Andreja Andric

Streams

guitar with computer

performing score

Streams is a suite of five short contrasting movements for guitar and computer. There are two key ideas of the work. The first extends the concept of polyphony. Namely, while in polyphonic music two or more independent voices are combined to create a unity of parts, in this collection the two entities, instrumental part and computer part, enter in a closer relationship with each other, that respectively of matter and form. The second key idea reintroduces the immediateness of music that can be transmitted orally. Namely, the scores of the pieces consist either of chord sequences, without any other markings, or of a textual guide for improvisation. In the first case, the chord sequences can be taught orally from musician to musician, while in the second, the piece can be told, or explained by one musician to another. Both approaches reduce the score to its essential parts, in order to encourage improvisation, create greater space for different interpretations, facilitate the development of the piece in time, and find a new way to recreate the old tradition of home music making with a live instrument.

The computer modifies the pitch of the instrument in real time, according to prepared schemas different for each piece. In this way it adds rhythms and melodies to the music played on the live instrument, and "forms" the live performance, in a way. The process reminds of the effect that hot air has on our perception when looking at distant objects, or, as the title itself suggests, the effect that running water has on our perception of the stream bed and pebbles under the water.

The title of the collection has two meanings. According to one, it follows many musical compositions from different periods that, through arpeggiated figures, evoke images of water in flux. According to another, it refers to digital streaming that, in this case, modulates the sound of a live instrument, instead of reproducing a recorded piece of music.

Equipment configuration for all the pieces is the following: a microphone is placed in a suitable position for recording the guitar. Microphone output is connected to the amplifier through the computer. The computer runs a program that we'll call pitch altering system (PAS). The functions of PAS are the following three:

1. to resample the input at a sample rate that is a given multiple or fraction of the original sample rate,

2. to be configured to follow any number of such fractions one after the other, and to change the sample rate accordingly at precisely the right moments, and

3. to do all the above processing and generate the output in real time and without any noticeable delay.

An implementation of PAS in C, with the input files for all the movements of the work can be found at the following links:

http://andrejaandric.altervista.org/pitchbender.zip (PC)

http://andrejaandric.altervista.org/pitchbender.tar.gz (Mac)

#1 Introduction

Play everything arpeggio, molto rubato. Dwell on each chord as long as necessary. Change speed and dynamic according to the feel of the moment. Practice with the computer and listen closely to the combined sound that comes out of the loudspeakers, follow it and adapt your playing to it. Accidentals are valid only for the notes directly behind them.

Duration: around 2 minutes