Indian Institute of Technology, Kharagpur

The Indian Institute of Technology Kharagpur (IIT Kharagpur or IIT KGP) is a public engineering institution established by the government of India in 1951. The first of the IITs to be established, it is recognized as an Institute of National Importance by the government of India. The institute was established to train scientists and engineers after India attained independence in 1947. It shares its organisational structure and undergraduate admission process with sister IITs. The students and alumni of IIT Kharagpur are informally referred to as KGPians. Among all IITs, IIT Kharagpur has the largest campus (2,100 acres), the most departments, and the highest student enrolment. With the help of Bidhan Chandra Roy (ex-chief minister of West Bengal), Indian educationalists Humayun Kabir and Jogendra Singh formed a committee in 1946 to consider the creation of higher technical institutions “for post-war industrial development of India. This was followed by the creation of a 22-member committee headed by Nalini Ranjan Sarkar. In its interim report, the Sarkar Committee recommended the establishment of higher technical institutions in India, along the lines of the Massachusetts Institute of Technology and consulting from the University of Illinois at Urbana–Champaign along with affiliated secondary institutions. The first Indian Institute of Technology was thus established in May 1950 as the Eastern Higher Technical Institute. It was located in Esplanade East, Calcutta, and in September 1950 shifted to its permanent campus at Hijli, Kharagpur 120 kilometres south-west of Calcutta. The classrooms, laboratories and the administrative office were housed in the historic building of the Hijli Detention Camp (now known as Shaheed Bhawan), where political revolutionaries were imprisoned during the British rule. The office building had served as the headquarters of the Bomber Command of the U.S. 20th Air Force during World War II. The name “Indian Institute of Technology” was adopted before the formal inauguration of the institute on 18 August 1951 by Maulana Abul Kalam Azad. On 15 September 1956, the Parliament of India passed the Indian Institute of Technology (Kharagpur) Act declaring it an Institute of National Importance.

IIT Kharagpur is located 120 kilometres (75 mi) west of Kolkata. The layout of the present campus and the design of the buildings were carried out by a group of engineers and architects under the guidance of Werner M. Moser, a Swiss architect. The 8.5 square kilometres (2,100 acres) campus is residence to about 20,000 inhabitants. In 2006, IIT Kharagpur had about 470 faculty members, 1,933 employees and approximately 5,500 students living on the campus. The campus has a total of 55 kilometres (34 miles) of roadways. The Institute plans to go Green by 2020.

The institute plans to expand the Kolkata extension centre at Rajarhat, and use it to offer full-time undergraduate and postgraduate courses from the 2008 session onwards.

About the place of the Symposium

Kharagpur is known world over for two landmarks. One, the longest railway platform, and the other, the Indian Institute of Technology, more commonly known as IIT.

Communication: Situated about 120 km west of Kolkata, Kharagpur can be reached in about 2 hours by train from Howrah railway station of Kolkata or 3 hours by car from Kolkata Airport. Kharagpur is also connected by direct train services to most major cities of the country. The Institute is about 10 minutes drive (5 km) from the Kharagpur railway station. Private taxi, auto-rickshaw or cycle-rickshaw can be hired to reach the Institute.

Climate: Winter (October to February) is moderate and pleasant (10 to 25 C) in Kharagpur. Summer (March to June) is hot (25 to 40 C) and sometimes humid. Rains are normally confined to the months of June to September.

Call for Papers

International Symposium
Frontiers of Research on Speech and Music (FRSM - 2015)
23-24, November, 2015

Special Theme
“Speech and Music technology in Education”

Organised by
Indian Institute of Technology, Kharagpur,
ITC Sangeet Research Academy, Kolkata,
Sir C V Raman Centre for Physics and Music,
Jadavpur University, Kolkata

Venue
Centre for Education Technology,
Indian Institute of Technology, Kharagpur
## About the Symposium

International symposium FRSM is organised in different parts of India every year since 1990. Till date, these symposiums were held at Kolkata, Santiniketan, New Delhi, Varanasi, Kanpur, Lucknow, Mysore, Gwalior, Bhubaneswar, Annamalai and Thiruvananthapuram to promote research interest in these areas to researchers working in different fields like physics, mathematics, musicology, Speech Science, Linguistics, electronics and computer science.

The continuation of these events would not have been possible without the active co-operation of CDAC-Kolkata, Indian Statistical Institute, Jadavpur University, Central Electronics Engineering Research Institute, BHU, Visva Bharati University, International School of Dravida Linguistics, IIT Kanpur, Annamalai University, Utkal University, Uttar Pradesh Technical University. IITM Gwalior, All India Institute of Speech and Hearing, Mysore and Acoustical Society of India and active participation of various research societies to researchers working in different fields like physics, mathematics, musicology, Speech Science, Linguistics, electronics and computer science.

The two-day symposium on Frontiers of Research on Speech and Music (FRSM – 2015) will be held at the Indian Institute of Technology, Kharagpur, during 12-13 November 2015. It will be jointly organised by Indian Institute of Technology, Kharagpur, ITC Sangeet Research Academy, Kolkata and Sir C V Raman Centre for Physics and Music, Jadavpur University, Kolkata. This yearly symposium would continue to unfold novel interactions of science, technology and mathematics with the faculties of mind like expressions, impressions and feeling and ultimately lead to a paradigm of research, to unify matter and mind.

Invited and some contributed papers related to speech, music and allied signal processing will be considered for presentation and publication.

### The topics include:
- Speech Analysis
- Speech Perception
- Speech production
- Acoustics
- Phonetic/Phonological Systems for Indian Languages
- Speech Prosody
- Labelling, Speech processing and applications
- Emotion in speech and music
- Application of speech and music technology in Education
- Music Modeling
- Aesthetics
- Recognition
- Analysis
- Synthesis
- Retrieval
- Structure analysis
- Pedagogy
- Transcription
- Production and composition
- Tools and Psychology
- Optical music recognition
- Semantic music technologies
- Music and sound data mining
- Comparison
- Classification
- Modeling of sound and music
- Cooperative music networks
- Structuring of audio data
- New methods for music representation and visualization
- Libraries
- Virtual reality
- Augmented reality
- Human-machine interaction
- Auditory perception
- Cognition
- Creativity
- Ethnomusicology
- Origins and Evolution of Music
- Emotion
- Music therapy
- Signal Processing

## International Advisory Committee

**Prof. P.P. Chakrabarty, Director, IIT, Kharagpur (Chairman)**

- **Prof. S. Bhattacharyya, Dy. Director, IIT, Kharagpur**
- **Mr. Ravi Mathur, Exe. Director, ITC SRA, Kolkata**
- **Prof. D. Dutta-Jamujumdar, President, SNLRT, Kolkata**
- **Prof. S. G. Deshmukh, Director, ABV IIITM, Gwalior**
- **Prof. S. A. Agrawal, KIIT Group of Colleges, Gurgaon**
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- **Prof. Hiroya Fujisaki, University of Tokyo**
- **Prof. Keikichi Hirose, University of Tokyo**
- **Prof. J. Sundberg, KTH, RIT, Sweden**
- **Prof. W. M. Hartman, Michigan State Univ., USA**

## Organising Committee

**Prof. A. K. Datta, SCVRCPM, JU, Kolkata, (Chairman)**

- **Prof. Anupam Basu, IIT, Kharagpur, (Convenor)**
- **Prof. Joy Sen, IIT Kharagpur**
- **Prof. B. Bhattacharya, IIT Kharagpur**
- **Prof. Partha Ghose, Bose Institute, Kolkata**
- **Prof. D. Ghosh, SCVRCPM, JU, Kolkata**
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- **Mr. M. Chakraborty, ITC SRA, Kolkata**
- **Mr. S. Ray Chaudhury, ITC SRA, Kolkata, (Co-Convenor)**

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- **Dr. Atashi, Mohanty, IIT Kharagpur**
- **Dr. Prabir. Kr. Bhowmick, IIT Kharagpur**
- **Dr. Tamali Bhattacharya, IIT Kharagpur**
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## Programme Committee

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- **Dr. Shyamal Das Mandal, IIT, Kharagpur (Convenor)**
- **Prof. P. Dasgupta, IIT Kharagpur**
- **Dr. Prabir. Kr. Bhowmick, IIT Kharagpur**
- **Prof. A. K. Datta, SCVRCPM, JU, Kolkata**
- **Prof. B. Gupta, JU, Kolkata**
- **Dr. S. Ghosh, University of Delhi**
- **Dr. R. Sengupta, SCVRCPM, JU, Kolkata**
- **Sri N. Dey, ITC SRA, Kolkata**

## Call for Papers

Scholars are invited to submit extended abstracts (1000 words) of original unpublished research work in the related fields by E-mail: frsm_iitkgp@iitkgp.ernet.in in MS Word format to Dr. S.K. Das Mandal, Organizing Committee- Frontiers of Research on Speech & Music (FRSM - 2015), Centre for Education Technology, Indian Institute of Technology, Kharagpur. The submitted abstracts will be reviewed carefully and only accepted papers will be published in the Symposium proceedings on payment of at least one registration fee.

### Important Dates

- **July 30, 2015** Last date of abstract submission
- **August 15, 2015** Notification of Paper Acceptance
- **September 30, 2015** Final Camera-Ready Paper
- **October 30, 2015** Last Date of Registration without late Fee

Instructions for the preparation of camera-ready manuscript will be sent along with the notification of paper acceptance.

### Accommodation

Accommodation for registered participants will be available in the Institute Guest Houses on first come first serve basis. Participants desirous of getting accommodation should inform along with their travel schedule to Dr. S.K. Das Mandal, IIT, Kharagpur, Organizing Committee- Frontiers of Research on Speech & Music (FRSM - 2015), Centre for Education Technology, Indian Institute of Technology, Kharagpur, Ph.0322282107 [E-mail: sdasmandal@iitkgp.ernet.in ] before October 30, 2015.

### Registration Fee

Registration fee by demand draft in favour of ‘CEP-STC, IIT Kharagpur’ payable at ‘Kharagpur’ along with Registration form may be sent to Dr. S.K. Das Mandal, Centre for Education Technology, IIT Kharagpur, Kharagpur-721 302, INDIA.

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<th>Category</th>
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<td>Foreign Delegates within</td>
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<td>Student Participants(Foreign)</td>
<td>US$ 150</td>
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The registered participants would get conference material, which include a copy of the proceedings. However as accommodation and other facilities are limited, prior intimation is necessary.
Registration Form
Frontiers of Research on Speech & Music
(FRSM - 2015)

Name: Mr/Mrs/Ms/Dr./Prof.________________________________________

Sex: Male/Female

Address__________________________________
 _______________________________________
 _______________________________________

E-mail____________________________________

Telephone________________________________

Fax______________________________________

I want to attend the symposium.........Yes / No

I want to present a paper in the symposium: Yes / No

I am a student & have no salary income: Yes / No

I am enclosing a DD of Rs.__________________

I want an accommodation at Guest House........Yes / No
(If ‘Yes’, send separate request as stated earlier in the “Accommodation” section)

Signature______________________________

To
Dr. S.K. Das Mandal,
Convenor, Programme Committee (FRSM-2015)
Centre for Education Technology
Indian Institute of Technology, Kharagpur
West Bengal, India
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Fax: +91-3222-282116
E. Mail: sdasmandal@cet.iitkgp.ernet.in