APPLICATION OF MACHINE LEARNING IN AUDIO SIGNAL PROCESSING

विश्वजीवनामृतं ज्ञानम्

Under the Karyashala Scheme - A SERB Initiative

September 5-11 2022

Funded By

Science and Engineering Research Board, Department of Science & Technology, Government of India under Accelerate Vigyan Scheme

Organized By

Atal Bihari Vajpayee-Indian Institute of Information Technology and Management (ABV-IIITM), Gwalior

ABOUT IIITM GWALIOR

Atal Bihari Vajpayee - Indian Institute of Information Technology & Management Gwalior (ABV-IIITM Gwalior) is India's premier Institute incepted by Ministry of Education (MOE), Government of India in the year 1997 as a center of excellence in the field of Information Technology and Management. It is foremost Institute providing superior quality higher education in the designated areas and is located at Gwalior, Madhya Pradesh, India. The Institute activities are aimed at developing a culture of inquiry and research through highly competitive academic environment, and close interaction between Institute and corporate world. Institute has many laurels to its credit at national and international arena.

ABOUT KARYASHALA

'KARYASHALA' scheme by SERB is meant for skill development training on topics required for scientific research work. It is an effort to improve research productivity of promising PG and PhD students from universities and colleges through highend workshops on specific themes. This program aims to provide opportunities to acquire specialized research skills

BRIEF DESCRIPTION ABOUT THE WORKSHOP

Human-machine-interaction is increasingly ubiquitous as technologies leveraging audio and language for artificial intelligence evolve. Speech technologies with machine learning, companies can create more efficient, personalized customer experiences. The prominent machine learning for audio application areas are covered, i.e. audio recognition (automatic speech recognition, music information retrieval, environmental sound detection, localization and tracking) and synthesis and transformation (source separation, audio enhancement, generative models for speech, sound, and music synthesis). Finally, key issues and future questions regarding deep learning applied to audio signal processing are discussed. Our workshop will help the students to understand and build intelligent systems capable of understanding and extracting meaning from human speech for diverse use cases, such as chatbots, voice assistants, search relevance, and more.

List of Sessions:

- Machine Learning Techniques for Automatic Speech Recognition
- Deep Learning for Content Based Music Retrieval System
- Beamforming Techniques for Localization and Tracking.
- Evolution of Assistive Listening Devices using Machine Learning based Signal Processing Techniques.
- Pathological Speech Processing Using Machine Learning Techniques.
- Sound Event Classification using Machine Learning Techniques.

Tentative Speaker List:

Prof. Rajesh M. Hegde (IIT Kanpur)
Dr. Prasanta Kumar Ghosh (IISc Bangalore)
Dr. Lalan Kumar (IIT Delhi)
Dr. Nithin V. George (IIT Gandhinagar)
Dr. Anil Kumar Vuppala (IIIT Hyderabad)
Dr. Suman Deb (NIT Surat)

Important Dates:

Registration Opens: June 10, 2022
Last Date of Application: August 20, 2022
Display of Shotlisted Candidates: August 21, 2022
Workshop Dates: September 5-11, 2022

General Information

- **Registration Fee: NIL**
- **Eligibility**: M. Tech & PhD students of Electrical/Electronics & Communication Engineering or Computer Science.
- **Accommodation** for participants may be provided at IIITM Gwalior.
- Participants who successfully complete the workshop a certificate from SERB will be awarded.
- Students selected for this workshop are eligible for **Travel allowance (TA) reimbursement** for their journey to and from IIITM Gwalior as per SERB norms.
- Daily necessary expenses such as stationary, accommodation, food etc. for participants **will be covered under the funds approved by SERB** as per norms.
- For more details visit https://karyashala-vp-iiitm.web.app or scan QR to apply.

Event Organizer:

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