
About This Issue

The first two articles in this issue discuss the process of developing techniques, both compositional and technological, for use with digitally augmented acoustic musical instruments. Andrew P. McPherson and Youngmoo E. Kim's article uses the magnetic resonator piano as a case study. That instrument, depicted on this issue's front cover, is a conventional grand piano fitted with a Moog PianoBar keyboard sensor and a custom set of computer-controlled electromagnets that cause the strings to vibrate independently of hammer strikes. The article emphasizes how a new instrument can attract the attention of a community of composers and performers, whose feedback in turn improves the design of the instrument.

The second article describes the development of an improvisatory piece for a digitally extended electric violin. After reviewing the violinist's previous strategies for controlling live electronics, the authors present their current setup. A ceiling-mounted video camera tracks the violinist's movements around a stage. Her instantaneous position corresponds to a specific location in a database of prerecorded violin snippets, which are played back using concatenative synthesis alongside the sound of the performer's instrument.

Moving on to the arena of musical analysis, Elizabeth Hoffman's article draws upon literary theory of

narrative. She proposes a narratology that is applicable to an important subset of electroacoustic music, namely, compositions that use recorded sound or other techniques to allude to an environment. The author argues that such music has distinctive features that can enrich the broader discourse on narrative method in literature and the arts, and, likewise, that narrative method can enrich the analyst's repertoire of techniques for interpreting specific pieces of computer music. After laying out her approach, she demonstrates its use in brief analyses of compositions by Denis Smalley, Judy Klein, Jon Appleton, Christopher Penrose, and Eric Lyon.

Some past issues of the *Journal* have considered problems in the preservation of electronic and computer music (see, for example, *CMJ* 24:2, 31:3, and 33:2). In the current issue, Guillaume Boutard and Catherine Guastavino argue for the importance of documenting the creative process during the composition of such works. Using the bottom-up approach known as grounded theory, the authors developed a hierarchical conceptual framework for analyzing the extensive documentation collected over a period of two years during the creation of Florence Baschet's *StreicherKreis*, a string quartet augmented by electronics. The top level of their hierarchy consists of the categories "organological specifications," "knowledge lifecycle,"

"production process lifecycle," and "electroacoustic composition." The authors offer thoughts on the transferability of their approach to other compositional projects.

This issue's final article concerns automatic transcription, the process of analyzing musical audio to derive some form of musical notation. Although this problem is already considered to be solved for recordings of a single voice or a monophonic instrument, challenges remain in the general case of multiple instruments playing simultaneously. The authors of this article present their technique for dealing with the general case. Their model extends the shift-invariant probabilistic latent component analysis method, by using multiple spectral templates per pitch and per instrument source, as well as a time-varying pitch contribution for each source.

The three reviewers in this issue take a look at the 2012 SEAMUS conference, a new CD by computer music pioneer Hubert Howe, and the first textbook of a three-volume set for a computer music curriculum based on Max/MSP. Following the customary product announcements, the issue concludes with program notes for the annual DVD, which is attached to the back cover. This year, Belgian acousmatic composer Annette Vande Gorne, who was interviewed in *CMJ* 36:1 and 36:2, served as curator for the DVD.

Front cover. Feifei Zhang plays the magnetic resonator piano.

Back cover. Victoria Johnson performs on electric violin while triggering violin sounds created through concatenative synthesis.