

**Workshop: The art of music making and recording explained, informed and enriched by psychoacoustics, neuroaesthetics, and music perception research**

Following Susan Rogers' distinguished lecture on November 21st, this workshop brings together researchers who study the creative process of music making and recording (including orchestration and sound design) from the perspective of psychoacoustics and music psychology, and musicians who draw inspiration and conceptual tools from these fields to achieve an in-depth and informed understanding of their own creative process and techniques.

1:00 pm : introduction

1:10 pm : **Ying-Ying Zhang** (McGill University)

*Audio Location Markers, Verbal Information Recall, and the Working Memory*

This presentation discusses an experiment where binaural audio processing was used to encode audio location markers onto verbal stimuli in order to examine spatial audio cognition. Research shows that under Baddeley's model of the working memory, performing two simultaneous tasks within one memory system negatively affects recall performance. If spatial memory is processed separately from auditory memory, spatialization would have no effect on recall. However, this research found that under sufficiently spatially complex circumstances, the participants' recall order suffered. This presents interesting possibilities regarding how spatial auditory memory is processed.

1:35 pm : **Sylvain Caron, Caroline Traube** (Université de Montréal) **et Erica Bisesi** (Institut Pasteur)

*Comparative study of timing variations in the performance of a François Couperin prelude captured on a MIDI-harpsichord*

Starting from the comparison of the variations of tempo in different interpretations of François Couperin's first prelude for harpsichord, our study aims to identify the components of musical expression according to the style of interpretation. The performance of 7 performers was captured on a MIDI harpsichord and tempo variations were derived from this data. The score was analyzed both subjectively and with the help of computational tools, using an analytical approach to identify different types of accents: group, metric, melodic, harmonic and syncopal. In order to better grasp the multiple manifestations of the expression that can emanate from the potentialities of the work, the accents thus identified are related to variations in tempo. It reveals strategies of interpretation that are both different and coherent in themselves.

2:00 pm : **Martha de Francisco** (McGill University)

*How to turn a lacklustre performance into one that sparkles - The multiple and varied engagements of recording producers, between music, technology and psychology*

As translators of music performances into preserved recordings that manage to capture all sonic, dynamic and emotional components of music, recording producers operate on a number of levels. There are musical and technological requirements, direction and oversight are expected, but also psychological guidance belongs to the important tasks at hand. Many musicians experience considerable stress when making a recording. Dealing with nerves, microphone anxiety, issues with confidence, performer's fatigue, artist's block and diva behaviour belong to the repertoire of issues requiring psychological direction by the producer in the course of a music recording. Examples in audio and video will be shown.

2:25 pm : coffee break

2:45 pm : **Richard King**, McGill University, Sound Recording

*Where Music Making and Recording Intersect, or Collide – a Field Report*

Via an overview of a recent recording project (Goat Rodeo Sessions), examples will be presented that demonstrate where the processes of music making and recording merge to become one in the same, and where they sometimes conflict. Solutions to the various problems will be discussed.

3:10 pm : **Susan Rogers**, Berklee college of music

*Music Making, Recording, and the Human Connection*

Our guest speaker, Susan Rogers, will offer practical tips for record producers and engineers from the perspective of psychoacoustics, neuroaesthetics, and music perception research. Popular music recordings will be analyzed in terms of

performance gestures, recording/mix techniques and arrangement choices, to consider how the artistry of record making engages listeners.

3:45 pm : Questions and final discussion

4:00 pm : end