

Tiruchirappalli – 620 015



19.06.2023

Inaugural Function Report of IEEE Student Branch activities for the year 2023

The IEEE Student Branch activities 2023 of NIT Tiruchirappalli was inaugurated on 19th June 2023. The Chief Guest for the inaugural event was Dr. Atul Negi, Professor and Dean at University of Hyderabad and Dr. G. Aghila Director, NITT presided over the meeting.

The event started off with an invocation to the almighty and Mr. Ayush Kumar Laad, Vice Chairperson, IEEE SB 2022 welcomed the audience. Ms. Vidya P Janaki, Chairman, IEEE SB 2022 gave a brief overview about the activities conducted throughout the year 2022. The new allocated Office Bearers of IEEE SB 2023 was introduced by Dr. M. Venkata Kirthiga, IEEE SB Counsellor 2023.

Dr. Atul Negi officiated the inaugural address with his inspirational words. Highlights of his speech are:

"The speech emphasized the passion, dedication, and efforts of the students in making this vision a reality. The IEEE Student Branch represents their commitment to advancing technology, fostering innovation, and shaping the future. The speech highlighted that as members of IEEE, the students are part of a global community focused on advancing technology for the benefit of humanity. The Student Branch provides a platform for students to collaborate, explore their interests, expand knowledge, and develop leadership skills. It aims to create a positive impact on society by engaging in activities, workshops, and projects that promote learning, innovation, and social responsibility. The Student Branch will serve as a hub for creativity and ingenuity, welcoming diversity and encouraging collaboration among students from various disciplines. The focus will be on exploring emerging technologies, conducting research, and fostering interdisciplinary cooperation. In addition, community outreach will play a significant role, with initiatives aimed at utilizing technology to address societal challenges and uplift the underprivileged. In conclusion, the speech highlights the commitment to embracing challenges, pursuing knowledge, and making a positive impact on society. The students are determined to shape the future and leave a lasting legacy for future generations".

Overall, the inaugural speech of the IEEE Student Branch showcased the enthusiasm, dedication, and aspirations of the students, setting the stage for a vibrant and impactful journey ahead.

Later, the action plan of IEEE SB 2023 was presented by Ms. Biby Joseph, Chairperson, IEEE SB 2023. Finally, Mr. Setti Suresh, Secretary, IEEE SB 2023 governed the Vote of Thanks.



National Institute of Technology, Tiruchirappalli will preside over the function.

Ms. Biby Joseph Chairperson, IEEE SB NITT Dr. M. Venkata Kirthiga IEEE SB Counsellor







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IEEE Student Branch Report of technical talk held on the inauguration day 19.06.2023

The IEEE Student Branch of NIT Tiruchirappalli organized a hybrid mode technical talk on "Introduction to the IoT Protocols" on 19th June 2023 via WebEx meetings. The event was set up on the inaugural day of the IEEE Student Branch 2023, NIT Tiruchirappalli.

The speaker for the technical talk was Dr. Atul Negi, Professor and Dean at University of Hyderabad.

"The speech on the introduction to IoT protocols provided valuable insights into the crucial role that protocols play in the realm of the Internet of Things (IoT). The speech highlighted the significance of IoT protocols in facilitating communication and interoperability between devices in an IoT ecosystem. Speaker emphasized MQTT (Message Queuing Telemetry Transport) as a widely used IoT protocol due to its lightweight nature and efficient messaging capabilities. MQTT's publish-subscribe model enables devices to publish messages to a broker, which are then received by interested subscribers. The protocol's simplicity, low overhead, and support for reliable messaging make it a popular choice in IoT deployments. The CoAP (Constrained Application Protocol) was discussed as a protocol specifically designed for resource-constrained devices and networks. Built on REST principles and operating over UDP (User Datagram Protocol), CoAP offers a lightweight and scalable solution for IoT devices with limited processing power and memory. HTTP (Hypertext Transfer Protocol), known for its universal compatibility and familiarity in web applications, was highlighted as a relevant protocol in IoT. The report noted that using HTTP enables devices to communicate using standard web protocols, opening opportunities for seamless integration with existing web technologies.

Finally, the ongoing development and standardization of new protocols such as Bluetooth Low Energy (BLE), Thread, and NB-IoT (Narrowband IoT), highlighting their potential for specific IoT applications are discussed."

After the presentation, an interactive session enabled the participants to clear their doubts regarding the talk. The technical talk was attended by UG & PG students, PhD scholars and faculties from all over the country.



National Institute of Technology, Tiruchirappalli



IEEE student branch Invited talk on "Introduction to the IoT Protocols"



A few screenshots from the workshop:







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20.06.2023

Workshop on soothing the senses: Pre-Yoga Day Gathering on 20.06.2023

The IEEE Student Branch of NIT Tiruchirappalli conducted the Pre-yoga day workshop on 20.06.2023 at EEE Auditorium. The speaker for the workshop was Dr. G Sangeetha, Professor, Dept. of Architecture at National Institute of Technology Tiruchirappalli.

A brief summary of the workshop:

The speech on soothing the senses focused on promoting relaxation and well-being for the body, mind, and soul. It emphasized the importance of intentionally engaging the senses to create a harmonious balance and foster inner peace. Soothing the body involves activities aimed at physical relaxation and rejuvenation. Practices such as gentle massage, warm baths or showers, yoga, and engaging in activities that promote physical well-being were highlighted. These practices help release muscle tension, improve circulation, and induce a state of physical relaxation. Soothing the mind revolves around calming thoughts, reducing mental chatter, and promoting mental clarity and focus. Mindfulness meditation, deep breathing exercises, and engaging in activities that promote mental relaxation, such as reading, listening to calming music, or practicing mindfulness, were discussed. These practices encourage present-moment awareness, alleviate stress, anxiety, and mental fatigue. Soothing the soul focuses on nourishing the inner self and connecting with a deeper sense of meaning and purpose. The speech mentioned activities that promote spiritual well-being, such as prayer or meditation, spending time in nature, practicing gratitude and self-reflection, and engaging in activities aligned with personal values and beliefs. These practices foster inner harmony, contentment, and a sense of connection to something greater.

The speaker emphasized the importance of a holistic approach to well-being by addressing the body, mind, and soul. By engaging in practices that nurture all aspects of one's being, individuals can experience profound relaxation, inner peace, and overall well-being. Prioritizing self-care and incorporating soothing practices into daily life were highlighted as ways to achieve a balanced, fulfilled, and peaceful existence.

In conclusion, the speaker carried out simple physical exercises to relax the body and mind. By intentionally engaging the senses and nurturing all aspects of one's being, individuals can cultivate a state of inner harmony, find solace amidst life's challenges, and experience enhanced well-being. Overall, the speech provided valuable insights into the practices and techniques that can be employed to soothe the senses and promote well-being for the body, mind, and soul.



IEEE Student Branch National Institute of Technology – Tiruchirappalli



E-mail ID: <u>iece-sb@nitt.edu</u> Webpage: https://www.nitt.edu/home/students/clubsnassocs/academic/iece/

Soothing the Senses: Pre-Yoga Day Gathering



A few screenshots from the event:







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25.06.2023

IEEE Student Branch Open Sketch contest

Theme - sketch should highlight women in engineering. We received a total of 8 sketch arts from the students





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Among the above received sketch arts (different arts), sketch 7 was voted by the IEEE SB committee members, where the art is simple and covering many aspects of women in engineering.

Winner name – Miss. E Shivani, Student from SRM Institute of Science and Technology.





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Mr. Setti Suresh (Secretary) - (7382409791) Ms. Biby Joseph (Chairperson) – (7034186401)

15-07-2023

IEEE Student Branch Logo design contest

To blend with the institute fame and locality with IEEE logo, a logo contest was launched representing the IEEE Student branch at NIT Trichy. Result was announced on 15th July, adopting the new logo for IEEE SB, NIT Trichy. The released poster and received participation were given below:



https://forms.gle/nCTm7h1MosqwU3qF9



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Following are the received logos from the students of NIT Trichy.



Following is the selected logo:

Student Name – Mr. Shubham Kumar, Production Engineering, B.Tech, NIT Trichy





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22.07.2023

IEEE Student Branch Report of expert talk delivered by Dr. Ajeet Kumar

The IEEE Student Branch of NIT Tiruchirappalli organized an online mode expert talk on "Hybrid-Polarimetry SAR and its usefulness in earth and lunar surface exploration" on 22nd July 2023 via WebEx meetings.

The speaker for the technical talk was Dr. Ajeet Kumar, Researcher (Level IV), National Laboratory of RADAR and Surveillance Systems (RASS), Italy.

The speaker delivered an insightful talk on three applications, highlighting the importance of hybrid polarimetery synthetic aperture radar (SAR) for imaging the locality and identifying the manmade oil spills in ocean. The importance of lunar surface exploration was presented in application-2 stating the advantages for exploring the planet Moon. In the application-3, he enlightened the usage of hybrid-polarimetry SAR in ground applications. Finally, he provided open source links for accessing free datasets and also discussed the approach for getting into PhD and PDF at reputed research institutions.

Screenshots of expert talk photos are shown below:





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National Institute of Technology, Tiruchirappalli



EXPERT TALK ON HYBRID-POLARIMETRY SAR AND ITS USEFULNESS IN EARTH AND LUNAR SURFACE EXPLORATION

SPEAKER

Dr. Ajeet Kumar

Researcher (Level IV) CNIT - National Laboratory of RADAR and Surveillance Systems (RASS), ITALY



DR. M. VENKATA KIRTHIGA

BIBY JOSEPH

SETTI SURESH





SCAN TO JOIN



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08.08.2023

IEEE Student Branch Report of invited talk delivered by Dr. Akansha Garg

The IEEE Student Branch of NIT Tiruchirappalli organized an online mode invited talk on "Real-Time Power Management in Microgrids" on 8th August 2023 via MS Teams.

The speaker for the technical talk was Dr. Akansha Garg, Postdoctoral Research Associate, The University of Manchester, UK.

The talk commences by introducing the concept of microgrids and their significance in the modern energy landscape. It underscores the importance of localized power generation, storage, and consumption, especially in scenarios where traditional centralized grids face challenges such as outages, high costs, and environmental concerns. Central to the discourse is the notion of real-time power management. The talk expounds on the dynamic nature of microgrids, where power generation from renewable sources like solar panels and wind turbines fluctuates based on weather conditions, and energy demand varies with time. Real-time power management becomes a cornerstone in optimizing energy flow, ensuring stability, and preventing overload or underutilization of resources. Finally, she shared her journey to PDF and discussed the approach for getting into PhD and PDF at reputed research institutions.

Screenshots of expert talk photos are shown below:







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National Institute of Technology, Tiruchirappalli

INVITED TALK

REAL-TIME POWER MANAGEMENT IN MICROGRIDS

8TH AUGUST 2023 03:00 PM

Followed by Q & A session

Dr. Akansha Garg

Postdoctoral Research Associate The University of Manchester, UK

Dr. M. Venkata Kirthiga IEEE SB Counsellor Biby Joseph IEEE SB Chairperson



More info Contact No :+91 73824 09791

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scan me to join the group



Tiruchirappalli – 620 015



16.08.2023

IEEE Student Branch Report of 02 days workshop handled by Mr. Ajinkya Lohakare.

The IEEE Student Branch of NIT Tiruchirappalli organized a two days hands-on online workshop on "Cyber Security and Ethical Hacking" via MS Teams (16th-17th August, 2023).

The speaker for the technical talk was Mr. Ajinkya Lohakare, Certified Ethical Hacker, CTO & Founder of Social-spectra & Ditto Security.

A total of 41 participants from various colleges has registered for the workshop. The welcome address was given by Dr. Venkata Kirthiga, IEEE SB counsellor, following a brief introduction about speaker by Ms. Biby Joseph, chairperson, IEEE SB. The workshop was engaging and filled with plenty of tools to exploit. Finally, the vote of thanks was given by Dr. Rajeswari Sridhar, IEEE SB Faculty secretary.

Some of the event photos are given below:





National Institute of Technology, Tiruchirappalli – 620 015



National Institute of Technology Tiruchirappalli

The National Institute of Technology (formerly known as Regional Engineering College) Truchirappalli (NITT), was started as a joint and co-operative venture of the Government of India and the Government of Tamil Nadu in 1964 with a view to catering the needs of man-power in technology for the country. NITT is one of the 31 National Derivityte of Technology retablished by the Government of Institutes of Technology established by the Government of India and ranks First among all the NITs in NIRF during there consecutive years. The institution offers Undergraduate Courses in ten branches and Post Graduate Courses in twenty-one disciplines of Science, Engineering & Technology besides M.S. (by Research) and Ph.D. in all

the departments. Website: https://www.nitt.edu

IEEE Student Branch - NITT

The world's leading professional organization for the advancement of technology has a local address at NIT, Tiruchirappalli. Members rely on the IEEE as a source of technical and professional information, resources, and services. To foster an interest in the engineering profession, the IEEE SB NITT indulge in various technical and non-technical activities. Other important constituencies include prospective members and organizations that purchase IEEE products and participate in conferences or other IEEE products and participate in conferences or other IEEE products mEEE SB NITT and its technical chapters encompasses undergraduate, postgraduate and Ph.D. Scholars from various departments. postgraduate ans departments. Website: https://site.icee.org/sb-nitt/ https://www.nitt.edu/home/students/clubsnassocs/acade

Objective of the Workshop

To empower attendees with quality information on emerging threats, techniques, strategies, solutions and cost-effective method of ensuring a comprehensive

cybersecurity infrastructure. The learner will get knowledge about securing both clean and corrupted system, protect personal data and secure computer networks.

Workshop Modules:

- DAY 1 Introduct hacking duction to Cybersecurity and ethical
 - Footprinting and scanning
 - Enumeration System Hacking
 - DAY 2
 - Hacking wireless password Cryptography

 - Sniffing Hacking web application Password cracking tech Metasploit exploration

Transform vulnerability into strength: Enhance your digital resilience through our allinclusive workshop on cybersecurity and ethical hacking. Join us now!

About the Resource Person



Mr. Ajinkya Lohakare Certified Ethical Hacker, under of Social-Spectra & Ditto Security, Josh talk and TEDx Speaker. CTO & Four

"Cyber Security and Ethical Hacking" 16th -17th August, 2023

Hands-on Workshop

02:30 PM - 04.30 PM 05:00 PM - 07.00 PM





IEEE Student Branch NIT Tiruchirappalli



National Institute of Technology Tiruchirappalli

Registration Fees

(Inclusive of GST as applicable)

Category	Amount
	in Rs.
IEEE Members	400
Non – IEEE Members	500
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- > The maximum number of participants will be limited to 100. Hence participants are advised to register early.
- > Participants will have access to the presentation material through Google Drive for a limited time, during which they can download it

Registration & Payment Process

- · Everyone willing to participate in the workshop must register by filling the Google Form (with all details including payment details) on or before 10.08.2023, 23:59 PM (IST).
- https://forms.gle/XJ321F5DuiJ5BuuEA · Registered participants will be intimated
- mail on 12.08.2023 by through the 21:00 PM (IST).
- Request for refund of registration fee will not be entertained. Contacts

For Event Related Queries

✓ Biby Joseph Chairman, IEEE SB, NIT Tiruchirappalli. Email: bibyjoseph13(Phone: 7034186401 h13@gmail.com

For Payment Related Queries

- M Goutham Reddy.
 - Treasurer, IEEE SB, NIT Tiruchirappalli.
- Email: mgreddy97@gmail.com Phone: 9581313454

Payment Guidelines Payment shall be made ONLY through UPI ID or SBI collect.

- Cash / Demand Draft / Cheque / Pay Orders, etc. are NOT ACCEPTED.
- Step-by-step procedure to make payment via SBI Collect:
- Step-1: Go to the link: https://www.onlinesbi.sbi/sbicollect/icollecthom
- e.htm > Step-2: Select the following from dropdown menu: State of Corporate / Institution: Tamil Nadu Type of Corporate / Institution: **Educational Institutions**
- Step-3: Select the following from dropdown Educational Institutions Name: menu:
- IEEESB NITT Step-4: Select the following from dropdown menu: Select Payment Category: Registration Fee
- > Step-5: Provide all details of payment >> Then submit

Step-by-step procedure to make payment via UPI ID:

- Step-1: Go to any UPI payment App (BHIM, Gpay, PhonePe, etc.)
- Step-2: Click on New Payment
- Step-3: Enter UPI ID (ieeesb@sbi) or scan the QR code given and verify that you can s the Merchant Name as 'DIRECTOR NIT TRICHY'
- > Step-4: Make the payment.



Hands-on Workshop "Cyber Security and Ethical Hacking"

16th -17th August, 2023

02:30 PM - 04.30 PM &

05:00 PM - 07.00 PM

Who can apply? Individuals affiliated with NITT, including students, research scholars, employees and faculty members.

COORDINATORS

Dr. M. Venkata Kirthiga, Professor/EEE, IEEE SB Counsellor

Ms. Biby Joseph, Chairperson - IEEE SB



National Institute of Technology, Tiruchirappalli.



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14.10.2023

IEEE Student Branch Report of 02 days workshop handled by Mr. Muhammed Raees PC and Mr. Akshayraj MR.

The IEEE Student Branch of NIT Tiruchirappalli organized a two days hands-on online workshop on "Data Analytics with Python" via MS Teams (14th- 15th October, 2023).

The speakers of workshop are Mr. Muhammed Raees PC, Co-Founder & CTO, Edutecnicia and Akshayraj MR, Co-Founder Bayestech Pvt. Ltd.

A total of 61 participants from various colleges has registered for the workshop. Throughout the workshop students are immersed in a rich tapestry of Python programming, and machine learning concepts, with a comprehensive understanding of these domains. Additionally, they delved into the exciting landscape of AI's recent developments and explored the promising career opportunities it offers.

Some of the event photos are given below:





National Institute of Technology, Tiruchirappalli – 620 015



National Institute of Technology, Tiruchirappalli

DATA ANALYTICS WITH PYTHON Online WORKSHOP



TIME 9:00 AM - 11:00 AM AND 11: 15 AM - 1: 15 PM



DATE OCTOBER 14 & 15

Dr. M. Venkata Kirthiga IEEE SB Counsellor

Biby Joseph IEEE SB Chairperson

MUHAMMED RAEES PC

Co-Founder & CTO, Edutecnicia, Research Fellow, NIT Trichy

AKSHAYRAJ MR

Co-Founder, Bayestech Pvt. Ltd., Research Fellow, NIT Trichy

SCAN TO REGISTER

MORE INFO CONTACT NO:+91 73824 09791





Tiruchirappalli – 620 015



26.10.2023

IEEE Student Branch Report of 05-day workshop

The IEEE Student Branch of NIT Tiruchirappalli organized a five-day offline workshop on "Refresher Hands-on Workshop" for supporting staff of NITT during $17^{\text{th}} - 19^{\text{th}}$, $25^{\text{th}} - 26^{\text{th}}$ October, 2023.

The faculty of NITT from different branches are the speakers of workshop covering the aspects of circuit (ECE/ CA/CSE/ CSG/EEE/ICE), non-circuit (Mechanical/ Production/ Chemical/ Metallurgy / Civil / Architecture) and allied sciences(Physics/ Chemistry etc.) branches.





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24.11.2023

IEEE Student Branch Report of 'Felicitation of former office bearers'

The IEEE Student Branch of NIT Tiruchirappalli organized a felicitation event for former office bearers of IEEE SB on 24th November, 2023.

The felicitation was inaugurated by current IEEE SB chairperson followed by a brief address of Dr. Venkata Kirthiga, IEEE SB Counsellor and Dr. M. P. Selvan, immediate past SB counsellor. As a token of appreciation, IEEE hoodies and momento are distributed to the past office bearers.

Some of the photos at the event are given below:





National Institute of Technology, Tiruchirappalli – 620 015





Biby Joseph IEEE SB Chairperson

Dr. M. Venkata Kirthiga IEEE SB Faculty Advisor



Tiruchirappalli – 620 015



28.11.2023

IEEE Student Branch Report of 01-day workshop handled by Dr. Shriram Vasudevan and Mr. Jayaraman Mahalingam

The IEEE Student Branch of NIT Tiruchirappalli organized a one-day offline workshop on "Unlocking Heterogeneous Computing with oneAPI" on 28th November, 2023.

The speakers of workshop are Dr. Shriram Vasudevan, Lead Tech Evangelist, Intel and Mr. Jayaraman Mahalingam, AI/oneAPI, Tech Program APJ Geo Lead, Intel.

The guests are felicitated by Dr. Rajeswari Sridhar, IEEE SB Faculty Secretary. Workshop was started with brief introduction to oneAPI, Intel Developer Cloud, SYCL – Benefits, Structure, Classes, Sample Codes, Profiling and poting codes to HPC platforms using oneAPI, GenAI with IDC.

Some of the event photos are given below:





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National Institute of Technology, Tiruchirappalli

UNLOCKING HETEROGENEOUS COMPUTING WITH



Agenda:

- 1. Introduction to oneAPI, IDC (Intel Developer CLoud)
- 2. SYCL Benefits, Structure, Classes, Sample codes.
- 3. Profiling and poting codes to HPC platforms using oneAPI
- 4. GenAl with IDC



SCAN TO REGISTER



oneAPI

DATE: 28-11-2023

TIME: 2PM -5PM

MODE: OFFLINE

Mr. Jayaraman Mahalingam Al/oneAPI Academia Tech Program APJ Geo Lead, Intel

Biby Joseph, IEEE SB Chairperson

Dr. Shriram Vasudevan Lead Tech Evangelist, Intel

> Dr. M. Venkata Kirthiga, IEEE SB Counseller

Dr. Rajeswari Sridhar, IEEE SB Faculty Secretary



Tiruchirappalli – 620 015



30.11.2023

IEEE Student Branch Report of 02-days workshop handled by Dr. S. S. Karthikeyan and Dr. D. Sriram Kumar in association with IEEE MTT-S SB and IEEE AP-S SB.

The IEEE Student Branch of NIT Tiruchirappalli organized a two days offline workshop on "Simulate and Build: Hands-On Workshop on RF and Microwave Devices" from 30th Nov. to 1st Dec., 2023.

The speakers of workshop are Dr. D. Sriram Kumar, Professor and Dr. S.S.Karthikeyan, Associate Professor, from the department of Electronics and Communications Engineering, NITT.

This event serves as the inaugural chapter in an ongoing series, aiming to equip participants with essential knowledge and skills to design and comprehend an RF system independently by the end of the series.

The inaugural day commenced with an enlightening speech by Dr. S. S. Karthikeyan, the esteemed faculty advisor of IEEE MTT-S SB Chapter NITT. Aligned with this, Dr. R. Parthasarathy delivered a comprehensive talk on the theories of radiofrequency and microwave devices, starting from the basics and setting the stage for practical exercises. Post-theoretical sessions, the workshop delved into "Design Simulation using HFSS."

On the subsequent day, participants actively translated theory into reality by designing patch antennas and directional couplers on laptops

Some of the event photos are given below:









Workshop on

"Simulate and Build: Hands-On Workshop on RF and Microwave Devices "



Webpage: https://www.nitt.edu/home/students/clubsnassocs/academic/ieee/