



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:

- Is spatialization in music an issue to be handled by the composer or the conductor?
- Will changes in spatialization be 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:

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