

Music 105: Interaction in Musical Systems *arr. Fall 2013*

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This course examines theories and practices of form, structure, composition, performance and interaction, and deals with their realization in systems for research and artistic purposes. Ideas covered in this class might include: computer-aided composition, non-deterministic algorithms, interaction design, perceptual modeling, bio-musical systems, and machine-learning models. Implementations might include: interactive environments and installations, real-time sound/music generation software, novel musical instruments, and adaptive systems.

Instructor: Topel

GR: S. Topel

Class Location: Hallgarten Hall (Seminar Room)

Learning Outcomes: At the end of this course you will be able to:

1. Describe current interdisciplinary and interactive sound-based practices.
2. Experimentation/Research with Adaptive Time-Based Systems.
3. Develop a personal art-practice incorporating technology
5. Create documentation in a choice of two professional forums.

Assessment

1. Readings	15%
2. Listening	15%
3. Presentations	15%
4. Final Project (in Prix Ars Electronica Documentation or NIME formats)	55%

Presentations

Most weeks we will have opportunities for individuals from the class to present specific topics. The general form of the talks is open, but each presentation should satisfy the following requirements:

- 1) Did the presenter thoroughly research the topic? 2) Was the material presented clearly and with good examples? 3) Were the citations appropriate and consistent?

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Readings

The main subject areas for our readings is interactivity, music systems, sound art, and soundscape. While this list is by no means exhaustive, it provides good entry points into the subjects. The criterion for selection was a combination of impact (number of citations,) and historical precedent, (were the authors the first to write about an idea). Additional readings will come from presentation bibliographies, and ad hoc from class discussion.

Barrass, S., & Kramer, G. (1999). Using sonification. *Multimedia systems*, 7(1), 23-31.

Butler, T. (2006). A walk of art: the potential of the sound walk as practice in cultural geography. *Social & Cultural Geography*, 7(6), 889-908.

Gaye, L., Mazé, R., & Holmquist, L. E. (2003, May). Sonic city: the urban environment as a musical interface. In *Proceedings of the 2003 conference on New interfaces for musical expression* (pp. 109-115). National University of Singapore.

Koetsier, T. (2001). On the prehistory of programmable machines: musical automata, looms, calculators. *Mechanism and Machine theory*, 36(5), 589-603.

LaBelle, B. (2006). *Background noise: perspectives on sound art*. Continuum International Publishing Group.

Lewis, G. E. (1999). Interacting with latter-day musical automata. *Contemporary Music Review*, 18(3), 99-112.

Miranda, E. R., & Brouse, A. (2005). Interfacing the brain directly with musical systems: on developing systems for making music with brain signals. *Leonardo*, 38(4), 331-336.

Pinch, T., & Bijsterveld, K. (2004). Sound studies: New technologies and music. *Social Studies of Science*, 34(5), 635-648.

Sterne, J. (Ed.). (2012). *Sound Studies reader*. Routledge.
Chion Essay (Chapter 5)