



SUMMARY SAMPLE:

Spatialization and Room Acoustic Effects

10 July 2018, 13:40

Schulich School of Music of McGill University
527 Sherbrooke W., Montréal, Québec, Room A807

Initial of first name + last name followed by affiliation.

Workgroup Leaders: **M. Kob** (Detmold University of Music), **C. Guastavino** (McGill), **M. de Francisco** (McGill)

Note-Takers: B. Madahi, T. Tschiedl (McGill)

Attendees: **Y. Adler** (McGill University), **F. Baril** (OrchPlay), A. Barri (McGill University), **A. Berndt** (Detmold University of Music), **J. Bucchi** (Université de Montréal), **V. Cordero** (Haute École de Musique de Genève), **M. de Franciso** (McGill University), **T. Díaz Villegas** (Université de Montréal), **F.- X. Dupas** (Vibe Avenue), **P. Esling** (IRCAM), **I. Fujinaga** (McGill University), **P. Gómez Olabarría** (Hochschule für Musik und Theater Felix Mendelssohn), **R. Hasegawa** (McGill University), **L. Heng** (McGill University), **N. Hérold** (Université de Strasbourg), **D. Lafortune** (McGill University), S. Li (McGill University), **A. Martins de Oliveira** (McGill University), **L. Radford** (University of Calgary), **L. Reymore** (McGill University), **J. Rosner** (McGill University), **J. Roth** (McGill University), **F. Sallis** (University of Calgary), **C. Traube** (Université de Montréal), **J. Winikoff** (University of British Columbia), A. Zacharakis (University of Thessaloniki), **M. Zeller** (McGill University), **Y.-Y. Zhang** (McGill University)

List of attendees in alphabetical order by last name + affiliation. ACTOR members in bold.

Zoom Attendees: **C. Cella** (University of California, Berkeley), **P. Susini** (IRCAM), **L. Zhu** (McGill University)

Aims:

The main goal of this discussion will be to document how the deliberate use of space and room acoustics affects the sound of musical compositions and if/how this can/should be represented in written compositions and in recorded signals. The topic of spatialization has been an outlier in the past. It has been perceived/dismissed as a "mere effect" and at times a problem. It should be considered as an omnipresent aspect of musical sounds. There is a need for a transparent and accessible explanation of acoustic effects on musical performance and sound.

Discussion Points:

- Spatialization in music – an issue to be handled by the composer or the conductor
- Changes in spatialization perceived by the audience
- Acoustics is of relevance in various fields:
 - Trajectories/choreography of sound sources for composers
 - Space-related timbre properties, especially for blended sounds
 - Audio mining: just noticeable difference (JND)/masking for audio descriptors
 - Need for binaural vs. multichannel reproduction/democracy of hearing
 - Review/collection of psychoacoustic, room/stage acoustic terms
 - Need for controlled, free-of-rights recordings of instruments and room acoustics with various genres and



ANALYSIS,
CREATION +
TEACHING OF
ORCHESTRATION

- forms: orchestra/ensembles/electronics as musical input
- Development of AMISE (<https://amise.netzwerk-musikhochschulen.de>) (graphic representation, directivity database)
- Progress and evaluation of current developments (AMISE, virtual instruments, spatialization tools, wave propagation/visualization tools) for later integration into the Orch-space
- Methods for adding spaciousness to synthesized sounds

Always include the person charged with the task and the timeline. ACTOR members are in bold.

Action Items:

1. Performance and evaluation of an orchestra recording with recordings of blended sounds.
[M. Kob, M. de Francisco, C. Traube, and J.-F. Rivest with students from UdeM, McGill, and Detmold, 29 & 30 September 2018]
2. Assessment and template documentation of room acoustical parameters (along with the above recordings).
[M. Kob and S. Ioannou, with the support of the recording teams of UdeM and McGill, 29 & 30 September 2018]
3. Draft description of useful recording and measurement set-ups for ACTOR needs and recorded media from the ODESSA project.
[M. Kob, C. Traube, J.-F. Rivest, M. de Francisco, and S. Ioannou, after the recording and measurement sessions; Fall 2018].

The timeline can be a specific date, period or even a year.

Follow-Up:

1. Further development of various projects (e.g. AMISE, OrchPlay) for visualization and auralization of musical sounds
2. Collection of features/terms within the group that might be relevant to timbre and different kinds of orchestrations.
3. Attempt to reflect these features in the model or instruments that will be created (dictionary of acoustical/spatial/timbral expressions)