

## Workshop Outline

### *I. ChuckK Introduction*

- A. How the pieces fit (ChuckK, miniAudicle, SMIRK, SMELT, PLOrk, SLORk, etc.)
- B. Ideas in ChuckK (Strongly-timed Concurrency, On-the-fly Programming)
- C. Language basics (syntax, feel, etc.)
- D. Time and concurrency
- E. How UGen's work

### *II. Audio Analysis in ChuckK*

- A. Philosophy of ChuckKian audio analysis
- B. UAna, upchuck(), and =^
- C. Flexible and precise FFT analysis
- D. Feature extraction
- E. On-the-fly algorithm design

### *III. Classification and Learning in ChuckK*

- A. Classifiers and Learners for ChuckK and in ChuckK
- B. Examples (on-the-fly artist classification)
- C. On-the-fly Learning
- D. Prototyping possibilities
- E. Real-time applications

### *IV. Group Q&A and Discussion*

## Resources

ChuckK homepage:

<http://chuck.cs.princeton.edu/>  
<http://chuck.stanford.edu/> (west coast mirror)

miniAudicle homepage:

<http://audicle.cs.princeton.edu/mini/>

sMIRk (Small MIR toolKit):

<http://smirk.cs.princeton.edu/>

UAna and Audio Analysis ChuckK Documentation:

<http://chuck.cs.princeton.edu/uana/>

ChuckK Community (mailing lists and web forums):

<http://chuck.cs.princeton.edu/community/>

Laptop Orchestras:

<http://plork.cs.princeton.edu/>  
<http://slork.stanford.edu/>

Information and code for this workshop:

<http://smirk.cs.princeton.edu/workshop/ismir2008/>

## **Additional Reading**

Ge Wang, Rebecca Fiebrink, and Perry R. Cook. 2007. "Combining Analysis and Synthesis in the Chuck Programming Language". In *Proceedings of the International Computer Music Conference*. Copenhagen.

Rebecca Fiebrink, Ge Wang, and Perry R. Cook. 2008. "Foundations for On-the-fly Learning in the Chuck Programming Language". In *Proceedings of the International Computer Music Conference*. Belfast.

Ge Wang. *The Chuck Audio Programming Language: A Strongly-timed and On-the-fly Environ/mentality*. PhD Thesis, Princeton University, 2008.

Rebecca Fiebrink, Ge Wang, and Perry R. Cook. 2008. "Support for MIR Prototyping and Real-time Applications in the Chuck Programming Language". In *Proceedings of the International Conference on Music Information Retrieval*. Philadelphia.