

Cort Lippe

Program Notes

Music for Marimba and Computer (2004) was commissioned by the 2004 Sonorities Festival of Contemporary Music and supported by the National Lottery through the Arts Council of Northern Ireland for the opening of the Sonic Arts Research Center of Belfast, and written for the percussionist Pedro Carneiro. The electronic part was created at the Hiller Computer Music Studios of the University at Buffalo, New York, using Max/Msp, which was originally developed by Miller Puckette and whose dedication to computer music made this piece possible.

Technically the computer tracks parameters of the marimba, such as pitch, amplitude, spectrum, density, rests, articulation, tempi, etc., using this information to trigger specific electronic events and continuously control all the computer sound output by directly controlling digital synthesis and compositional algorithms in real-time. (Thus, the performer is offered the possibility to interact with the computer, not simply triggering, but also continuously shaping all of the computer output.) Some of the sounds in the electronic part come directly from the composed marimba part, so that certain aspects of the musical and sound material for the instrumental and electronic parts are one and the same. Stored sound material, other than the marimba, is also manipulated via a variety of sampling techniques. The digital synthesis algorithms focus on frequency domain processing, including interpolation of spectral snapshots, cross-synthesis, noise reduction/enhancement, re-ordering of spectral components, and various non-standard spectral techniques. (Thanks to Erik Oña and Henrik Frisk for sharing my obsession with the spectral domain.) Standard time-based signal processing such as harmonizing, delay, frequency shifting, phasing, reverberation, spatialization, etc., are also employed.

The instrument/machine relationship moves constantly on a continuum between the poles of an extended solo and a duo. Musically, the computer part is, at times, not separate from the marimba part, but serves rather to amplify the marimba in many dimensions and directions; while at the other extreme of the continuum, the computer part has its own independent voice.

Duration: 14 minutes.