clever dimensionality reduction paired with feature sets like those from the FANTASTIC (Müllensiefen and Frieler, 2006) or CATCHY (Van Balen et al., 2015) toolboxes have sought a middle ground.

This talk will present several uses of everyday features from the CATCHY toolbox for studying everyday listening, most notably a discussion of the Hooked on Music series of experiments (Burgoyne et al., 2013) and a recent user study of thumbnailing at a national music service. In conclusion, it will outline some areas where MIR expertise can go further than just recommendation to learn about and engage with listeners during their daily musical activities.

Abstracts:

(listed in alphabetical order by first author's last name)

Identifying orchestral blend effects from symbolic score data

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We report on an ongoing research project that aims to computationally model perceptual effects of orchestration using symbolic, audio, and perceptual information. Here, we focus on orchestral blend, which happens when sounds coming from two or more instruments are perceived as a single sonic stream. In this first phase, we developed models to identify orchestral blend effects from symbolic information taken from scores. Several studies have suggested that different musical properties contribute to create such effects. The blend estimations of our models are based on calculations related to onset synchronicity, pitch harmonicity, and parallelism in pitch and dynamics, using symbolic information contained in MusicXML files taken from the OrchPlayMusic Library (orchplaymusic.com). In order to assess the performances of the models, we applied the models to different orchestral pieces and compared the outputs with human experts' ratings in the Orchestration Analysis and Research Database (orchard.actor-project.org). Using different weights for the three parameters, the models obtained an average accuracy score of 75%. These preliminary results support the initial developments and suggest that estimations based on symbolic information would account for a significant part in modeling orchestral blends. Future work aims to include audio analyses to take into account timbral properties as well.

Perception of sound mass and an emergent harmony in György Ligeti's Continuum

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The goal is to present a methodology of analysis to describe the sound masses from a psychoacoustic standpoint, analyzing the work Continnum (1968) of György Ligeti. Ligeti's instrumental music in such period explores the fusion of sound by experimenting different sound sequences superimposed, creating a complex polyphony, known as timbre of movement (Ligeti, 2010: 185). We apply a model of psychoacoustic audio descriptors to the audio recording, intending to reveal emergent features of the sound texture which are beyond musical notation. The representations based on the descriptor's data extracted (Figure 1) are compared with a listening and traditional score analyzes. Bark coefficients (Bullock, 2007) reveal that all critical bandwidths are stimulated along the piece, varying in different moments. Chroma (Mauch, Dixon, 2010), gives similar information, but in relation to pitches. Spectral flux (Peeters, 2004) describes the intensity variation between two successive frames. The volume descriptor (Malt, Jourdan, 2009) defines the frequency and intensity space that the texture occupies. By observing the graphics, the excerpt between 1'48'' and 2'30'' is the climax of the piece in terms of intensity, flux and