

“ELSOC ACTIVITIES REPORT”
JANUARY 2023 - DECEMBER 2023



Faculty Coordinators

Faculty name	Department	Mail ID
Dr. Archana HR	Department of electronics and communication	archanahr.ece@bmsce.ac.in
Dr. Maligi Anantha Sunil	Department of electronics and communication	sunil.ece@bmsce.ac.in

Office Bearers

Position	Student name	Year, branch	Mail ID
President	Vishvesha V	3rd year, Department of electronics and communication	vishvesha.ec20@bmsce.ac.in
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Treasurer	Sanjana A	2nd year, Department of electronics and communication	sanjana.ec21@bmsce.ac.in
Logistics Team	Priyanshu K	2nd year, Department of electronics and communication	priyanshukumar.ec21@bmsce.ac.in
	Rahul Rathod	2nd year, Department of electronics and communication	rahulrathod.ec21@bmsce.ac.in



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Name of the event	ELSOC Felicitation 2022
Date	11-02-2023
Time	11:00 - 12:00 PM
Venue	Seminar Hall, Department Of ECE, BMSCE

Objectives

1. Felicitation of the core members for the academic year 2022.
2. Introducing the new core members for the academic year 2023.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Maligi Anantha Sunil, ELSOC faculty coordinator, Dept. of ECE
3. Dr. Archana H.R, ELSOC faculty coordinator, Dept. of ECE

Brief summary

Soumya Gopal Kulhalli and Vishvesha V, the event's hosts, began by welcoming everyone and introducing the HoD, faculty coordinators, former and current core committee members to the audience.

The HoD, Dr. Siddappaji then addressed the gathering and expressed his admiration for the former core committee's efforts. He commended them for their exceptional leadership skills and dedication to the club's success. He went on to share his vision for the future of ELSOC and emphasized the importance of taking it to new heights. He urged the current core committee members to learn from their predecessors' experiences and work hard to create more successful events that would help the student community.

Dr. Anantha Sunil Maligi, faculty coordinator of the club, then expressed his gratitude for the support the club received from the HoD and another faculty coordinator throughout the course. He praised the former core committee for their efforts and encouraged the current committee to follow in their footsteps.

Then, Dr. Archana H R, faculty coordinator of the club, thanked HoD and the co-faculty coordinator for their support throughout and guided the current committee on how to conduct events. She highlighted the importance of teamwork and proper planning for the successful execution of events. She also expressed her pleasure towards having coordinated with the former core committee. The session was followed by distributing certificates to the former core committee members for their hard work and dedication as a token of appreciation.

The new core committee members expressed their dedication and excitement to start their tenure to bring success to the club. The speeches by the HoD and faculty coordinators provided them with valuable insights into managing and conducting successful events.



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Overall, the felicitation program for the former core committee of ELSOC was a resounding success. It was an excellent opportunity for everyone to come together and celebrate the past year's achievements. The event was a great learning experience for the current core committee, and it left everyone feeling motivated and inspired to continue the legacy of ELSOC.



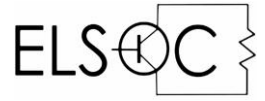
Fig 1. Vishvesha V, the event's host addressing the audience



Fig 2. HoD felicitating Bharath G, the former Vice-President of ELSOC



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Name of the event	Arduino Bootcamp
Date	27.20.2023-03.03.2023
Time	2:00 PM to 5:00 PM
Venue	BSN Hall, PG Block
Registration Fee	Rs. 50

Objectives

1. Providing hands on experience with Arduino Kits.
2. Covering basics of sensor interfacing.
3. Building real time application based projects.

Presided by

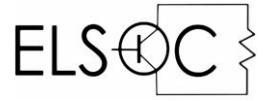
1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Archana HR, ELSOC faculty coordinator, Dept. of ECE
3. Dr. Maligi Anantha Sunil, ELSOC faculty coordinator, Dept. of ECE

Brief summary

The event started with Dr. Siddappaji, HOD of ECE Dept., addressing the gathering on the first day and introducing ELSOC and its history followed by Dr. Maligi Anantha Sunil, faculty coordinator of ELSOC explaining the benefits of the bootcamp. The event had 140 registrations from various departments. Interested participants were also provided with hardware kits consisting Arduino Nano, sensors and actuators at subsidized rates.



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The topics covered along with the schedule are as follows.

Date	Concepts covered
27-02-23	Introduction to Arduino, Basics of C programming, LED Blink, usage of breadboards and introduction to Tinkercad website.
28-02-23	Pushbuttons, RGB LEDs, voltage divider principle and assignments based on them.
01-03-23	Theory of sensors like temperature, IR, and Gas sensors and their interfacing.
02-03-23	PIR, Ultrasonic, and Flex sensors, followed by motors and drivers.
03-03-23	PWM, servo motors, 7 segment displays, and LCDs

Problem statements were given everyday based on the concepts covered and after the completion of days, participants competed to build the best simulation of a metro train system with the available sensors and actuators. The submissions were judged upon innovation, robustness and presentation.

On 13/03/2023, Dr. Siddappaji, Head of Department Of ECE, Girish K sir from the Department of MCA, along with the faculty members presided over the felicitation ceremony to award certificates to the winners and the instructors of the bootcamp.

The winners of the competition were

Position	Name	USN	Prize money
1st	S M Nithish	1BM21EC134	Rs.1500
2nd	P M Varun Krishnan	1BM21ME070	Rs.1000
3rd	Jayanth M N	1BM21EC051	Rs.750



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Instructors of the workshop were:

Sl.no	Name	USN
1	ESHWAR BEVOOR	1BM21EC035
2	Hanumesh V Burli	1BM21EC042
3	Skandha S Bhat	1BM21EC162
4	Vamshi B	1BM21EC192
5	Shishir M	1BM21EC150
6	Vishnu Prakash Bharadwaj	1BM21EC209
7	Priyanshu	1BM21EC115
8	Nikhil H Raju	1BM21EC088
9	Rahul Rathod	1BM21EC122
10	Arvind Sista	1BM21EC160
11	Spoorthi	1BM21EC168
12	Sanjana A	1BM21EC143

Participants had a wonderful time learning and gaining hands-on experience. The combined enthusiasm of the instructors and participants made the workshop enjoyable. Overall, the Bootcamp was a huge success and received positive responses from the participants.



Attached below are the photos taken during the boot camp:



fig1. Participants working on Tinkercad simulation software

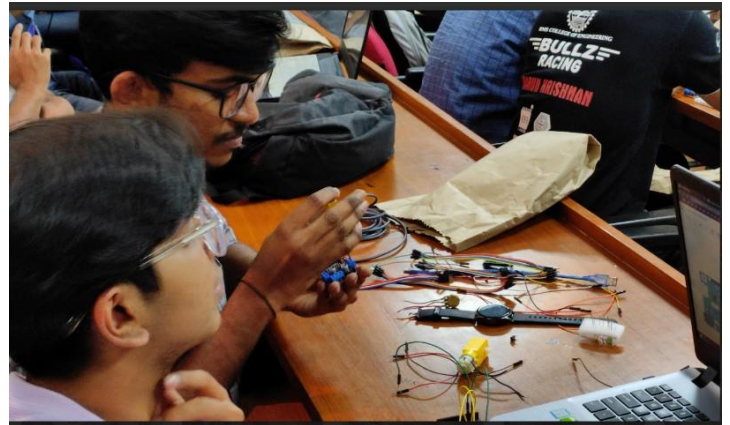


fig2. Participants gaining hands on experience



fig3. Dr. Siddappaji, HOD of ECE addressing the gathering during felicitation Ceremony



Name of the event	VLSI Test and Reliability
Date	16.03.2023 - 18.03.2023
Time	9:00 AM to 5:00 PM
Venue	Auditorium 2 ISE Lab 504

Objectives

1. Learning from industry experts and expanding knowledge.
2. Getting hands-on with cutting edge technology..

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Mr. Sameer Chillarige, General Chair, ITC

Speakers of the Workshop

1. Navin Bishnoi, General Chair, TTTC
2. Mr. Venkata Rangam, Senior Director, Infineon Technologies
3. Sahil Jain, Sr. Principal Design Engineer, Cadence India
4. Mr. Leela Krishna, Senior solutions Engineer
5. Mr. Prasad Mantri, Chief Technology Officer. AISemicon
6. Dr. R Jayagowri, Associate Professor, Dept. of ECE, BMSCE

Faculty Coordinators

1. Dr. R Jayagowri, Dept. of ECE
2. Mrs. Hemavathi S, Dept. of ECE
3. Mr. Jeeru Dinesh Reddy, Dept. of ECE

Brief summary

This State Level Workshop was hosted in collaboration with the Test Technology Technical Council (TTTC) and the International Test Conference (ITC). This workshop aimed to bridge the gap between academia and industry. Here are the key themes that emerged during the discussions. Experts shared innovative test strategies and techniques to improve the quality and reliability of VLSI circuits. These included built-in self-test (BIST), scan-based testing, fault modeling, and defect analysis. The discussions emphasized the need for efficient and accurate test methodologies to ensure high-quality integrated circuits. Discussions revolved around scan insertion, boundary scan, and other DFT approaches that enable effective fault detection and diagnosis during manufacturing and in-field testing.



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The VLSI Test and Reliability Workshop provided a platform for experts and professionals to exchange knowledge, insights, and best practices in the field. The outcomes of the workshop emphasized the significance of robust testing methodologies, reliable design practices, and collaboration to ensure the quality, reliability, and longevity of VLSI circuits. The insights gained from the workshop will undoubtedly contribute to advancing the field of VLSI test and reliability in the coming years.

Day 1:

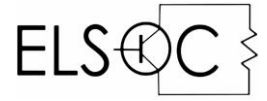
1.	9:30 AM to 10:30 AM	Inauguration and Introduction
2.	10:30 AM to 10:45 AM	Networking over Tea/Coffee
3.	10:45 AM to 11:45 AM	Introduction to Design for Test
4.	11:45 AM to 01:00 PM	Scan Based Testing
5.	01:00 PM to 02:00 PM	Networking over Lunch
6.	02:00 PM to 03:30 PM	Lab session
7.	03:30 PM to 03:45 PM	Networking over Tea/Coffee
8.	03:45 AM to 05:00 PM	Lab session

Day 2:

1.	09:30 AM to 11:00 AM	Scan Compression
2.	11:00 AM to 11:30 AM	Networking over Tea/Coffee
3.	11:30 AM to 01:00 PM	Test Standards
4.	01:00 PM to 02:00 PM	Networking over Lunch
5.	02:00 PM to 3:30 PM	Lab Session
6.	03:30 PM to 3:45 PM	Networking over Tea/Coffee
7.	03:45 PM to 05:00 PM	Lab Session



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Day 3:

1.	09:00 AM to 9:30 AM	DFT as a career
2.	09:30 AM to 11:00 AM	Logic BIST & Memory Testing
3.	11:00 AM to 11.30 AM	Networking over Tea/Coffee
4.	11.30 AM to 01:00 PM	Advanced Fault models & Test Diagnosis
5.	01:00 PM to 01:30 PM	Conclusion



Vote of thanks by Dr. R Jayagowri

Fig 1:



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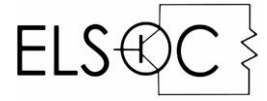


Fig 2: A group photo with the participants and the resource speakers

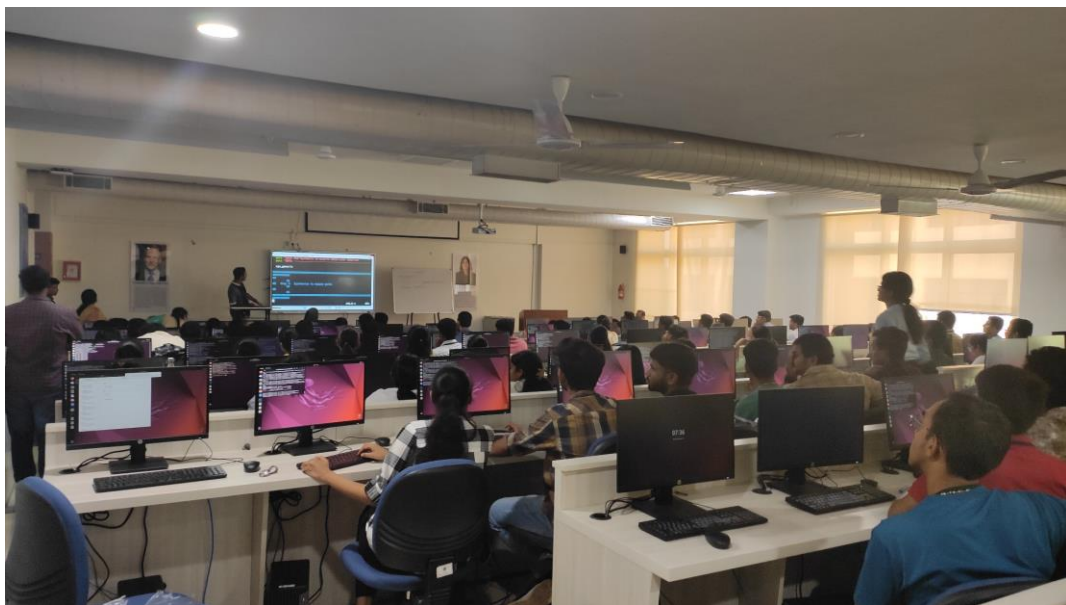


Fig 3: Lab Session in progress by Sahil Jain, Sr. Principal Design Engineer, Cadence India



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Name of the event	Talk on Intellectual Property Rights and Cyber Laws
Date	15-04-23 & 29-04-23
Time	9:00 AM - 1:30 PM
Venue	Auditorium 2, PJ block
No. of Participants	100

Objectives

1. Understanding and use of Intellectual Property Rights.
2. Creating awareness about cyber threats and understanding of cyber laws.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE

Brief summary

A guest lecture series on "Intellectual Property Rights and Cyber Law " was organized jointly by the Department of Electronics and Communication Engineering, BMSCE in association with BMS College of Law, with support from ELSOC BMSCE and IEEE SSCS BMSCE. The organizers were Dr. Siddappaji, Prof. K. Sujatha, Dr. Kiran Bailey.

On 15th April 2023, in the first session, Naman Vankdari, Advocate Entrepreneur, Co Founder of Youth based educational start up 'The Indian Conclave' and Assistant Professor (Guest Faculty) BMS College of Law Bengaluru delivered an engaging presentation on the significance of patents. Through captivating examples, he demonstrated the importance of patents in various domains, highlighting their role in fostering innovation and protecting intellectual property. The audience was captivated by his compelling insights and real-world illustrations.

Following a short break, Mrs. Priyanka Vaidyanath, Research Scholar, Christ University started off on the topic of cyber security. She delved into the threats and risks associated with the cyber world. She shed light on the evolving nature of cyber threats and the potential consequences they can have on individuals and organizations. Furthermore, she provided valuable guidance on how to enhance online safety and protect against these cyber threats.

On 29th April 2023, the second session started off with Mrs. Raniyal Niyada, Assistant Professor at the BMS College of Law and faculty-in-charge of IPR Cell at the college, introducing the attendees to Copyright Laws and their importance. She explained exactly the



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rights in case of situations where persons in multiple levels have been involved in creating or authoring the work. She elaborated on the cases where copyright is not applicable and on the need of balance between protecting the rights of the owner/author and the societal good. In the end of session, she touched upon the issue of copyrights when it comes to computer or AI generated works and encouraged students to ponder on who needs to get the rights in such cases.

After a break, Mr. Ankit Shripatwar, Assistant Professor at BMS College of Law introduced the attendees to Trademark Laws. His lecture started with explaining the history of Trademark laws and explained the difference between the labels 'Registered' and 'Trademark'. He eloquently stressed on how trademarks not only serve the interests of the respective firm, but also the general public. He also explained the process and costs of registering a name or logo for a firm or for a society in India.

Overall, the workshop successfully highlighted the importance of patents and cyber security, equipping the participants with a deeper understanding of these critical topics. The event served as a platform for knowledge sharing and networking, leaving the attendees with valuable takeaways that can be applied in their respective fields.



Fig.2 Mrs. Priyanka Vaidyanath
addressing students

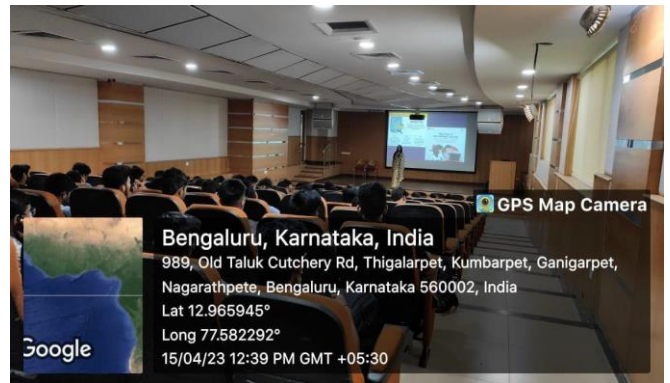


Fig.1 Sri Naman Vankdari
addressing students



Fig.3 Raniyal Niyada addressing students



Fig.3 Raniyal Niyada addressing students



Name of the event	GATE - 2023 Achievers Felicitation
Date	29-04-2023
Time	1:30 PM
Venue	Seminar Hall, Department Of ECE, BMSCE

Objectives

1. Felicitation of the achievers of GATE-2023 exam.
2. Introduction to GATE and tips from the achievers to the juniors.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Hemavathi D, GATE faculty coordinator, Dept. of ECE
3. Dr. Maligi Anantha Sunil, ELSOC faculty coordinator, Dept. of ECE

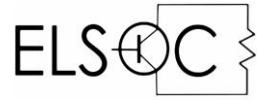
Brief summary

Graduate Aptitude Test in Engineering (GATE) is a national level exam that primarily tests the comprehensive understanding of various undergraduate subjects in Engineering. It was organized by the Indian Institute of Technology Kanpur for the year 2023. The exam is conducted by IISc Bangalore and seven IITs (IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Madras, IIT Roorkee), on behalf of the National Coordination Board – GATE, Department of Higher Education, Ministry of Education (MoE), Government of India (GoI). The benefits of the GATE exam include opportunities for higher studies in elite institutes across the country including IITs, IISc and NITs, job opportunities in the Public Sector Units (PSUs) and many more.

The department had 21 students who had registered for the exam out of which an outstanding number of 11 qualified the exam. The students appeared for the exam for various streams including ECE(9) and CSE(2). The event began with a welcome note by the ELSOC team followed by HOD's speech on the importance and benefits of the GATE exam, and congratulating the achievers. The achievers were called onto the stage and honoured with certificates and mementos by the HOD. A few students amongst the achievers including an alumni, 4th years and 3rd years spoke about their experience of the exam and provided useful insights on the approach used by them to prepare for the exam, covering topics like time management. They also collectively expressed their gratitude to all their teachers who trained them in the subjects. All the participants were served with light refreshments followed by the vote of thanks by the ELSOC team. The event was then successfully concluded with a group picture of the achievers with the faculty.



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Group picture of GATE achievers with the faculty, Department of ECE



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Name of the event	Path to a Successful Startup
Date	12-05-2023
Time	10:30 PM
Venue	Seminar Hall, Department Of ECE, BMSCE

Objectives

1. Introduction to entrepreneurship.
2. To enlighten the students on the steps to build a successful startup.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Rajanikanth K.N, faculty coordinator, Dept. of ECE

Brief summary

The workshop titled "The Path to a Successful Startup" was conducted by Mr. Chandrashekar Bharathi, Founder & Managing Director, AceMicromatic. The objective of the workshop was to provide aspiring entrepreneurs with valuable insights, strategies, and practical guidance on establishing and scaling their own successful startup ventures. The workshop spanned for 2 hours and featured experienced industry professionals, successful entrepreneurs, and subject matter experts as speakers and panelists.

The workshop began with an opening session, where the purpose and agenda of the event were outlined. The importance of entrepreneurship and the potential impact of startups on the economy were emphasized.

The workshop featured keynote speeches delivered by Mr. Chandrashekar Bharathi who have achieved significant success in their respective fields. The speaker shared his personal stories, highlighting the challenges he faced, lessons learned, and key principles that contributed to his success. He emphasized the importance of perseverance, innovation, adaptability, and maintaining a customer-centric approach.

"The Path to a Successful Startup" workshop provided aspiring entrepreneurs with a comprehensive understanding of the key elements involved in building and scaling a successful startup. The event offered valuable insights, practical guidance, and networking opportunities, empowering participants to embark on their entrepreneurial journeys with confidence and knowledge.



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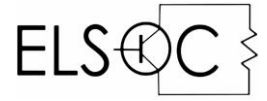
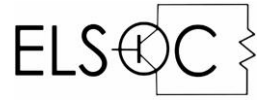


Fig 1. The speaker addressing the enthusiastic audience



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Name of the event	Talk on Impactful Research Methodology
Date	19-05-2023
Time	2:00 PM
Venue	Seminar Hall, Department Of ECE, BMSCE

Objectives

1. To emphasize the importance of engaging in research across various disciplines.
2. To promote research as a fundamental aspect of knowledge acquisition and personal/professional growth.
3. To provide guidance on research methodology, including the adoption of appropriate techniques, tools, and frameworks.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE

Brief summary

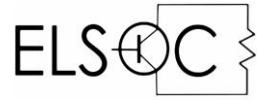
Dr. T. S. Mohan, Founder & Director of Pragyan Datalabs and Steering Committee Co-Chair of the 1958 Cloud Computing for Emerging Markets (CCEM) Conference, delivered an invited talk on "Impactful Research Methodology." In his talk, Dr. Mohan emphasized the significance of engaging in research, its intrinsic connection to nature, the importance of publishing papers, and the role of research in knowledge acquisition.

Dr. Mohan highlighted the significance of research as a fundamental pursuit in various disciplines. He emphasized that research allows for the exploration of new ideas, the development of innovative solutions, and the advancement of knowledge in diverse fields. The speaker noted that research is an evolutionary process that involves constant learning and adaptation. He emphasized the importance of being open to new perspectives, considering alternative methodologies, and embracing change in order to achieve meaningful research outcomes. Dr. Mohan emphasized the importance of publishing research findings in the form of academic papers. He emphasized that publication enables researchers to share their insights, methodologies, and discoveries with the wider scholarly community, thereby contributing to the collective knowledge and fostering further advancements in the respective fields. Dr. Mohan briefly discussed research methodology, highlighting the significance of adopting appropriate techniques, tools, and frameworks to conduct research effectively. He emphasized the importance of rigor, objectivity, and transparency in research methodology to ensure the validity and reliability of the results.

Dr. T. S. Mohan's invited talk on "Impactful Research Methodology" provided valuable insights into the significance of research as an integral part of knowledge acquisition and innovation. His emphasis on publishing research papers, embracing the evolutionary nature of



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research, and adopting rigorous methodologies highlighted the importance of conducting impactful research. By encouraging researchers to actively engage in the research process, Dr. Mohan has contributed to promoting the advancement of knowledge and the growth of the scholarly community.



Fig.1. The HoD felicitating the speaker



Fig.2. Session in progress



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Name of the event	TCL Workshop
Date	14th to 18th June 2023
Mode	Online

Objectives

1. Develop a strong foundation in TCL programming fundamentals.
2. Understand the role of TCL programming in VLSI design automation.
3. Gain hands-on experience through coding exercises and projects.

Brief summary

ELSOC in collaboration with BMSCE IEEE SSCS organized an online certification course on TCL programming by Kunal Ghosh, co-founder of VSD (VLSI System Design). The course aimed to educate participants on TCL programming and featured daily doubt sessions to ensure a comprehensive understanding of the subject.

TCL (Tool Command Language) programming holds significant importance in the VLSI industry, particularly in VLSI design automation. It enables the development of scripts for automation, simulation, verification, and synthesis processes. TCL programming is also highly valued by VLSI companies during the recruitment process. Proficiency in TCL programming showcases a candidate's ability to automate design processes, collaborate effectively, and work with industry-standard EDA tools. It provides a competitive advantage in the job market, enhancing employability and expanding career prospects within the VLSI industry.

The course received a total of 52 registrations. The participants were given access to the course throughout the workshop duration and were assigned with daily assignments to enhance their understanding. The daily doubt sessions also helped the participants throughout the workshop and eased their learning process.

By participating in this online certification course, individuals had the opportunity to gain valuable skills and knowledge in TCL programming, which can significantly contribute to their success in the VLSI industry.



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Fig. The closing meet of the workshop headed by Kunal Ghosh.



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Name of the event	Electronics.py
Date	10-07-2023 to 15-07-2023
Time	2 - 5 PM
Venue	Seminar Hall, Department Of ECE, BMSCE

Objectives

1. To introduce Python as a versatile and powerful programming language for Electronics applications.
2. To explore advanced topics such as Transform Calculus, graphical representations, and GUI development using Python.
3. To provide hands-on experience and practical knowledge through interactive sessions and coding exercises.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Veena Jawalai, HOD, Dept. of Mathematics
3. Dr. Archana HR, ELSOC faculty coordinator, Dept. of ECE

Resource Person:

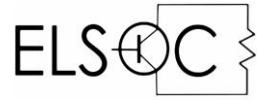
1. Dr K.P Lakshmi, Dept. of ECE
2. Dr. Gayathri MS, Dept. of Mathematics
3. Dr. P. Gomathi,, Dept. of Mathematics
4. Prof Rahul R, Dept. of Mathematics
5. Dr. Anthony Christy Melson, Dept. of Mathematics
6. Dr. ChandraShekara G, Dept. of Mathematics
7. Dr. Bandaru Mallikarjuna, Dept. of Mathematics

Brief summary

ELSOC in collaboration with the Department of Mathematics, BMSCE organized “Electronics.py”, a 5-day workshop on Applied Python. During the course, participants were introduced to Python on Day 1. A comparative analysis between Python and traditional programming languages such as C/C++ was presented, alongside simple example programs. On Day 2, participants delved into the mathematical concepts in Python, emphasizing numerical methods. The participants were guided through solving differential equations and working with matrices. Day 3, focused on graphical representation with Python. The session involved plotting various graphs and exploring symbolic Python capabilities. Subsequently, on Day 4, Dr. KP Lakshmi introduced Graphical User Interface (GUI) development in Python. Participants learned how to create a simple window, a calculator, and a sample "Click me" button application. Finally,



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Day 5, conducted by Dr. Bandaru Mallikarjuna, covered the advanced topic of Transform Calculus. Additionally, the participants were introduced to Fourier series expansion and its practical applications.

The Electronics.py workshop achieved remarkable achievements in Python programming, mathematical proficiency, Transform Calculus and signal processing, graphical representations, and GUI development with over 50 participants. Participants gained proficiency in Python programming, mathematical concepts, and visual communication, enabling efficient engineering challenges and user-friendly applications. A valedictory ceremony was held on 18th July 2023 where, participants and resource persons were felicitated by Dr. Siddappaji, HOD of ECE Department.

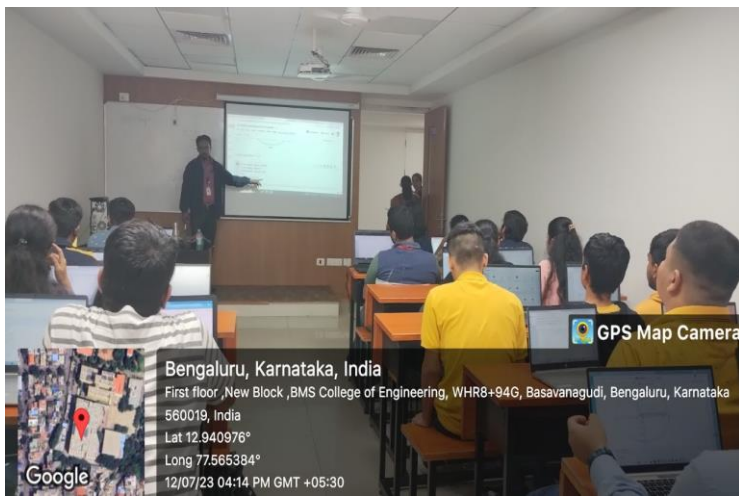


Fig: Participants learning during Day 2 and Day3

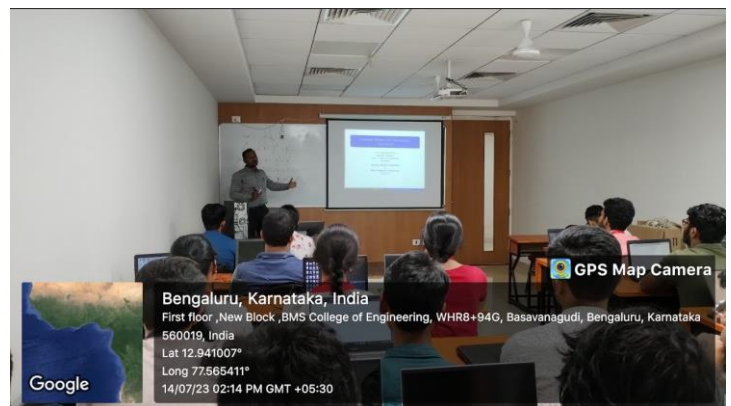
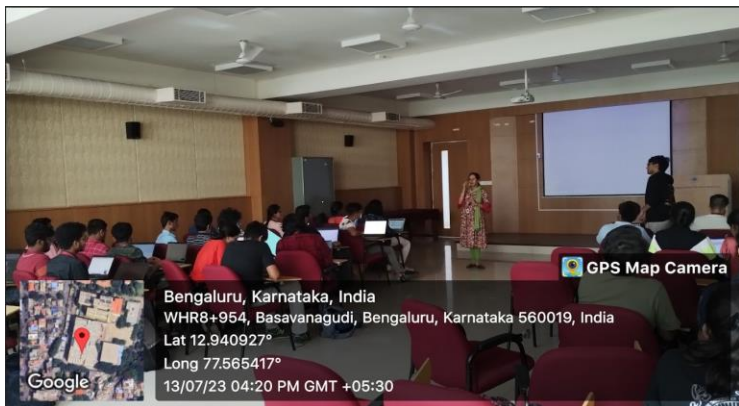


Fig: Participants learning during Day 4 and Day 5



Name of the event	RISC-V and VLSI Roadshow
Date	10-08-2023
Time	11 AM - 5 PM
Venue	Auditorium 2, 504 UG lab, PJ block, BMSCE

Objectives

1. Promote awareness of RISC-V architecture and its applications.
2. Provide hands-on experience in VLSI design and open-source EDA tools.
3. Foster networking and knowledge-sharing among participants interested in RISC-V and VLSI.

Presided by

1. Dr. S Muralidhara, Principal, BMSCE
2. Dr. Siddappaji, HoD, Dept. of ECE, BMSCE
3. Dr. Archana H R, ELSOC faculty coordinator, Dept. of ECE, BMSCE
4. Dr. Kiran Bailey, BMSCE IEEE SSCS faculty coordinator, Dept. of ECE, BMSCE
5. Mr. Kunal Ghosh, Co-founder, VSD
6. Mr. Sharath Kaul, VP of Strategy, Innovation and Execution, IESA.

Brief summary

The VLSI System Design (VSD) and India Electronics Semiconductor Association (IESA) organized a state-level RISC-V and VLSI roadshow, hosted by ELSOC and BMSCE IEEE SSCS. The event had 100 participants from across Karnataka, aimed to provide practical insights into RISC-V architecture and VLSI design.

The roadshow encompassed a comprehensive curriculum, covering topics such as converting high-level programming languages to RISC-V machine code, programming RISC-V development boards, and transforming Verilog RTL to GDS using open-source EDA tools.

The event kicked off with talks by industry experts from VSD and IESA, shedding light on the significance of RISC-V architecture and VLSI design in the technology landscape. A midday break allowed participants to network and engage in discussions, followed by an afternoon of hands-on lab sessions. Notably, the VsdSquadron development board, created by VSD, played a pivotal role in providing participants with practical experience.

The roadshow's impact extended beyond the event day. Participants left with enhanced skills, a deeper understanding of RISC-V architecture and VLSI design, and a valuable network of



industry contacts. This event contributed to the growth and advancement of the tech ecosystem in Karnataka, fostering enthusiasm and knowledge-sharing among tech enthusiasts and learners.



Fig1. Inauguration of the workshop.



Fig2. Talk by industry experts.



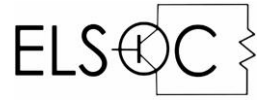
Fig3. Lab session.



Fig4. Attendees of the workshop.



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Name of the event	ELSOC Week
Date	19th to 25th August 2023
Venue	Department Of ECE, BMSCE

Objectives

1. To provide a platform for students to enhance their practical skills and knowledge in various aspects of the electronics field, including Raspberry Pi programming, design thinking, antenna designing, and medical signal processing.
2. To foster a culture of innovation and creativity among participants by encouraging them to think critically and come up with unique solutions during the design hackathon and other workshops.
3. To create a vibrant community of electronics enthusiasts within the college, promoting collaboration, knowledge-sharing, and a passion for advancements in the field.

Brief summary

The much-anticipated Elsoc Week at BMS College of Engineering (BMSCE) was an astounding success, leaving a trail of inspiration and knowledge in its wake. From the 19th to the 25th of August 2023, the campus buzzed with the vibrant energy of budding electronics enthusiasts. The week was replete with engaging events and workshops, each catering to different aspects of the ever-evolving field of electronics.

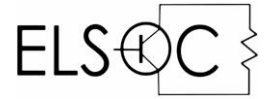
Events conducted:

1. '0 to Pi': Raspberry Pi workshop
2. 'Synthosphere': Design hackathon
3. 'Transmitech': Antenna designing workshop
4. Workshop on Medical Signal Processing and Bioinformatics
5. 'Electro Odyssey': Showcasing event

The reports of individual events are attached below.



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Name of the event	0 to PI
Date	21-08-2023 and 22-08-2023
Time	2:00 PM - 5:00 PM
Venue	C - 305, Department Of ECE, BMSCE
Registration Fee	Rs. 50
Number of Participants	40

Objectives

1. Understanding operating system booting
2. Exploring Raspberry Pi basics with sensor & actuator interfacing.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE
2. Dr. Archana H R, ELSOC faculty coordinator, Dept. of ECE

Brief summary

On account of ELSOC Week 2023, the 2-day hands on Workshop 0 to PI started with focusing on the fundamental aspects of Raspberry Pi, including setting up and booting the device. The workshop was conducted by Mr. V Pavan Shastri, 6th Sem, Dept. of EIE and Mr. Rahul Rathod, 4th Sem, Dept. of ECE. Participants learned about hardware components and practical experience in configuring and initiating Raspberry Pi boards with operating systems. The workshop aimed to provide a robust understanding of the basics, setting the stage for deeper exploration in subsequent sessions.

The second day, titled Sensors, Actuators, Pi Cam, and Machine Learning, was an immersive exploration of advanced applications of Raspberry Pi. Participants learned how to interface Raspberry Pi with various sensors and actuators, gain theoretical knowledge and hands-on experience, and appreciate its potential in real-world scenarios for data collection and control. The Raspberry Pi Camera Module was explored, focusing on image capture and manipulation, computer vision applications, and the potential of Raspberry Pi in automation, surveillance, and image analysis. The final segment was a thrilling journey into machine learning using Raspberry Pi, showcasing the limitless possibilities of artificial intelligence.



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Essential instructors provided guidance, facilitated discussions, and encouraged active learning, allowing participants to work on projects to apply their newfound knowledge and skills practically.



Fig: Instructors teaching participants about Booting



Fig: Group Picture of participants and Instructors.



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Name of the event	SynthoSphere
Date	24 & 25 /08/2023
Time	9:00 AM
Mode	Online

Objectives

1. To provide participants with a platform for hands-on experience in VeriLog design, fostering their technical skills and familiarity with open-source tools.
2. To promote a culture of innovation and creativity among participants, enabling them to demonstrate their technical proficiency and adaptability within a constrained time frame.

Brief summary

On the occasion of ELSOC Week, the collaborative efforts of BMSCE IEEE SSCS and ELSOC, Electronics Society at BMS College of Engineering, culminated in the successful organization of SynthoSphere: A VeriLog Designathon, which commenced on the 24th of August 2023, with invaluable support from Mr. Kunal Ghosh, co-founder at VLSI System Design. The event provided a platform for participants to engage in a 48-hour online competition, starting at 9:00 AM after a comprehensive briefing by the judges during the opening call, outlining the rules, judging criteria, and documentation requirements.

Throughout the competition, participants utilized the collaborative platform Slack for doubt clarifications, effectively leveraging the available resources to tackle design challenges and synthesize their chosen projects. The culmination of the event on the 26th of August at 9 AM marked a significant milestone, followed by a closure call expressing gratitude and acknowledging the collective efforts of all participants and stakeholders.

The event served as a testament to the technical prowess and ingenuity of the participants, providing them with an invaluable opportunity to explore and apply open-source tools in a competitive environment. With the efficient announcement of results within two days, the SynthoSphere Designathon emerged as a cornerstone event during the vibrant ELSOC week 2023, embodying the spirit of collaborative innovation and technical excellence.



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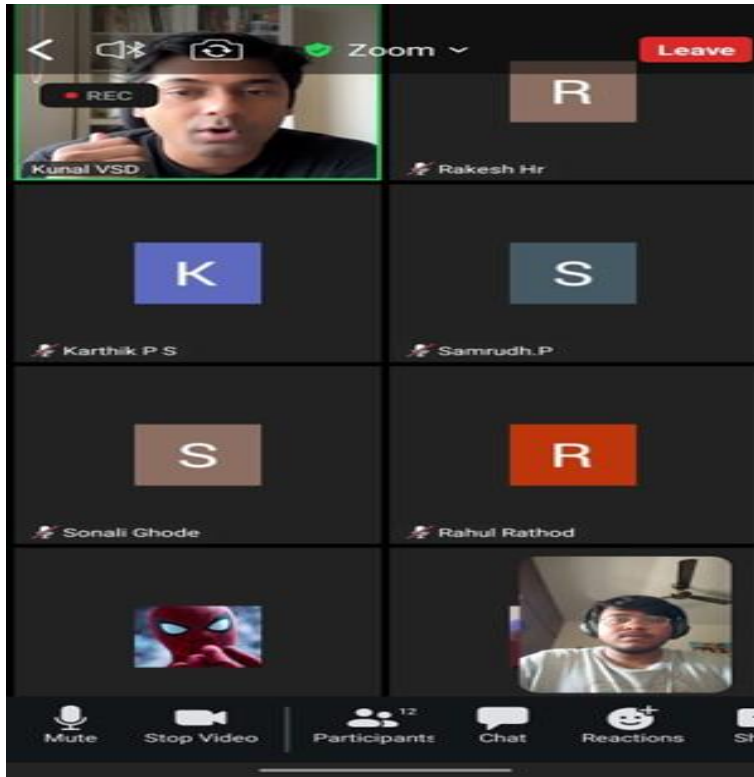
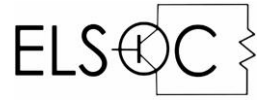
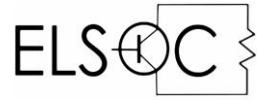


Fig1. Opening call with participants



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Name of the event	TransmitTech
Date	25-08-2023
Time	9:00 AM
Mode	Online

Objectives

1. To foster an environment conducive to innovative antenna design and simulation.
2. To facilitate the exchange of ideas and expertise among participants from diverse educational backgrounds.
3. To enhance participants' communication skills through effective presentation and articulation of technical concepts during the Q&A session.

Brief summary

On account of the vibrant ELSOC Week, a celebration of innovation and collaboration, the BMSCE IEEE APS in collaboration with ELSOC organized the "TransmitTech" Antenna Designing Competition. This stimulating event, held on the 25th of August 2023, brought together a host of participants from institutions across Bengaluru and Karnataka in an engaging online format on Google Meet.

The participants were encouraged to showcase their designs and simulation results, followed by a rigorous Q&A session to delve deeper into their concepts. A panel of esteemed judges, Dr. Karthikeya G.S and Dr. Feroz Morab, both Assistant Professors from the Department of ECE, meticulously evaluated the entries based on various criteria such as presentation skills, the novelty of the designs, adept handling of the Q&A session, and the thoughtfulness behind the choice of topics.

The winners of the competition were awarded with cash prizes. The competition not only served as a platform for showcasing talent but also facilitated the exchange of innovative ideas and knowledge within the vibrant community of electronics enthusiasts and professionals.

The event served as an integral part of the ELSOC Week celebrations, fostering a culture of collaboration and learning among participants from various institutions. "TransmitTech" not only highlighted the significance of cutting-edge antenna design but also emphasized the importance of effective communication and critical thinking in the field of electronics and communication engineering.

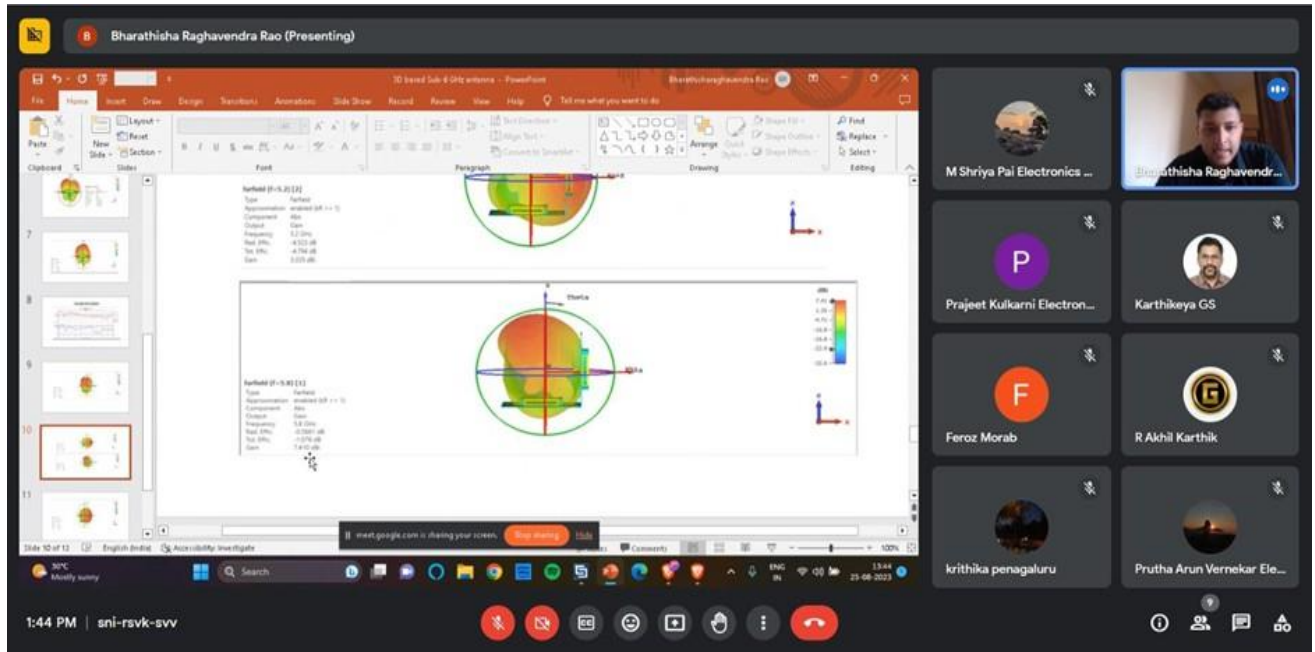


Fig1. Participant presenting the simulation



Fig2. Participants group picture



Name of the event	Workshop on Medical Signal Processing and Bioinformatics
Date	24-08-2023
Time	11:00 AM - 5:00 PM
Venue	Department Of ECE, BMSCE

Objectives

1. Familiarize participants with fundamental signal filtering techniques for medical data refinement.
2. Introduce key bioinformatics tools, highlighting their applications in genetic data analysis and molecular studies.
3. Conduct hands-on exercises to demonstrate practical applications of signal processing methods for medical data analysis.

Brief summary

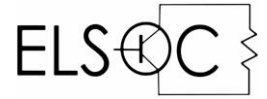
The BMSCE IEEE Signal Processing Society, in collaboration with ELSOC BMSCE, organized an insightful workshop during ELSOC week, focusing on the theme "Medical Signal Processing and Bioinformatics." The event took place at BMS College of Engineering, Bengaluru, and was attended by students, faculty members, and experts in the field of signal processing and bioinformatics. To start this significant event, the Chairperson of the BMSCE IEEE Signal Processing Society Student Branch Chapter extended a warm welcome to the distinguished Chief Guests. With enthusiasm, they greeted the notable guests, acknowledging their invaluable presence. As a gesture of gratitude and respect, the Head of the department of the Electronics and Communication Engineering (ECE) Department at BMS College of Engineering presented a token of appreciation to Dr. DK Ravish, recognizing his remarkable contributions. In a parallel gesture of honor, Dr. HN Latha, representing the college, offered a heartfelt token of appreciation to Dr. KN Madhusudhan, commemorating his exceptional expertise and dedication. These gestures served to exemplify the spirit of mutual respect and collaboration that marked the event, fostering an environment of knowledge exchange and inspiration.

Session 1: Medical Signal Processing and Bioinformatics by Dr. D K Ravish (11:00 AM - 12:30 PM). Dr. D K Ravish, an Associate Professor at the Department of Medical Electronics at Dr. AIT Bengaluru and a senior member of IEEE, delivered an engaging talk. The session covered various fundamental topics: Introduction to Medical Image Processing and Medical Signal Processing, Fundamentals of Medical Image Processing and Medical Signal Processing, Topics in Image Processing and Medical Image Modalities. The participants had the opportunity to gain valuable insights into the critical aspects of medical signal processing and bioinformatics



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during this session. A short tea break was held at 12:30 PM, allowing participants to network and interact with the speakers.

Session 2: Medical Image Security by Dr. K N Madhusudhan (12:45 PM - 1:30 PM) Dr. K N Madhusudhan, an Assistant Professor in the Department of Electronics and Communication Engineering at BMSCE Bengaluru, with expertise in image security, conducted the second session. The session covered: Introduction to Medical Image Security, Case Study and the Need for Medical Image Security, Participants Involvement in Medical Image Security. The participants were enlightened about the significance of securing medical images and data in the healthcare sector. A well-deserved lunch break followed from 1:15 PM to 2:30 PM, providing an opportunity for networking and relaxation.

Session 3: Hands-On Workshop in Electronics Laboratory (2:30 PM - 4:30 PM) The practical segment of the workshop took place in the electronics laboratory. Participants were guided by the experts through hands-on activities related to medical image processing and basic signal processing techniques using MATLAB. This interactive session allowed attendees to apply the knowledge gained from the earlier sessions. The workshop concluded at 4:30 PM, followed by a group photo session where participants and resource persons captured memorable moments of the day.

The workshop on "Medical Signal Processing and Bioinformatics" provided a comprehensive understanding of the subject and equipped participants with practical skills. It was a successful event, thanks to the efforts of BMSCE IEEE Signal Processing Society and ELSOC BMSCE. The valuable insights shared by Dr. D K Ravish and Dr. K N Madhusudhan will undoubtedly benefit the attendees in their future endeavors in the field of medical signal processing and bioinformatics.

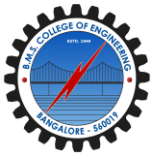


Fig1. HoD Felicitating the speaker.



Fig2. Dr. H N Latha felicitating the speaker.

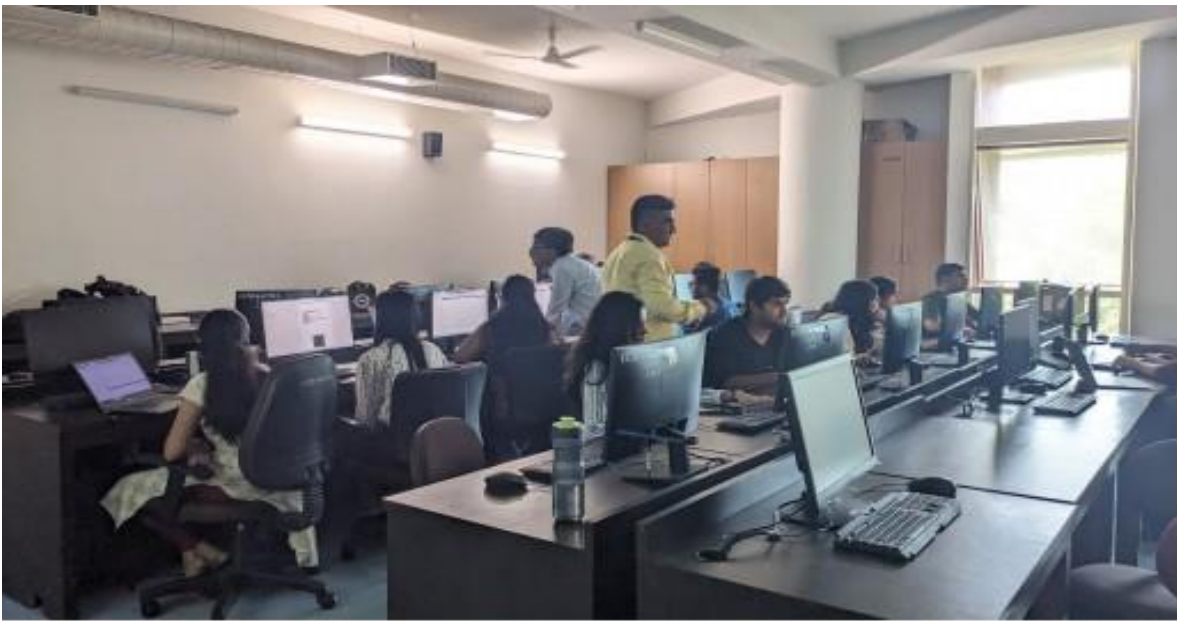
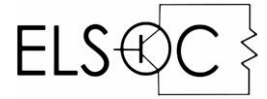


Fig3. Hands-on session



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Name of the event	Electro Oddyssey
Date	19-08-2023
Time	2 PM
Venue	Seminar Hall, Department Of ECE, BMSCE
No. of teams	14 (2 per team)

Objectives

1. Smooth conduction of Electro Oddyssey, a fun event to mark the opening of ELSOC Week 2023.

Presided by

1. Dr. Siddappaji, HOD, Dept. of ECE

Brief summary

"Electro Oddyssey" was an engaging and lively event that marked the grand kickstart of ELSOC Week 2023. The event was meticulously structured, featuring four exciting rounds that combined elements of learning, creativity, and strategic thinking:

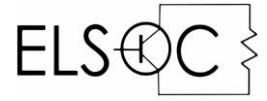
Round 1 - The Electronics Quiz: The event commenced with a stimulating quiz that assessed participants' knowledge of electronics. It was a test of wits and knowledge that set the stage for what was to come. After completing the quiz, participants were presented with a riddle. Deciphering the riddle served as a unique way to lead them to the next location. This combination of knowledge assessment and riddle-solving added an element of challenge and intrigue to the event.

Round 2 - Coding Quest: At the location revealed by solving the riddle, participants ventured into the world of coding. The challenges presented in this round allowed them to showcase their coding skills in either Python or C. Successfully deciphering these challenges unlocked the coordinates to the ECE seminar hall, adding an element of adventure to the event.

Round 3 - Creative Problem-Solving: The third round was not just about technical know-how but also about creativity and presentation skills. Teams were assigned unique problems to solve and were equipped with a menu of 15 strengths to choose from. The teams' task was to select five strengths wisely and use them to creatively address their assigned problems. They then took the stage to present their solutions, engaging in thoughtful debates and captivating storytelling. Judges evaluated their creativity, presentation, and problem-solving prowess. The judges' evaluation criteria, which included creativity and debating skills, added an interesting dimension to this round. The points gained at the end of this round served as the team's life points.



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The Grand Finale: The final round added a dash of excitement and strategy to the event. Teams engaged in a series of mini games, competing for points. What made this round particularly intriguing was the ability to strategically reduce the life points of rival teams using these points. This tactical element introduced an element of suspense, strategy, risk and decision-making with teams carefully plotting their moves to outwit their competition. Teams had to carefully choose when and how to play their mini games to both gain points and strategically weaken their competition. The last team remaining with the highest life points emerged as the event's winner.

As a reward for their efforts, the winning team was presented with a cash prize of 500 rupees, recognizing their achievements in the Electro Odyssey. The event seamlessly blended elements of knowledge, creativity, and strategy, making it an engaging and memorable experience for all participants.

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Fig 2. ELSOC core members with the participants