff member of the university;
(d) dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s).
(e) any other act designed to give a student an unfair advantage.

2) Academic dishonesty – plagiarism. The term "plagiarism" includes, but is not limited to:
(a) the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgement and
(b) the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in the selling of term papers or other academic materials.

Disability policy (http://www.unt.edu/policy/UNT_Policy/volume2/6_8_3.html)
Individuals qualifying under the Americans with Disabilities Act (ADA) who need special assistance to participate in a program, service or activity sponsored by the University Union are asked to contact the Verde Scheduling Office, a minimum of three business days in advance of when they will need the requested assistance to allow time for the request to be handled in an appropriate manner. The Verde Scheduling Office is located on the level 2 of the University Union. Telephone: (940) 565-3804, 565-3806 or TDD access through Relay Texas 1-800-735-2989.

Reference Bibliography

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Mathematics, Statistics, Programming, and Electronics

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see also F. Richard Moore, Elements of Computer Music, above