Opportunities for a Culture Specific Approach in the Computational Description of Music

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http://compmusic.upf.edu
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• Current topics in MIR
• Some music examples
• Culture specific challenges
• Data available
• Current CompMusic problems
Current topics in MIR

• Audio identification
• Beat detection
• Chord recognition
• Genre identification
• Cover song detection
• Query by humming
• Collaborative filtering
• Instrument recognition
• Music similarity
• Mood classification
• Audio summarization
• Music transcription
• ...

compmusic
Music Information Processing

High Level

emotion
style
performer
relations

Mid Level

mood
similarity
composer
preferences

beat
motives
genre
gestures

dynamics
melody
lyricist
motions

loudness
chord
instrument
scene

pitch
timbre

Low Level

duration
loudness

intensity
timbre

Audio

Text

Images

compmusic
Annual Conference and Concerts
Culture specific challenges (1/3)

• **Identify computationally relevant music cultures.** Identify musical cultures (a combination of a musical repertoire plus a user community) that can be characterized computationally.

• **Gather culturally relevant data for different music cultures.** Gather the data sources (audio, audio descriptors, editorial metadata, expert data, user commentaries, ...) with which to characterize the community+repertoire of the selected cultures.
Culture specific challenges (2/3)

- **Identify specific music characteristics for each culture.** Identify particular semantic music concepts and characteristics that are specific of each culture. These should be the aspects that allow us to characterize the different musical cultures.

- **Develop methodologies for culture specific problems.** Develop knowledge-based data processing approaches that, by taking advantage of the specificities of each culture, can be used to model the characteristics of each music repertoire and community.
Culture specific challenges (3/3)

- **Develop specific applications of relevance for each cultural context.** The members of each user community might have specific needs and thus the applications to be developed for them should target their context and interests.

- **Carry out comparative studies between cultures.** Given the research results obtained in the characterization and modeling of specific music repertoires and user communities, carry out comparative studies using computational approaches.
Data available

• Descriptive text data
• Audio recordings
• Editorial metadata
• Low-level audio features
• Music notation
• Lyrics
• Community data
Descriptive text data
# Audio recordings

<table>
<thead>
<tr>
<th>Album</th>
<th>Name</th>
<th>Time</th>
<th>Artist</th>
<th>Album by Artist</th>
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<tr>
<td>Bharat Sangeet Utsav</td>
<td>Sarasuda Saveri</td>
<td>7:07</td>
<td>Sowmya</td>
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<td>2008</td>
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<td>Sowmya</td>
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<td>Divakara Tanujam Yadukulakam</td>
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<tr>
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<td>Yanukkuthan Theriyum Devaman</td>
<td>7:10</td>
<td>Sowmya</td>
<td>Bharat Sangeet Uts...</td>
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</tbody>
</table>

| Bharat Sangeet Utsav 2008...| Nidhichala Kalyani Mishra Ch...           | 39:52| Sowmya     | Bharat Sangeet Uts...    |
| Sowmya                      | Yanukkililum Bogada Mishra...             | 7:39 | Sowmya     | Bharat Sangeet Uts...    |
| Sowmya                      | Smara Sundaranguni Phraz Adi              | 3:35 | Sowmya     | Bharat Sangeet Uts...    |
| Sowmya                      | Kanda Nal Madhuwanthi Adi                 | 7:24 | Sowmya     | Bharat Sangeet Uts...    |

| Carnatic Vocal – S.Sowmya   | Raghu Nayaka Raga Hamsadhwa...            | 5:38 | Sowmya     | Carnatic Vocal – S.S...   |
| Sowmya                      | Singara Velavan Raga Ananda B...          | 5:12 | Sowmya     | Carnatic Vocal – S.S...   |
| Sowmya                      | Guna Purna Raga Sam...                    | 5:41 | Sowmya     | Carnatic Vocal – S.S...   |
| Sowmya                      | Sambino Mahadeva Raga Ra...               |      |            |                          |
| Sowmya                      | Jesinideli Raga Thodi Tala Adi            |      |            |                          |
| Sowmya                      | Vagala Adi Jawali Raga Behag...            |      |            |                          |
| Sowmya                      | Ninnavi Raga Sindhu Bhairavi T...         |      |            |                          |

| Sri Krishna Canam           | Neelkan Mechi Kolla                      | 2    | Kuzhaloddi |                          |
| Sowmya                      | Kuzhaloddi                                | 3    | Adahu Asangadh |                      |
| Sowmya                      | Thaye Yasodha                             | 4    | Enna Punniyam  |                        |
| Sowmya                      | Vandhadhu Vurn                           | 5    |             |                          |
| Sowmya                      | Alai Puyuthne                             | 7    |             |                          |
| Sowmya                      | Pullai Piravi                             | 8    |             |                          |
| Sowmya                      | Thillana                                  | 9    |             |                          |
| Sowmya                      | Thillana                                  | 10   |             |                          |
## Classical Vocal

~ Release by M. D. Ramanathan (see all versions of this release, 1 available)

### Tracklist

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Lead Vocals</th>
<th>Performance</th>
<th>Composer</th>
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<td>M. D. Ramanathan</td>
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<td>M. D. Ramanathan</td>
<td>Smara Janaka Subha Charitha</td>
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### Release Information
- **Date:** 2004
- **Country:** India
- **Format:** CD

### Additional Details
- **Type:** Album
- **Status:** Official
- **Language:** [Multiple languages]
- **Script:** Latin
- **Data Quality:** Normal

### Labels
- Gita Compact Discs
- GCT-CDCL-559

### Rating
- ****

### Editing
- Log in to edit

### Relationships
- Classical Vocal has no relationships.

---

**compmusic**
Low-level audio features

metadata:
  version:
    essentia: "1.2.2"
pitch_confidence:
  mean: 0.725613296032
  skew: -1.01243495941
spectral_flatness_db:
  mean: 0.189157426357
spectral_rms:
  mean: 0.0014992490178
spectral_strongpeak:
  mean: 0.628910064697
  var: 0.741435945034
mfcc:
  mean: [143.017318726, -38.4358482361, 7.8873260797]
  var: [122.917526245, 159.187026978]
onset_rate: [1.70000004768]
tristimulus:
  mean: [0.29845097661, 0.602976679802]
Music notation

Bir Dalda İki Kiraz
Sabâ Türkü

Usul: Sofyan

\[ \text{\rotatebox{-90}{
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Bir dal da i ki ki raz

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Lyrics

A daya sri raghuvara

Sri Raghuvara! Ocean of Compassion!
Why wouldn't you have that compassion today?

Charanam

Hasret odu yaktı cigerim sry nufuâ altım
bir kevâb hemi hâlimi sormazım a zalim
Günden gune efûn oluyor dildem melârim
bir kevâb hemi hâlimi sormazım a zalim

Verge

Hasret odu yaktı cigerim sry nufuâ altım
bir kevâb hemi hâlimi sormazım a zalim
Günden gune efûn oluyor dildem melârim
bir kevâb hemi hâlimi sormazım a zalim

ACADEMY

Score

Listed:1475/Total:241.09

with score

A daya sri raghuvara

Lyrics

Sri Raghuvara! Oceâns of Compassion!
Why wouldn't you have that compassion today?
Community data

**Freesound**

**Forums**

Freesound Forums - Sample Requests - Hardstyle vocals

**Previews**

**tahAffect**

0 sounds
2 posts
1 month, 1 week ago

Hardstyle vocals

Hello 😊 I'm A-ffect an amateur hardstyle producer and I would really need some vocals for my new song. The vocals should be saying:

Music will light my candle so, that it shall shine full bright; it shall scare away, the fears of the night, it shall give power, to those who are might; it shall give me a gift; to make the decisions that are right, but it will also make my darkness to be light.

The song has a darkish intro and an epic melody 😊. So if anyone would be somewhere in between dark and light if you know what I mean 😊.

**Rasikas.org**

Carnatic Music Forums

**Raga & Alapana**

Board index - Carnatic Music - Raga & Alapana

FAQ - Register - Login

It is currently 03 Mar 2012 16:18

**Announcements**

Login Issues --> Have you reset your password after Feb 10th
by srikris - 03 Apr 2010 14:32
19 replies 9586 views by venu sundar 22 Mar 2011 21:59

**Topics**

kambhoji sancharas by SURYAPRABHA 02 Mar 2012 23:38
0 replies 23 views by SURYAPRABHA 02 Mar 2012 23:38

Kolahalam by sathyabalu 20 Feb 2012 17:49
1 reply 111 views by Ranganayaki 25 Feb 2012 22:15

Janya's of SHANKUMUKHAPRIYA by vs_manjunath 09 Oct 2006 15:32
25 replies 1887 views by ganeishkant 25 Feb 2012 18:16

Charulatha Mani - A Raga's journey by cilmweb 26 Nov 2011 07:38
17 replies 469 views by cilmweb 19 Feb 2012 17:38

Sumanaranjani by sathyabalu 15 Feb 2012 23:00
2 replies 74 views by VK RAMAN 16 Feb 2012 07:16

Ragheshri by sathyabalu 27 Nov 2011 13:37
10 replies 363 views by ganeishkant 15 Feb 2012 11:24

“Raga surabhi” helps raaga identification for learners
by Vijayakumar 16 Apr 2010 14:08
72 replies 3375 views by Raga Surabhi 12 Feb 2012 15:21

Folksy Shankarabharanam
by vasanthakokilam 27 Jan 2012 04:56
3 replies 172 views by arasi 29 Jan 2012 22:44

Similar Ragas by vasanthakokilam 27 Jan 2012 14:58
67 replies 8250 views by vasanthakokilam 27 Jan 2012 14:58
Research topics

- “Intonation characterization”: Characterize the pitches used by a performer in a piece.
- “Melody description”: Describe the temporal pitch variations performed in a piece, organized in “motifs” of different temporal scales.
- “Rhythm description”: Describe the arrangement of sounds and silences in time establishing patterns of strong and weak events.
- “Community characterization”: Characterize the group of people sharing a cultural tradition and common aesthetic values.
- “Browsing and discovering methods”: Develop musically meaningful navigation methods for audio music collections.
### Editorial Metadata

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<thead>
<tr>
<th>Artist</th>
<th>Kaushiki Chakrabarty</th>
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<tr>
<td>Title</td>
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#### Performers

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Thanks!!!