

IEEE EMBS SB TKMIT REPORT 2022

ANNUAL GENERAL MEET 2022

Date: 11th May 2022

The **Annual General Meet 2022** conducted by IEEE SB TKMIT regarding the completion of 2021 execom was held on 11th May 2022. The meet was from 12:15 PM to 1:00 PM.

The welcome address was presented by Manasa R of S6 BM, Link Representative of 2022. The presidential address was given by Dr. Jyothiraj V P, Head of the Biomedical Department. Vasu S Gautam of S8 CS, Chairman 2021 presented the report of 2021.

IEEE SB TKMIT appreciated the selfless efforts of the members and certificates were distributed. Dr. Nitha V Panicker, Professor, Department of Biomedical Engineering, EMBS SBC Advisor announced the 2022 execom team. Vinayak S of S6 BM, Vice chair 2022 presented an action plan of 2022.

Vote of thanks was presented by Dr. Nitha V Panicker. Mr. Anas A S, Asst Professor of Electronics Department, Branch Counsellor IEEE SB TKMIT presided over the meeting. By 1 PM we wined up the meeting. All the IEEE SB TKMIT members, other staff and students attended the meet.



LIT UP WIZARDS- A TECHNICAL QUIZ COMPETITION

Date: 23rd May 2022

IEEE SB TKMIT conducted a **Technical Quiz-LITUP WIZARDS** on 23rd May 2022, exclusively for TKMITians. The event was conducted at 12.30 PM. Almost 15 students from various departments participated as teams. Under the supervision of our Branch Counselor Mr. Anas A S, the quiz program was conducted successfully. Participants gave a good response. Later, the winners were selected. First prize was grabbed by Abdul Malik and Anagha Subhaga from S6 BM, second by Sibin V Saju and Reshma Remesh from S6 BM and the third prize by Nourin Fathima and Gopika Pushpan from S4 BM. The winners were awarded with a cash prize of Rs 500, RS 200 and Rs 100 respectively.

The poster features logos for IEEE, Thangal Kunju Musaliar Institute of Technology, IEEE SB TKMIT, and EMB at the top. The main title is 'LIT UP WIZARDS' in large blue letters, with 'A Technical Quiz Competition' below it. A subtitle reads '~Exclusively For TKMITians'. The registration information is 'Register At: https://bit.ly/Technical_Quiz' and the date is '23rd MAY 2022'. A gold seal on the right says 'Win Exciting Prices!'. At the bottom left, contact details are provided: 'For further queries, contact: Afsana : 8330052593, Vinayak: 8281908321'. At the bottom right, there is an Instagram icon and the handle '@ieesbtkmit'.



SPECTRUM TALK - 1

Date: 17th June 2022

IEEE SB TKMIT had organized a series of Technical Talk Sessions under the label **Spectrum Talk**. The lecture is to be purely based on the contents mentioned in Spectrum magazine. The first session of the talk series was on the topic “**Sustainable Material Management**“, and was handled by Ms Manasa R ,S6 biomedical , Link Rep IEEE TKM IT.

The talk under the topic " Sustainable Material Management" explained the importance of how effectively we can manage the waste and various ways to reuse it. The technical talk gave a deep understanding of the topic and was made lively and beautiful by Ms. Manasa R and was delivered to almost 20 attendees. The talk series officially started with this event and will carry on the technical talk series based on the spectrum magazine. The event was then concluded by around 1:40 followed by an interactive session.

IEEE SB TKMIT

EMB IEEE Engineering in
Medicine & Biology Society

IEEE

SPECTRUM TALK

Topic: Sustainable material management

FRIDAY
16 JUNE 2022
1:00PM - 2:00 PM

E&C Seminar Hall

+91 92076 11536



Manasa R

The poster features a background image of a person's hands working with a laptop. A circular orange frame on the right contains a portrait of a woman, Manasa R, wearing a patterned blue and white dress. The text is arranged in a clean, modern layout with various font sizes and weights.





SEMINAR ON ADDING VALUE TO YOUR RESEARCH

Date: 22nd June 2022

IEEE SB TKMIT organized a seminar on the topic “**ADDING VALUE TO YOUR RESEARCH**”. The seminar was conducted by three eminent speakers from Sree Chitra Tirunal Institute for Medical Sciences & Technology - Ms. Sandhya C G, Engineer F, Ms. Indu Govind, Business Development Manager, TIPS @ SCTIMST TIMed and Mr Aswin R Krishnan, Nidhi Prayas Coordinator. Ms. Sandhya C G discussed the topic “CHANGING YOUR RESEARCH OUTLOOK”. Ms. Indu talked about “SCRIPTING YOUR RESEARCH”. And finally, Mr. Aswin R Krishnan explained an overview on “NIDHI PRAYAS SCHEME”. All the students of S6 and S4 BM and IEEE members from S6 CS attended the seminar. The session was truly informative as they discussed various topics related to research. The speakers made the session interactive with the students by carrying out an activity to figure out their entrepreneurship skills within them. The session started at 10 AM in the morning and ended at 12 PM in the afternoon.



ADDING VALUE TO YOUR RESEARCH



Indu Govind
[Business Development Manager,
TIPS @ SCTIMST TImed]



Aswin R. Krishnan
[Nidhi Prayas Coordinator]



Sandhya C G
[Engineer F, SCTIMST]

10:00am - 12:00pm
22-06-2022

Seminar Hall, Administrative Block

IEEE SB TKMIT



EMB IEEE Engineering in
Medicine & Biology Society





SPECTRUM TALK - 2

Date: 24th June 2022

IEEE SB TKMIT organized the second session of **Spectrum Talk**. The meeting commenced by 1:15 pm on 24th June 2022 Friday, at the EC Seminar Hall .The session was led by Mr Jacob Varghese , S4 Biomedical Engineering Department and Chaired by Asst Prof Anas AS , respected SB Advisor. The talk was on "**Low Dose CT Scan**", whereby the speaker introduced modern technologies and practices adopted by MNCs and professionals to cope up with the limitations of traditional CT Scanning technology. The consequences of heavy exposure to radiation and constrained applications of conventional CT scan machines, were clearly explained through the presentation. The session was made lively by the active participation of about 20 members. The meeting was concluded by 1:40 pm.

IEEE SB TKMIT EMB IEEE Engineering in
Medicine & Biology Society IEEE

SPECTRUM TALK

Topic: low dose CT scan

FRIDAY
24 JUNE 2022
1:00PM - 1:30PM

Session handled by
Jacob Varghese

E&C Seminar Hall

91 92076 11536





WEBINAR ON PACEMAKER/IMPLANTABLE CARDIOVERTER DEFIBRILLATOR

Date: 1st July 2022

As a part of doctor's day, IEEE EMBS SB TKMIT conducted a webinar on **Pacemaker/Implantable Cardioverter Defibrillator**. The speaker of the session was medical safety physician Dr Jeril Varghese (MBBS, MMST). The webinar was from 12:10 pm to 1.00 pm on 1st July 2022 and was conducted via Google meet. The webinar had 62 participants. The webinar was also streamed live and participants from TKMIT attended it in the EC seminar hall.

IEEE SB TKMIT

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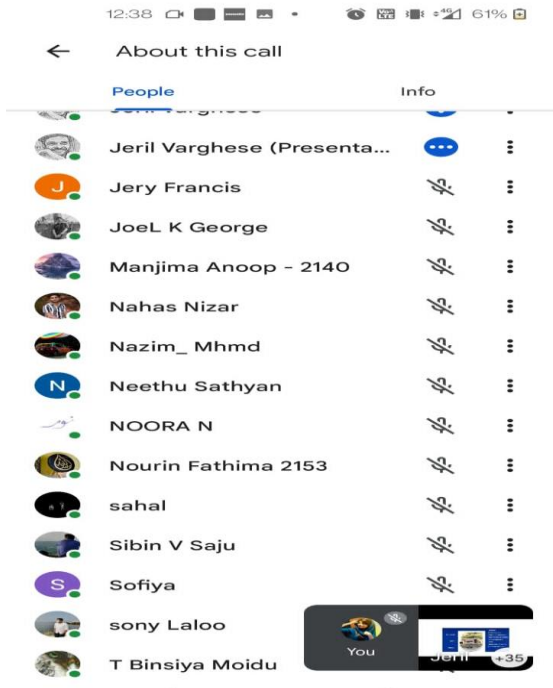
WEBINAR ON:

IMPLANTABLE CARDIOVERTER DEFIBRILLATOR

July 01, 2022
12:10PM to 1:00PM
EC Seminar Hall



Dr Jeril Varghese
MBBS, MMST
Medical Safety Physician





SPECTRUM TALK - 3

Date: 14th October 2022

IEEE SB TKMIT organized the third session of **Spectrum Talk**. The meeting commenced by 1:15 pm on 14th October 2022 Friday, at the EC Seminar Hall. The session was led by Mr Steven Sam Luke , S5 CS Engineering Department and Chaired by Asst Prof Anas AS , respected SB Advisor. The talk was on different topics which includes "**AI can make recycling better, How recycling robots could help us clean the planet and Robo recycling**", whereby the speaker discussed about how AI solves the problem of garbage handling by recycling, explaining a future where waste collecting robots will move through air, land and water, cleaning our environment and why recycling is a very promising area for robotics. The session was made lively by the active participation of about 20 members. The meeting was concluded by 1:40 pm.

IEEE SB TKMIT EMB IEEE Engineering in Medicine & Biology Society IEEE

SPECTRUM TALK

TOPICS

- 1. AI can make recycling better
- 2. How Recycling Robots Could Help Us Clean the Planet - IEEE
- 3. Robo recycling

FRIDAY
14 OCTOBER, 2022
1:00PM - 1:30PM

E&C Seminar Hall *Session handled by*
Steeven Sam Luke

Department of Biomedical Engineering

-91 92076 11536





ONE DAY INDUSTRIAL VISIT TO SCTIMST

Date: 26th October 2022

The final year students of Biomedical Department visited SCTIMST for a **one day Industrial Visit** under the guidance of Dr.Nitha V Panicker, Asst.Professor Harsha R. Biomedical technology wing in SCT has been instrumental in establishing a medical device Industry base in India by successfully developing and commercializing technologies of a Number of device and implants. Firstly, Ms Sandhya C.G, Scientist in SCT provide an outline About biomedical wing and their major findings and also familiarize these novel technologies Includes blood bag, artificial heart valve, membrane oxygenator, hydrocephalus shunt, Hydroxyapatite based materials and implants. By the help of faculties, visited several medical device developing laboratories which includes calibration cell, Quality cell, CNC, in vivo Models and testing lab. Artificial heart is the ongoing research in the biomedical wing. The students were able to acquire practical knowledge interacting with various professional Working under different laboratories and also learnt about the various ongoing research and the machineries and equipment's used in these researches. It was indeed a learning Experience.



ONE DAY INDUSTRIAL VISIT TO SCTIMST

Date: 05th December 2022

The third-year students of Biomedical Department visited SCTIMST for a **one-day Industrial Visit** under the guidance of Dr. Nitha V Panicker, Mr Davis and Mr. Ajayakumar. Biomedical technology wing in SCT has been instrumental in establishing a medical device Industry base in India by successfully developing and commercializing technologies of a number of device and implants. Firstly, Ms. Sandhya C.G, Scientist in SCT provide an outline About biomedical wing and their major findings and familiarize these novel technologies Includes blood bag, artificial heart valve, membrane oxygenator, hydrocephalus shunt, Hydroxyapatite based materials and implants. By the help of faculties, visited several medical Device developing laboratories which includes calibration cell, Quality cell, CNC, in vivo Models, and testing lab. Artificial heart is the ongoing research in the biomedical wing.

The students were able to acquire practical knowledge interacting with various professional Working under different laboratories and also learnt about the various ongoing research and the machineries and equipment's used in these researches. It was indeed a learning Experience.



WORKSHOP ON MATLAB

Date: 28th November 2022

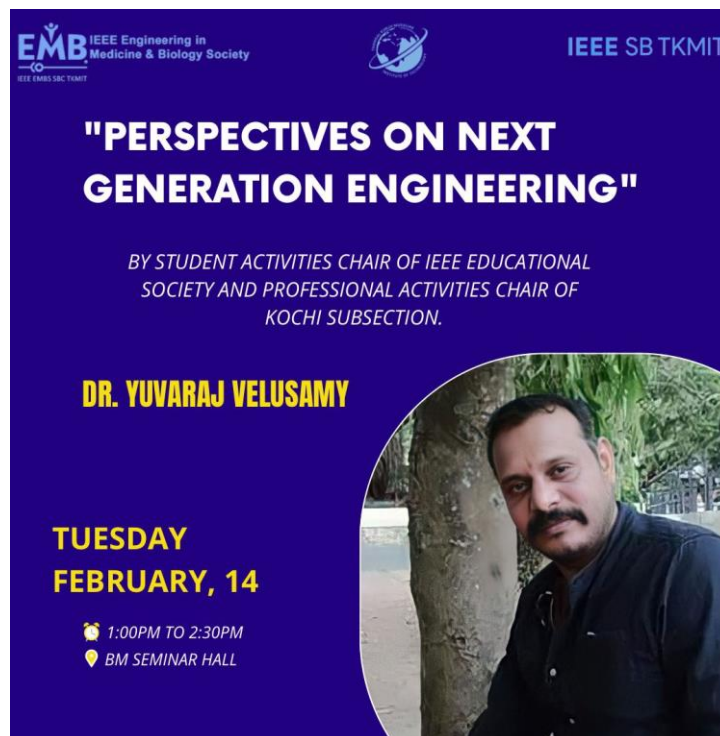
The EMBS SBC TKMIT had conducted a session on **Data Analytics and Artificial Intelligence using MATLAB** for final year students. The session was handled by Mr. Rakshit B S, Senior application engineer for Mathworks products at CoreEI Technologies, Bengaluru. He is currently providing technical engagement and solutions to educational institutions as a part of CoreEL University program. The session was held from 10:00am to 5:00pm. The schedule was organised engaging the students on topics like Data Processing and Visualization using MATLAB and Artificial Intelligence using MATLAB. Detailed hands-on training was given on the above topics covering subtopics like defining categories of data, analyzing groups within a data, graphics formatting options, customizing graphics objects, visualizing data, importing unstructured data, introduction to AI, overview of unsupervised and supervised learning, working with neural networks, classification methods, working with MATLAB apps. The workshop thus gave the students an insight on the vast features available in MATLAB.



TALK ON PERSPECTIVES ON NEXT GENERATION ENGINEERING

Date: 14th February 2023

The IEEE EMBS SB TKMIT had conducted a session on **Perspectives on Next Generation Engineering** by student activities chair of IEEE educational society and professional activities chair of kochi subsection. This was arranged for IEEE members of TKMIT. The session was handled by Dr. Yuvaraj Veluswamy. It was a one-hour program. The talk referred to the development and application of new technologies, tools, and methodologies in the engineering field. Various platforms such as ChatGPT, Dall.E etc were discussed in this session. Speaker conveyed the idea of the topic very effectively. Also, he made the students understand that the next generation engineering will require a combination of technical expertise, collaboration, creativity, and adaptability in order to solve complex problems and address the challenges of the future. Thus, the session gave a clear vision on the perspectives on next generation engineering.



The poster is a vertical rectangle with a dark blue background. At the top left, there is a logo for 'EMBS IEEE Engineering in Medicine & Biology Society' with the text 'IEEE EMBS SB TKMIT' below it. At the top center is a globe icon, and at the top right is the text 'IEEE SB TKMIT'. The main title is in large, bold, white capital letters: '"PERSPECTIVES ON NEXT GENERATION ENGINEERING"'. Below the title, in smaller white capital letters, is the text: 'BY STUDENT ACTIVITIES CHAIR OF IEEE EDUCATIONAL SOCIETY AND PROFESSIONAL ACTIVITIES CHAIR OF KOCHI SUBSECTION.'. The speaker's name, 'DR. YUVARAJ VELUSAMY', is written in bold yellow capital letters. Below the name, the date 'TUESDAY FEBRUARY, 14' is written in bold yellow capital letters. At the bottom left, there are two icons: a clock icon followed by '1:00PM TO 2:30PM' and a location pin icon followed by 'BM SEMINAR HALL'. On the right side of the poster, there is a circular photograph of Dr. Yuvaraj Velusamy, a man with a mustache wearing a dark shirt, standing outdoors next to a tree.



SPECTRUM TALK- 4

Date: 17th February 2023

IEEE SB TKMIT organized the fourth session of **Spectrum Talk**. The meeting commenced by 1:15 pm on 15th February 2023 Friday, at the EB Seminar Hall. The session was handled by Mr. Rahul Mohan, S6 CS Engineering Department. The talk was on **AI with ChatGPT** whereby the speaker discussed about the AI language model and how it can be used for various applications, including chatbots, virtual assistants, and customer service support, among others. The session was

made lively by the active participation of about 20 members. The meeting was concluded by 1:40 pm.

IEEE SB TKMIT **EMB** IEEE Engineering in Medicine & Biology Society **IEEE**

SPECTRUM TALK-4

• TOPICS •
AI With ChatGPT

FRIDAY
17 FEBRUARY, 2023
1:00PM - 1:30PM

EB Seminar Hall

Session handled by
Rahul Mohan

+91 83300 52593



SPECTRUM TALK- 5

Date: 24th February 2023

IEEE SB TKMIT organized the fifth session of **Spectrum Talk**. The meeting commenced by 1:15 pm on 15th February 2023 Friday, at the EB Seminar Hall. The session was handled by Mr. Anlon J Saji , S6 BM Engineering Department. The talk was on **Wearable ultrasound patch for continuous Heart Imaging** whereby the speaker discussed about the electronic skin which is capable of producing and monitoring the working cycle of heart. The session was made lively by the active participation of about 20 members. The meeting was concluded by 1:40 pm.

