



PSG INSTITUTE OF TECHNOLOGY AND APPLIED RESEARCH
Neelambur, Coimbatore – 641 062.



The Institution of Engineers (India) PSGI Students Chapter
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Department of Electronics and Communication Engineering

Event title	One day seminar on “ Emerging Trends in Deep Learning for Multimodal Image Fusion and Analysis ”
Event Category	Seminar featuring four sessions
Date and Duration	13-04-2024
Department	ECE
Co-ordinators	Dr M Jothibas, AP(Sl.Gr) - ECE Ms D Archana, AP(Sr.Gr) - ECE
Chief Guests/ Resource Speakers	Dr Sudhakar Radhakrishnan Mr Boopathi Sakthivel Dr S Esakkirajan Dr C Bagavathi
Session Chair	Dr P R Natarajan (Former Chairman IE(I), Coimbatore Local Centre) Dr M Yuvaraja (Joint Honorary Secretary IE(I), Coimbatore Local Centre)
No. of Participants	52

- The inaugural session began with a Prayer followed by welcome address by Dr P R Natarajan, Former Chairman IE(I), Coimbatore Local Centre and briefed on the theme of the seminar.
- Dr P Vijayakumar Professor and Head, Department of ECE gave the felicitation address.
- Next, Dr M Jothibas, AP(Sl. Gr.) - ECE briefed about the seminar and Ms D Archana AP(Sr.Gr)- ECE welcomed the chief guest of the day Dr Sudhakar Radhakrishnan, Professor and head, department of ECE, Dr.Mahalingam college of Engineering and Technology.
- The inauguration session ended with a brief introductory note about the seminar by Dr Sudhakar Radhakrishnan and vote of thanks by Dr M Yuvaraja, Joint Honorary Secretary IE(I), Coimbatore Local Centre followed by reciting a thank you note to the IE(I) technical forum for their unwavering support in helping students learn and grow.

SESSION 1

Resource person: Dr Sudhakar Radhakrishnan, Professor and Head, Department of ECE, Dr. Mahalingam College of Engineering and Technology, Pollachi

Topic: “Medical Image Analysis using Wavelets”

In the first of the four engaging sessions, Professor Sudhakar Radhakrishnan presented on medical image processing and analysis, starting with the

types/modalities used in medical Imaging and covered various aspects from data processing to classification, compression and wavelet transform. He also exhorted passionate students to do research projects in the field of image processing and assured support and guidance.

SESSION 2

Resource person: Mr Boopathi Sakthivel , Founder and CEO, Prashan Medical Technologies, Coimbatore

Topic: Innovations in Medical Imaging Equipment: Harnessing the Power of Deep Learning.

Mr Boopathi Sakthivel, Founder and CEO of Prashan Medical Technologies, Coimbatore explained about some medical devices like X-Ray, CT, MRI and PET machines and their application. He also talked on the business aspects of biomedical research and motivated the students.

SESSION 3

Resource person: Dr S Esakkirajan, Professor, Department of Instrumentation and Control Systems Engineering, PSG College of Technology, Coimbatore

Topic: “Transform Domain based analysis of biomedical signals”

Dr S Esakkirajan handled an engaging session on Transform Domain based analysis and de-noising of signals. His use of analogies helped students understand basic concepts clearly. He also cited an example of the work of his student on “A Generalized Classification Framework for Power Quality Disturbances Based on Synchro squeezed Wavelet Transform and CNN.” He also motivated students to research and enjoy the process of learning. The session was an eye-opener.

Resource person: Dr C Bagavathi, Assistant Professor (Sr.Gr), School of computing, Amrita Vishwa Vidyapeetham, Coimbatore

Topic: “Deep Learning based Multimodal Image fusion and future perspectives”

Dr C Bagavathi explained in detail the importance of Multi-modality in image processing, comparing various available image processing techniques. She also explained Image fusion techniques with examples. She covered the U-Net architecture and other models that have future scope for development. She also conducted an online quiz on the topic and awarded the top scoring students.

- *The guest speakers were presented with a memento as a token of gratitude for taking time to enlighten the young minds.*



Dr S Esakkirajan



Dr C Bagavathi



Dr Sudhakar Radhakrishnan



Mr Boopathi Sakthivel



