

HALVING THE EMISSIONS OF ACADEMIC CONFERENCES – A MULTI-LOCATION, SEMI-VIRTUAL APPROACH

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Background

Greenhouse gas emissions produced by flying may represent the biggest contribution of academics to global warming. Consequently, a large proportion of emissions produced by universities is due to aviation.

Most academics regard personal contacts at conferences as an essential part of the conference experience and are unwilling to give up or modify the traditional conference format. But it is interesting to consider how conference emissions might be reduced (i) without losing the experience of personal contact and (ii) compensating for any perceived loss with other advantages.

We describe a conference format that achieves these aims. We expect to halve greenhouse gas emissions per participant by comparison to previous comparable conferences, while at the same time improving other conference features, as listed below. The idea has the potential to revolutionize conferences at all universities and in all academic disciplines, and it could eventually halve the greenhouse gas emissions of universities.

The International Conference on Music Perception and Cognition (ICMPC) takes place every two years. The 15th event in the series is planned for 23-28 July 2018. Continuing a traditional 6-year cycle, the conference will be combined with the 10th triennial conference of the European Society for the Cognitive Sciences of Music (ESCOM), of which the author is currently the president.

The semi-virtual, multi-location format

ICMPC15/ESCOM10 will be distributed across hubs on different continents, communicating via an internet cloud. We will strike a new balance between face-to-face and virtual communication, and between activities on different continents, to create a truly global conference.

Every hub will present a regular local keynote and regular parallel sessions. In addition, there will be virtual parallel sessions from the other hubs, mostly in real time (as unlisted, password-protected YouTube streams) followed by international discussions (probably using Zoom). In this way, each hub will present most or all of the global program. The technology was tested in April 2017 in a small international pilot event (Global Arts and Psychology Seminar, GAPS2017).

For the first time,

- every talk will be both live and virtual, that is, presented to a live local audience and viewed elsewhere in real time (and possibly at other places, with a time delay);
- all discussions will include real-time virtual participants at one or more remote locations;
- all presentations and all discussions will be documented as videos plus comment feeds;
- a limited number of colleagues who are unable to travel due to disability, caring commitments, visa/travel problems or severe financial limitations will have the opportunity to present a prerecorded, reviewed video;
- abstract reviews will be considered when selecting keynotes, of which there will be one at each hub, streamed to one or two other hubs in real time with no competition from other events.

Participants will be free to attend any hub, regardless of their location. We recommend travelling to the closest hub, which will reduce both travel costs and greenhouse gas emissions. Flying across the world to a conference is comparable with driving a car in a regular way for a year.

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The hubs

The number of hubs is theoretically unlimited. The open nature of the internet “cloud” means the conference does not become more difficult to organize or more prone to accidents as the number of hubs increases. The ICMPC committee decided that ICMPC15/ESCOM10 would comprise four hubs:

- Montréal, Québec: Department of Music, Concordia University
- Sydney, Australia: School of the Arts and Media, University of New South Wales
- La Plata, Argentina: Faculty of Fine Arts, National University of La Plata
- Graz, Austria: Centre for Systematic Musicology, University of Graz

These hubs are equal in the sense that each will present a mixture of real and virtual talks; each will have equal access to the entire global program; and registration fees will be paid directly to hubs. They are unequal in that some received more abstract submissions than others, so the number of people physically in attendance will differ. Graz will carry out the review procedure and write the program in collaboration with other hub organizers.

The 24-hour global program

The 24-hour global program will include all streamed academic presentations at all hubs and all interhub sessions and meetings. Each hub will also have a separate local program that includes both live and virtual presentations at the particular hub as well as local-only events (symposia, concerts, social events). Conference materials (abstracts, live streams, videos, discussions) will be available to registered participants only within a separate password-protected system.

UTC (GMT)	Δ	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Montreal	-4	20													9	10	11	12					17	18	19
La Plata	-3														10	11	12	13				17	18	19	20
Graz	+2							8	9	10	11				15	16	17	18							
Sydney	10	10	11	12				16	17	18	19														9

Table 1: 24-hour program for one day in July

The above table is a sketch of the 24-hour program for one day in July (summer in the northern hemisphere). The numbers in the top row are the time at the start of each 1-hour timeslot relative to GMT (Greenwich Mean Time), which for our purposes is the same as UTC (coordinated universal time, temps universel coordonné). The second column shows time differences relative to GMT/UTC.

The daily program at each hub is divided into a morning and an evening session to maximize real-time international communication. The exact form of the program will vary from day to day depending on specific program events. There should be a half-day break at all hubs in the middle of the conference.

Consider the red block in the figure between 13 and 16 UTC. At 13 UTC it will be 9am in Montreal Canada, 10am in La Plata Argentina, and 3pm in Graz Austria. At this time, the morning halfday will begin in the Americas and the afternoon/evening halfday will begin in Europe. For four hours, these three hubs will be in constant communication.