

DYNAMIC CONVOLUTION TECHNIQUES IN LIVE PERFORMANCE

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Convolution plays an important role in digital audio processing, typically to impose the spectral and temporal characteristics of a given impulse response onto an audio signal. In this workshop we will discuss how convolution can be utilized as a live interprocessing technique, for instance in the context of improvised electroacoustic music, working on two live inputs or on dynamically updated “impulse responses”. After covering some basic challenges with convolution as a live performance tool, the tutorial will present a number of approaches to increase the dynamic control of convolution. Topics include live sampling of impulse responses, transient analysis for control of smearing and rhythmic precision, and multilayered cross-convolution. The workshop will touch upon work in progress and participants are welcome to contribute with comments and suggestions. The workshop will include several audio examples and live demonstrations of our convolver plugins implemented in the open source software Csound and Cabbage.