Auditory perception discontinuities from temporal electronic treatments

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In this presentation we intend to approach the perceptual discontinuities related to electronic sound treatments such as delay and microtemporal decorrelation (KENDALL, 1995; VAGGIONE, 2002; SÈDES, 2015). The theoretical basis of this work is the catastrophe theory of René Thom (1976), which can be thought of as a perceptual theory based on morphological accidents (critical points) linked to continuous processes. Our objective is to indicate the critical points of these temporal electronic treatments applied to a sound source, addressing temporal values from 1 to 200ms. These points indicate where there is a qualitative leap in our perception, which passes from timbre modulations (phaser, flanger) to periodical repetitions in space and time. For this purpose, we work with Max, using objects of the HOA Library (High Order Ambisonics Library), developed by the CICM of Université Paris 8 and with AudioSculpt, to visualize the temporal and spectral result of the treated sound.

Technical rider

Audio system, preferably a multi-channel system of 4 or 8 audio-speakers.
Video projection