

Content

Page No

Velalar College of Engineering and Technology Event Report.....	1-3
SRM Institute of Science and Technology Event Report.....	4-5
Karunya Institute of Technology and Science Event Report.....	6-7
BMESI Sponsored Future Event.....	8-9

MESSAGE

Greetings to all the esteemed members of BMESI. You must all be busy with your work, be it studies, invention or teaching. The world is witnessing newer innovations but the necessity to reach the last mile of the populace for healthcare remains a challenge. Also, making healthcare affordable and available for everyone is a bigger challenge. Various Governments are tackling the enormity of the situation with different policies which best suit their people.

The Government of India has recently launched the new Medical Device Policy to streamline the import and manufacturing of these devices. Our esteemed past President Dr. Sinha is an expert on this policy and has educated us in the past. He has been a part of the committee framing the policies and is very proactive in urging the Government to recruit BME Engineers for various tasks in the medical device regulation. The BMESI commends his efforts.

Another disruptive technology which has stormed the world is the large language model of ChatGPT. It is a Machine Learning tool that has been put to general use. While the academic world is debating the pros and cons of it, the medical fraternity is busy exploiting its capabilities of report generation, summarization and even diagnosis. Many ML based tools and processes have been accorded approval for use in healthcare in the west and are being used. We shall see many innovative products and processes in the coming days to make healthcare accessible to all and we the members of the BMESI have a significant role to play in this effort.

Best Regards
President
Dr U C Niranjana



Ignite | Inspire | Impact



VELALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Thindal, Erode-638012, Tamilnadu, India

Department of Medical Electronics



BIOMEDICAL ENGINEERING SOCIETY OF INDIA (BMESI)

VENUE

II FLOOR CONFERENCE HALL

SPONSORED

Hands-on Training Programme on

DATE

29/03/2023-30/03/2023

OPERATION AND TRAINING ON MEDICAL EQUIPMENT



Mr Nitturi Naresh kumar
Scientist, D
Andra Pradesh, India
Medtech Zone Limited(AMTZ),



Mr.Senthil Prasad J
Service Application Specialist,
ARS Medical System,
Madurai, Tamil Nadu.



Mr.Manikandan T
Service Application Specialist,
ARS Medical System,
Madurai, Tamil Nadu.



Mr.Ruban Raj
Application Specialist,
Allied Medical Limited,
India.

Coordinators

Ms.S.B.Abitha, AP/MDE

Mr.S.Surender, AP/MDE

Registration link

<https://bit.ly/3FXqDAn>



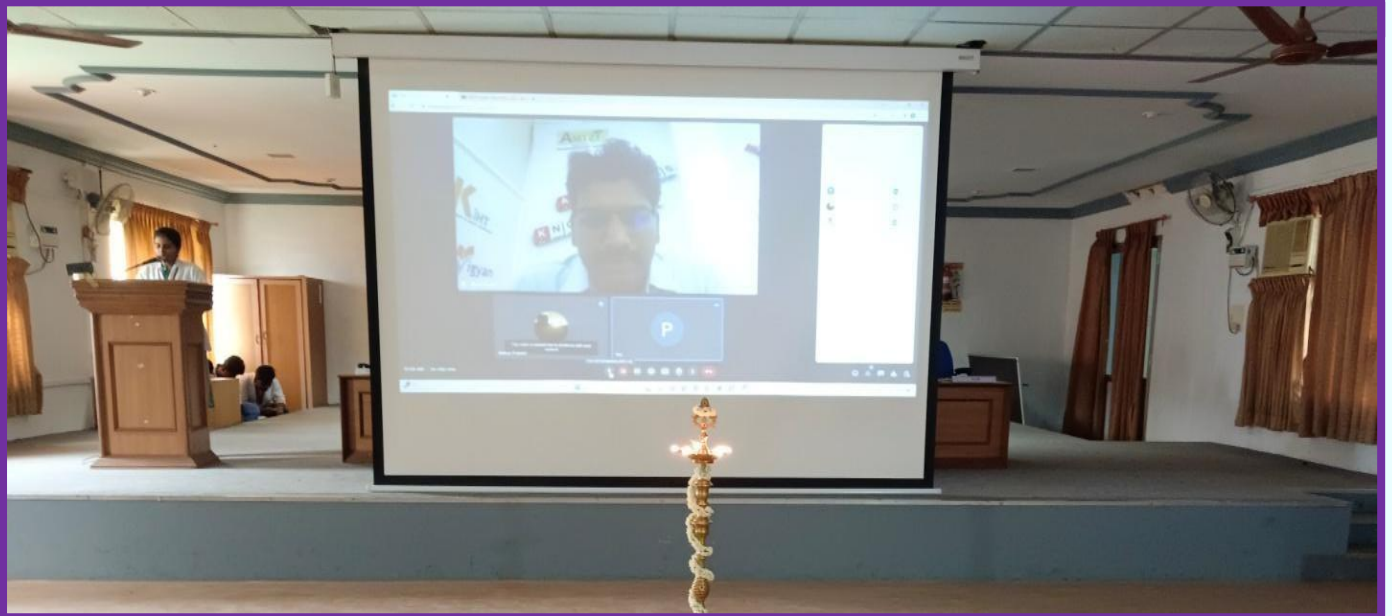
Convener

Dr.V.Chandrasekaran

HoD/MDE

The Department of Medical Electronics has organized BMESI sponsored “Hands on Training programme on operation and maintance of Medical Equipment“ from 29.03.2023 to 30.03.2023 at 9:30 AM to 4:00 PM (2nd Floor Conference Hall) for the students of II, III and IV year .The event was convened by Dr.V.Chandrasekaran, HoD/MDE and coordinated by Ms.S.B.Abitha, AP/MDE- BMESI Co-ordinator and Mr.S.Surender, AP/MDE. Dr.M.Jayaraman, Principal delivered a small speech about the training programme and sparkled his warm wishes for the students to utilize the training more effectively. The Chief guests of this event are from ARS Medical System, Madurai and Allied Medical Limited, Delhi. Around 100 students got benefited from this training.

DAY-01 SESSION-I:



DAY-01 SESSION-II:



DAY-02 SESSION-I:



DAY-02 SESSION-II:



REPORT

Workshop on skill development

Workshop on IPR

31st March 2023



Organized by

Department of Biomedical Engineering

School of Bio-Engineering

Faculty of Engineering and Technology

SRM Institute of Science and Technology

In association with

Biomedical Engineering Society of India (BMESI)



ABOUT THE EVENT

The department of Biomedical Engineering, since its inception has been organizing various technical events periodically to enrich knowledge and upgrade skills for students and faculty on the various emerging technologies associated with health care. Research has become an integral part in the development of the nation and is being extensively carried out across all levels ranging from school to the higher level education to find solutions for various problems thereby enhancing the livelihood of mankind. Research is a rigorous process with extreme levels of hard work and dedication. Therefore, it is imperative to offer protection to the creations of the mind as it is critical in fostering innovation, without which researchers would not reap the benefits of their ideas and would focus less on research and development. Therefore, the department has planned to organize a Workshop on Intellectual property rights (IPR) to educate the importance's of patents, which recognizes and paves way to earn financial benefits for their inventions and creation.





MEDOVATE'23

DEPARTMENT OF BIOMEDICAL ENGINEERING

**IN ASSOCIATION WITH
BIOMEDICAL ENGINEERING SOCIETY OF INDIA**

TECHWIZ

PAPER PRESENTATION

**DATE: 25, MARCH 2023
TIME: 9:30 AM - 10:30 AM**

TOPICS:

**HEALTHCARE DEVICES
MEDICAL IMAGE & SIGNAL PROCESSING
REHABILITATION
PROSTHETIC DEVICES & BIO PRINTING
AI AND ML IN HEALTHCARE**

INSTRUCTIONS:

**TEAM OF TWO MEMBERS
PRESENTATION TIME: 5 MINS**

**FACULTY CO-ORDINATOR
MRS.HEPSIBA. D**

**STUDENT CO-ORDINATORS
MS. SOWMYA - IV BME
MS.KAVYA - I P.G**

POSTER PRESENTATION

**DATE: 25, MARCH 2023
TIME: 10:30 AM - 11:30 AM**

TOPICS:

**AI AND 3D PRINTING
MEDICAL IMPLANTS
MEDICAL DEVICES
FUTURE SCOPE OF BIOMEDICAL**

INSTRUCTIONS:

**TEAM OF TWO MEMBERS
POSTER DESIGN: A0 SIZE**

**FACULTY CO-ORDINATOR
MRS.NIMI JEGAN**

**STUDENT CO-ORDINATORS
MR.DEREK - IV BME
MS. ORIANA - IV BME**



BMESI Sponsored Future Event

REGISTRATION FORM

1. Name :
2. Qualification :
3. Institution :
4. Address for Communication :
5. Phone No :
Mobile :
E-mail :
6. Payment Details :
D.D.No :
Bank :
Amount :

Signature of the Participant

CONTACT ADDRESS

Ms. B. Ragavi
Department of Biomedical Engineering,
Dr. N.G.P Institute of Technology,
Coimbatore - 641 048
Tamilnadu, India
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ORGANIZING COMMITTEE

Chief Patron
Dr. Nalla G. Palaniswami
Chairman
Dr. N.G.P. Institute of Technology

Dr. Thavamani D. Palaniswami
Secretary
Dr. N.G.P. Institute of Technology

Patron
Dr. O.T.Buvaswaran
Chief Executive Officer
Dr. N.G.P. Institute of Technology

President
Dr. S. U. Prabha
Principal
Dr. N.G.P. Institute of Technology

Convener
Dr. K.Vijayakumar
Professor & Head
Department of Biomedical Engineering
Dr. N.G.P. Institute of Technology

Organizing Secretaries
Ms. B. Ragavi,
Assistant Professor,
Department of Biomedical Engineering,
Dr.N.G.P. Institute of Technology,
Coimbatore-641 048



Dr. N.G.P. INSTITUTE OF TECHNOLOGY

(An autonomous Institution)
(Approved by AICTE, New Delhi &
Affiliated to Anna University, Chennai
Accredited by NBA & NAAC)
Dr.NGP Nagar, Kalapatti Main Road,
Coimbatore -641048.
Tamil Nadu

BMESI Sponsored

Two days Seminar

On

Design and Fabrication of Chip-free thin film Biopatches to detecting bio parameters in human body under non invasive methodology for healthcare application.

30th October 2023

**Department of Biomedical Engineering
Dr.N.G.P. Institute of Technology
Coimbatore-641 048
Tamil Nadu**

ABOUT Dr. N.G.P. INSTITUTE OF TECHNOLOGY

The essence of education lies in translating opportunities into experiences of empowerment, in transcending 'what is' to 'what can be' and transforming limitations into limitless learning. Welcome to an institution that recognizes the power of education to help Nurture, Grow and Progress. Dr.Nalla.G.Palaniswami - A name that is taken with great reverence by the medical fraternity and common public alike, for his pioneering efforts in providing quality healthcare. Since its inception in 1989, the Kovai Medical Center and Hospital or KMCH as we know it, has been redefining the corporate hospital set up, making healthcare accessible to all, catering to patients from all over the globe. Looking beyond its success and recognizing the need for competent Technical education, Dr.N.G.P. Institute of Technology an autonomous institution was established in 2007 approved by the All India Council for Technical Education (AICTE), New Delhi, recognized by UGC under section 2(f) and Accredited by NAAC and NBA for five departments.

ABOUT THE DEPARTMENT

The Department of Biomedical Engineering has been in existence since 2012. The Department is grown into a fully fledged one with well equipped lab facilities and Infrastructure. The Department has well experienced Faculty members of various specializations. The Department has signed MoU with various core companies and has collaboration for Research & Development / Student Projects / Consultancy works. Since inception, the department provides an encouraging environment and imparts the latest advancements in knowledge and skills through innovative methods of teaching. The students are trained to upgrade themselves and the Department is striving to mould them in to a better engineer in this society.

VISION

To produce quality biomedical engineers with strong technical knowledge and excellence in engineering design for providing solutions to healthcare problems.

MISSION

- MD1 – Integrating engineering and life sciences for the development of innovative biomedical products.
- MD2 – Imparting quality education through innovative Teaching –Learning methodologies.
- MD3 – Collaborating with healthcare industries for education, training, research and development.
- MD4 – Establishing state –of-art facilities to enhance the technical skills.
- MD5 – Providing sustainable solutions for challenges in global healthcare with ethical, social and moral values.

ABOUT THE SEMINAR

Electronics and wireless body area communication plays a major role in recent technology. It is poised to become a transformational force in healthcare. The main objective of this national seminar is to discuss about the primary components of electronics, semiconducting materials and how it facilitate to detect the vital bio parameters in our body healthcare systems is a hot topic. The programme will explore the fabrication of biopatches using semiconducting materials in healthcare and the framework used to evaluate the effects advanced manufacturing and fabrication technology. The primary focus of this seminar will be on the use of such systems in various areas of health care such as basics of electronics, PCB designing, wearable system wireless communication and smart healthcare. This one day seminar provides an excellent knowledge in biopatch fabrication and to promote research to the participants and also enables to share ideas across the industry and academia.

SEMINAR TOPICS

- Introduction to biopatches
- Chip free advanced biopatch fabrication using Semiconductors and Biomaterials.
- Detection of vital bio parameters with non-invasive technology for various healthcare application.
- Role of electronics in future generation technologies for smart healthcare.
- Research opportunities in fabrication of semiconducting material for improving healthcare industry.

IMPORTANT DATES

Last date for Registration : 25th October 2023

REGISTRATION FEE

- Registration fee includes Seminar Kit, Refreshment and Lunch.
- Registration fee can be paid by Demand Draft drawn in favor of " The Principal, Dr.N.G.P Institute of Technology, Coimbatore" payable at Coimbatore.

Registering Members	Amount in Rupees
• Students	250
• Faculty from Academic Institutions	200
• Industry and R & D Organizations.	400

ABOUT SRMIST

SRM Institute of Science and Technology (formerly known as 'SRM University') is located in an extensive sylvan campus of 380 acres skirting the National Highways (NH45), in the outskirts of Chennai. SRMIST is one of the top-ranking Universities and most premier engineering destinations in India, which was established in 1985 by the Founder Chancellor, Dr. T. R. Paarivendhar. Now it is functioning in campuses located at Kattankulathur, Ramapuram, Ramapuram Part (Vadapalani) in Chennai, Tiruchirappalli and one in Modi Nagar, Ghaziabad with over 52,000 students and 3,200 faculty members, offering a wide range of undergraduate, postgraduate and doctoral programs in Engineering, Management, Medicine & Health Sciences, Agriculture, Law and Science & Humanities. The Institution has moved up through international alliances and collaborative initiatives to achieve global excellence. SRMIST also collaborates with various foreign Universities. Now the Institute enjoys an unsurpassed reputation in academic and corporate circles being the preferred manpower source for realizing the vision to be recognized as a world - class learning institution. SRMIST has been accorded Category I status by MHRD-UGC of Government of India and also accredited by NAAC with 'A++' Grade in the year 2018.

DEPARTMENT OF BIOMEDICAL ENGINEERING

The Department was established in the year 2004 with active clinical/industry partnership in association with SRM Medical College Hospital and Research Institute, Kattankulathur. Since then, the department has been actively engaged in diversified research and teaching. Its main objective is to provide a knowledge-based, timely, cost effective and high-quality service to clinicians in a professional and responsible manner, in order to improve and enhance patient care by supporting all aspects of care related technology. The department offers B.Tech, M.Tech, and Ph.D programmes in Biomedical Engineering. The students of our department periodically visit various departments of our medical institutions, and get a deep knowledge about the existing medical devices and instruments. About 300+ research publications have been published in National and International levels. About 38 patents have been filed out of which 36 have been published in National and International level and 4 patents have been granted so far.



DEPARTMENT OF BIOMEDICAL ENGINEERING SCHOOL OF BIOENGINEERING

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY,
KATTANKULATHUR

Is conducting a workshop on

MEDICAL DATA ANALYSIS USING MACHINE LEARNING AND DEEP LEARNING TECHNIQUES

Date : 4th & 5th September 2023
Venue : Medical Image Processing Lab



ORGANIZING COMMITTEE

Dr. LAKSHMI PRABHA . P
Associate Professor, BME

Dr. U . SNEHALATHA
Professor, BME

ABOUT WORKSHOP

During this comprehensive two-day workshop, participants will embark on a transformative journey through the realms of computer vision and machine learning. The first day will delve into foundational topics, ranging from essential computer vision feature extraction techniques to a comprehensive exploration of supervised and unsupervised machine learning methods.

Building upon this solid understanding, the second day will propel participants into the world of neural networks. Beginning with the principles of feed-forward and backward propagation, attendees will grasp the inner workings of neural networks and their role in modern AI. The spotlight then shifts to Convolutional Neural Networks (CNNs), where participants will unravel the intricate layers of image analysis and pattern recognition. Leveraging the power of transfer learning, attendees will learn how to harness pre-trained models from the esteemed ImageNet dataset, effectively transferring knowledge from one domain to another. The pinnacle of this workshop lies in the domain of medical imaging, where participants will tackle real-world challenges. From diabetic classification and retinal image analysis to the interpretation of MRI images, attendees will apply their acquired knowledge to pivotal healthcare scenarios. As the workshop culminates, participants will emerge with a profound grasp of computer vision and machine learning.

COURSE CONTENTS

DAY 1 :

1. Computer vision feature extraction techniques.
2. Supervised and unsupervised machine learning techniques.
3. Hands on OpenCV and scikit-learn library.

DAY 2 :

1. Feed forward and backward propagation Neural networks.
2. Convolutional Neural networks.
3. Transfer learning for imagenet pre-trained models.
4. Hands on tensorflow and keras library
5. Diabetics classification using machine learning
6. Retinal image classification using Deep Learning
7. MRI image classification using deeplearning
8. Vision transformer



REGISTRATION FEE

Participants- Rs. 200

BANK DETAILS

AccountName : Biomedical SRM
AccountNo. : 117001000633136
Name of the Bank : City Union Bank
IFSC Code : CIUB0000117
MICRNo. : 600054011

CLICK/SCAN LINK BELOW FOR REGISTRATION

<https://forms.gle/oH04476nwr1AR145A>



**Compiled by Dr. Muralidhar Bairy, Secretary, BMESI,
India.**

**Sachin S Devadiga, Junior Engineer, Biomedical
Engineering, MIT, Manipal, 576104.**