



NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR



25th International Symposium on Frontiers of Research in Speech and Music 2020 (FRSM 2020), 08-09 October 2020

Time (IST)	Inauguration	08 October, 2020	Duration
9:30-10:30AM	Digital Lamp Lighting		9:30-9:32
	Welcome address by Dr. Anupam Biswas , General Chair, FRSM 2020		9:33-9:38
	Address by Prof. A. K. Dutta , Honorary Chair, FRSM 2020		9:39-9:44
	Address by Prof. M. Ali Ahmed , Dean R&C, NIT Silchar		9:45-9:49
	Address by Prof. Sivaji Bandyopadhyay , Director, NIT Silchar and Chief Patron, FRSM 2020		9:50-9:59
	Address by Prof. Bjorn Schuller , Imperial College London, UK		10:00-10:05
	Address by Prof. Sanghamitra Mohanty , Utkal University & former VC of North Orissa University, India		10:06-10:11
	Address by Prof. Emile Wennekes , Chair Professor of Musicology, Utrecht University, Netherlands		10:12-10:17
	Address by Prof. Keikichi Hirose , Emeritus Professor, University of Tokyo, Japan		10:18-10:25
Vote of Thanks by Dr. Ripon Patgiri , Organizing Chair, FRSM 2020		10:26-10:30	

Anchor: *Dr. Malaya Dutta Borah & Dr. L. Dolendro Singh*, Technical Coordinator: *Dr. Naresh Babu M.*

Time (IST)	Keynote Talk	08 October, 2020
10:45-11:30AM	Keynote Speaker: Prof. Keikichi Hirose , Emeritus Professor, University of Tokyo, Japan Talk Title: Speech synthesis and prosody	
11:30-11:45AM	Break	
11:45-12:30PM	Keynote Speaker: Prof. Bjorn Schuller , Technical University of Munich, Germany Talk Title: Computational Paralinguistics: Challenge Accepted	
12:30-01:30PM	Break	
01:30-02:15PM	Invited Talk: Dr. T. V. Sairam , President, Nada Centre of Music Therapy, India Talk Title: The Advantage of Raga Chikitsa, the Indian Music Therapy	



Technical Session I

Session Chair:

Prof. Sanghamitra Mohanty, Utkal University, India
Prof. B . K. Roy, NIT Silchar

Coordinator:

Dr. Partha Pakray

Time	Paper ID	Paper Title and Authors	08 October, 2020
2:15PM-4:30PM	31	An artificial intelligence-based approach towards segregation of folk songs <i>Himadri Mukherjee, Ankita Dhar, Md Obaidullah Sk, Santanu Phadikar, Kaushik Roy and Sukumar Nandi</i>	
	33	North Indian Classical Music Tabla Tala (Rhythm) Prediction System Using Machine Learning <i>Shambhavi Shete and Saurabh Deshmukh</i>	
	35	Shruti Detection using Machine Learning and Sargam Identification for Instrumental Audio <i>Muktharunisa Chapparband, Megha Kulkarni, Sameeksha D K, Vijaya Krishna A and Ashwini Bhat</i>	
	39	Noise removal from Audio using CNN and Denoiser <i>Manmohan Dogra, Saumya Borwankar and Jayashree Domala</i>	
	48	Perception of Similarity and Dissimilarity in Hindustani Classical Music <i>Junmoni Borgohain, Gouri Karambelkar, Raju Mullick and Priyadarshi Patnaik</i>	
	49	Analytical Comparison of Classification Models for Raga Identification in Carnatic Classical Audio <i>Vihar Devalla, Om Amitesh B.R., Sathwik Acharya and Ashwini B</i>	
	51	Multimodal Sentiment Analysis of Rabindra- Sangeet through Machine Learning Techniques <i>Sandipan Ganguly, Dipankar Das, Akash Modak and Samanway Chakraborty</i>	
	58	Style Identification of vocal singers in Indian Classical Music using Meend and Andolan <i>Kaushik Banerjee, Anirban Patranabis, Ranjan Sengupta and Dipak Ghosh</i>	
	61	A Simple Statistical Comparison of Bagheshree and Bhimpalasi <i>Pranjala Shukla and Soubhik Chakraborty</i>	



Technical Session II

Session Chair: Prof. Emile Wennekes, Utrecht University, Netherlands Prof. P. K. Das, Indian Institute of Technology Guwahati, India		Coordinator: Dr. Shyamapada Mukherjee	
Time	Paper ID	Paper Title and Authors	08 October, 2020
4:30PM-6:45PM	13	The Influence of Music on Image Making: An Exploration of Intermediality between Music Interpretation and Figurative Representation <i>Pinaki Gayen, Junmoni Borgohain and Priyadarshi Patnaik</i>	
	20	Vocalist Identification in Audio Songs using Convolutional Neural Network <i>Manoj Kaushik, Shikha Rani and Vrinda Yadav</i>	
	24	Swaragram: Shruti based Chromagram for Indian Classical Music <i>Yeshwant Singh, Ranjeet Kumar and Anupam Biswas</i>	
	25	Bi-lingual TDNN-LSTM acoustic modeling for limited resource Hindi and Marathi language <i>Ankit Kumar and Rajesh Kumar Aggarwal</i>	
	28	Machine Learning Approach for Audio Surveillance <i>Subarna Chatterjee and Nida Farheen</i>	
	38	A Pilot study of Indian Ragas based music therapy for enhancement of chronic patient health condition <i>Milind Nemade</i>	
	46	Addressing the Recitative Problem in Real-time Opera Tracking <i>Charles Brazier and Gerhard Widmer</i>	
	53	A Continuous Speech Recognition System For Bangla Language <i>Rajat Paul and Samudravjaya K</i>	
	57	Style of vocal singer in Indian Classical Music: Timbre approach <i>Anirban Patranabis, Kaushik Banerjee, Ranjan Sengupta and Dipak Ghosh</i>	



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Time (IST)	Keynote Talk	09 October, 2020
9:30-10:15AM	Keynote Speaker: Prof. Sanghamitra Mohanty , Utkal University & former VC of North Orissa University, India Talk Title: Extractive Summarization of Continuous Speech using Odia ASR	
10:15-10:30AM	Break	
10:30-11:15AM	Invited Talk: Dr. Michal Kosiedowski , Poznań Supercomputing and Networking Center, Poland Talk Title: Using advanced ICT for supporting people with profound intellectual and multiple disabilities to 'speak' to others	
11:45-11:30PM	Break	
11:30-12:15PM	Keynote Speaker: Prof. Aurobinda Rautray , Indian Institute of Technology Kharagpur, India Talk Title: An Application for Early Warning of Conflict and Aggression in Dyadic Speech Communication	



Technical Session III

Session Chair:

Prof. S. K. Singh, Indian Institute of Technology (BHU) Varanasi, India
Prof. K. L. Baishnab, NIT Silchar

Coordinator:

Dr. Naresh Babu M.

Time	Paper ID	Paper Title and Authors	09 October, 2020
1:00PM-3:15PM	12	Effect Of Vocal Loading On Singing Power Ratio And Singer’s Formant In Indian Heavy Metal Vocalist <i>Sv Narasimhan and Mahesh Soumya</i>	
	17	Classifying Hate Speeches shared in Twitter <i>Dipankar Das, Souvik Mondal and Antariksha Ray</i>	
	18	State of the art & review on analysis methods, software and application of fMRI for classification of Alzheimer’s disease <i>Chintan Varnagar and Hitesh Shah</i>	
	19	Impact of visual representation of audio signals for Indian language identification <i>Himanish Shekhar Das and Pinki Roy</i>	
	22	Musical Signal Processing – A Literature Survey <i>Amulya Sri Pulijala and Suryakanth V Gangashetty</i>	
	23	Audio Quality Control Method based on ASS (Audio Secret Sharing) <i>Sachin Kumar Singh and Mainejar Yadav</i>	
	29	Speech based Emotion Detection Using R <i>Subarna Chatterjee and Nida Farheen</i>	
	52	Music Genre Classification with Convolutional Neural Networks and Comparison with F, Q, and Mel-Spectrogram based Images <i>Aditya Dhall, Srinivasa Murthy Y V and Shahidhar G Koolagudi</i>	
	55	Indian Language Speech Label (ILSL): A de facto National Standard <i>Samudravjaya K</i>	



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Technical Session IV			
Session Chair: Prof. Debashis De, MAKAUT, West Bengal, India Prof. Nidul Sinha, NIT Silchar		Coordinator: Dr. Anish Kumar Saha Mr. Biswanath Dey	
Time	Paper ID	Paper Title and Authors	09 October, 2020
3:15PM-5:30PM	6	IFSC : A database for Indian Folk Songs Classification <i>Anshul Patel, Anuj Shah, Krutarth Gor and Sapan Mankad</i>	
	10	Transformation of Vowel Duration in the Speech Intelligibility of Children with Hearing Loss <i>Sv Narasimhan and Np Nataraja</i>	
	21	Language Model Fine Tuning Using Second Order Optimizer <i>Kartik Vyas and Dinesh Naik</i>	
	26	Comparative Analysis of Neural Network Architectures for Speech Emotion Recognition <i>Shubham Patil and Saaket Agashe</i>	
	27	Vowel Based Acoustic and Prosodic Study of Three Manipuri Dialects <i>Thangjam Clarinda Devi, Leihaorambam Sarbajit Singh and Kabita Thaoroijam</i>	
	30	Human to Robotic Voice Conversion by employing Wave Patterns based on Gender and Emotions <i>Dipankar Das and Rubel Das</i>	
	41	Sine-Wave Speech as Pre-Processing for Downstream Tasks <i>Sri Harsha Dumpala, Jason d'Eon and Sageev Oore</i>	
	47	Effects of Musical Training on Auditory Spatial Processing Abilities: A Psychoacoustical and Perceptual Study <i>Bhoomika and Kavassery Venkateswaran Nisha</i>	
	54	Scottish Education: a Model for Strengthening Mental Health— a Case Study in Inclusive Scottish Primary Schools <i>Hanah Kim</i>	



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Time (IST)	Valedictory	09 October, 2020
5:30-6:00 PM	Address by Dr. Samir Kumar Borgohain , HoD, CSE, NIT Silchar and Patron, FRSM 2020	
	Participant Feedback	
	Address by Prof. A. K. Barbhuiya , Dean Accademic, NIT Silchar	
	Address by Prof. Sivaji Bandyopadhyay , Director, NIT Silchar and Chief Patron, FRSM 2020	
	Vote of Thanks by Dr. Ripon Patgiri , Organizing Chair, FRSM 2020	