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Conference Report: The Fourth Conference on Interdisciplinary Musicology (CIM08)

Why should a report on a musicology conference be of interest to the readership of AISB, you may ask? Well this unusual conference provided an excellent opportunity to present work on simulating intelligent musical behaviour and cognition, with a strong emphasis on collaboration across disciplines.

This series of annual conferences, the brainchild of Richard Parncutt, aims to encourage an interdisciplinary approach to the study of music in academia. There were a healthy number of sessions devoted to cognitive, computational and artificial intelligence-based approaches to music, showing a keen current level of interest in such research.

Collaborative work involving people from both arts and science backgrounds can produce substantial benefit, as there is a broader depth of knowledge to be drawn upon to base the work. A cross-disciplinary approach also helps balance the priorities of each discipline; for example placing emphasis on both the quality and theoretical validity of the musical output of a system and also the set of steps or methodology taken to achieve that musical output. This is as opposed to focusing on one way of thinking at the expense of the other – a common pitfall when working across the arts/science boundary.

To help foster interdisciplinary collaborations, there is an unusual requirement in the call for papers for CIM conferences: each submission must be from at least two authors who represent different academic disciplines. In general, the most common combinations of disciplines came from computing and music or music psychology. More uncommon combinations also proved fruitful, for example the work by Reynaud Meric and Makis Solomos in using philosophical approaches to aesthetics to analyse contemporary music.

Another unusual aspect of this conference series is that keynote speakers are not arranged in advance, but instead are drawn from the best of the submissions received. Michel Vallières from McGill University gave the opening keynote, on a paper co-authored with Daphne Tan, William E. Caplin, Joseph Shenker and Stephen McAdams. This entertaining and well-presented talk examined how we perceive the structure of musical themes, compared to music theoretical ideas of how parameters such as tempo or harmonic progression help to identify the beginning, middle and end of a theme.

Vallières discussed the results of empirical experiments where the participant was asked to judge what was the temporal function of various musical extracts: as ‘beginning’, ‘middle’ or ‘end’ segments. The results gave insights into how useful each musical parameter was in determining these roles. In particular, the results
highlighted how the use of these parameters varied according to the musical expertise of the participant.

In the session on Artificial Intelligence perspectives, Alan Marsden and Geraint Wiggins described how they are using AI search techniques to assist computational musical analysis. The particular form of analysis being investigated is Schenkerian analysis: a reductionist technique used to identify the underlying structure of a piece of music.

Successful Schenkerian analysis involves a high degree of subjective evaluation. Finding the appropriate analysis for a piece of music is not just a case of following the right steps in the right order, but requires insight and musical training; moreover the number of potential analyses increases rapidly with the length of the piece. Hence Marsden and Wiggins have employed a number of appropriate search methods; their best results so far are from an A* best-first algorithm, using Marsden’s heuristics for Schenkerian analysis to guide the search.

The authors defended their choice of using computational search techniques as being a tried and tested way of finding solutions to a problem as quickly as possible. This contrasted well with a later presentation in the same session on intelligent tutoring systems by Panayotis Mavromatis that utilised a more cognitively based approach to model how humans find solutions to musical problems. Although Marsden and Wiggins’ work is an ongoing project rather than finalised work, the preliminary results looked to be quite promising. It will be interesting to see how this project progresses in the future.

Emergence in music is of particular interest to me, so a paper presented by Makis Solomos and Agostino Di Scipio captured my attention. As a researcher in music aesthetics, Solomos explores how we construct our own interpretation of music as we listen to it. When considered as a collection of organised sounds or “sonic structures”, the authors suggest that music emerges as the result of performing a piece. In interacting with the performance, passively or actively, the audience contribute to the music. Another key contribution to the emergent music is the environment where the music is performed; the authors are hinting at (but not directly mentioning) the embodiment of music in an interactive environment.

The fascinating angle taken in this talk was the interaction between the composer (Di Scipio) and the musicologist (Solomos). Di Scipio composes with musical emergence in mind; Solomos analyses Di Scipio’s music retrospectively. This talk effectively became a discussion between the two authors as to how their ideas converge. Although they posed many more questions than they answered, the presentation was highly thought provoking.

Including so many disciplines under the banner of one conference leads to a very broad range of in depth knowledge and some novel and exciting ideas from the combination of different disciplines. The challenges in presenting work to an
audience with varying levels of knowledge for that particular specialism were, on the whole, well met. The variety of non-Western-classical music genres and cultures represented, such as Byzantine and Flamenco music, gave the conference a more international and diverse feel. In general the paper standard was high and the ethos of the conference was well subscribed to.

At the recent International Computer Music Conference there was an impromptu discussion about the difficulties of combining expertise across different disciplines. Conferences such as CIM may well prove to be a valuable way of developing cross-disciplinary work and encouraging wider collaboration. The next CIM conference will be in Paris, in 2009.

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