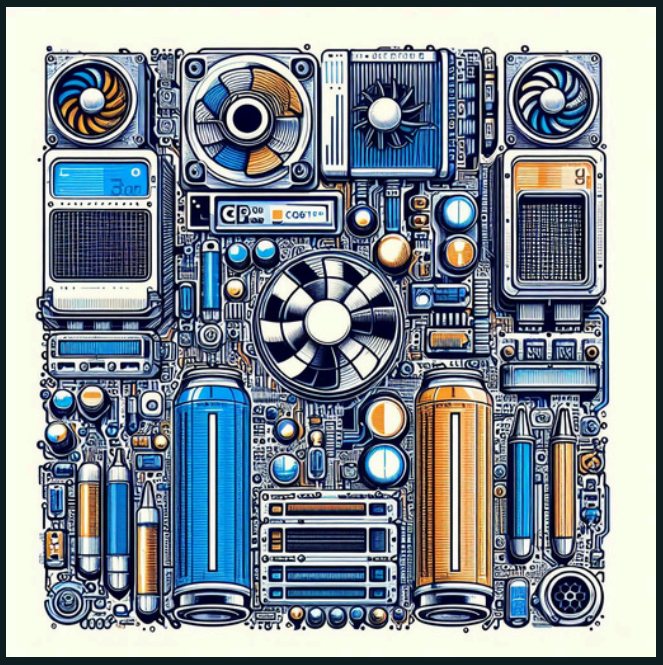
CHANNEL ECE

NEWSLETTER OF ELECTRONICS & COMMUNICATION DEPARTMENT

A.Y. 2023-24

MUFFAKHAM JAH COLLEGE OF ENGINEERING AND TECHNOLOGY

CIRCUIT BY CIRCUIT, WE ILLUMINATE THE PATH TO INNOVATION



AN ENGINEER'S MIND IS THE MOST POWERFUL CIRCUIT BOARD.

TABLE OF

Contents

LETTER FROM **HOD**

Dear Esteemed Readers,

As we reflect on the past year in our Electronics and Communication Engineering Department, I am filled with pride for our community's dedication and achievements. We have reached significant milestones in research, teaching, and service, pushing the boundaries of knowledge in areas such as IoT, Computer Vision, 5G, etc. Our faculty's pioneering efforts not only advance technology but also inspire our students to excel in their academic pursuits.

Our students have demonstrated exceptional resilience and creativity, contributing passionately to various projects and initiatives. Their commitment has fostered a vibrant and collaborative environment within our department, shaping our collective success.

Looking ahead, I am confident that we will continue to uphold our commitment to excellence, innovation, and community. I extend my heartfelt thanks to each member of our ECE family for their unwavering support and dedication. Let us embark on the coming year with renewed enthusiasm and determination to make a lasting impact in Electronics and Communication Engineering.

Warm regards

Ayesha Naaz

DR. AYESHA NAAZ
HEAD, ECED

Engineering is the closest thing to magic that exists in the world.
– Elon Musk

ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

The inception of Electronics and Communication Engineering (ECE) Department dates back to the establishment of the institution in 1980. As one of the founding departments, it excelled very high, with experienced teachers and enthusiastic young students, along with excellent facilities.

ECE Department isn't just about academic excellence; it's a nurturing ground for all-round growth and development in students' lives. The intensive four-year coursework here has been the launchpad for numerous ECE graduates who've excelled professionally, a testament to the rigorous training and holistic education they receive.

The Electronics and Communication Engineering Department at this institution offers a range of programs, including a B.E. in Electronics and Communication Engineering and an M.E. in Digital Systems. Furthermore, the department is recognized as a research center by Osmania University, offering doctoral degrees.

The field of Electronics and Communication Engineering has experienced tremendous growth in recent decades, finding applications in various domains such as consumer electronics, communication, medical electronics, IoT, and product industry. Notably, its advancements in communication have evolved from traditional telephony and telegraphy to modern wireless satellite communication. In healthcare, crucial developments like X-rays, computerized tomography, ECG, and Shortwave-Diathermy owe their existence to this field's innovations.

The B.E. (ECE) program places a strong emphasis on communication systems principles alongside core electronics courses. Students engage with simulation concepts using tools like P-SPICE, Tanner, and Cadence. An intriguing aspect of the program involves student-centric mini-projects introduced from the second year, fostering hands-on learning and practical skill development.

Vision

To be recognized as a premier education center providing state of art education and facilitating research and innovation in the field of Electronics and Communication Engineering.

Mission

We are dedicated to providing high quality holistic education in Electronics and Communication Engineering that prepares the students for successful pursuit of higher education and challenging careers in industry, R&D and academics.

Program Outcomes

Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal and environmental considerations.

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broader context of technological change.

Program Objectives

Graduates will demonstrate technical competence in their chosen fields of employment by identifying, formulating, analyzing and providing engineering solutions using current techniques & tools.

Graduates will communicate effectively as individuals or team members and demonstrate leadership skills to be successful in the local and global cross cultural working environment.

Graduates will demonstrate lifelong learning through continuing education and professional development.

Graduates will be successful in providing viable and sustainable solutions within societal, professional, environmental and ethical contexts.

ECE Students shine in Hack Revolution

The highly anticipated Hack Revolution, powered by ACES, marked a day of boundless innovation and creativity at Muffakham Jah College of Engineering & Technology (MJCET). Organized through the dynamic collaboration of the Computer Society of India (CSI) and E-Cell, this monumental hackathon brought together tech enthusiasts, problem solvers, and budding entrepreneurs in an electrifying atmosphere. With cash prizes totaling up to ₹3,00,000, the event featured four competitive tracks: Healthcare, Fin-Tech, Generic Software, and Generic Hardware, each offering ₹75,000.

The day ignited with a spark as our keynote speaker fired up the crowd, setting the stage for epic idea clashes. The energy was electric as everyone dove headfirst into their creative corners, ready to unleash their inner problem-solving superheroes. It was like a playground for brilliant minds, and the possibilities were endless!

The hackathon saw fierce competition across four tech-driven battlegrounds. In Healthcare, Algorithm Assassins emerged victorious, outmaneuvering Lightheads and Alphas. The Fin-Tech arena crowned BitBounty Hunters as champions, with Digital Titans and Hexa Hive close behind. HexTech dominated the Generic Software track, besting Clutch Monkeys and SLATE. Finally, in the Generic Hardware showdown, Team Robocon MJCET took top honors, while Ababeil and Team Robotics MJCET tied for second, and TouchVision claimed third.

Throughout the day, teams immersed themselves in coding, designing, and problem-solving. Mentors roamed the venue, offering guidance and support, ensuring that participants had all the resources they needed to succeed. The atmosphere was charged with a spirit of collaboration and competition, as teams worked tirelessly to turn their ideas into reality.

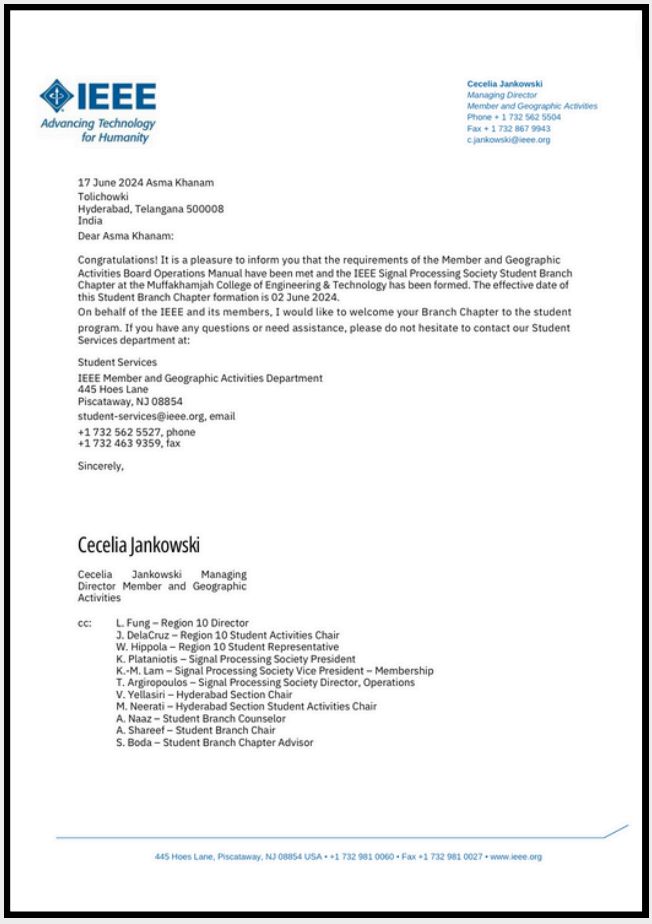
Mini Project Expo

ECED's mini-project expo on February 16, 2024, showcasing 38+ projects on IoT, cybersecurity, 3D printing, and image processing by students. The event was coordinated by Mrs. Shubhangi Saxena and Mr. K. Sasidhar, and aimed to enhance presentation and teamwork skills. Dr. Kaleem Fatima and Nazia Parveen evaluated projects and winning teams where awarded certificates of excellence by Dr. Ayesha Naaz.

The mini-project expo not only served as a platform for technical demonstration but also as a hub for exchanging ideas and networking among students, faculty, and industry professionals present. It sparked discussions on emerging trends and practical applications in various fields of engineering, inspiring participants to explore new avenues for innovation. The interactive nature of the event allowed students to receive valuable feedback, helping them refine their projects and gain deeper insights into their chosen domains. This holistic learning experience not only bolstered technical skills but also nurtured leadership qualities and teamwork, essential for succeeding in today's competitive job market. Overall, the expo highlighted the department's proactive approach in bridging academic learning with industry demands, ensuring students are well-prepared to make meaningful contributions to the field of engineering.

The event was a huge success, driving innovative ideas and fostering creativity. Everyone who contributed played a vital role in its success. Overall, it was a memorable and impactful occasion.

PROFFESIONAL BODY ACTIVITIES



IEEE
Advancing Technology for Humanity

Cecelia Jankowski
Managing Director
Member and Geographic Activities
Phone + 1 732 562 5504
Fax + 1 732 867 9943
c.jankowski@ieee.org

17 June 2024 Asma Khanam
Tolichowki
Hyderabad, Telangana 500008
India

Dear Asma Khanam:

Congratulations! It is a pleasure to inform you that the requirements of the Member and Geographic Activities Board Operations Manual have been met and the IEEE Signal Processing Society Student Branch Chapter at the Muffakhamjah College of Engineering & Technology has been formed. The effective date of this Student Branch Chapter formation is 02 June 2024.

On behalf of the IEEE and its members, I would like to welcome your Branch Chapter to the student program. If you have any questions or need assistance, please do not hesitate to contact our Student Services department at:

Student Services
IEEE Member and Geographic Activities Department
445 Hoes Lane
Piscataway, NJ 08854
student-services@ieee.org, email
+1 732 562 5527, phone
+1 732 463 9359, fax

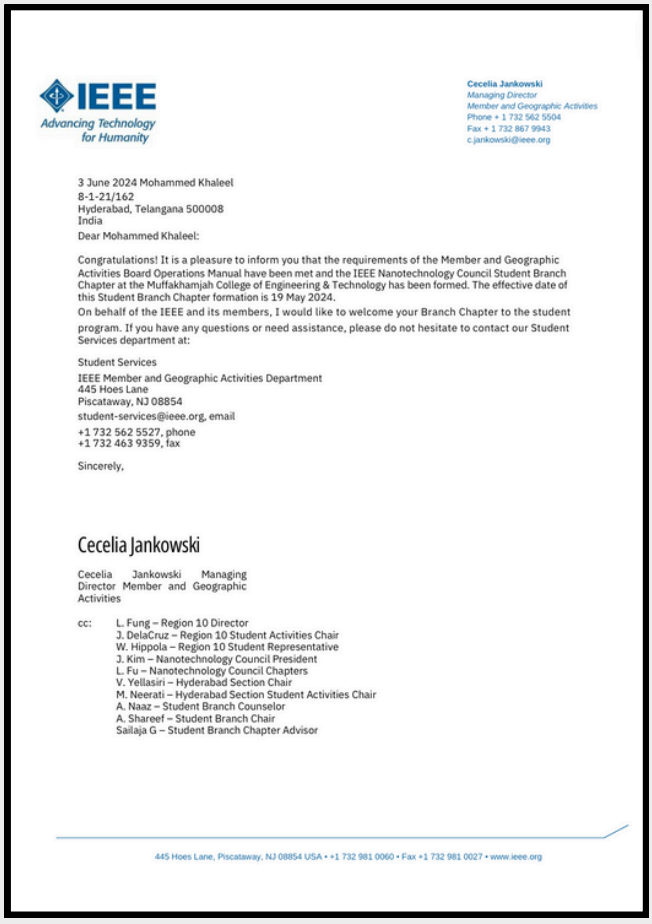
Sincerely,

Cecelia Jankowski

Cecelia Jankowski Managing Director Member and Geographic Activities

cc: L. Fung – Region 10 Director
J. DelaCruz – Region 10 Student Activities Chair
W. Hippola – Region 10 Student Representative
K. Plataniotis – Signal Processing Society President
K.-M. Lam – Signal Processing Society Vice President – Membership
T. Argiropoulos – Signal Processing Society Director, Operations
V. Yellasiri – Hyderabad Section Chair
M. Neerati – Hyderabad Section Student Activities Chair
A. Naaz – Student Branch Counselor
A. Shareef – Student Branch Chair
S. Boda – Student Branch Chapter Advisor

445 Hoes Lane, Piscataway, NJ 08854 USA • +1 732 981 0060 • Fax +1 732 981 0027 • www.ieee.org



IEEE
Advancing Technology for Humanity

Cecelia Jankowski
Managing Director
Member and Geographic Activities
Phone + 1 732 562 5504
Fax + 1 732 867 9943
c.jankowski@ieee.org

3 June 2024 Mohammed Khaleel
8-1-21/162
Hyderabad, Telangana 500008
India

Dear Mohammed Khaleel:

Congratulations! It is a pleasure to inform you that the requirements of the Member and Geographic Activities Board Operations Manual have been met and the IEEE Nanotechnology Council Student Branch Chapter at the Muffakhamjah College of Engineering & Technology has been formed. The effective date of this Student Branch Chapter formation is 19 May 2024.

On behalf of the IEEE and its members, I would like to welcome your Branch Chapter to the student program. If you have any questions or need assistance, please do not hesitate to contact our Student Services department at:

Student Services
IEEE Member and Geographic Activities Department
445 Hoes Lane
Piscataway, NJ 08854
student-services@ieee.org, email
+1 732 562 5527, phone
+1 732 463 9359, fax

Sincerely,

Cecelia Jankowski

Cecelia Jankowski Managing Director Member and Geographic Activities

cc: L. Fung – Region 10 Director
J. DelaCruz – Region 10 Student Activities Chair
W. Hippola – Region 10 Student Representative
J. Kim – Nanotechnology Council President
L. Fu – Nanotechnology Council Chapters
V. Yellasiri – Hyderabad Section Chair
M. Neerati – Hyderabad Section Student Activities Chair
A. Naaz – Student Branch Counselor
A. Shareef – Student Branch Chair
Sailaja G – Student Branch Chapter Advisor

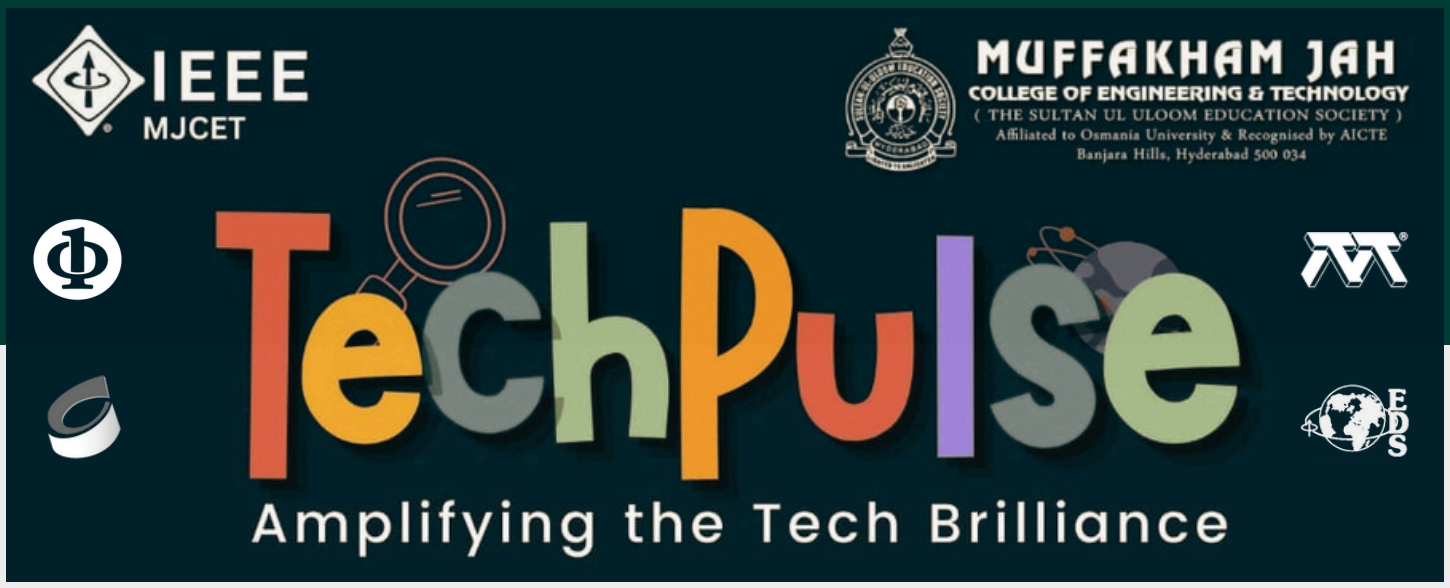
445 Hoes Lane, Piscataway, NJ 08854 USA • +1 732 981 0060 • Fax +1 732 981 0027 • www.ieee.org

Under the guidance of **Dr. Ayesha Naaz, Branch Counsellor**, The IEEE MJCET Student branch has recently launched two new student chapters: **the Signal Processing Society (SPS) and the Nanotechnology Council (NTC)**. These chapters are dedicated to promoting innovation and research in their respective fields, offering students and professionals valuable resources and networking opportunities. The inauguration of SPS, with faculty advisor **Mrs. B. Sucharitha, Assistant Professor, ECED** and NTC, with **Dr. Sailaja, Associate professor, MECH** as faculty advisor, signifies a significant milestone. The establishment of these chapters followed petitions filed by dedicated students, with **Ms.Asma Khanam, Chair IEEE SPS,** and **Mr.Mohammed Khaleel, Chair IEEE NTC**, playing pivotal roles in this achievement. Their hard work and commitment were instrumental in gaining approval. These chapters will provide specialized funding, support for advanced projects, and opportunities to participate in conferences and workshops, enhancing technical skills and fostering professional and academic growth at MJCET.

TechPulse

In collaboration with IEEE CS , CASS, EDS, and MTT MJCET

A tech filled exhibition for the budding engineer to show off his skill and ingenuity.



TechPulse fostered creativity and innovation among aspiring engineers, promoting collaboration and skill development. Throughout the day, participants engaged in competitive presentations, showcasing their technical skills and innovative solutions. The dynamic competitions were designed to challenge and bring out the best in participants, promoting teamwork and collaborative problem-solving.

TechPulse offered an enticing prize pool of 20,000/-, motivating participants to showcase their best work and compete at the highest level. Winners not only received monetary rewards but also gained recognition for their accomplishments.

With an overwhelming response, over 300 enthusiastic students from diverse engineering disciplines participated, highlighting the event's inclusive nature.

TechPulse emerged as a success, creating a vibrant atmosphere of innovation and collaboration. The event provided a platform to explore emerging technologies, exchange ideas, and network with industry experts exemplifying the transformative power of technology in shaping the future of engineering and beyond.

Scientists discover the world that exists; Engineers create the world that never was.
-Theodore Von Karman

TechPulse featured three main themes for teams to participate in: Hardware, Software, and the integration of both. The event showcased a plethora of innovative technologies created by students, ranging from an IoT Enabled Smart Home to a Deepfake Detection Algorithm. Among the standout projects were a CNC Plotting Machine, a Smart Healthcare System, a Four-Legged All-Terrain Rover, and a Smart Pharmacy System.

TechPulse served as a vibrant tapestry of student creativity and technological ingenuity. The diverse array of projects not only demonstrated the depth of technical knowledge but also unveiled the boundless creativity within our student community. Each project offered a unique perspective, highlighting the students' dedication to solving real-world problems through cutting-edge technology.

Each project offered a unique perspective, highlighting the students' dedication to solving real-world problems through cutting-edge technology. The event fostered an environment where ideas flourished, inspiring collaboration and pushing the boundaries of what is possible in the realm of technology and innovation.

Several events were organized under the aegis of student's professional chapters/societies such as Student Workshops, Technical Talks, Seminars, Guest Lectures, Coding Competitions, Technical Visits, and Student Conference.

- The IEEE Circuit and System Society's workshop on IoT Spark, conducted on November 17, 2023. The workshop focused on imparting essential knowledge of Arduino through a series of hands-on experiments. Our esteemed lecturers, serving as speakers, delivered engaging sessions that provided valuable insights into the intricate world of IoT.
- IEEE CASS MJCET proudly hosted ElectroVision, a dynamic workshop designed to ignite the passion for electronics among students and enthusiasts. The primary aim of ElectroVision was to unravel the mysteries of basic electronic components, laying a strong foundation for the participants' future projects.
- Hosted by the Department of Electronics and Communication Engineering at MJCET and supported by IEEE Student Branch CAS, the VLSI internship included both offline and online

hosted by the Department of Electronics and Communication Engineering at MJCET and supported by IEEE Student Branch CAS, the VLSI internship included both offline and online

- Electro Quest offered a thrilling journey through the realms of electronics and memory challenges, encapsulating three engaging rounds designed to test and enhance participants' skills. From arranging basic circuit components to designing circuits under time constraints and mastering a memory game with blinking lights and buzzer sounds, the event promises excitement and learning.

- MJCET IEEE Computer Society (CS) presented a unique opportunity for tech enthusiasts and professionals alike! Diving deep into the world of DevOps with insights from an industry expert. The session promised and delivered on unravelling the complexities of DevOps practices, strategies, and implementation techniques.
- The IEEE Computer Society Chapter organized a dynamic and engaging tech event, "Innovate & Elevate," on November 18, 2023, featuring a plethora of activities aimed at fostering creativity, collaboration, and technical prowess. Teams displayed coding expertise, problem-solving skills, and ingenuity in a fiercely competitive software competition, fostering a stimulating atmosphere of friendly rivalry.
- CYBERSEC-UNLOCKING THE WORLD OF ETHICAL HACKING. The event provided a unique opportunity for students to learn from an experienced ethical hacker and gain insights into the world of cybersecurity. The hands-on hacking demo and interactive session helped attendees understand the hacker's mindset and explore various cybersecurity domains. The event also offered valuable career guidance and advice for those interested in pursuing a career in cybersecurity
- IEEE CS and CASS organized the "INTELLECTUAL RUMBLE" event to boost creativity. It includes three rounds: "Drawn Secrets," focusing on creativity and guessing; "Answer Assault," a rapid-fire guessing game; and "Bits and Bytes," a quiz covering various topics. The event aims to foster a competitive and stimulating atmosphere.

CyberSec event held by IEEE CS

CyberSec event speaker Mr. Sarwar Jahan shedding light on cybersecurity

IEEE MJCET SB held a plantation drive

DevOps event conducted by IEEE CS

Competition held by IEEE CS

Electrovision event hosted by IEEE CAS

Several events were organized under the aegis of student's professional chapters/societies such as Student Workshops, Technical Talks, Seminars, Guest Lectures, Coding Competitions, Technical Visits, and Student Conference.

- The "Awareness on HAM Radio" webinar, organized by the Lamakaan Amateur Radio Club and hosted by MJCET, was a resounding success. With enlightening presentations by Ashar Farhan and Kishore, participants left with a deeper understanding and appreciation of HAM radio technology. The interactive session fostered active engagement, ensuring that attendees could make the most of this educational opportunity. The event underscored MJCET's commitment to providing valuable learning experiences for its students and the broader community.

- The IEEE MTT-S/AP-S Workshop and Students Conclave held at Matrusri Engineering College in Hyderabad was a significant event focusing on advancements in microwave theory, techniques, antennas, and propagation. It offered a platform for networking among students, researchers, and professionals in the field of microwave and antenna technology. This allowed for fruitful discussions and the exchange of ideas.

- The webinar on "Future Prospects of Women in Engineering in Light of RF" provided a platform for knowledge sharing and inspiration. The event highlighted the potential and opportunities for women in RF Engineering, encouraging more participation and advancement in the field. This event not only underscored the significance of gender diversity in engineering but also demonstrated the collective effort needed to foster an inclusive environment. Dr. Madhumita Chakravarti's insights emphasized the evolving landscape of RF technology and the critical role women can play in shaping its future.

- The IEEE EDS student branch at MJCET hosted an insightful webinar titled "Wireless Power Transfer for Electric Vehicles," featuring Dinesh Kithany, Chief Analyst and Founder of Wired & Wireless Technologies (WAWT). This informative session, attended by 40 participants, including 20 active IEEE members, explored the evolution and applications of wireless power transfer (WPT).

- The IEEE EDS Club was delighted to host the Circuit Craft Quest Competition on November 18, 2023, at Gulam Ahmed Hall as part of the IEEE Day celebrations. This exciting competition featured three distinct segments: Find the Defect, Buzz, and Loop. These activities provided participants with a platform to demonstrate their technical prowess, problem-solving skills, and innovative thinking.

- The IEEE RAS & EDS Workshop on Wireless Charging was successfully conducted, offering engineers a deep dive into the intricacies of designing wireless charging systems and circuits. Participants explored the fundamental principles and practical applications of wireless charging technology, leveraging tools such as Ansys and LTspice to gain hands-on experience. The workshop provided attendees with valuable insights into the future of electric vehicles (EVs) and sustainable transportation solutions. Through interactive sessions and practical demonstrations, participants learned to conceptualize and implement efficient wireless charging systems.

IEEE MTT-S/AP-S Workshop and Students Conclave

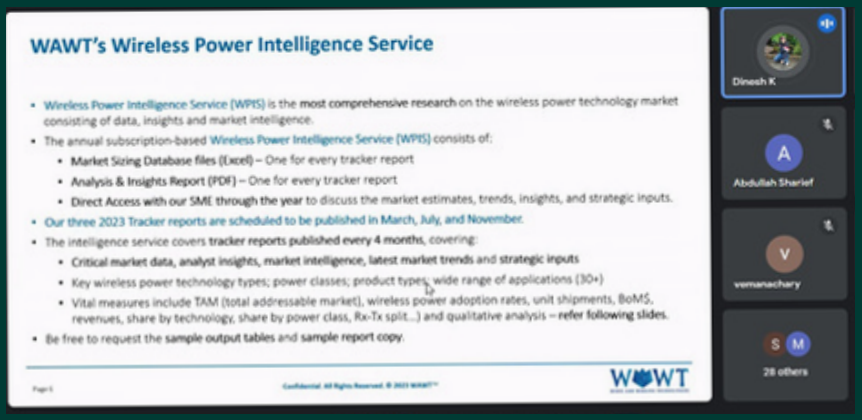
Awareness on Ham Radio by Lamakaan Amateur Radio Club

Talk on “Awareness of Ham Radio” by Lamakaan Amateur Radio Club

Circuit Craft Quest Competition by IEEE EDS

ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)
ON
Role of Artificial Intelligence for Computer Vision and Medical Imaging Applications
(4th March –12th March 2024)
Organised by
Electronics & ICT Academy, NIT Warangal
In Association With
Department of Electronics and Communication Engineering
Muffakham Jah College of Engineering and Technology, Hyderabad, Telangana
(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

A Faculty Awareness Program



Webinar on Wireless Power Transfer for Electric Vehicles by IEEE EDS

Wireless Charging event held by IEEE EDS

Several events were organized under the aegis of student's professional chapters/societies such as Student Workshops, Technical Talks, Seminars, Guest Lectures, Coding Competitions, Technical Visits, and Student Conference.

- The "No Entry: Ethical Hacking 101" workshop by IEEE WIE MJCET, led by Shazia, Saima, Uzma, and Saleha, provided a comprehensive introduction to cybersecurity for beginners. The workshop emphasized the distinction between ethical and malicious hacking, highlighting the role of ethical hackers in identifying vulnerabilities with system owner permission. Participants engaged in practical exercises, such as vulnerability scanning and penetration testing, to apply their knowledge. The event concluded with an interactive quiz to reinforce key takeaways and ensure a solid understanding of ethical hacking principles.

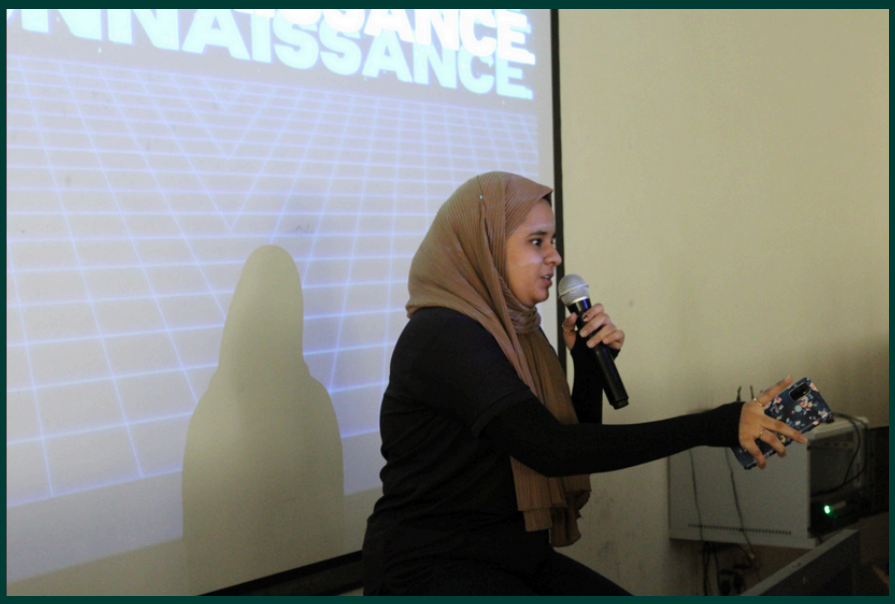
- The summer mentorship program by IEEE Women In Engineering MJCET aimed to educate its technical team on coding small-scale projects, combining cutting-edge technologies with foundational programming skills. Through a series of webinars and hands-on sessions, participants developed a chatbot using Hugging Face tools like Hugchat and Gemini, and deployed it with Streamlit for practical application. They also created a customized chatbot for data visualization using Kaggle datasets. The program included training in HTML and CSS to enhance web development skills, alongside comprehensive lessons in traditional programming fundamentals, ensuring participants gained a well-rounded technical education.

- Code Purple, organized by IEEE WIE MJCET, was a vibrant expo that gathered over 200 students to showcase their innovative engineering projects. The event featured a diverse array of projects, from robotics and AI to renewable energy and biomedical devices, highlighting the students' creativity and technical prowess. It fostered collaboration among participants and provided a valuable platform for learning and networking with industry professionals, faculty, and peers. Aligned with IEEE WIE's goals, Code Purple promoted diversity and inclusion in STEM, encouraging female participation and showcasing women's contributions to engineering innovation. The event underscored students' innovation, skill development, and community engagement.

- The AESS Chapter of IEEE Hyderabad Section, in collaboration with the MTT-S and WIE Chapters of MJCET SB, hosted a webinar on "Future Prospects of Women in Engineering in Light of RF" on July 5th, 2024. Dr. Madhumita Chakravarti, the keynote speaker and retired Director of CMSDS, DRDO, highlighted Sisir Kumar Mitra's pioneering role in radio research in India and the achievements of Smt. Sudhira Das in women's technical education. She discussed the current educational opportunities in microwave engineering, noting that 32 institutions offer relevant courses, with 28 ME/M.Tech programs and 4 BE/B.Tech programs. The event concluded with an interactive session, fostering a dynamic exchange of ideas and insights into the future of women in RF engineering.

- The IEEE Women in Engineering (WIE) MJCET conducted a successful membership drive to encourage new members to join their community. The event resulted in the recruitment of over 20 new members, with 10 also opting for IEEE memberships, indicating a strong interest in the broader organization. Immediate commitment was shown as 2-3 individuals completed their membership payments on the spot. The drive highlighted cross-club memberships, showcasing the diverse interests of the student body and fostering interdisciplinary collaboration. Interactive sessions, presentations, and discussions about upcoming events generated excitement and engagement among potential members.

IEEE Day at MJCET, organized by the IEEE WIE Chapter Execom Members



Chair person Shazia addresing the audience at the “Ethical Hacking, No entry” Event

Attendees Interacting with WIE MJCET stall and taking pictures through the Instagram post layout

The AESS Chapter of IEEE Hyderabad Section, in collaboration with the MTT-S and WIE Chapters of MJCET SB, hosted a webinar on "Future Prospects of Women in Engineering in Light of RF" on July 5th, 2024.

EVENTS AND WORKSHOPS

- Robotics MJCET represented MJCET at RoboVeda 2023 hosted at Sreenidhi Institute of Science and Technology, participating across both days of the event. The team advanced to the semifinals in two tracks and successfully qualified in two additional categories, showcasing their strong performance and competitive spirit.
- On December 6, 2023, Robotics hosted "Track Bots," drawing participants from all years and batches with impressive attendance. The event focused on practical learning using Arduino and beginner-friendly components, aiming to impart essential skills in robotics and electronics. It provided an engaging platform for participants to deepen their understanding and enthusiasm for technology, fostering a collaborative and educational atmosphere throughout the event.
- "Teaching is Half Learning" is a motto we uphold at Robotics MJCET. At Urwah High School, Robotics MJCET organized a voluntary event that included hands-on sessions on robotics and drones. The event aimed to cultivate an interest in science and technology among school-level students. The quiz at the end was the most enthusiastic and captivating moment of the day, reflecting their engagement.

- Team Robocon MJCET successfully advanced through rounds 1 and 2 of ABU Asia-Pacific Robot Contest, showcasing their prowess in robotics and engineering. Their achievement underscores their dedication and skill in navigating challenging competition environments.
- Team Robocon MJCET has triumphed in rounds 1 and 2 of DD Robocon and is now poised for round 3 in Delhi. Their advancement highlights their expertise in robotics and determination to excel in competitive arenas, setting a strong precedent for future competitions.

- At the Cadism event, we conducted hands-on sessions for over 50 participants in PCB design, 3D shape modeling, and 3D printing using EGDA and Onshape. This initiative aimed to equip attendees with advanced skills in these critical design tools, promoting practical experience and professional development opportunities.
- PyWeek, our online 7-day Python workshop, engaged over 130 student participants. Over seven days, each dedicated to a distinct Python project, it provided an immersive learning experience. This initiative aimed to cultivate valuable programming skills among attendees, contributing to their proficiency and enthusiasm in Python development.
- Interpreneur, an internship with ATTA, drew over 80 students. Focused on HTML, CSS, and JavaScript, it featured hands-on projects. The program aimed to equip students with practical web development skills, preparing them for challenges in the dynamic tech sector.
- Two teams, "Bionic Arm" and "Metro Station," from TSIG participated in Aakruti. Our teams achieved recognition by being shortlisted among the top 30 finalists, showcasing our commitment to innovation and excellence in the competition.
- TSIG participated in an ISRO competition and was recognized among the top 50 out of over 2,000 teams from across India. This achievement underscores our commitment to excellence and innovation in the field, reflecting our competitive spirit and technical prowess.
- Team TSIG participated in the Abdul Kalam Innovation Competition and was awarded a consolation prize, showcasing our commitment to innovation and excellence in the field.

Robotics MJCET held a session on robotics at a school

Robotics MJCET at a school imparting interest in science

Explaining robots and electronics to school children

Robotics MJCET hosted an event TrackBots

Robotics MJCET hosted an interactive event on Arduino, electronic sensors, bots and much more

FACULTY CORNER

FACULTY RECOGNITION

The academic year 2023-24 marked significant achievements by the faculty of the ECE department. Ranging from research publications to pioneering innovations and academic excellence, each of the faculty has contributed to the growth of the ECE department, unearthing new pearls of knowledge

The ECE department at MJCET proudly recognizes the outstanding academic accomplishments of its faculty members **Dr. Nazeerunnisa** (Sr. Assistant Professor) and **Dr. Afshan Kaleem** (Sr. Assistant Professor) who have successfully acquired their Ph.D. degrees in the academic year 2023-24.

FACULTY ACHIEVEMENTS

The academic year 2023-24 has been marked by significant achievements of the faculty members. Their contributions to research and innovation have been recognized through various awards and honors.

DR. NAZEERUNNISA

SR. ASSISTANT PROFESSOR

Awarded Faculty Incentives by MJCET for research journal paper publications (3 papers) in SCI and Scopus indexed journals on April 24th, 2024. Dr. Nazeerunnisa's prolific output in high-impact journals underscores her commitment to advancing research in her field.

DR. SALMA FAUZIA

ASSOCIATE PROFESSOR

Received Faculty Incentives from MJCET in recognition for a journal publication (1 paper) and a book chapter on April 24th, 2024. Dr. Fauzia's dedication to research and her scholarly contributions are highly commendable.

DR. SABIR HUSSAIN

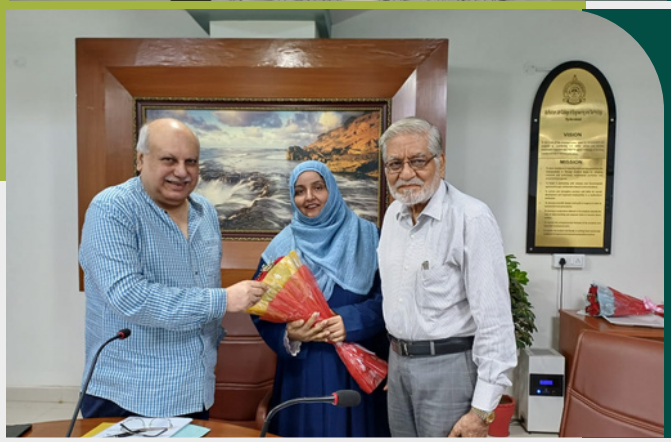
ASSOCIATE PROFESSOR

Awarded the "Best Paper Award" at the IEEE 5th International Conference on Devices for Integrated Circuits, 2023. This prestigious recognition reflects Dr. Hussain's outstanding research and contribution to the field of integrated circuits.

DR. NAZEERUNNISA

SR. ASSISTANT PROFESSOR

Invited as a Resource Person in Faculty Development Program(FDP) on "Advances in 5G Technology & Beyond" at GITAM University. Her expertise in cutting-edge technology and role in disseminating knowledge highlight her significant contributions to academia.



DR. AFSHAN KALEEM

SR. ASSISTANT PROFESSOR

Dr. Afshan Kaleem was warmly celebrated and applauded by society members for her outstanding achievement in completing her Ph.D. Her dedication and scholarly prowess have truly inspired everyone, marking a significant milestone in her academic journey.

The ECE department has been remarkably active in publications, showcasing their strong commitment to research. The faculty's dedication to contributing to the body of knowledge is evident through their numerous publications in journals and conferences.

International Journals: The faculty members have published a total of 9 papers in various international journals, highlighting their ongoing efforts to engage with the global research community and contribute valuable insights and advancements in their respective fields.

International Conferences: The faculty has presented 7 papers at international conferences. These conferences provide a platform for the faculty to share their research findings, network with other professionals.

Books: The faculty's academic contributions extend beyond journals and conferences. They have published 1 book chapter and edited 2 books. These publications are a testament to the faculty's expertise and their role in providing comprehensive and authoritative resources for both students and fellow researchers.

FACULTY CORNER

1 Guest Lecture by Dr. M Mohammed Sabir Hussain

Dr. M Mohammed Sabir Hussain, Associate Professor at Muffakham Jah College of Engineering & Technology, presented a session on “smart sensors” in healthcare, emphasizing energy efficiency, reliable communication, biosensors, and VLSI applications.

Dr. M Mohammed Sabir Hussain, Associate Head in ECED at Muffakham Jah College of Engineering & Technology, Hyderabad, was resource persona at the AICTE-VAANI sponsored workshop titled “Medical Technology and E-Health” organised by the Department of Electronics and Communication Engineering, Shadan College of Engineering and Technology. His session delved into the advancements and applications of smart sensors in healthcare, emphasizing energy-efficient design, reliable communication, and fault-tolerant sensor systems. Topics included wearable electronics, biosensors, and VLSI design for multi-sensor smart systems. Dr. Sabir Hussain also discussed innovative testing methods to enhance sensor reliability and efficiency, concluding with practical demonstrations and an interactive session highlighting smart sensors' transformative potential in modern healthcare.

---

2 ECE Staff attended AICTE workshop

Dr. Salma Fauzia and Ms. Maliha Naaz attended a 3-day AICTE-sponsored workshop on designing medical devices at Shadan College, Peerancheru.

Dr.Salma Fauzia, Associate Professor, and Ms.Maliha Naaz, Assistant Professor from ECE department attended a 3 day AICTE sponsored workshop on “Recent developments in design of Medical devices using latest technologies to diagnose various health conditions” from 20th June-22nd June, 2024 organized by Shadan College of Engineering and Technology, peerancheru.

3 Students of MJCET Attend IEEE Workshop

Students from IEEE MTT-S MJCET SB, accompanied by Dr. Ayesha Naaz and Dr.Nazeerunnisa Qurishi, attended a Workshop and Student Conclave at Matrusri Engineering College on June 28, 2024. Organized by IEEE Hyderabad Section MTT-S/AP-S/EMC-S Joint Chapter, the event featured notable speakers discussing antennas and related fields, enriching participants' knowledge.

Students from IEEE MTT-S MJCET SB attended a Workshop and Student Conclave on June 28, 2024, at Matrusri Engineering College. The event was organized by the IEEE Hyderabad Section MTT-S/AP-S/EMC-S Joint Chapter. Accompanying the students were Dr.Ayesha Naaz, Head of the ECE Department, IEEE MJCET SB Counsellor and IEEE MTT-S faculty advisor Dr. Nazeerunisa Qurishi. The workshop featured distinguished speakers, including Prof. Debatosh Guha, IEEE AP-S Distinguished Lecturer from IRPE, University of Calcutta, who elaborated on the role of antennas, and Prof. Chinmoy Saha, IEEE MTT-S R10 Coordinator, who contributed valuable insights into the field.

Event Highlights:

- **Distinguished Speakers:** The event featured talks by renowned speakers such as **Prof. Debatosh Guha and Prof. Chinmoy Saha.** Their presentations covered cutting-edge topics in antenna science, microwave wireless power transfer, and other significant areas within the field.
- **IEEE Membership Benefits:** Participants gained valuable insights into the benefits of IEEE membership, fostering a stronger sense of community and professional development opportunities.
- **75th Anniversary Celebration:** The event also served as a celebration of the 75th Anniversary of IEEE AP Society, highlighting its contributions to the advancement of antenna and propagation technologies globally

SUPERANNUATION

Superannuation of Mr. Hifazath Ali Khan | 31/12/2023

Mr. Hifazath Ali Khan: A Legacy in Analog Communications

Mr. Hifazath Ali Khan, whose recent superannuation marks the end of an illustrious career spanning almost four decades at Muffakham Jah College of Engineering and Technology, was undeniably a cornerstone in the institution's academic edifice. For which he was felicitated by the principal of MJCET, Prof. Mahipal Singh Rawat. Renowned for his expertise in Analog Communications, his lectures were more than just academic discourses; they were transformative experiences. Students often described his classes as a captivating blend of theoretical depth and practical relevance, making complex concepts accessible and engaging. His ability to simplify intricate topics and his knack for illustrating them with real-world examples earned him the respect and admiration of countless students who passed through his classroom.

FACULTY PUBLICATIONS

Name of the Author	Title	Name of the Journal / Conference	Year of publication
Dr. Ayesha Naaz	A Survey on Identifications of Hotspots using DSP Methods	Recent Trends in Analog Design and Digital Devices	April 2023
Dr. Kaleem Fatima	Compound Metric Assisted Trust Aware Routing for Internet of Things through Firefly Algorithm	International Journal of Intelligent Engineering and Systems	Feb 2023
	Design and Development of Novel Refresh Technique for Gain Cell Embedded DRAM	SN Computer Science	October 2023
Dr. Sabir Hussain	An Introductory Review on Nanoparticles Based Treatment of Cancer	Middle East Journal of Applied Science & Technology (MEJAST)	March 2024
	Investigating Public Awareness and Attitudes towards People with Bipolar Disorder in Punjab, Pakistan: A Cross-Sectional Study	Pakistan Journal of Health Issues	October 2023
	ASIC vs FPGA based Implementations of Built-In Self-Test	International Journal of Advanced Natural Sciences and Engineering Researches	July 2023

FACULTY PUBLICATIONS

Name of the Author	Title	Name of the Journal / Conference	Year of publication
Dr. Nazeer Unnisa	Red Deer Optimisation-Based Delay Minimisation for mmWave Communication System Enabled with Mobile Edge Computing	Journal of Information & Knowledge ManagementVol. 22, No. 04, 2350014 (2023)	Sep 2023
Dr. M. A Raheem	ASIC vs FPGA based Implementations of Built-In Self-Test	International Journal of Advanced Natural Sciences and Engineering Researches	July 2023
Ms. Maliha Naaz	A DC-DC Boost Converter using PWM with 65%efficiency	2023 IEEE Devices for Integrated Circuit (DevIC)	April 2023
	Design of DC-DC Boost Converter Using PFM Switching Technique	2023 IEEE Devices for Integrated Circuit (DevIC)	April 2023

Here are some trending facts about Electronics and Communications Engineering (ECE) in 2024:

5G and Beyond: The deployment and advancement of 5G technology are in full swing, with a focus on enhancing connectivity, reducing latency, and increasing data transfer speeds. Research into 6G technology is also gaining traction, promising even more revolutionary changes in communication networks.

Internet of Things (IoT): IoT continues to expand rapidly, with more devices becoming interconnected. ECE professionals are at the forefront of developing and securing these networks, ensuring seamless and secure communication between devices.

Artificial Intelligence (AI) Integration: AI and machine learning are being integrated into various ECE applications, including smart grids, autonomous vehicles, and advanced robotics. This integration is driving innovation and creating new opportunities within the field.

Quantum Computing: Research in quantum computing is advancing, with potential applications in cryptography, optimization, and complex simulations. ECE engineers are exploring how to develop and utilize quantum communication networks.

FACULTY PROMOTIONS

DR. AYESHA NAAZ

HEAD, ECED

Dr. Ayesha Naaz, formerly the incharge HOD, has been promoted as the Head of the ECE Department.

DR. M MOHAMMED SABIR HUSSAIN

ASSOCIATE HEAD

Dr. M Mohammed Sabir Hussain has served as an assistant professor and associate professor for 18 years. He has been promoted to the position of Associate Head, ECED

DR.MOHAMMED ABDUL RAHEEM

ASSOCIATE PROFESSOR

Dr.Mohammed Abdul Raheem working as an Assistant professor has been been promoted to the position of Associate Professor,ECED

DR. SALMA FAUZIA

ASSOCIATE PROFESSOR

Dr.Salma Fauzia serving the institution as Assistant Professor has now been promoted to the position of Associate professor, ECED

STUDENT ACHIEVEMENTS

- The students in the Electronics and Communications Engineering department at Muffakham Jah College of Engineering and Technology exhibit both the skills and the passion to excel in academics as well as sports.
- They have an exceptional knack for setting their minds on achieving goals.
- The ECE students delve into a wide range of technical fields, not all of which are directly related to electronics. From Web designing to Cybersecurity, many and more such fields are explored.
- The students of the ECE department at MJCET excel not only in academics and technology, but also in many sports, always giving their best effort regardless of the outcome.

Mohd Hamza Anwar

Mohd Hamza Anwar presented a review paper on simultaneous wireless power and data transfer at the 5th International Conference on Design and Manufacturing Aspects for Sustainable Energy. He also published a research paper on coil geometry's effect on wireless power transfer in AUVs at the IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET).

Consistency is the last refuge of the unimaginative
- Oscar Wilde

Maleeha Naba

Has achieved the 29th rank in TS PGCET. The Telangana State Post Graduate Engineering Common Entrance Test is a state-level entrance exam conducted for admission into postgraduate (PG) programs in engineering, pharmacy, and other related fields.

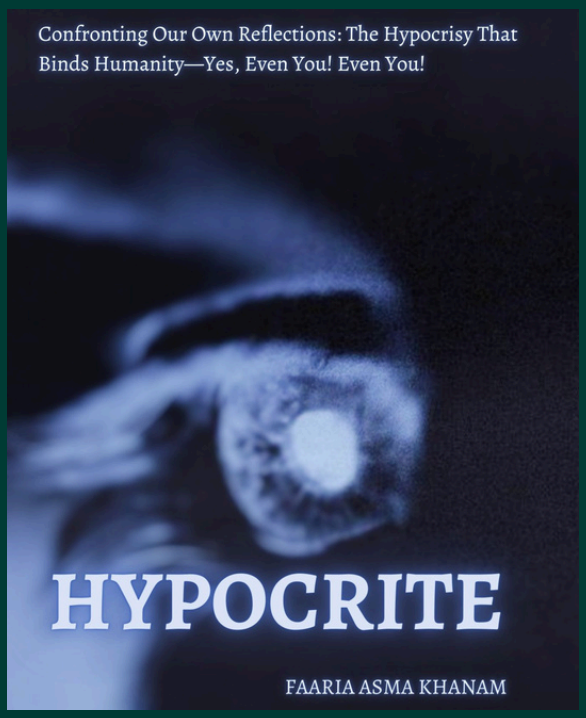
Zaid Amer Syed

With various sports achievements under his belt, Zaid Amer is also the sports co-ordinator in the sports department and has conducted multiple sports events in the college.

A prodigy in football, his team achieved gold in the SNIST Inter-College Football Tournament as well as silver in the HFL Cup 2023

Ikram Hyderi

Persevering towards a career in Cybersecurity, Ikram Hyderi is also a campus ambassador for ShadowFox. He encourages and guides his peers in the field of Cybersecurity.



Asma Khanam

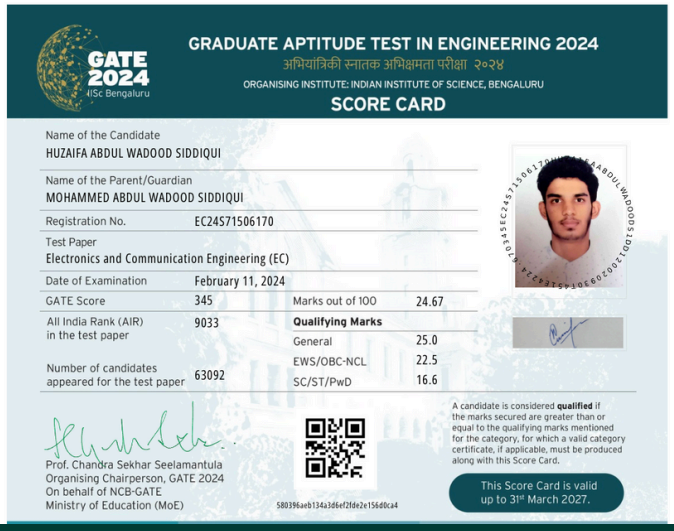
- Asma Khanam, along with her team, achieved 2nd place in the Mini Project Expo 2024 organized by the Department of ECE on February 16, 2024. Their project, titled "Aquasentinel," aims to combat water pollution.
- She has also been honored as an IEEEXTREME Student Ambassador and recently published a poetry book titled "Hypocrite."
- Additionally, Asma successfully petitioned to establish a new IEEE chapter, SPS (Signal Processing Society), which was approved on July 2nd by the IEEE Board. Dr. Ayesha Naaz, Head of ECED, and Mrs. B. Suchirita, Assistant Professor, provided guidance and support for this initiative.

Mirza Farhan Baig

Mirza Farhan Baig is a national-level baseball player who represented Telangana in the Indian Baseball League conducted by the Baseball Federation of India, highlighting his talent and contribution to the sport at a competitive level.

Huzaifa Abdul Wadood Siddiqui

Huzaifa Abdul Wadood Siddiqui achieved a of ranking 9,033 out of 63,092 candidates. His performance underscores dedication and skill in a competitive academic setting, inspiring peers with his achievement.



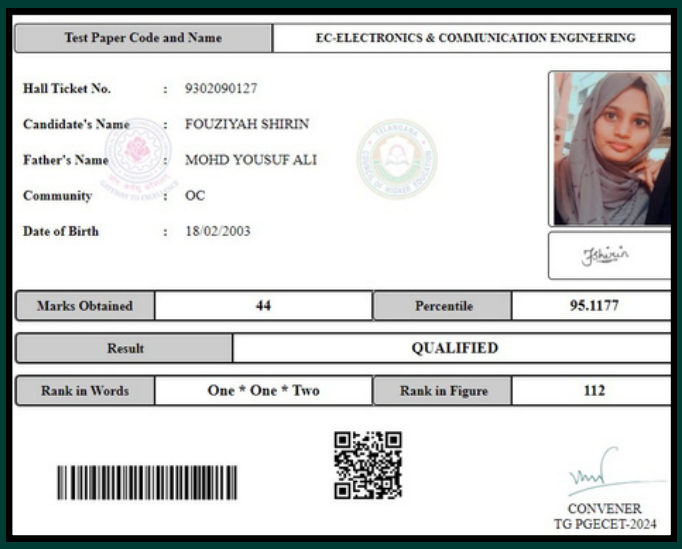
GRADUATE APTITUDE TEST IN ENGINEERING 2024
अभियांत्रिकी स्नातक अभिक्षमता परीक्षा २०२४
ORGANISING INSTITUTE: INDIAN INSTITUTE OF SCIENCE, BENGALURU
SCORE CARD

Name of the Candidate: HUZAIFA ABDUL WADOOD SIDDIQUI
Name of the Parent/Guardian: MOHAMMED ABDUL WADOOD SIDDIQUI
Registration No.: EC24571506170
Test Paper: Electronics and Communication Engineering (EC)
Date of Examination: February 11, 2024
GATE Score: 345
Marks out of 100: 24.67
All India Rank (AIR) in the test paper: 9033
Qualifying Marks — General: 25.0; EWS/OBC-NCL: 22.5; SC/ST/PwD: 16.6
Number of candidates appeared for the test paper: 63092

Prof. Chandra Sekhar Seelamantula
Organising Chairperson, GATE 2024
On behalf of NCB-GATE
Ministry of Education (MoE)

A candidate is considered **qualified** if the marks secured are greater than or equal to the qualifying marks mentioned for the category, for which a valid category certificate, if applicable, must be produced along with this Score Card.

This Score Card is valid up to 31st March 2027.



Test Paper Code and Name	EC-ELECTRONICS & COMMUNICATION ENGINEERING		
Hall Ticket No. :	9302090127		
Candidate's Name :	FOUZIYAH SHIRIN		
Father's Name :	MOHD YOUSUF ALI		
Community :	OC		
Date of Birth :	18/02/2003		
Marks Obtained	44	Percentile	95.1177
Result	QUALIFIED		
Rank in Words	One * One * Two	Rank in Figure	112

CONVENER
TG PGECET-2024

Fouziyah Shirin

Fouziyah Shirin secured a rank of 112 in the TG-PGECET-2024 for EC-Electronics & Communication Engineering. Conducted by JNTU Hyderabad on behalf of TGHCE, this achievement highlights her excellence and dedication in a competitive examination.

Mohammed Hassan Ahmed

Mohammed Hassan Ahmed won Second Prize at the APJ Abdul Kalam Innovation Project Award 2024 for his project on cardiovascular disease detection using image processing and machine learning, highlighting his innovation in medical diagnostics.

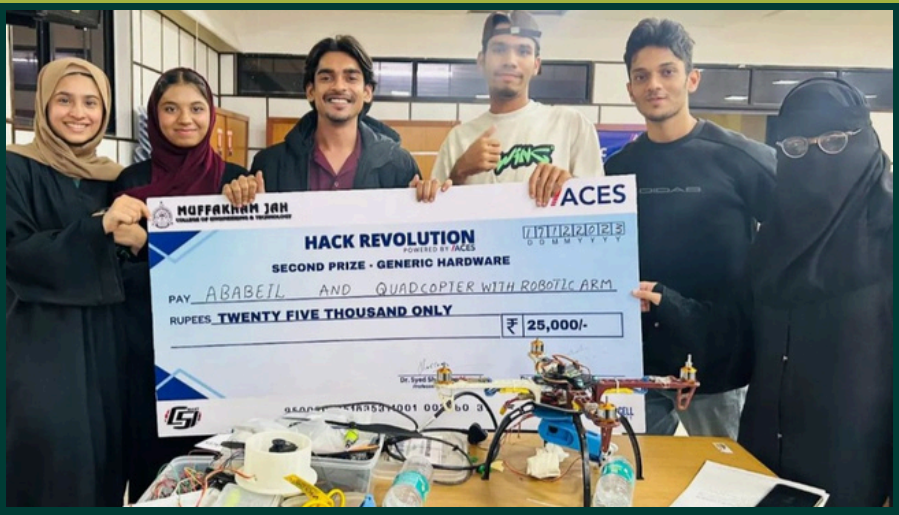
Muffakham Jah College of Engineering and Technology
Department of Electronics and Communication Engineering

ABDUL KALAM INNOVATION PROJECT AWARD 2024
THIS CERTIFICATE IS PROUDLY PRESENTED TO
Mohammed Hassan Ahmed
FOR THE
PROJECT TITLED Cardiovascular Disease Detection Using Image Process And Machine
FOR PARTICIPATING IN "ABDUL KALAM INNOVATIVE PROJECT AWARD 2024" HELD ON
14TH JUNE 2024.
This is to acknowledge that the participant won the First/Second/Third Prize in the "Abdul Kalam Innovative Project Award 2024" held on 14th June 2024.

Dr Mahipal Singh Rawat
PRINCIPAL

Dr.Ayesha Naaz
HOD ECE DEPARTMENT

Najiyah Ghouse won 3rd prize in carrom in the annual sports competition



Fahat Bar Khan and his team won 2nd prize in the Hack Revolution powered by ACES for their hardware entry, Quadcopter with Robotic Arm.

Mohammed Azam was selected as Student Network member of IEEE Student activity community Hyderabad section for MJCET, Matursri, Malla Reddy college

Mirza Sameeullah Baig and his team won joint 2nd prize in the Hack Revolution powered by ACES for their hardware entry: Ababeil.

Mohammed Zakwan Khan secured a silver medal at 2nd Fast5 Netball Nationals held in Telangana.

Mirza Sameeullah Baig won 2nd prize in the APJ Abdul Kalam Innovation Competition for developing a Machine-Learning based model to accurately gauge the cardiac vitals of patients with sensitive heart conditions

OUTGOING BATCH | 2023-24

All the best for your new beginnings
Warm Farewell!!!

NEWSLETTER EDITORIAL COMMITTEE

Editorial Committee Patrons

Dr. Mahipal Singh Rawat, *Principal, MJCET*
Dr. Ayesha Naaz, *Head, ECED*

Chief Editor

Dr. Salma Fauzia, *Associate Professor, ECED*

Editor

Ms. Maliha Naaz, Assistant Professor, ECED

Student Chief Editors

Ms. Asma Khanam, *3rd year, ECED*
Mr. Danish Ahmed, *3rd year, ECED*

Editorial Support

Mr. Syed Suheb Ahmed, *3rd year, ECED*
Ms. Asna Khanam, *1st year, ECED*
Mr. Mohammed Faariq, *3rd year, ECED*
Ms. Ayesha Siddiqua, *3rd year, ECED*

CHANNEL ECE

ANNUAL NEWSLETTER 2023-24

FROM THE EDITORIAL COMMITTEE

Our newsletter serves as a platform to celebrate the accomplishments of our community members. Whether you've presented at a conference, received an award, or participated in a noteworthy event, we want to hear about it and share your achievements with our readers. Do send the achievements contributions before the 25th of every month for inclusion in Channel ECE Newsletter.

Submit to us at: 160421735007@mjcollege.ac.in | 160421735097@mjcollege.ac.in

Department of Electronics and Communications Engineering
Muffakham Jah College of Engineering and Technology
Road No: 3, Banjara Hills, Hyderabad, 500034.
www.mjcollege.ac.in