

IT in the study of music traditions



The Ottoman music ensemble

CompMusic is a European research project that studies several world art music traditions in the context of information technologies. The project started last year with a focus on the music of India (Hindustani and Carnatic) and Turkey and will soon include the art traditions of China and of the Maghreb. It aims to develop information technologies to automatically analyse and describe music, and to facilitate the cataloguing and discovery of music recordings within large repositories. CompMusic is coordinated by Prof. Xavier Serra from the Universitat Pompeu Fabra in Barcelona, Spain. It includes two Indian research teams, one from IIT-Bombay led by Prof. Preeti Rao working on Hindustani music, and another from IIT-Madras led by Prof. Hema Murthy working on Carnatic music.

The field of Music Information Technologies has developed rapidly in the last two decades, following the development of the Internet and the growth of the online distribution and consumption of music. This has opened up new opportunities for accessing and listening to music, and music

information technologies are supporting new ways to manage large collections of music and music related data. Their practical use includes the automatic organisation and cataloguing of audio recordings, the efficient search of music data within large repositories, and the recommendation of new songs to music lovers. Given that these technologies have to “know” about music, the research and development has to be done by engineers with the involvement of musicians and musicologists. At present, the available technologies and most research efforts have focused on Western commercial music and practically nothing has been done on such art music traditions as Hindustani and Carnatic music. This is the gap that the CompMusic project is addressing.

In order to approach the study of a given musical repertoire from the information technology point of view, there is a need to have well-structured digital data available to be processed. In the context of CompMusic, a large collection of audio CDs from the different cultures is being collected

and open on-line repositories are being used to gather other types of data. For example, MusicBrainz.org is used for the metadata of CDs, Wikipedia.org for descriptive information, and Freesound.org for the special recordings that are made. Anyone can contribute to these repositories and the contributed information is open and available to everyone, except for the collected commercial CDs that cannot be distributed.

The second CompMusic Workshop was conducted on 12 and 13 July at Istanbul in Turkey. The workshop in Istanbul was the first event that brought together all the researchers and music collaborators of CompMusic. It also invited researchers working on the same topics – a total of around 40 people from a few countries. It included 28 talks and several meetings prior to the workshop to discuss specific research and musical topics in an informal and focussed fashion. One of the fundamental goals of the workshop was to bring together engineers and musicians working in Indian and Turkish music to discuss the future direction that the project

should focus on. Apart from the researchers of the project, several Turkish musicians and some well-recognised Indian musicologists and musicians, like Dr. Suvarnalata Rao, T.M. Krishna, and M. Subramanian participated.

In the case of Indian music, the technical topics presented and discussed mainly related to tonic detection, intonation characterisation, melody and rhythm description, community characterisation, and music browsing and discovering methods.

The tonic in a concert is the reference pitch from which all the harmonic and melodic relationships are

established during a performance. Its automatic detection is a necessary step for analysing the music, and the results obtained and reported at the workshop showed that the computational solutions in hand could be used in practical applications. Another musical element, the intonation of a performer in a piece, is not such a simple concept and its automatic characterisation is not yet a solved problem, but the initial results reported at the workshop were quite promising.

There were many talks relating to the characterisation of melodies. Raga music has particular ways in

which melodies are constructed, very different from other music traditions, and its characterisation requires specific approximations. There is a long way to go in developing proper parameters with which to identify musically meaningful melodic elements, but the research presented in the workshop reported some initial results and good approaches to be further developed.

The rhythm in Turkish music revolves around the concept of 'usul' and Indian rhythms are based on the concept of tala. These concepts have been formalised quite well by musicologists, but there is practically

BANGALORE KIDNEY FOUNDATION - 9TH DHWANI - 2012

BKF PT. MALLIKARJUN MANSUR HINDUSTANI MUSIC FESTIVAL

29TH & 30TH SEPTEMBER - JSS AUDITORIUM - BANGALORE - 560 070.

PROGRAM DETAILS

DAY: I SATURDAY 29 TH		SEPTEMBER 2012	DAY: II SUNDAY 30 TH	
05.45 TO 07.15 PM	SMT. SHUBRA GUHA - VOCAL RAVINDRA YAVAGAL - TABLA RAVINDRA KATOTI - HARMONIUM		06.00 TO 08.00 PM	SRI. SHIRAZ ALI KHAN - SAROD ARIJIT TAGORE - PHAKAWAJ
07.30 TO 08.15 PM	AWARD FUNCTION PT. INDUDHAR NIRODY - AWARDEE		08.15 TO 10.00 PM	DR. PRABHA ATRE - VOCAL RAVINDRA YAVAGAL - TABLA VYASMURTI KATTI - HARMONIUM
08.30 TO 10.00 PM	PT. INDUDHAR NIRODY - VOCAL GURUCHARAN GARUD - TABLA VYASMURTI KATTI - HARMONIUM		For details contact Guruprasad 98454 24053	

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