Physical Interaction
Design for Music

Center for Computer Research in Music and Acoustics

http://ccrma.stanford.edu/workshops/2008

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This workshop integrates **programming, electronics, interaction design, audio**, and **interactive music**. Focus will be on **hands-on applications** using **sensors** and **microprocessors** in conjunction with **real-time DSP** to make music. Specific technologies will include C programming for Atmel AVR microcontrollers, PD and/or Max/MSP for music synthesis, and **sensors** including force-sensitive resistors, bend sensors, accelerometers, IR range finders, etc. Participants will **design and build working musical instruments** using a kit that can be taken home at the end of the workshop (for a fee). Further issues to be explored will include **modes and mappings** in computer music, exercises in invention, and applications of sensors and electronics to real-time music. The course will be augmented by a survey of existing controllers and pieces of interactive music.
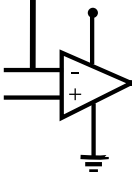
This workshop is intended for:

* **Musicians** or **composers** interested in exploring new possibilities in interactive music in a hands on and technical way;
* **Students** looking to gain valuable skills in basic analog and digital electronics, with a focus on invention;
* **Engineers, computer scientists**, or **product designers** interested in exploring artistic outlets for their talents and collaborating with performers and composers.

The workshop will consist of half-day supervised lab sessions, and half-day lectures, classroom exercises and discussions. Classroom sessions will feature live demos and/or concerts of interactive music and instruments. Participants are encouraged (but by no means required) to bring their own laptop computers with any music software/hardware they already use.

The workshop will be held on the Stanford campus at CCRMA in the historic Knoll building from July 7th - July 18th, 2008. Please see the link above for registration details.

Instructors: **Michael Gurevich, Ed Berdahl** and **Carr Wilkerson**

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