

#### **TECH TATVA CELEBRATIONS 2024**

The inauguration of the four-day technical fest of the institute - TechTatva 2024 was held at MIT, Manipal on 15 October 2024. Mr Pradeep Sinha, CEO of Inditech and an MIT alumnus (Batch of 1984, Mechanical Engineering) was the Chief Guest for the event. Cdr (Dr) Anil Rana, Director, MIT, and Dr Somashekara Bhat, Joint Director, along with over 800 student participants graced the occasion and set the tone of camaraderie for the festival.



Mr Sinha captivated the audience with his reflections on his time at MIT and his illustrious journey in engineering and business. His remark "You can take an engineer out of Manipal, but you cannot take Manipal out of that engineer," drew heartfelt applause from attendees as Mr Sinha continued to share his fond anecdotes from his campus life at MIT, Manipal. He emphasized the values of resilience, collaboration, and striving for excellence, inspiring the next generation of innovators to embrace challenges and create solutions that impact humanity.

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#### MIT MANIPAL ALUMNI REUNIONS 2024

Manipal Institute of Technology, Manipal celebrated vibrant alumni reunions and meaningful alumni initiatives with a series of activities in the month of December. The Ruby, Golden, and Silver Reunions for alumni of various batches showcased the enduring bond between the institution and its alumni, while the launch of the MIT Manipal Alumni Association (MITMAA) heralded a new era of alumni engagement.

On 20 December 2024, the institution launched MITMAA under the theme "Bringing Generations, Building Legacies." With impactful speeches by the Chief Guest Mr Vinod Eswaran (Batch of 1990, Electronics & Communication Engineering), MD & CEO, Jio Payments Bank and Guest of Honour Lt Gen (Dr) M D Venkatesh, Vice Chancellor, MAHE, the event showcased the transformative power of its vibrant alumni network. With over 37,800 alumni connected via the AlmaShine portal, MITMAA is set to build a robust mentorship, collaboration, and global leadership initiative, building on MIT's illustrious legacy of seven decades.



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All well-conceived ideas implemented with great dedication, devotion, and dynamism get people's support and cooperation.





### MANNUPALLA TO MANIPAL - AN EPIC SAGA

#### SELF-FINANCING MODEL: TREND-SETTING STORY OF MANIPAL IN EDUCATION

At a time when higher education in India was largely reliant on government funding or private donations, a visionary leader emerged from the coastal town of Udupi, Karnataka, with a revolutionary idea that changed the landscape of education in India forever. Dr T M A Pai, a medical professional turned philanthropist, became one of the foremost pioneers of self-financing educational institutions in India, creating educational opportunities for generations besides setting an example for others operating or willing to operate in the sector.

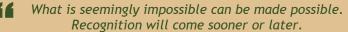
Dr Pai's journey is a tale of vision and determination set against the backdrop of a challenging era. In a time when higher education was a privilege available to only a few, he dared to dream of a different future for those from rural and underserved areas. During the mid-20th century, Government-run institutions, though commendable, were burdened with bureaucracy and limited capacity, while private ones relied on charitable donations, often struggling to sustain themselves. Dr Pai saw these limitations as an opportunity to revolutionize the system. He envisioned a self-sustaining model of education that would bridge the gap between quality and accessibility, ensuring that no deserving student was left behind, regardless of their financial background.

Equipped with his medical education and a deep understanding of the barriers faced by students from economically disadvantaged families, Dr Pai embarked on his mission. He recognized the untapped potential of rural talent and the growing disparity between demand and supply in the education system. His revolutionary idea was to establish institutions that could thrive independently of government funds or external charitable donations. By building this model, Dr Pai redefined how quality education could be delivered and offered a beacon of hope to countless students who might otherwise have been denied their dreams.

In 1942, Dr T M A Pai laid the foundation for a model that would transform Indian higher education, particularly, professional education. His pioneering idea centered on creating a self-sustaining framework where the cost of education would be met through an innovative combination of affordable tuition fees and revenue from complementary services. This approach ensured that institutions could maintain and enhance their standards without relying on government grants or charitable donations.

Dr Pai's vision was simple yet revolutionary: to establish a system where quality education remained accessible while institutions thrived independently. By making education both sustainable and inclusive, his model paved the way for long-term growth and excellence, setting a benchmark for educational institutions across the country. Dr Pai understood that the key to this model was maintaining a balance—keeping fees affordable for students, while ensuring that the institution maintains high standards of education. His solution lay in efficiency, self-reliance, and strategic reinvestment. By channeling revenue from student fees back into the institution, he ensured continuous improvement in infrastructure, faculty quality, and opportunities, creating a model of excellence and sustainability.







Dr. T. M. A. Pai

### MANNUPALLA TO MANIPAL - AN EPIC SAGA

In those days, the idea of self-financing education was looked at with skepticism. Many doubted whether rural students could afford such a model or whether an institution could thrive without government aid or donations. Yet, starting with a humble medical college in Manipal, Dr Pai built an educational ecosystem rooted in sustainability and excellence. His results-driven approach attracted both students and faculty, proving that quality speaks louder than doubt. Moreover, to support this vision, he employed innovative methods of fundraising, leveraging the revenues generated by the institution's services, along with investments in infrastructure and modern technology. As the institution grew, so did its financial independence. This allowed Manipal to reinvest in its people—its faculty, staff, and students—ensuring that it transforms into a world-class institution.

In addition to turning education affordable and accessible, Dr T M A Pai's self-financing model redefined the boundaries of education by also making it inclusive. Manipal quickly emerged as a hub for students from diverse backgrounds, not just from India but across the globe, creating a vibrant community of ideas, cultures, and talent. This transformative approach broke barriers, ensuring that education was no longer a privilege for the few but an opportunity for all.

Manipal became a destination where dreams converged and took flight, setting a new standard for inclusivity and excellence in higher education. Under Dr Pai's leadership, Manipal prioritized practical, career-focused education, offering courses in medicine, engineering, business, technology, and more to meet society's evolving needs. Its emphasis on global partnerships further provided students with international exposure and opportunities, empowering them to excel both locally and globally.

More importantly, Dr Pai proved that education could be a sustainable enterprise without compromising on its core values. By prioritizing quality over profits, he built an institution that thrived financially while staying true to its mission of societal betterment. The Manipal model over time influenced countless institutions and set a trend in India's higher education landscape. Its profound impact on millions of students is a testament to Dr Pai's vision—a harmonious blend of innovation, accessibility, and integrity.

As India's economy expanded, Manipal evolved to nurture not just professionals but future leaders, innovators, and entrepreneurs beyond geographical boundaries. Dr Pai's vision empowered students to think beyond traditional career paths, equipping them to shape industries and create meaningful impact. By creating a culture of self-reliance and creativity, Manipal became a shining hub for transformative ideas and constructive ventures centered around education and healthcare.

Dr T M A Pai's story continues to inspire, proving that education is not just about learning... It is about finding solutions, creating futures and transforming lives.

#### **PATRONS**

Cdr (Dr) Anil Rana
Director, MIT

Dr Somashekara Bhat

Joint Director, MIT

#### **PUBLISHER & CHIEF EDITOR**

Dr Shankaranarayana Bhat M Associate Director (FD&W)

#### **ASSOCIATE EDITOR**

Dr Praveen K Shetty

Assistant Professor Selection Grade Humanities & Management

#### **ASSISTANT EDITORS**

Dr Yashwanth N

Associate Professor Electronics & Communication Engineering

Dr Srinivas G

Associate Professor Aeronautical & Automobile Engineering

Dr Gajanan Anne

Associate Professor Mechanical & Industrial Engineering

Dr Rahul Ratnakumar

Assistant Professor Electronics & Communication Engineering

Dr Swapna K S

Assistant Professor Senior Scale Humanities & Management

Dr Hari M G

Assistant Professor Senior Scale Humanities & Management

Ms Rashi Goel

Student (CSE)

Mr Suryank Joshi
Student (Mechatronics)

#### **PAGINATION & DESIGN**

Mr Sandeep Nayak Pangal Assistant Professor Senior Scale

Assistant Professor Senior Scale Humanities & Management

#### CIRCULATION IN-CHARGE

Mr Ashok Kumar Nayak Senior GDW, Office of ADFD

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### Editor's Musings

Dear Reader,

Warm greetings from MIT, Manipal!

We wish you a very happy and prosperous New Year 2025.

As we embrace the new year, we are excited to present the fourth issue of the MIT Newsletter FOCUS for the calendar year 2024, bringing you a roundup of the significant events that unfolded at MIT Manipal in the final quarter of the year. This issue also marks a significant milestone for us: four years of chronicling and sharing the vibrant happenings at MIT with you all alongside helping in the creation of a digital repository at the institute.

The quarter commenced with the annual event, Tech-Tatva 2024 that took place during 16-19 October 2024, demonstrating a fusion of innovation, creativity, and cultural vibrancy. It brought together expert conclaves, engaging technical competitions, insightful workshops, and captivating cultural performances, making it a truly memorable experience for all.

Another proud moment for MIT came with the 32<sup>nd</sup> Convocation of MAHE, held during 08-10 November 2024. This ceremony saw 2,283 undergraduate, postgraduate, and PhD graduates from MIT Manipal receiving their degrees. It was a moment of immense pride for the faculty, parents, and peers in the audience, as they witnessed a new generation of professionals, equipped with knowledge and determination, step into the world outside, prepared to make a meaningful impact. MIT Manipal witnessed a series of Alumni Meets and reunions during 16-20 December 2024, that included the Silver, Ruby, and Golden Reunions. These events provided a wonderful opportunity for alumni to reconnect with their alma mater and themselves, strengthening the bond between the institute and its graduates. A highlight of this year's alumni meet was the formal launch of the MIT Manipal Alumni Association (MITMAA) on 20 December 2024.

This quarter showcased an outstanding spirit of collaboration, highlighted by the successful hosting of multiple international and national conferences. These events, involving various departments of MIT Manipal, universities from India and abroad, brought experts to Manipal, fostering the exchange of innovative ideas and approaches among the research community. We also take immense pride in our remarkable collaboration, exemplified by our success in securing the second phase of the INR 330 crore research grant for the Artificial Intelligence Center of Excellence (AI-COE) in Health project, an initiative from the Ministry of Education, Government of India. MIT Manipal is part of a prestigious consortium that includes IIT Madras, AIIMS, IIT Delhi, IISc Bangalore, and MAHE Manipal. We are sure that this success would lead to many more such collaborations to emerge in the future with MIT Manipal as the leading partner.

MIT Manipal has also made significant strides in fostering meaningful internal collaborations by breaking down departmental silos. As a first step, starting with the Computer Science Stream, a new approach to curriculum revision has been initiated. Two key events, Chintan and the Curriculum Conclave, were held to discuss and revise the curriculum for CS programs. A key feature of this initiative was the participation of administrators from the Manipal group institutions in the deliberations, ensuring the development of a curriculum that meets the needs and expectations of stakeholders. This marks the beginning of curriculum restructuring and re-organization of MIT Manipal with a view to achieving greater unity and efficiency as we move forward.

As we reflect on the events of this quarter, we are filled with pride for MIT's achievements and the enduring legacy of excellence it continues to uphold. As we look forward to the year 2025, a major curriculum revision awaits, leading to the introduction of new curricula across all streams in 2026, alongside many exciting events, collaborations, and accomplishments. We are confident that the year ahead will bring even greater success and several opportunities to celebrate, ensuring that MIT's flag continues to fly high.

Happy Reading...!

#### **TECH TATVA CELEBRATIONS 2024**

A video presentation created by students to showcase major innovative projects specifically for the event was the highlight of the ceremony. This creative display demonstrated the spirit of ingenuity that defines Tech Tatva and MIT Manipal. The evening also witnessed the unveiling of Tech Tatva's anthem, embodying the festival's theme "Gears of Innovation - Turning Tomorrow Today" and fostering unity among participants. Performances by the student council members and technical clubs added a vibrant cultural touch, blending innovation with artistry.

The inaugural event was meticulously executed by the Student Council, led by President Keshav Garg, under the guidance of the Office of Associate Director Student Welfare, Dr Poornima P Kundapur, and her team.



The annual Techfest during 16-19 October 2024 brought the campus alive with an electrifying blend of innovation and learning. The event pitched numerous technical competitions and exhibits attracting the new age talent among the student community across the country.

The festival's prelude included a series of engaging pre-Tech Tatva events, ranging from hackathon primers to skill-building workshops, setting the tone for the main event. The inauguration of Tech Tatva 2024 was held on 15 October 2024. The exhibitions and interactive showcases during the inauguration marked the beginning of four days brimming with cutting-edge innovation and thought-provoking discussions.

Tech Tatva 2024 stood out with its seamless fusion of knowledge, creativity, and entertainment. A



testament to this was the Conclave, featuring renowned personalities like Karan Singh Magic, Sharan Hedge, Smitha Prakash, and Harsh Gujral, whose insightful sessions captivated audiences and provided inspiration for budding engineers. A standout feature was the Manipal Hackathon, which showcased brilliant minds solving real-world problems, marking a highlight of this year's fest.

Tech Tatva 2024 also embraced the future of technology through its theme, Gears of Innovation - Turning Tomorrow Today, symbolizing the transformative power of innovation and its role in shaping a sustainable future. The festival witnessed the convergence of technology and creativity in over 40 technical events and workshops organized by MIT's diverse clubs and societies, fostering collaboration and intellectual growth among participants nationwide.

Tech Tatva 2024 received a record-breaking participation with over 7800 registrations and enthusiasts joining from across the country. It also featured several interesting technical events spanning diverse domains such as robotics, biotechnology, and coding, offering participants an expansive platform to explore their interests. Further, the fest witnessed a notable improvement in the variety and quality of stalls, catering to diverse tastes and preferences, and elevating the overall experience for attendees.



Notably, Tech Tatva 2024 prioritized environmental responsibility by introducing green initiatives such as digital platforms for event management and reducing waste, aligning with global sustainability goals and reinforcing MIT's eco-friendly initiatives.

The flagship event of Tech Tatva, Manipal Hackathon 2024 brought together innovative minds to tackle real-world challenges across diverse domains. The problem statements involved creating intuitive tools for the visually impaired, developing platforms to empower SMEs, designing gamified cybersecurity education and others.

#### MIT MANIPAL ALUMNI REUNIONS 2024

The Ruby Reunion on 16 December 2024 celebrated the 1979-84 and 1980-84 batches, featuring heartfelt reminiscences and a felicitation of professors. The Golden Reunion on 17 December 2024 celebrated the 1965-70 and 1969-74 batches alongside the 50<sup>th</sup> anniversary of MIT's rechristening. On 19 December 2024, the Silver Reunion brought together the 1995-99 batch in a spirited event where alumni shared memories and achievements, including generous initiatives like scholarships for underprivileged students.

The celebrations, while rekindling cherished memories, also strengthened the institution's vision for the future. The events highlighted the significance of alumni contributions to the institute in diverse ways such as scholarships for deserving students, mentorship programs, and leadership initiatives. The series of events demonstrated that MIT continues to thrive as a hub of innovation and excellence while uniting generations of MITians to build long lasting legacies.



The Alumni Meet, Ruby Reunion from the 1979-84 and 1980-84 batches of MIT, Manipal, was held on 16 December 2024 at the institute. During the event, Dr Narayana Sabhahit, Pro Vice Chancellor (Technology & Science), Manipal Academy of Higher Education lauded the remarkable legacy of these distinguished alumni. Dr Sabhahit highlighted the contributions of alumni to the institution's enduring excellence and encouraged them to continue being torchbearers of MIT's values.

The day commenced with a nostalgic campus and department tour, allowing alumni to relive cherished memories. Dr Kanthi, Associate Director (Alumni Relations), presented a comprehensive overview of MIT Manipal, detailing its evolution, achievements, and the role of alumni in shaping its future. She introduced the Almashine portal, a dynamic platform designed to strengthen alumni engagement, emphasizing its features and benefits.



A heartfelt highlight of the event was the felicitation of the professors from the alumni's batch, a touching gesture of respect and gratitude. Further, during the event, Mr Anuj Patel, Mr Anant Talaulicar, Mr Sarvanana Martandam, and Mr Srinath Shetty shared inspiring reminiscences, recounting their journeys since their time at MIT.



Dr Somashekara Bhat, Joint Director, MIT, shared his thoughts with the alumni, highlighting the importance of nurturing strong alumni relations and the impactful role of alumni contributions. Dr Shankaranaryana Bhat, Associate Director (Faculty Development and Welfare), delivered the welcome address, while Ms Lora, an alumna of the 1984 batch, expressed heartfelt gratitude to conclude the event.



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The Golden Reunion of the 1965-70 and 1969-74 batches of MIT Manipal were celebrated with a deep sense of delight on 17 December 2024. This historic occasion also marked the 50<sup>th</sup> anniversary of the rechristening of Manipal Engineering College (MEC) into the Manipal Institute of Technology (MIT), a significant milestone in the institution's illustrious journey. This transformation reflects decades of growth, innovation, and academic excellence that have cemented MIT's reputation as a leading institute of technology.



The celebrations featured a mesmerizing Yakshagana performance by Mr Sudhanva Kalkur, a third year ICT Department student showcasing the rich cultural heritage of Tulunadu. On this momentous day, two distinguished alumni, Shri Ranga Pai Tonse and Shri Dayashankar Shetty, were honored for their exceptional career achievements and inspiring generations of MITians. Dr H S Ballal, Pro Chancellor, MAHE, graced the occasion as the Chief Guest. Dr Kanthi, Associate Director (Alumni Relations), presented an overview of MIT Manipal's journey, accomplishments, and strong alumni engagement.



During the event, Dr Somashekara Bhat, Joint Director, MIT, delivered an address highlighting MEC's humble beginnings and MIT's remarkable progress over the decades. The event commenced with a welcome address by Dr Sriram KV, Associate Director (Placement and Industry Liaison), and concluded with a vote of thanks by Dr Krishna Prakash, Assistant Director (Alumni Relations). The Golden Reunion 2024 was a heartfelt celebration of shared memories and milestones, leaving participants with renewed pride and joy in their alma mater's extraordinary legacy.

The Silver Reunion of the MIT Manipal Batch of 1995-99 was, held on 19 December 2024. The event began with a spirited procession at the MIT Quadrangle, accompanied by music that evoked cherished memories of college days. The Chief Guest, Dr Giridhar Kini, Registrar, MAHE and an alumnus of the 1995 batch, captivated the gathering with heartfelt anecdotes, recounting classroom tales and hostel adventures. Reflecting on MIT's evolution, he emphasized its focus on research-based studies, placements, and holistic development, urging alumni to remain connected and inspire current students with their experiences.



Cdr (Dr) Anil Rana, Director, MIT, highlighted the significant contributions of alumni, including Mr Harish Shah, who sponsors scholarships for 57 economically underprivileged students. He remarked "What you achieve outside brings recognition to your alma mater," emphasizing the value of alumni to the institution. Dr Rana shared insights into initiatives such as the Centre for Outdoor Studies, student-driven publicity projects, and patent filings that drive growth, as well as the upcoming launch of the MIT Manipal Alumni Association (MIT MAA).

Dr Kanthi, Associate Director (Alumni Relations), presented an overview of MIT Manipal's journey, achievements, and alumni engagement initiatives. She also introduced the Almashine portal as a tool for maintaining alumni connections. The event also featured a felicitation ceremony honoring senior faculty and HODs, with alumni sharing cherished memories that brought laughter and heartfelt emotions. Dr Somashekara Bhat, Joint Director, MIT welcomed the gathering while Dr Krishna Prakash, Assistant Director (Alumni Relations) delivered the vote of thanks.



### Launch of MIT Manipal Alumni Association (MITMAA): Bringing Generations, Building Legacies...

The much-anticipated MIT Manipal Alumni Association (MITMAA) was officially launched on 20 December 2024, at MIT, Manipal. With the tagline "Bringing Generations, Building Legacies," the event marked a historic milestone for the institution, featuring the unveiling of the association's logo and the participation of distinguished alumni and guests.



Mr Vinod Eswaran, MD & CEO, Jio Payments Bank was the chief guest for the event. He shared his inspiring journey and the profound impact of MIT on his life. Recalling his final year struggles, he said, "The adaptability I learned at MIT became my strength. This institution taught me resilience and community lessons that inspire me to strive for excellence." Further, highlighting the importance of a robust



alumni network, he noted, "MIT has produced leaders across industries, yet the absence of a strong alumni association limits our impact. MITMAA can bridge gaps in corporate relationships and recruitment, benefiting alumni, students, and Brand MIT."

Lt Gen (Dr) M D Venkatesh, Vice Chancellor, MAHE was the Guest of Honour at the launch of MITMAA. In his address, he emphasized the transformative role of alumni in shaping an institution's legacy, describing the alumni bond as "an umbilical cord that nurtures generations." Cdr (Dr) Anil Rana, Director, MIT, expressed pride in MIT being the first MAHE institute to adopt the AlmaShine portal, linking over 37,800 alumni. He highlighted the association's role in supporting mentorship, collaboration, and leadership. Dr Somashekara Bhat, Joint Director, MIT welcomed the gathering at the beginning and Dr Kanthi, Associate Director (Alumni Relations) delivered the vote of thanks to conclude the event.





### **EVENTS AT MIT**

## INTERNATIONAL CONFERENCE ON COMPUTATIONAL METHODS ON ENGINEERING & HEALTH SCIENCES

The 8<sup>th</sup> International Conference on Computational Methods on Engineering & Health Sciences (ICCMEH2024) was successfully organized by the Department of Aeronautical and Automobile Engineering during the 16-17 December 2024 at MIT, Manipal.

This event was jointly organized by Manipal Academy of Higher Education, University Putra Malaysia, Kyushu Institute of Technology-Japan, Cranfield University-United Kingdom, Malaya-Malaysia. University The conference brought together computational scientists. engineers, and medical professionals from various interdisciplinary domains under one common forum.



The conference featured insightful keynote addresses by five distinguished speakers, each an expert in their respective fields. Mr Dave Daines Director & Past Chair of Board, Asset Management



Council, Australia delivered his address on the topic "People Do Asset Management."

Dr Suresh Sampath Head of Gas Turbine Systems Engineering and Operations Group, Centre for Propulsion and Thermal Power Engineering, Cranfield University, UK delivered his talk on the topic Gas Turbine Engine Fault Diagnostics using Digital Twin and Artificial Intelligence.

Mr Suman Gowda N C Application Manager - Additive, Phillips Machine Tools India Pvt Ltd spoke about Advances in Composites Manufacturing and Medical Grade Materials through Additive (3D Printing).

Dr Ramesh Subramaniam Professor, Department of Physics, Faculty of Science, Universiti Malaya, Kuala Lumpur, Malaysia delivered the talk on Cutting-Edge Materials in Energy Storage and Clean Energy Technologies.

Dr Lung-Jieh Yang Counselor and Director, Science and Technology Division, Taipei Economic and Cultural Center (TECC), New Delhi gave a talk on the topic Scaling Laws on Flapping Wings and Indo-Taiwan Research Opportunities.



ICCMEH2024 saw enthusiastic participation from researchers and professionals across various fields and locations. The diverse range of topics, high-quality presentations, and thought-provoking discussions made ICCMEH2024 an enriching experience for all attendees.

# INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE, COMPUTATIONAL ELECTRONICS, AND COMMUNICATION SYSTEM

The Department of Electronics and Communication Engineering organized an international conference on Artificial Intelligence, Computational Electronics, and Communication Systems (AICECS 2024) during 13-14 December 2024. The conference highlighted emerging trends in AI, computational electronics, and communication systems while providing opportunities for participants to engage with experts in these fields.

Lt Gen (Dr) M D Venkatesh, Vice Chancellor, MAHE was the chief guest and Dr Prasant Misra, Executive Committee member of IEEE Bangalore Section and Senior Scientist at Tata Consultancy Services-Research was the guest of honor at the inaugural event held on 13 December 2024.

Lt Gen (Dr) M D Venkatesh delivered the inaugural address, emphasizing the significant role of Artificial Intelligence (AI) in shaping the future of emerging technologies. Dr Prasant Misra, in his address highlighted the contributions of IEEE in advancing professionalism within the research community and its role in nurturing students and researchers.



Dr Somashekara Bhat, Joint Director, MIT, shared his insights on the theme of the conference, highlighting the far-reaching impact of AI, computational electronics, and communication systems in modern era. Dr Subramanya Nayak, Professor, Department of Electronics and Communication Engineering welcomed the gathering and presented the outline of the conference.

The conference then moved on to a series of captivating keynote sessions that focused on the latest advancements in various technical domains. Dr Prasant Misra presented the first keynote address on Cyber-Physical Systems (CPS) for Electric Mobility, emphasizing the integration of CPS in creating more efficient and intelligent transportation systems.

Dr Taimoor Khan, Associate Professor, NIT Silchar in his session focused on ambient energy harvesting



for smart wrist wearables and explored sustainable solutions for wearable devices, making them more energy efficient.

In the subsequent keynote, Dr Chengappa Munjandira, Senior Technologist, HP Expertise, Bengaluru highlighted on the role of AI in the development of 6-G networks, outlining the potential of Radio Access Networks (RAN) to transform communication systems.

Dr Ashish Khanna, Associate Professor, Maharaja Agrasen Institute of Technology, Delhi in his talk addressed the significance of research publications, patents, and start-ups, and highlighted how they contribute to the success of academic and professional pursuits in the field of computer engineering.

Dr Kumar Rajamani, Associate Director, Cropin Technologies, Bengaluru wrapped up the series with an insightful session on unsupervised deep learning approaches for satellite image analysis, emphasizing the importance of automation in processing large datasets for environmental and urban planning purposes.

The conference also featured parallel paper presentation sessions across three key tracks—Artificial Intelligence, Computational Electronics, and Communication Systems—drawing 76 registered participants from academic institutions, research organizations, and industries from India and abroad. The conference attracted a diverse group of attendees, including undergraduate, graduate, and doctoral students, who actively participated in the discussions.

On the evening of 13 December 2024, the event organizers arranged a memorable Gala Dinner, which showcased the cultural talents of the MIT



faculty and their children. This lively evening included performances such as a flute recital, vibrant folk dances, and dynamic modern dance performances by the faculty and their families.

The conference concluded on 14 December 2024 with a valedictory ceremony attended by Dr Giridhar Kini, Registrar, MAHE, and Dr Michal Welzl, a renowned professor from the University of Oslo and other dignitaries from the institute.

Dr Kini emphasized the importance of continued research and innovation, while Dr Welzl inspired attendees to explore deeper, meaningful problems in their research. Dr Ashok Rao, Associate Director (Research and Consultancy), emphasized the multidisciplinary approach of the conference, referencing the work of 2024 Nobel laureates in machine learning and neural networks. The



conference wrapped up with the announcement of the Best Paper and Best Poster awards in various categories, including undergraduate, postgraduate, and doctoral research. Dr Tanweer Ali, Associate Professor, Department of Electronics & Communication Engineering, the General Chair of AICECS 2024, delivered the vote of thanks.

# IEEE INTERNATIONAL CONFERENCE ON AUGMENTED REALITY, INTELLIGENT SYSTEMS, AND INDUSTRIAL AUTOMATION

IEEE International Conference on Augmented Reality, Intelligent Systems, and Industrial Automation (ARIIA-2024) was held during 20-21 December 2024. The conference was jointly organized by MIT Manipal and Manipal University Jaipur in association with the University of Warwick, UK, and L-Università ta' Malta.

The conference brought together researchers, academicians, industry leaders, and innovators from across the globe to discuss advancements in technologies that shape the future of augmented reality (AR), intelligent systems, and industrial automation.



Mr Kishore Alva, President and Executive Director of ADANI Group India, was the Chief Guest for the inaugural ceremony held on 20 December 2024. In his inaugural address, Mr Alva highlighted the role of augmented reality and intelligent systems in transforming industries. He also stressed the need for ongoing research and partnerships between academia and industry.

The Guests of Honour at the inauguration, Dr Vasudeva, Chair, IEEE Mangalore Subsection, and Dr

Somashekara Bhat, Joint Director MIT Manipal, also highlighted the importance of technological advancement and innovation in the context of industrial automation. Cdr (Dr) Anil Rana, Director, MIT presided over the ceremony, while Dr Arunachala U Chandavara, Head of the Department of Mechanical and Industrial Engineering, provided the outline of the conference.



Dr Mayukh Das, Senior Research Scientist, Microsoft delivered the keynote address on the latest advancements in intelligent systems, particularly their applications within industries such as healthcare and manufacturing. Dr Richa Sharma, JK Lakshmipat University, Jaipur, followed with a session on augmented reality and intelligent systems, emphasizing their potential to revolutionize various sectors, from education to healthcare.

A significant highlight of the conference was the panel discussion on the importance of artificial intelligence (AI) in various fields. The panel moderated by Dr Dasharathraj K Shetty, Associate Professor, Department of Data Science and Computer Applications, featured experts such as Mr Mayur Shetty from Blackfrog Technologies, Dr Praveen Shastry from Manipal Health Map, and Dr Vijay Shanthagiri from Analogica & Certisured. The

panelists reflected on the growing influence of Al across sectors like healthcare, robotics, and industrial automation, discussing its transformative impact and future potential. Paper presentations across various tracks such as robotics, artificial intelligence, bioengineering, and industrial automation were held on 21 December 2024. The presentations sparked insightful discussions, with researchers and industry leaders sharing their findings and exchanging ideas.

Dr Mohit P Tahiliani, the Chair of the IEEE Mangalore Subsection, was the chief guest for the

valedictory session. He emphasized the value of collaborative platforms such as ARIIA-2024 in fostering research and innovation. The Guest of Honour for the event, Dr Preetham Kumar, Deputy Registrar - Academics (Technical) MAHE, reinforced the importance of integrating academic research with industry needs in his address.

With over 230 accepted papers, diverse keynote sessions, panel discussions, and exciting workshops, the event provided an ideal platform for academia and industry to explore possible areas of collaboration.

## INTERNATIONAL CONFERENCE ON MAINTENANCE AND INTELLIGENT ASSET MANAGEMENT

The Department of Mechanical and Industrial Engineering, MIT, Manipal organized the International Conference on Maintenance and Intelligent Asset Management (ICMIAM 2024) during 16-17 December 2024. The conference provided a platform for researchers, academicians, and industry experts to discuss innovations in asset management, reliability engineering, healthcare systems, and condition monitoring.



The inauguration ceremony on 16 December 2024 featured prominent dignitaries. Mr Harish B., CEO, Ace Micromatics Pvt Ltd and an alumnus (Batch of Industrial & Production Engineering), delivered a special address on the role of artificial intelligence and machine learning in asset management. Lt Gen (Dr) M D Venkatesh, Vice-Chancellor, MAHE, lauded the organizers for nurturing meaningful academia-industry collaborations. Dr Somashekara Bhat, Joint Director, MIT, emphasized the importance of innovation-driven events in knowledge dissemination.

ICMIAM 2024 showcased an impressive line-up of 12 keynote sessions and two invited talks by distinguished speakers from India and abroad. Topics ranged from "Digital Asset Management" to "Scenario Planning for Long-Life Infrastructure," offering deep insights into the latest trends and

challenges in intelligent asset management. Additionally, 41 research papers were presented across 10 parallel technical sessions, held in hybrid formats. These sessions covered diverse topics such as maintenance, tribology, life-cycle management, and sustainable practices in waste and water management.

Narayana Sabhahit, Pro Vice-Chancellor (Technology & Science), the chief guest for the valedictory ceremony held on 17 December 2024 delivered an inspiring address on the importance of global collaborations in asset management. Dr Raghuvir Pai, Professor, Department of Mechanical Industrial Engineering presented comprehensive summary of the conference, highlighting the breadth of topics discussed and the strong engagement from participants. During the valedictory ceremony, it was announced that Federation University Australia will host ICMIAM 2025, continuing to promote international research collaborations.



ICMIAM 2024 served as a crucial platform for advancing intelligent asset management practices, strengthening academic-industry ties. sponsored conference was by organizations, including Ace Micromatics Pvt Ltd, Fractal Works, and Fronius India, MIT Manipal Alumni Association, DigiToad Technologies, Bangalore, Gennext Scientific and IT Solutions, Mangalore, Dollops Manipal, Gift House Manipal, Madhuvan Serai Manipal and Syndicate Stores Manipal.

#### INTERNATIONAL CONFERENCE ON NEW HORIZONS IN CIVIL ENGINEERING

The International Conference on New Horizons in Civil Engineering (NHCE ICEMS 2024) with the theme "Innovative Civil Engineering Materials and Systems" was held at MIT, Manipal during 12- 14 December 2024. The event was organized by the Department of Civil Engineering with the aim to enhance discussions and collaborations on cutting-edge advancements in the field by bringing together academicians, industry experts, and researchers.



Prof Madhira Madhav, Professor Emeritus at JNT University, was the chief guest for the inaugural ceremony on 12 December 2024. His inspiring opening inaugural address set the tone for the conference. Dr Narayana Sabhahit, Pro Vice Chancellor (Technology & Science), MAHE, graced the event as the Guest of Honor, while Dr Somashekara Bhat presided over the inaugural session. The opening ceremony highlighted the critical role of innovation in addressing contemporary challenges in civil engineering.

Over the course of three days, NHCE ICEMS 2024 featured 12 technical sessions in hybrid mode to facilitate widespread participation. Presentations covered diverse topics, emphasizing the integration of innovative practices in major areas of civil engineering. The conference underscored the urgent need for sustainable development practices, urging stakeholders to align current advancements with future goals to optimize resource utilization and ensure a resilient built environment for future generations.

The conference concluded with a valedictory ceremony, where awards for Best Presentation and Best Paper were presented to the participants. Dr Indrani Gogoi, Training & Placement Officer, Directorate of Technical Education, Kahilipara, Guwahati was the chief guest for the valedictory event. A highlight of the event was the signing of two publication agreements with Springer. Selected papers from the conference will be published in two prestigious book series: Innovative Building Technologies: Select Proceedings of NHCE-ICEMS 2024 and Recent Advances in Construction Materials: Select Proceedings of NHCE-ICEMS 2024.



# INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN INFORMATION TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT

The Department of Information and Communication Technology (ICT) hosted the 2<sup>nd</sup> International Conference on Recent Advances in Information Technology for Sustainable Development (ICRAIS-2024) during 06-07 November 2024.

The inauguration ceremony was held on 06 November 2024. Dr Manohar Pai M, Senior Professor in the Department of ICT, welcomed the gathering and set the stage for a series of insightful discussions. Dr S N Omkar, Chief Research Scientist at IISc Bengaluru, the Chief Guest of the event, highlighted the transformative role of drone technology in disaster management, precision agriculture, environmental monitoring, and logistics. The Guest of Honor, Dr Vinod V Thomas, Registrar Evaluation, MAHE, emphasized the significance of academia-industry collaboration in tackling global challenges. Cdr (Dr) Anil Rana,

Director, MIT Manipal, reaffirmed the commitment of the institute's leadership in driving technological progress that is aligned with sustainable development goals (SDG).



Dr Vasudeva Acharya, Chair of IEEE Mangalore Subsection, highlighted the alignment of conference theme with IEEE's mission of advancing technology for humanity. Dr Balachandra, Professor, Department of ICT and the Convener of the conference provided an overview of the event, highlighting key topics such as Distributed Computing, Networking and Communication,

Information Security, and Soft Computing. Dr Preetham Kumar, Professor, Department of IT, delivered the vote of thanks

The conference was supported by IEEE Bangalore Section, IEEE Mangalore Subsection, ISAC, Cyberange, Canara Bank, Bank of Baroda, and HDFC Life Insurance Puttur.

#### NATIONAL CONFERENCE ON CONDENSED MATTER PHYSICS AND APPLICATIONS

The Department of Physics, MIT, Manipal organized the 12th National Conference on Condensed Matter Physics and Applications (CMPA-2024) on 13 December 2024.

The conference highlighted the theme "Functional Materials for Green and Clean Energy," addressing the pressing global need for innovative solutions in energy production.

Dr Satish Rao B S, Director Research, MAHE was the Chief Guest at the inaugural session while Prof G U Kulkarni, President, JNCASR, Bangalore, and Dr Ashok Rao, Associate Director (Research and Consultancy) were the Guests of Honor.

Dr Sudha D Kamath, Professor and Head of the Department delivered a welcome address, emphasizing the importance of the theme "Functional Materials for Green and Clean Energy". Dr Gurumurthy S C, Associate Professor and Convener of the conference presented the overview of the conference.



The event featured a series of insightful talks by renowned experts, including Prof. G U Kulkarni of JNCASR, Dr Mahadeva Bhat, Scientist G, SSPL Lab, DRDO, Dr Sreedhara M B, Dr Sajan Daniel George, Dr Vinaya Kumar K B from BITS Pilani, Goa, and Dr Venkataramana B, Senior Scientist, CSIR-NAL, Bangalore.

The talks covered topics such as neural networks, quantum dot solar cells, and high-power electronic materials. A vibrant poster presentation session with 60 contributions and oral presentations from 48 participants added depth to the discussions.

The conference also included a cultural evening, "Kalasandhya," which provided an engaging platform for networking.



CMPA 2024 demonstrated interdisciplinary collaboration and showcased developments in the domain of Physics with the participation of 140 delegates representing academic institutions, research organizations, and industries.

Participants, including undergraduate, postgraduate, and doctoral students, engaged in meaningful dialogues with senior researchers, creating a dynamic environment for knowledge exchange.

CMPA-2024 highlighted the critical role of functional materials in clean energy, calling for stronger industry-academia partnerships, advanced manufacturing techniques, and focused funding for sustainable materials research.

The conference re-emphasized the commitment to advancing technologies that align with global sustainability goals.

### 2-DAY BIS NATIONAL SEMINAR ON LANDSLIDES AND LAND SUBSIDENCE IN HILLY AREAS

Manipal Institute of Technology (MIT), in collaboration with the Bureau of Indian Standards (BIS) and the National Institute of Rock Mechanics (NIRM), Bengaluru, organized a two-day BIS National Seminar on "Landslides and Land Subsidence in Hilly Areas: Causes, Prevention, Mitigation, and Restoration" during December 2024. The entire seminar was funded by the Bureau of Indian Standards, New Delhi.

In the inaugural session of the 2-day seminar, the chief guest, Prof R Anbalagan, Former Professor, IIT Roorkee and Chairman, CED-56, delivered a thought-provoking keynote address titled "Landslide Hazards of India: An Overview," emphasizing the urgent need for preventive measures and collaborative efforts to mitigate landslides and land subsidence. In his presidential address, Cdr (Dr) Anil Rana, Director, MIT reaffirmed MIT's commitment to environmental sustainability.



Dr Manoj Kumar Rajak, Director & Scientist-E, BIS, welcomed the gathering. Ms Chaithra M, Assistant Professor Senior Scale, Department of Civil Engineering rendered the invocation. Dr Purushothama G Sarvade, Head, Department of Civil Engineering introduced the Chief Guest, Prof R Anbalagan, while Dr K Balakrishna, Professor, Department of Civil Engineering introduced Cdr (Dr) Anil Rana. Dr S N Bhat, Associate Director (FD&W) delivered the vote of thanks.

The 2-day seminar aimed to bring together academia, industry experts, and policymakers to share knowledge and explore sustainable solutions to mitigate the impact of landslides and land subsidence in hilly terrains. Through expert presentations, case studies, and field visits, the seminar emphasized the critical role of standards, advanced technologies, and importance of collaboration in addressing these challenges effectively.

The following are the key sessions held during the seminar:

- Overview of BIS and Indian Standards for Hill Area Development by Dr M K Rajak, BIS.
- Significant Causes for Landslides in the Western Ghat Region by Dr Sreevalsa Kolathayar, Associate Professor, NITK Surathkal.
- Site Investigation Techniques and Analysis of Landslides by Dr D Chakraborthy, Director, GSI Nagpur.
- Techniques of Stabilizing Fragile Hill Slopes -Landslide Hazard Management by Prof. R. Anbalagan, IIT Roorkee.
- Application of BIS Codes in Macro Landslide Hazard Zonation Mapping: A Case Study from the Western Ghat Area in India by Dr D S Rawat, Scientist, NIRM.
- Comprehensive Strategies for Landslide Protection in Challenging Hilly Terrains: Case Studies by Dr Anand Hulagabali, Terre Armee India.
- Predicting Landslides in Western Ghats Region: An AI/ML Approach by Dr Shweta Vincent, MIT Manipal.
- A field visit to landslide locations in and around Manipal, coordinated by Dr K Balakrishna and his team, provided practical insights into real-world challenges.



Dr Anbalagan, retired professor of IIT Roorkee and an expert in landslide analysis gave two lectures on the various techniques he adopted that helped in stabilizing the slopes and prevent the landslides in select locations of the Himalayas. His techniques have helped the BIS in formulating codes for landslide hazard zonation mapping and mitigation.

Dr Sreevalsa Kolathayar, Associate Professor at NITK Surathkal gave a detailed case study on the analysis of landslides in Wayanad, Kerala. He discussed the causes of landslides that are occurring at Dakshina Kannada, Uttara Kannada, Udupi and Kodagu, with case studies from Shiroor landslides, Byndoor landslides, and Kodagu landslides.



Dr Sreevalsa showed through video animations the causes of the landslides through experimental studies made at his lab, and possible prevention techniques in the laterite terrain of coastal Karnataka.

On the second day, Dr Anand Hulagabali, Manager at the Terre Armee India through a pictorial and video-based presentation, discussed several landslide-prone slope stabilization techniques his company has adopted at West Bengal and the Himalayan terrain.



Dr Shweta Vincent, Associate Professor at the Mechatronics department delivered a lecture on using Artificial Intelligence (AI) and Machine Learning (ML) Techniques to map the landslide-prone areas in the Western Ghats. She discussed the advantages and limitations of using AI and ML techniques in landslide-susceptible zones.



Dr D Chakraborthy, Director, Geological Survey of India, Nagpur gave a detailed description of the analysis of landslides and the methods of site investigations in the landslide-prone regions in online mode.

Dr Manoj Kumar Rajak, Senior Scientist with the BIS and the co-organizer gave an overview of the BIS standards that must be adopted for the hill area development.

Dr Devendra Singh Rawat, Senior Scientist at the National Institute of Rock Mechanics, Bengaluru and the co-organizer discussed the case studies of landslides in Dakshina Kannada district and the necessary BIS codes that must be adopted for the hazard zonation mapping.

The 2-day event concluded with a site visit to a landslide location in Parkala close to Manipal. Dr K Balakrishna, Professor of Geology at MIT and Dr Aditya Udayaraj Joshi, Assistant Professor of Geology at MIT, coordinated the field trip. Dr Devendra Singh Rawat gave a detailed analysis of the causes of this landslip and the necessary action to be taken to prevent its further slide.



The seminar concluded with Dr Manoj Kumar Rajak, Director & Scientist-E, BIS, and Dr Devendra Singh Rawat, Scientist-III, NIRM Bengaluru, delivering the concluding remarks. Dr Rajak emphasized the role of standards and engineering practices in mitigating the risks associated with landslides and land subsidence, urging stakeholders to adopt proactive measures for sustainable development.

Dr Rawat highlighted the importance of collaborative efforts between academia, industry, and policymakers to devise innovative solutions and shared practical insights gained during the seminar.

Dr K Balakrishna, Professor, Department of Civil Engineering, MIT Manipal delivered the vote of thanks.

#### SYMPOSIUM ON CYBER PHYSICAL SYSTEMS

The Department of Instrumentation and Control Engineering and Department of Mechatronics in collaboration with ISSS, IAC Electrical Stream, and IIC organized a Symposium on Cyber Physical Systems (CPS) on 26 October 2024. The event featured Guest Lecture Series and Mini Project Exhibition.

Academicians and industry leaders deliberated on the "physical" layer of CPS. Topics discussed included machine olfaction, microfluidics, biosensing, robotics, and automation, illustrating their relevance to CPS applications. As part of the symposium, the third-semester student teams from Instrumentation Engineering made poster presentations based on their mini-projects. A total of twenty-one teams showcased innovative prototypes that align with initiatives such as Digital

India, Make in India, Atmanirbhar Bharat, Vikasit Bharat, Swachh Bharat, and the United Nations Sustainable Development Goals.



#### AWARENESS PROGRAM ON THE BENEFITS OF EMPLOYEE PROVIDENT FUND

The Office of Faculty Development and Welfare, MIT Manipal organized an informative session on 27 November 2024, to empower employees with knowledge about Employees' Provident Fund (EPF) and Employee Pension Scheme (EPS) benefits. Dr S N Bhat, Associate Director (Faculty Development and Welfare), welcomed the participants and emphasized the importance of financial security. Dr Somashekara Bhat, Joint Director, MIT Manipal, further highlighted the significance of such initiatives in ensuring the well-being of employees.



Dr Sandeep Kumar, Regional PF Commissioner at the RO Udupi Employees' PF Organization, delivered a keynote presentation offering valuable insights into various aspects of the Employees' Provident Fund (EPF). He explained the coverage and dual contribution mechanism under the EPF Scheme 1952, emphasizing the shared roles of employees and employers. The importance of the Universal Account Number (UAN) for account portability, claim tracking, and transparency was highlighted, along with detailed provisions of the EPS 1995. Further, he highlighted the features such as retirement pensions, dependent benefits, and

minimum monthly pension guarantees as available in the scheme.

Additionally, Dr Kumar elaborated on the accessibility of online services via the UMANG App, the member portal and discussed the conditions applicable for advance withdrawals. Dr Sandeep Kumar was accompanied by a team of PF officials who addressed queries from the participants. Smt Priyagi Manjunath Ambiga, Branch Manager (I/c), ESI Corporation, Udupi, provided additional insights into ESI benefits and healthcare provisions for insured employees. The interactive session allowed participants to clarify their doubts and concerns. Moreover, a few pension sanction letters to the employees retiring in the month of November were distributed on the spot.

Dr S N Bhat concluded the event by thanking the participants for their active involvement and reaffirmed MIT Manipal's commitment to employee welfare. Approximately 200 participants, including faculty, staff, and retired employees, attended the program.



#### 32nd CONVOCATION OF MAHE MANIPAL HELD IN NOVEMBER 2024

The 32<sup>nd</sup> Convocation ceremony of Manipal Academy of Higher Education (MAHE), Manipal, was conducted with great grandeur at KMC Greens, Manipal, over three days from 8 to 10 November 2024. On the first day of the convocation, Prof Mamidala Jagadesh Kumar, Chairman of the UGC, was the Chief Guest. Dr Indrajit Bhattacharya, Director General of the National Institute of Robotics and Artificial Intelligence (NIRA) graced the occasion as the Chief Guest on Day 2. On the

third day, Dr Rajiv Bahl, Secretary to the Government of India, Department of Health Research, and Director General of the Indian Council of Medical Research (ICMR), New Delhi, served as the Chief Guest.

From MIT Manipal a total of 2283 candidates received the degree certificates which included 1781 graduates, 456 postgraduates and 46 research scholars.

Program	Received in Convocation	Received in Absentia	Total
UG (B. Tech)	1360	421	1781
PG(M.Tech/MCA)	314	42	356
PG (M.Sc)	80	20	100
Ph.D	42	4	46
Total	1796	487	2283



Scan the QR Codes to view the 32<sup>nd</sup> CONVOCATION

Day 1 8 November 2024



Day 2 9 November 2024



Day 3 10 November 2024



### CHINTAN: PRE-CONCLAVE DELIBERATIONS ON BTECH CURRICULUM FOR CS STREAM

A day-long event 'Chintan: Pre-Conclave Deliberations on BTech Curriculum for CS Stream' was organized by the office of the Associate Director, Faculty Development and Welfare (FDW) on 01 October 2024.

The event aimed at deliberating on revising the curriculum for five BTech programs under the computer science stream: Computer Science & Engineering, Computer Science & Engineering (AI&ML), Information Technology, Computer & Communication Engineering, and Data Science & Engineering.

The event involved 25 members, consisting of MIT leadership, representatives from the Manipal Academy of Higher Education (MAHE), and curriculum committee members from the corresponding departments. The primary objective was to brainstorm and propose modifications to the existing 2022 curriculum for the five programs.

Dr S N Bhat, Associate Director (FDW) welcomed the members and presented the overview of the day's proceedings in the beginning, highlighting the crucial need for a dynamic curriculum that aligns with the evolving technological landscape.

Dr Narayana Sabhahit, Pro-Vice-Chancellor (Tech & Science), MAHE, Manipal, emphasized the importance of a well-rounded curriculum that offers flexibility in student course selection. He stressed the significance of strong faculty and collaboration with industry experts and renowned institutions to enhance the learning experience.

Dr Giridhar Kini, Registrar, MAHE, advocated for a "student-centric" approach, ensuring the curriculum caters to the evolving needs of students and parents. He encouraged faculty development through regular upskilling programs and suggested

a top-down curriculum design approach with minimal disruption for students. He further emphasized the importance of industry partnerships, research orientation, promoting entrepreneurial spirit, and incorporating MOOCs for the benefit of students.

Cdr (Dr) Anil Rana, Director, MIT, Manipal, shared his vision for curricular modifications. He proposed exploring options for flexible learning paths, including multiple exits, academic breaks, and "learn while earn" models. He also suggested embedding micro-credentials into the programs and investigating the possibility of on-campus, industry projects. He also highlighted strengthening industry collaboration through curriculum design.

Dr Somashekara Bhat, Joint Director, MIT, Manipal, highlighted the importance of core engineering subjects and integrating applied courses as electives in higher semesters. He encouraged the team to deliberate on crucial issues such as the need for undergraduate specialization, the optimal structure for lab and theory courses, and achieving a balanced curriculum.

Dr Vinod V Thomas, Registrar Evaluation, MAHE, discussed the implications of the new Self-Assessment Report (SAR) set by the National Board of Accreditation (NBA), effective from January 2025. He emphasized the need for a unified computer science stream with shared faculty across Manipal, Bengaluru, and Dubai campuses. This would involve common courses until the second year of the BTech program, followed by specialization in the third and fourth years. He also recommended leveraging model curriculums from AICTE, IEEE, and ACM, fostering capstone projects, promoting self-directed learning, and embracing the principles of Education 4.0, innovation, and skill-based education.





Dr Krishnamoorthi Makkithaya, Head of the Department of Computer Science, presented a proposed new CS curriculum. acknowledged the strong foundation provided by the current curriculum, he also identified knowledge gaps in emerging technologies like AI. Dr Krishnamoorthi Makkithaya emphasized the need for self-directed learning opportunities for students and faculty development programs to equip the faculty with the skills to handle new courses. He underscored the importance of aligning the curriculum with the new NBA SAR format and emphasized the need for continuous feedback from industry and other key stakeholders.

Dr Smitha Pai, Head of Department of Information and Communication Technology and Dr Radhika Pai, Head of Department of Data Science and Computer Applications also presented their perspectives and suggested the introduction of new topics like risk management and sustainability, and a flexible core structure with minor specializations for the Data Science program.



Dr K V Sriram, the Associate Director (Placement) shared valuable feedback from industry, highlighting the importance of the need for strong fundamentals in general computer science among undergraduate students. He also emphasized the

growing trend of skill-based hiring and the need for students to pursue relevant industry certifications.

Dr Preetham Kumar, the Deputy Registrar (Academics-Tech), MAHE, outlined a clear timeline for subsequent meetings, such as departmental curriculum committee meetings, the board of studies meeting, and the academic council meeting to take it forward.

The afternoon session featured an insightful group discussion led by Dr S N Bhat, exploring crucial topics like designing a curriculum in the age of Artificial Intelligence, rethinking assessment methods, and leveraging AI tools to enhance the learning experience.



In the final session, Dr Vinod V Thomas listed the activities that must be completed before the proposed curriculum conclave. Cdr (Dr) Anil Rana in his concluding remarks appreciated the efforts of the team and wished that a curriculum that is acceptable to the stakeholders would emerge as the outcome of the conclave.

Towards the end of the program, Dr S N Bhat invited the members to the proposed curriculum conclave on 29 October 2024 as a next step and concluded the event by delivering the vote of thanks.

#### **CURRICULUM CONCLAVE: COMPUTER STREAM PROGRAMS**

MIT, Manipal hosted a Curriculum Conclave focused on the Computer Science stream on 29 October 2024 at MAHE, Manipal. The event brought together key stakeholders from academia, industry, and management to discuss and revise the curriculum for BTech programs in Computer Science Stream.

Dr S N Bhat, Associate Director (Faculty Development and Welfare), MIT Manipal, welcomed participants and outlined the conclave's objectives. Lt Gen (Dr) M D Venkatesh, Vice Chancellor, MAHE, in his opening remarks emphasized the importance of a robust and futuristic curriculum adaptable to technological advancements. He stressed the need for student-centric learning methods that enhance problem-solving abilities and incorporate experiential learning besides promoting self-directed learning among the students.

Dr Narayana Sabhahit, Pro-VC (Tech & Sc), MAHE, highlighted the importance of attracting strong faculty and establishing industry connections to enhance the employability of students. He advocated flexible curriculum options with online components and blended learning approaches to foster independent learning.

Dr Preetham Kumar, Deputy Registrar - Academics (Technical), provided an overview of the revised BTech program structure, including program specializations, option for honors, and other key highlights. The program proposes a common first-year curriculum with core computer science subjects. This will be followed by a common course in the second year for all CS Stream students. In the third year, students can pursue any one of the proposed specializations. The fourth year allows customization with electives and the option for pursuing study abroad programs.

Department Heads presented details of various specializations:

- Dr Krishnamoorthi Makkithaya (CS): Core courses offered in the BTech Computer Science program.
- Dr Prema K V (CSE, MIT Bengaluru): BTech specialization in AI & Quantum Computing,

- including early introduction of electives and credit-bearing certification courses.
- Dr Dayanand P (IT, MIT Bengaluru): Curriculum for Cyber Security specialization.
- Dr Vijay Arjunan (CSE, MIT Manipal): Coursework for the Artificial Intelligence and Machine Learning specialization.
- Dr Smitha N Pai (ICT, MIT Manipal): Structure of Information Technology and Computer Communication specializations.
- Dr Radhika M Pai (Data Science & CA, MIT Manipal): Program structure and key features of the Data Science specialization.



Dr Ananthanarayana V S (Former Dy Director, NITK Surathkal) emphasized the importance of including all regulatory-mandated subjects in the core curriculum. He suggested laboratory components for specific courses and underlined the equal significance of curriculum delivery and evaluation alongside structure.

Dr Dileep A D (HoD, CS, IIT Dharwad) commended the initiative and offered feedback on specific aspects of the BTech honors program. Mr Raghupathy C N (Director, MILES Bengaluru) education emphasized core over specialization, which can adapt to industry trends. He highlighted the importance of new-age skills like full-stack development, coding best practices, and understanding system architecture performance. He also advocated for stronger foundations in mathematics, entrepreneurship, and operational technology.

Dr Prashant Bhat (CTO, Manipal Dot Net) reinforced the importance of theory-based learning for core





subjects like computer organization and operating systems, while favoring laboratory environments for compilers, git, scripting, and cloud computing. He emphasized the need for well-rounded professional skill sets, advocating for self-directed learning, professional ethics, and open-source contributions. He proposed an engineer's oath on ethical conduct.

Post lunch, participants engaged in group discussions based on expert feedback and the modifications proposed were presented by department heads in the meeting. Dr Karunakar Kotegar (Pro-President, Manipal University Jaipur) emphasized breaking departmental silos and leveraging new AICTE intake policies. He recommended faculty sabbaticals in industry and suggested addressing credit transfer challenges in international programs. Cdr Dr G L Sharma (Director, Sikkim Manipal Institute of Technology) highlighted changes due to the National Education Policy (NEP), advocating for a common curriculum structure with specialization options in AI, ML, and Blockchain.

Dr Vinod V Thomas, Registrar Evaluation at MAHE, Manipal, highlighted the significance of the National Framework's requirement for 1200 hours of student engagement. This translates to 30 hours of

student effort per credit, emphasizing the importance of both teacher-led instruction and independent learning. He stressed the need to shift towards more engaging, beyond-the-class learning experiences.

Dr Giridhar Kini, Registrar, MAHE, Manipal reiterated the primary objective of the curriculum revision: to align the curriculum with the needs and expectations of key stakeholders. He emphasized the importance of a future-proof curriculum that remains relevant throughout the program duration. He urged faculty members to prioritize the organization's goals over personal preferences when designing the curriculum.

Dr Shri Krishna Pandey (Chairperson, SoE-IT, Dubai) expressed hope that the revised curriculum would meet the expectations of the stakeholders. He also wished that innovative assessment and delivery methods would be implemented. He suggested modular teaching as a strategy to integrate subjects effectively. Dr Iven Jose (Director of Engineering, MIT Bengaluru) appreciated the proposed curriculum and emphasized the importance of faculty training and development. He suggested integrating industry tutorials into courses and extending teaching to businesses and startups, potentially leading to certification opportunities.

Cdr (Dr) Anil Rana (Director, MIT Manipal) acknowledged the ongoing faculty and student training initiatives. He proposed further faculty development through certifications and advocated for the consolidation of departments into a unified computer science stream. Dr S N Bhat, Associate Director (FD&W), concluded the conclave by thanking the dignitaries, participants from sister institutions, MIT leadership, and the Department Curriculum Committee (DCC) members for their valuable contributions. A total of 56 members participated in the event.



#### ANNUAL NSS CAMP 2024: A WEEK OF SERVICE AND LEARNING

The MIT NSS units hosted the annual NSS camp at Manipal during 04 - 09 December 2024. The camp was a transformative experience for the participants as it combined aspects of community service, skill development, cultural engagement, and environmental awareness. About 37 participants engaged in diverse activities aimed at promoting teamwork, leadership, and social responsibility.

Inauguration & Team Formation: The camp began with an inaugural session where participants were introduced to the objectives and detailed itinerary on 04 December 2024. They were divided into teams, ensuring effective collaboration throughout the week. The day concluded with a cultural event that acted as an icebreaker, encouraging camaraderie among participants.



#### Community Service & Leadership Development:

The second day kicked off with a yoga session, followed by a visit to Alevoor Higher Secondary School for a clean-up drive and interactive sessions with students. A guest lecture on leadership and digital literacy added to the learning experience.

On the third day, participants continued their service efforts with a plantation drive and a campus clean-up at ITI College, followed by a leadership talk by Dr Gurumurthy S. C, Associate Professor, Department of Physics.

#### Cultural Exploration & Environmental Initiatives:

Day four involved visits to ITI College and Hasta Shilpa Heritage Village Museum. At ITI college participants explored automotive technology and in Heritage Village the participants had a tour of India's architectural heritage. A mindfulness session was organized for the participants that linked meditation principles to engineering concepts. On the fifth day, a beach clean-up at Delta Point emphasized sustainability, followed by visits to Manipal Soan Farms and historical sites like Karkala Shri Gommateshwara Statue and St Lawrence Minor Basilica Church, enhancing cultural appreciation.

Environmental Conservation & Educational Tours: The final day was dedicated to environmental conservation and learning. Participants visited a local nursery focusing on ecofriendly gardening, conducted a beach clean-up at Saint Mary's Island, and explored the Anatomy Museum to deepen their scientific understanding. The camp concluded with a cultural event celebrating India's heritage and a reflective feedback session. The NSS camp ended on a high note with a closing ceremony where participants shared their experiences and received tokens of appreciation. The six-day journey instilled in the participants leadership qualities, teamwork, and a sense of social responsibility.

#### **BLOOD DONATION CAMP AT BANTAKAL BY NSS UNITS**

A voluntary blood donation camp was organized by the Civil Service Committee (R) Bantakal, Abhayahasta Charitable Trust, Udupi, NSS Units 1 & 2 of MIT Manipal, and the KH Blood Center KMC Manipal in collaboration with various local organizations, at the Rotary Bhawan in Bantakal, Kaup on 02 October 2024 to mark the Gandhi Jayanti celebrations.

The camp was inaugurated by Kaup Tehsildar, Dr Pratibha, who commended the efforts of the donors and the organizers, including the NSS Units of MAHE-MIT. Sri K R Patkar, Chairman of the Civil Service Committee, Bantakal, presided over the event. Sri Satish Salian, Chairman of Abhayahasta Charitable Trust, Manipal, was the chief guest. He congratulated the organizing team and expressed gratitude for the inclusion of NSS-MAHE-MIT and



Abhayahasta Charitable Trust in this noble initiative. The Chief Convenor of the Blood Donation Camp, Sri Devdas Patkar, was honored during the event. A total of 109 units of blood were collected, with approximately 150 blood donors registering for the camp.

#### MIT NSS UNITS: SOCIAL, EDUCATIONAL, & ENVIRONMENTAL INITIATIVES

The MAHE MIT NSS Units I & II actively participated in various social, educational, and environmental initiatives between October and December 2024. The activities focused on community service and awareness with a goal of making positive changes to the local society.

#### **BLOOD DONATION CAMPS**

The NSS units organized 15 blood donation camps across Udupi and surrounding areas, collecting over 1,200 units of blood during October - December 2024. These camps helped strengthen the region's healthcare system by ensuring a steady supply of blood for emergencies. The initiative received appreciation from local hospitals and healthcare providers.

#### **BEACH CLEANING DRIVES**

Committed to environmental conservation, NSS volunteers conducted eight beach clean-up drives at different locations, successfully removing 800+kg of plastic and waste materials during October - December 2024. The drive aimed to raise awareness about marine pollution and encourage responsible waste disposal among the local community.

#### **VANAMAHOTSAVA - A GREEN INITIATIVE**

As part of the Vanamahotsava celebrations, the NSS team distributed and planted over 2,000 saplings in schools, colleges, and community spaces during November - December 2024.

#### **TECHNICAL EDUCATION DRIVE**

NSS volunteers conducted a Technical Education Drive at Parkala High School, introducing students to basic engineering concepts and hands-on activities on 22 October 2024. This initiative aimed to encourage young minds to explore careers in science and technology.

#### **CET & NEET COACHING PROGRAM**

A special coaching program for CET and NEET aspirants was organized in collaboration with the Udupi Zilla Panchayat during 08 - 20 November 2024. The initiative provided structured guidance and study materials to students preparing for competitive exams, ensuring better career prospects.

#### STREET PLAY & AWARENESS CAMPAIGNS

NSS volunteers conducted street plays and awareness programs in schools and colleges to educate students about drug abuse prevention, environmental sustainability, and civic duties during November -December 2024.

#### **CAREER GUIDANCE PROGRAM**

A Career Guidance Program was conducted for high school and pre-university students on 15 December 2024 by NSS Units. It helped the students explore career options, academic choices, and prospects.



#### **GUEST TALK ON AI AND THE FUTURE OF HUMANITY**

The Office of Faculty Development and Welfare organized a guest talk titled AI and the Future of Humanity on 17 December 2024. The talk was delivered by Dr Makarand R Paranjape, Director of Education, Access Health Care Physicians, LLC, USA. The speaker captivated the audience with his critical analysis and forecast on the special challenges posed by 'Human-competitive' AI to the Humanities as a group of academic and human pursuits and to the Homo-sapiens species. He also narrated the plausible threat of making jobs and functions obsolescent by AI and how AI-enabled robotics would upend the very idea of what it means to be human. Drawing from films like The Terminator and The Matrix series, and novels like Aldous Huxley's Brave New World and George Orwell's 1984, he illustrated how these issues are explored in creative works.

Dr Makarand R Paranjape emphasized the importance of the Humanities and its constituent disciplines in safeguarding the future of humanity through criticism and creativity. He highlighted the ways in which Al operates on deep cognition as opposed to pseudo-cognition. He opined that the most valuable area to understand and change the impact of AI would be consciousness studies, where India offers invaluable and extensive material. The speaker also suggested that while traditionally the Indian "Gurus" advocate the yogic path to transformation, we need to extend their wisdommethods to machines and AI too. He also said that Autonomous Al may be a programming nightmare and metaphysical conundrum, but if we understand that consciousness is not an object but the first and ultimate subject, we need not be afraid of Al leading to AC-artificial consciousness.

According to the speaker, the "solution" to the Al challenge is not found in changing technology, but in transforming the human being. A transformed collective global consciousness as advocated by Sri Aurobindo would also help making Al to be useful servant rather than the dangerous master of mankind. In his view, to achieve that we must see this crisis as the means to transform ourselves first. Al will follow as a matter of course.

Dr S N Bhat, Associate Director (Faculty Development and Welfare) welcomed the guest and the gathering in the beginning and delivered the concluding remarks emphasizing the importance of fostering interdisciplinary dialogues.

The event was graced by Dr Somashekara Bhat, Joint Director, MIT Manipal, Associate Directors, Heads of Departments, representatives from other constituent organizations of MAHE, faculty members and research scholars. The Q&A session at the end of the talk encouraged discussions between the audience and the speaker, with thought-provoking questions and ideas enriching the discourse.





#### INTERACTION WITH THE PROFESSOR FROM IIT BOMBAY

Dr Ravindra D Gudi, Professor and Dean (Alumni and Corporate Relations) at IIT Bombay and adjunct faculty in the Department of Instrumentation and Control Engineering visited the department during 03 - 04 October 2024. During his visit, he has delivered lectures on Process Control and Instrumentation for the Fifth Semester Electronics and Instrumentation Engineering Students.

In his lectures he focused on the industrial applications of the course contents. Students through their enthusiastic engagement and interactions with the Professor enhanced their perspectives on the domain. Dr Ravindra Gudi appreciated the interest shown by the students, facility and infrastructure available in the

department. Dr I Thirunavukkarasu, Professor in the department coordinated the sessions.



#### **GUEST TALK ON INSTRUCTIONAL SYSTEM DESIGN USING THE CDIO FRAMEWORK**

A guest talk on Instructional System Design using the CDIO Framework was organized by the Office of the Associate Director (Faculty Development and Welfare) on 21 November 2024. Dr T Gnana Sambanthan, former Professor of Computer Science and Engineering, National Institute of Technical Teachers Training and Research (NITTTR), Chennai, was the guest Speaker. He introduced the attendees to the CDIO (Conceive, Design, Implement, Operate) framework, a widely used methodology for engineering education by many countries.

In his talk, Dr Sambanthan focused on the significance of the CDIO (Conceive, Design, Implement, Operate) framework for educators at highlighting its relevance in shaping engineering and technical education. He discussed the origins and evolution of Outcome-Based Education (OBE) and accreditation in the backdrop education. Dr Sambanthan engineering elaborated on the integration of OBE with the CDIO framework, showcasing it as a set of best practices for enhancing instructional system design. Through practical examples and anecdotes, he illustrated how the CDIO framework could be applied effectively to curriculum design, helping faculty focus on cultivating critical thinking, problemsolving, and collaborative projects. By aligning educational outcomes with industry expectations,

Dr Sambanthan opined that the CDIO framework offers a robust approach to achieve measurable learning outcomes besides ensuring students to get prepared for meeting real-world challenges.

Dr Shankaranarayana Bhat, Associate Director (Faculty Development and Welfare), welcomed the guest and the gathering, and highlighted the significance of adopting modern instructional frameworks like CDIO in the context of Outcome-Based Education (OBE). The event was graced by Dr Somashekara Bhat, Joint Director, MIT Manipal and active participation of faculty members from various departments of MIT, Manipal. The event concluded with a vote of thanks delivered by Dr Shankaranarayana Bhat, AD(FD&W).



#### HEARTFULNESS MEDITATION SESSION AT MIT MANIPAL

As part of the Fit India Week 2024 initiative, the Office of Faculty Development and Welfare (FDW) organized a three-day Heartfulness Meditation sessions aimed at promoting mental well-being and holistic fitness during 09 - 11 December 2024.

The sessions were conducted by Dr Suresh Baliga, renowned surgeon and Heartfulness meditation practitioner and his team. They introduced participants to simple, yet effective techniques designed to reduce stress, enhance focus, and cultivate inner peace.

The session predominately focused on the practice of meditation. However, the event witnessed enough interactions with the resource persons, both during and after the sessions helping the attendees to engage deeply with the practice and to know the concepts better. By helping to integrate mental health into the broader fitness initiatives, the session contributed to the Fit India movement and encouraged individuals to take proactive steps toward their personal fitness.



The program attracted an enthusiastic participation of over 60 teaching faculty, non-teaching staff, and research scholars, who gathered to experience the transformative potential of Heartfulness Meditation. The event was a step towards creating a healthier, more mindful community in line with the goals of the Fit India Movement, which emphasizes the importance of physical fitness and mental health for all.

#### MIT STUDENT COUNCIL INVESTITURE CEREMONY 2024



The Investiture Ceremony for the newly elected office bearers of the MIT Student Council for the academic year 2024-2025 was held on 12 November 2024, in a grand event organized by the Office of Associate Director (Student Welfare). The ceremony marked a significant moment for the students of Manipal Institute of Technology (MIT), Manipal, showcasing leadership, talent, and the spirit of collaboration.

Cdr (Dr) Anil Rana, Director of MIT Manipal presided over the event while Dr Somashekara Bhat, Joint Director, was the Guest of Honor. Dr Poornima P. Kundapur, Associate Director (Student Welfare), in her opening remarks, emphasized the importance of student leadership and active participation in campus life.

Outgoing President Mr Keshav Garg addressed the gathering, sharing his reflections on the past year, before handing over the reins to the newly elected President, Mr Vennala Harshavardhan Reddy, who pledged to uphold the values and vision of the council.

The event also featured a cultural showcase that added vibrancy to the ceremony. Ms Aaryica Talati, a seventh-semester BTech (IT) student, mesmerized the audience with a classical Kathak performance from the Lucknow Gharana, set to the soulful tune of "Aaj Mera Piya Ghar Aavengae". A musical medley of Bollywood songs by Shivam Poddar and Shreyas Kumar further added vibrancy to the spirit of the gathering.

Ms Sanjana Belvai, a third-semester BTech (Biomed) student, was the Master of Ceremony, while the Vote of Thanks was delivered by Dr Ashwini Bhat, Assistant Director (Student Welfare). The seamless execution of the event was supported by Ms Sanjana Adiga, BTech (Biomed) who managed logistics. The Investiture Ceremony 2024 promised a sense of dynamic student leadership and exciting activities in the coming year at the institute.



#### **GUEST TALK ON HYDROGEOCHEMICAL INTERPRETATION**

The Department of Civil Engineering organized a special talk titled "Hydrogeochemical Interpretation" on 11 October 2024 by Dr M A Mohammed Aslam, Dean of the School of Earth Science, Central University of Karnataka, Kalaburagi. The talk revolved around the ideas on the interpretation of geochemical data, with a particular emphasis on groundwater chemistry.

Dr Aslam shared valuable insights with the students on how to interpret large geochemical datasets, turning them into meaningful figures and tables to uncover the science hidden within the data. The session also covered modern analytical techniques used to quantify even the lowest concentrations of various chemical elements in water.



#### **GUEST TALK ON ANTENNA DESIGN AND OPTIMIZATION FOR SPACE APPLICATIONS**

The Department of Electronics and Communication Engineering (E&C) organized an Alumni Talk on "Antenna Design and Optimization for Space Applications" on 01 October 2024.

Mr Sammir Sakhare, Division Head at SAC, ISRO Ahmedabad shared valuable insights into the future of antenna technology for satellite communications and space applications.

Mr Sakhare discussed the increasing complexity of space missions and the growing demand for compact, lightweight, and high-performance antennas. He highlighted the trend towards the use of flexible materials and innovative designs, such as deployable reflectors and origami-inspired structures, to meet the size and weight constraints of small satellites and CubeSats.

The talk also explored the significance of high-frequency bands like Ka and mm-Wave, which offer higher bandwidths and data transmission rates. These frequencies are crucial for emerging applications such as Earth observation, deep space exploration, and satellite internet. Mr Sakhare emphasized the role of phased array antennas in enabling electronic beam steering and multibeam capabilities, which are essential for inter-satellite

communication in constellations and networks. Mr Sakhare also discussed the application of optimization techniques and artificial intelligence (AI) and machine learning (ML) algorithms in modern antenna design to help improve antenna performance, reduce power consumption, and enhance fault tolerance.

Dr Pallavi R Mane, Professor and Head of the Department, thanked Mr Sakhare for his valuable session. The event was coordinated by Dr Goutham Simha G D, and Dr Tanweer, Associate Professors in the department.



#### ALUMNI TALK ON PRACTICAL IMPLEMENTATION OF GenAI FOR HEALTHCARE

The Department of Biomedical Engineering organized an alumni talk on "Practical Implementation of GenAl for Healthcare" by Mr Shreyan JD Fernades, Executive, KPMG India, Bengaluru, India on 09 and 11 October 2024.



#### **GUEST TALKS AT DEPARTMENT OF CHEMISTRY**

The Department of Chemistry organized a guest lecture by Dr Irishi N N Namboothiri, HAG Professor from the Department of Chemistry, IIT Bombay on 09 September 2024. Dr Namboothiri delivered a lecture, covering advanced research topics in the domain. The event also marked the official launch of CHEMALGHAM, the Post Graduate Students' Chemistry Club.



As part of the Industry Advisory Committee (IAC) event, the Department of Chemistry, in association with CHEMALGHAM, organized a guest talk by Dr Ravindra Vikram Singh, Director and Head of R&D at Sigma-Aldrich, Bangalore on 13 September 2024. Dr Singh shared valuable industry insights on advancements in chemical research and development.



In celebration of World Hydrogen Day, the Center for Renewable Energy, Department of Chemistry, and CHEMALGHAM organized a guest talk by Dr Sharad Lande, Assistant Vice President at Reliance Industries Ltd, Corporate Research and Technology Office, Mumbai on 08 October 2024. Dr Lande provided insightful perspectives on the role of hydrogen in the future of sustainable energy.



The Department of Chemistry, in collaboration with the student club CHEMALGHAM, organized an engaging alumni interaction session for postgraduate students on 23 October 2024. The guest speaker for the event was Mr Sachin, a 2017 batch alumnus and Lecturer at PPC, Udupi. During the session, Mr Sachin shared his academic and professional journey, offering insights into career opportunities in chemistry and higher education.



The Department of Chemistry organized an interactive session with Dr A K Sinha, Chief Scientist of the Biofuels Group at CSIR-Indian Institute of Petroleum (IIP), Dehradun, during his visit to Manipal on 13 November 2024. Dr Sinha shared his expertise on biofuels, discussing recent advancements, sustainable energy solutions, and the role of research in driving innovation in the field.



#### ALUMNI TALK ON LIFE AFTER MANIPAL: CAREER, JOURNEY AND LEARNING

The Department of Information and Communication Technology (I&CT) organized an Alumni Talk on "Life After Manipal: Career, Journey, and Learning" on 04 October 2024 in an online mode.



Mr Ravi Kashyap (Batch of 2008), Sr SAP Solutions Architect, Amazon Web Services (AWS), USA, delivered the session that provided a comprehensive overview of his experiences at Manipal Institute of Technology, encompassing both academic and personal life.

Mr Kashyap shared valuable insights into his academic journey, highlighting the skills and knowledge he acquired during his student life at MIT, Manipal. He also focused on his placement experiences, discussing the challenges he faced and the opportunities he could explore. The event was coordinated by Ms Veena K M, Assistant Professor Senior Scale, Department of I&CT.

#### ALUMNI TALK ON BRIDGING TECHNOLOGY AND HEALTHCARE

The Department of Biomedical Engineering organized an alumni talk on "Bridging Technology and Healthcare" by Dr Swati Suran, Researcher, Artificial Organs, IMEC the Netherlands on 23 October 2024.





#### **GUEST LECTURE ON MEDICAL DEVICE REGULATIONS & SAFETY**



The Department of Biomedical Engineering organized a guest lecture on "Medical Device Regulations & Safety" by Dr Raghavendra S Rao, Visiting Faculty (International) on 28 October 2024.

#### **GUEST LECTURE ON HEMODIALYSERS**

The Department of Biomedical Engineering organized a guest lecture on "Hemodialysers" by Dr V S Venkatesan, Visiting Professor (International) on 03 and 07 October 2024.



#### ONLINE SESSIONS ON HEAVY VEHICLE TECHNOLOGY IN COLLABORATION WITH VOLVO MOTORS



NINE MEMBER VOLVO MOTORS TEAM

The Mechatronics Department, MIT Manipal, in collaboration with Volvo Motors, conducted a series of 11 online sessions under the subject "Heavy Vehicle Technology (MTE-4076)."

The sessions delivered by nine industry experts from Volvo Motors were divided into key technical modules, ensuring a structured approach to learning.

"Cabin and Transport Body" was covered in detail, explaining the importance of ergonomic design, global safety standards, and material innovations for durability. "Sensors, Actuators, and Electrical Systems" provided an in-depth look at modern functionalities, sensor electrical integration, and their impact on vehicle performance. The "Diagnostics and Miscellaneous" segment emphasized predictive maintenance and troubleshooting techniques, equipping students tools to enhance vehicle efficiency. with Additionally, specialized sessions on battery technology, alternators, and ultra-capacitors highlighted advancements in electrical power management for heavy vehicles.

Mr Vinoth Kumar U and Mr Uday Patil led discussions on "Cabin and Transport Body," detailing the role of crash safety, transport configurations, regulatory compliance.

Mr Mrinmoy Das and Ms Gunavathi handled the sessions on "Sensors, Actuators, and Electrical Systems," offering insights into sensor technologies

and their integration in vehicle efficiency and diagnostics.

Sessions on Electrical System Fundamentals, Including Battery And Alternator Technologies, were covered by Mr Abhishek Sadhukhan and Mr Mariadoss R. They elaborated on power storage and energy optimization techniques involved in heavy vehicle technology.

later sessions focused on vehicle maintainability and diagnostics. They were delivered by Ms Bhashyam Abhilasha, Ms Nithiya Devi, and Mr Prithiviraj Kannan.

Abhilasha provided an overview maintainability strategies to reduce downtime and enhance operational efficiency.

Ms Devi and Mr Kannan focused on the advanced diagnostic tools, fault detection methodologies, and real-world troubleshooting case studies using OBD and EOBD systems.

Led by industry experts, these sessions provided students with insights into real-world applications of heavy vehicle technology.

This collaboration marks a significant step in enhancing technical education through industrydriven learning. By connecting students directly with experts, the initiative strengthens the university's efforts to prepare future engineers for real-world challenges.

#### CELEBRATION OF INDIAN CONSTITUTION DAY AT MAHE-MIT NSS UNIT I & II

MAHE-MIT NSS Units celebrated Indian The Constitution Day on 26 November 2024. To mark the occasion, the students read the Preamble of the Constitution and took a pledge to uphold its

principles with utmost sincerity. The event witnessed the active participation of NSS volunteers, MIT faculty members, NSS Program Officers, MIT students, and staff.



## L&T EDUTECH: PHYSICAL MODE CLASSES ON HIGHWAY PLANNING, DESIGN, AND CONSTRUCTION

As part of the L&T EduTech course on Highway Planning, Design, and Construction, physical sessions were held at MIT, Manipal during 30 September - 01 October 2024.

Ms Karthika S, a subject expert from L&T EduTech, led the sessions, providing valuable insights into the design of flexible and rigid pavements, including overlay design. The sessions also featured hands-on experience with IIT PAVE, a pavement design and analysis software, allowing students to gain practical skills in pavement design.



# MSC GEOLOGY STUDENTS' STUDY TOUR TO GOLD, IRON ORE, AND MANGANESE MINES



The third-semester MSc Geology students, accompanied by faculty members od Department of Civil Engineering, Dr K. Balakrishna and Dr Amrish V Narayan, embarked on a study tour to explore significant mines and geological heritage sites in North and Central Karnataka during 14-18 October 2024.

The tour began at the Hutti Gold Mines, where students were taken 600 meters below the surface to observe native gold occurrences within metavolcanic rock formations. The students were also shown the process of ore extraction, including the methods of powdering and gold extraction through various metallurgical techniques.

The team also visited the Sandur Manganese and Iron Ore Company, an open-cast mine, where the

geologists demonstrated the manual extraction of manganese ore and the process of separating it into different grades. The high-grade manganese and iron ore from this mine are sent to JSW Steel, Thoranagallu, to produce ferroalloys and steel.

Further, the students had the opportunity to explore the historical sites at Hampi. And on the final day of the tour, the students visited the Yaana Rock Formations in Uttara Kannada District. These nearly billion-year-old formations showcase remarkable karst weathering patterns and cave formations.

This study tour provided the students with invaluable hands-on experience, offering insights into both geological formations and their cultural significance in Karnataka.

#### TRAINING ON CPS INTERFACE LAB BUNDLE

Industry experts from ARK Infosolutions trained faculty members of the Department of Instrumentation and Control Engineering on CPS Interface Lab Bundle during 05-06 December 2024.

The training included Assembling, Testing and Verification, Interfacing MATLAB & Simulink with Embedded hardware (Arduino / Raspberry Pi) and Demonstration and explanation of CPS hardware's interface with MATLAB & Simulink.



#### WEBINAR ON QUANTUM COMPUTING

The Department of Physics hosted a webinar on 03 October 2024 on the applications and future potential of quantum computations. As part of the webinar, Dr Sunil Kumar Mishra from IIT BHU Varanasi delivered a talk titled "Quantum Computing: A Paradigm Shift.

The session aimed to examine the transformative role of quantum computing. " The discussion highlighted the growing importance of quantum computing techniques in both current and future technological advancements.

The webinar was presided over by Prof Sudha D Kamath, Head of the Department of Physics and

was attended by students, research scholars, and faculty members. Dr Akhilesh Ranjan, Assistant Professor - Selection Grade and Dr Vikash Mishra, Assistant Professor in the department were convener and co-convener of this webinar respectively.



#### WEBINAR ON EXPERIMENTAL NUCLEAR FACILITIES

The Department of Physics organized a webinar "Experimental Nuclear Facilities" on 17 October 2024. Dr Dinesh Negi, Assistant Professor Senior Scale, Department of Physics, MIT, Manipal delivered a talk on the "Overview of Experimental Nuclear Facilities in India and Abroad," highlighting the complexities and collaborative nature of these research facilities. The session presided over by Prof Sudha D Kamath, Professor and Head, Department of Physics attracted participation from students, research scholars, and faculty members.



"There is almost no limit to the potential of an organization that recruits good people, raises them up as leaders and continually develops them."

- John Maxwell

### **FACULTY ACHIEVEMENTS**

## MAHE SECURES A PLACE IN THE GOVT OF INDIA ARTIFICIAL INTELLIGENCE CENTER OF EXCELLENCE (AI-COE)

MAHE Manipal, in collaboration with IIT-M, secured a place in the second phase of the Artificial Intelligence Center of Excellence (AI-COE) in Health project, an exciting initiative launched by the Ministry of Education, Government of India. The official announcement of the AI-COE centers was made by the honorable Union Minister of Education, Sri Dharmendra Pradhan in New Delhi on 15 October 2024.

Five institutions will be part of AI-CoE in Health: AIIMS and IIT Delhi as lead institutes along with IISc Bangalore, IIT Madras and MAHE as core consortium partners. Cardiovascular Disease Project has been recognized as one of five projects of national importance. Dr Manjunath K N from the Department of Computer Science & Engineering, Manipal Institute of Technology, Manipal is the co-lead in this project along with Dr Ganesh Paramasivam from the Department of Cardiology, Kasturba Medical College, Manipal.



Dr Manjunath K N, and Dr Neelima Bayyapu, Associate Professors from the Department of Computer Science & Engineering represented MIT at the event. This project aims to revolutionize healthcare by using artificial intelligence to develop affordable diagnostic and therapy solutions for the common man, with a budget of 330 crore INR over five years. MAHE will be working alongside prestigious institutions such as AIIMS, IIT Delhi, IISc, and IIT Madras to bring this vision to life. Dr Ajitha Shenoy K B, Professor, Department of Information and Communication Technology and Dr Muralikrishna S N, Assistant Professor Senior Scale, Department of Computer Science Engineering are the other members from MIT Manipal in the team.









### Dr DHANYA SUNIL IS CONFERRED WITH FELLOW OF THE ROYAL SOCIETY OF CHEMISTRY

Dr Dhanya Sunil, Assistant Director-Doctoral Programs, Assistant Director-CAIF & Professor, Department of Chemistry, has been honored with the prestigious title of Fellow of the Royal Society of Chemistry (FRSC) from the United Kingdom. FRSC is one of the most prestigious awards conferred by the Royal Society of Chemistry (RSC), the United Kingdom. Dr Dhanya's achievements, including patents, scientific publications, and significant research, have earned her this esteemed fellowship.



### Dr SUDHA KAMATH RECEIVES EXCEPTIONAL WOMEN RESEARCHERS AWARD FROM ICSSR AND SPRINGER NATURE

Dr Sudha Kamath, Professor and Head of the Department of Physics at MIT, Manipal, was honored with the Exceptional Women Researchers Award by the Indian Council of Social Science Research (ICSSR) and Springer Nature as part of the "Research Tour 2024" initiative. The award was presented on 07 October 2024, during the "India Bus Tour", which focused on the western and southern regions of the country. Dr Kamath was one of five top researchers selected from the Manipal Academy of Higher Education to receive this prestigious recognition. The award highlights her outstanding contributions to the field of research, further cementing her reputation as a distinguished and accomplished woman researcher.



#### Dr MANIKANDAN M RECEIVES BEST PAPER AWARD

Dr Manikandan M, Assistant Professor Senior Scale, Department of Aeronautical and Automobile Engineering was awarded the "Best Paper Award" for his research paper titled "A MATLAB GUI-Based Approach to Wing Design and Aerodynamic Performance Evaluation" at the International Conference on Futuristic Advances in Mechatronics, Engineering for Aerospace and Defense (ICFAMEAD-2024). The conference was held at Symbiosis International (Deemed University) in Pune during 04-05 October 2024.



#### Mr VIPIN V RECEIVES BEST PAPER AWARD

Mr Vipin V, an Assistant Professor, Department of Electrical and Electronics Engineering received the "Best Paper Award" for his research paper titled "Study of the Effect of Temperature and C-rate on Inductor based Active Cell Balancing for a Li-ion based Battery" at the IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER-2024). The conference was held at St. Joseph Engineering College in Mangaluru during on 18-19 October 2024.



#### Dr YASHWANTH N RECEIVES BEST PAPER AWARD

Dr Yashwanth N, Associate Professor, Department of Electronics & Communication Engineering was awarded the "Best Paper Award" for his research paper titled "Turbo Decoding Performance Analysis for EEG Signal Processing in Telemedicine Applications: A Comparative Study in 5G Networks" at the International Conference on Recent Advances in Information Technology for Sustainable Development (ICRAIS-2024). The conference was held at MIT Manipal during 06-07 November 2024.



#### Dr MANISH, Dr SWATI and Dr TANWEER RECEIVE BEST PAPER AWARD

Dr Manish Varun Yadav, Assistant Professor Senior Scale, Department of Aeronautical and Automobile Engineering, Dr Swati Varun Yadav, Assistant Professor, Department of Instrumentation & Control Engineering, and Dr Tanweer, Associate Professor, Department of Electronics & Communication Engineering, received the "Best Paper Award" for their collaborative research paper titled "Optimized Printed Antenna for Aerospace IoT Wireless Connectivity" at the International Conference on Data-Processing and Networking (ICDPN-2024) held at the Institute of Technology and Business (VŠTE) in České Budějovice, Czech Republic during on 25-26 November 2024.







#### Dr GIRIDHAR and Ms VIBHA RECEIVE BEST PAPER AWARD

Dr Giridhar B Kamath, Associate Professor, Department of Humanities & Management and Ms Vibha, Assistant Professor Senior Scale, Department of Information & Communication Technology received the "Best Paper Award" for the paper titled "An Integrative Review of ChatGPT Landscape in Library Contexts" at the International Conference on Maintenance and Intelligent Asset Management held at MIT Manipal during 16-17 December 2024.





## Dr DIVYA RAO COORDINATED APPLE DEVELOPERS GROUP RECEIVES BEST STALL AWARD AT THE MAHE RESEARCH DAY 2024

The Apple Developers Group coordinated by Dr Divya Rao, Associate Professor, Department of Information & Communication won the Best Stall award in the Allied Health and Other Theme of the Collaborate Section at the MAHE Research Day 2024 on held during 13-16 November 2024.



### Dr VIJENDRA PRABHU COORDINATED CENTRE µBioPS BAGS BEST STALL AWARD AT THE MAHE RESEARCH DAY 2024

Dr Vijendra Prabhu, Assistant Professor - Selection Grade, Department of Biotechnology received the Best Stall Award in the Enrich Section at the MAHE Research Day 2024 held during 13-16 November 2024 for his Centre for Microfluidics, Biomarkers, Photoceutics, and Sensors (µBioPS).



### Dr SRINIVAS RECEIVES "GALACTIC LOCAL MENTOR" AWARD

Dr Srinivas G, Associate Professor, Department of Aeronautical & Automobile Engineering participated online as a mentor in the NASA International Space Apps Challenge, where he was honored with the "Galactic Local Mentor" award for his outstanding contributions and efforts in addressing challenges on Earth and in space. This challenge program was organized by Sandip University, Nashik, Maharashtra, India, from October 5 to 6, 2024.



### Dr ANISH KUMAR WARRIER JOINS 44th INDIAN SCIENTIFIC EXPEDITION TO ANTARCTICA

Dr Anish Kumar Warrier, a Professor of Geology and Coordinator of the Centre for Climate Studies, Department of Civil Engineering embarked on a scientific journey as part of the 44<sup>th</sup> Indian Scientific Expedition to Antarctica. Dr Warrier joined an international team of scientists on a mission to East Antarctica in October 2024 for the STAPLES project (Spatio-Temporal Investigations of Polar Lacustrine Systems).

The eight-member team, consisting of experts from India, Japan, and Belgium, collaborated on a field campaign to study the climate history of the region. Their primary objective was to collect sediment cores from lakes in East Antarctica, which contain valuable data on past climate patterns, ice-sheet fluctuations, and historical sea levels. By analyzing these sediment samples, the team aims to unlock vital insights into the behavior of ice sheets over time and the response of sea levels to natural climate variations.

The research gathered during the expedition will significantly enhance our understanding of the past and provide essential data for climate models predicting future sea-level changes. In the context of accelerating climate change, these predictions will play a crucial role in guiding global policymakers and scientists in addressing its long-term consequences. This expedition marks Dr Warrier's fifth journey to Antarctica. The mission is financially supported by the National Centre for Polar and Ocean Research (NCPOR), an institution under India's Ministry of Earth Sciences.



### TALK BY Dr RAGHUVIR PAI AT SME - IMECE2024 OREGON, USA

Dr Raghuvir Pai, Senior Professor, Department of Mechanical Engineering presented the paper titled "Study of the Stresses and Friction during Blink between the Posterior Surface of the Eyelid and Anterior Surface of the Cornea, using Finite Element Analysis," at SME International Mechanical Engineering Congress and Exposition (IMECE 2024), held at Portland, Oregon, USA during 17-21 November 2024. IMECE is one of the largest global conferences in mechanical engineering, hosted annually by the American Society of Mechanical Engineers (ASME). The event attracts thousands of experts and researchers from across the world, offering a comprehensive platform for sharing advancements in both established and emerging fields of mechanical engineering. With more than 2,400 papers, presentations, and posters spanning 17 core tracks, IMECE covers a vast array of topics across various engineering disciplines.

Dr Raghuvir Pai presented his paper within the Biomedical and Biotechnology track. This research, funded by the Department of Science and Technology - Science and Engineering Research Board (DST-SERB) under the Core Research Grant Scheme, is a collaboration with several experts, including Dr Ramesh S V, Dr Menatchi Sundaram, Dr S M Abdul Khader, Dr Manali Hazarika, Dr Girish H, Mr Sohan Rao, and Mr Abhilash Hebbandi. This study, which investigates the mechanical interactions between the eyelid and cornea, has already been accepted for publication in the prestigious ASME Journal of Engineering and Science in Medical Diagnostics and Therapy.



# Dr RAGHUVIR PAI IS A PANELIST AT THE INSTITUTE OF PUBLIC WORKS ENGINEERS AUSTRALASIA (IPWEA)

Dr Raghuvir Pai, Professor, Department of Mechanical and Industrial Engineering, was invited as a panel member at the Institute of Public Works Engineers Australasia (IPWEA) International Asset Management Congress 2024, held at the National Convention Centre in Canberra, Australia during 28-29 November 2024. This prestigious event brought together leading experts from around the world to discuss the pressing issues surrounding the management of engineering assets, particularly those funded by taxpayer money at various levels of government.

The Congress opened with an address by The Honourable Catherine King, Minister for Infrastructure, Transport, Regional Development and Local Government of the Australian Federal Government. The Honourable Bridget McKenzie, Shadow Minister for Infrastructure, Transport and Regional Development and Leader of the Nationals delivered the keynote address at the event.

Dr Pai was part of a distinguished panel featuring Dr Emmanuel Ngcobo from South Africa, Ursula Bryan from the United Kingdom, and Tanya Garost from Canada, with David Jenkins from Australia moderating the discussion. The panel focused on the challenges and opportunities in managing engineering assets across local, state, and federal levels of government. Each panelist shared insights into their respective countries' approaches to asset management and the need for a coordinated national strategy to address skills development in the field. Dr Pai emphasized the critical need for governments to build a strong pipeline of talent for the asset management profession, as the absence of a clear strategy increases risks associated with the cost-effective use of public funds and affects the quality of services provided to communities.



#### Dr I THIRUNAVUKKARASU DELIVERS SPECIAL LECTURES

Dr I Thirunavukkarasu, Professor, Department of Instrumentation and Control Engineering, MIT, Manipal delivered two lectures at the Five Days FDP on Artificial Intelligence Integrated Green Wireless Communication and Sensor Technologies held at PVKK Institute of Technology, Anantapur (Autonomous Institute under JNTU). The lectures were titled "Machine Learning Concept for Advanced Control Implementation via Wireless Communication using Jetson Orin" and "Cyber Physical System Implementation on Batch Reactor via Nodes and Virtual Reality using Unity Pro & Blender".



### Dr ISMAYIL DELIVERS TWO GUEST TALKS

Dr Ismayil, Associate Professor, Department of Physics, an expert in the field of energy storage technology delivered a special lecture titled "From Lithium to Alternatives: Sodium and Magnesium Ion Conducting Polymer Electrolytes for Energy Storage Devices," at St Aloysius (Deemed to be University), Mangalore on 01 October 2024. The talk was organized by the Department of PG Physics and the Phoenix Association. Dr Ismayil's presentation focused on the latest advancements in alternative ion-conducting polymer electrolytes, highlighting the potential of sodium and magnesium as viable alternatives to lithium in energy storage devices.



Dr Ismayil, Associate Professor, Department of Physics delivered a special talk on "Sustainable Polymer Electrolytes for Energy Storage Devices." at National Level Symposium held at Poornaprajna College (Autonomous), Udupi on 09 October 2024. He highlighted the crucial role of sustainable materials in the development of efficient energy storage solutions. The symposium brought together experts, researchers, and students from across the country to discuss the latest trends and innovations in materials science for sustainability.

#### Dr KALIRAJ S DELIVERS SPECIAL TALK

Dr Kaliraj S, Associate Professor, Department of Information & Communication Technology delivered a talk on 'Trends in Threat Analysis of Cyber Attacks in Machine Learning" in online mode on 23 October 2024. The session was organized by the Department of Computer Science and Engineering and the Department of Information Technology, Vardhaman College of Engineering, Hyderabad.



### Dr POORNIMA P KUNDAPUR DELIVERS SPECIAL TALK

Dr Poornima P Kundapur, Associate Professor, Department of Data Science and Computer Applications & Associate Director (SW), MIT Manipal was invited as resource person to deliver a talk on the Future scope of AI at a conference for school teachers on emerging trends in pedagogy on 19 October 2024 organized by Manipal Institute of Communication, Manipal. The talk focused on AI tools and the way teachers can use them in their assessment for enhancing efficiency and productivity.



"The achievements of an organization are the results of the combined effort of each individual."

- Steve Aquei

### ENRICHING INSTITUTE LEADERSHIP DIMENSIONS



**Dr NAGARAJ N KATAGI**Deputy Chief Warden - Technology Campus, MAHE

Dr Nagaraj N Katagi, Professor in the Department of Mathematics is appointed as Deputy Chief Warden - Technology Campus, MAHE, Manipal for a period of two years from 11 Dec 2024.



**Dr JAYALAKSHMI N S**Head of Department - Electrical and Electronics Engineering

Dr Jayalakshmi N S, Professor in the Department of Electrical and Electronics Engineering is appointed as Head of the Department for a period of two years from 01 Jan 2025.



**Dr SIDDALINGASWAMY P C**Head of Department - Computer Science & Engineering

Dr Siddalingaswamy P C, Professor in the Department of Computer Science & Engineering is appointed as Head of the Department for a period of two years from 01 Jan 2025.



**Dr VINAY KUMAR JADOUN**Assistant Director - Research & Consultancy

Dr Vinay Kumar Jadoun, Associate Professor, Department of Electrical and Electronics Engineering, is appointed as Assistant Director - Research & Consultancy for a period of one year from 01 December 2024.



**Dr PRATEEK JAIN**Assistant Director - Academics

Dr Prateek Jain, Assistant Professor, Department of Electrical and Electronics Engineering, is appointed as Assistant Director - Academics for a period of one year from 01 January 2025.

### ENRICHING INSTITUTE LEADERSHIP DIMENSIONS



Mr GHANASHYAMA PRABHU Assistant Director - Academics

The tenure of Mr Ghanashyama Prabhu, Assistant Director-Academics is extended for a period of one year from 01 December 2024.



**Dr THIVAHARAN V** Assistant Director - Quality Assurance

The tenure of Dr Thivaharan V, Assistant Director- Quality Assurance is extended for a period of one year from 07 December 2024.



**Dr Thirunavukkarasu I**Assistant Director - Doctoral Programmes

The tenure of Dr Thirunavukkarasu I, Assistant Director - Doctoral Programmes is extended for a period of one year from 01 January 2025.



**Dr YASHWANTH N**Assistant Director - Faculty Development & Welfare

The tenure of Dr Yashwanth N, Assistant Director - Faculty Development & Welfare is extended for a period of one year from 01 January 2025.



"A leader is best when people barely know he exists. When his work is done, his aim fulfilled, they will say: we did it ourselves."

- Lao Tzu



### RESEARCH HIGHLIGHTS

#### **PATENTS**

Dr R Vinoth, Additional Professor, Department of Electronics & Communication Engineering, MIT Manipal, Dr Ravishankar Dudhe, Associate Professor, SoE-IT, MAHE Dubai were granted with a patent on 29 October 2024 for their invention titled "AN OPTIMAL HEMODIALYZER MEMBRANE SYSTEM AND ITS DESIGNING METHOD" by The Patent Office, Government of India. Ms Ahana Fatima Alex, Research Scholar from SoE-IT, MAHE Dubai is the co-inventor.







Mr Nitesh Naik, Assistant Professor Senior Scale, Department of Mechanical & Industrial Engineering, and Dr Dasharathraj K Shetty, Associate Professor, Department of Data Science and Computer Applications were granted with a patent on 29 October 2024 for their invention titled "AN AUTOMATIC LIGHT POSITIONING AND FOCUSING SYSTEM" by The Patent Office, Government of India.

Dr Vathsala, Associate Professor, Department of Oral Medicine & Radiology, MCODS Manipal, Dr B M Zeeshan Hameed, Former Associate Professor, Department of Urology, KMC Manipal, Mr Kshitij Bhardwaj, Mr Rajath Shenoy, alumni of Department of Mechanical and Manufacturing Engineering, Ms Sambhav Singh Rohatgi, alumnus of Department of Mechatronics, Rhea Shetty and Mr Aditya Kalra alumni of MCODS Manipal are the co-inventors.









Dr Sathyashankara Sharma, Senior Professor, Department of Mechanical & Industrial Engineering, Dr Murthy B R N, Additional Professor, Associate Professor, Department of Mechanical & Industrial Engineering were granted with a patent on 10 December 2024 for their invention titled "ALLOY COMPOSITION AND A METHOD OF SYNTHESIZING THE ALLOY COMPOSITION" by The Patent Office, Government of India.

Dr Sandeep Nambiar S, Former Research Scholar, MIT and Dr Prasanna A A, MCE Hassan are the co-inventors.







Dr Ashwin Kumar Devaraj, Assistant Professor Selection Grade, Department of Mechanical & Industrial Engineering, MIT, Manipal was granted with a patent on 04 March 2024 for his invention titled "DENTAL DEVICE" by The Patent Office, Government of India.

Dr Ramya Shenoy, Professor & Head, Department of Public Health Dentistry, MCODS, Manipal, Dr Dilip G Naik, Pro Vice Chancellor, Mangaluru Campus, Dr Nikita Rungta, alumnus, MCODS, Manipal, and Mr Suhan are the co-inventors.









Mr Nakul Shetty K, Assistant Professor Senior Scale, Department of Electronics & Communication Engineering, MIT, Manipal was granted with a patent on 22 October 2024 for his invention titled "DEVICE TO EVALUATE AND DETERMINE THE EXTENT OF NEUROLOGICAL DYSFUNCTION" by The Patent Office, Government of India.

Dr Adarsh Kudva, Professor, Department of Oral and Maxillofacial Surgery, MCODS, Manipal, Dr Arun Shanbhag, Former Chief Innovation Officer, MAHE, Dr Anahat Chugh, alumnus, MCODS, Manipal, Ms Ranjani Aithal and Mr Melroy Pinto, alumni of Department of Electrical and Electronics Engineering are the coinventors.















### **GRANTS**



Dr Murthy Dharmapura

Dr Murthy Dharmapura, Associate Professor (Research), Department of Chemistry has received One Crore grant under National Green Hydrogen Mission (NGHM) from Ministry of New and Renewable Energy (MNRE) to work on next generation optical sensor materials to detect ppm level hydrogen leak. This work is of immense importance to expedite deployment of hydrogen technology in various sectors.



Dr Chiranjit Ghosh, Assistant Professor (Research), Department of Biotechnology, has received the ICMR grant of INR 31,00,000/- for the project titled "Hospital bedside portable breath analyzer for rapid diagnosis of bacterial pneumonia, characterization of species, and antibiotic resistance profiling". Dr Ghosh is the Principal Investigator for the project.

The Co-PI of this grant is Dr Chiranjay Mukhopadhyay, Professor, Department of Microbiology, KMC Manipal.



Dr Nagaraj Kamath H



Dr Anjan Gudigar



Dr G Divya Deepak



Dr Sooraj Mohan

**Dr Nagaraj Kamath H**, Assistant Professor Selection Grade, Department of Humanities & Management received MAHE seed money grant of INR 10,00,000/- for the proposal titled "Abdominal Compression device for Radiotherapy or Radiation Oncology".

The Co-Pls are Dr Shirley Lewis Salins, Associate Professor, Department of Radiotherapy and Oncology, KMC, Manipal, Dr Sudha Kamath, Professor and HOD, Department of Physics, Dr Shailendra Kumar Tiwari, Associate Professor, Department of Electronics and Communication Engineering, Dr Sandhya Parasnath Dubey, Assistant Professor, Department of Data Science and Computer Applications, Dr Srinivas Shenoy H, Assistant Professor Senior Scale, Department of Mechanical & Industrial Engineering, Mr Aldrin Lewis, Radiologist, KMC, Manipal, Mr Tejas and Mr Kiran R - Research Scholars, Department of Physics.

**Dr Anjan Gudigar**, Associate Professor, Department of Instrumentation & Control Engineering received MAHE seed money grant of INR 7,00,000/- for the proposal titled "Development of hybrid feature engineering model under graph embedding framework for the automated identification of the Diseases Characterized by Left Ventricular Hypertrophy in adults using Ultrasound Images".

The Co-PIs are Dr Raghavendra U, Associate Professor, Department of Instrumentation & Control Engineering, MIT, Manipal, Dr Jyothi, Associate Professor, Department of Cardiovascular Technology, MCPH Manipal and Dr Mukund A. Prabhu, Associate Professor, Department of Cardiology, KMC Manipal

**Dr G Divya Deepak**, Assistant Professor - Selection Grade, Department of Mechanical & Industrial Engineering received MAHE seed money grant of INR 1,20,000/- for the proposal titled "Cold plasma treatment of Mg alloy for enhanced biocompatibility and corrosion resistance".

The Co-PIs are Dr Subraya Krishna Bhat, Assistant Professor, Department of Mechanical & Industrial Engineering and Dr Deepak D, Professor, Department of Mechatronics Engineering, MIT.

**Dr Sooraj Mohan**, Assistant Professor Senior Scale, Department of Mechanical & Industrial Engineering received MAHE seed money grant of INR 95,000/- for the proposal titled "Investigating activated hydrochar for CO2 capture applications".

### PUBLICATIONS IN HIGH IMPACT FACTOR JOURNALS



Dr Amit Kumar Goyal

**Dr Amit Kumar Goyal**, Assistant Professor Senior Scale, Department of Electronics and Communication Engineering has published a research article titled "Nanograting-assisted flexible Triboelectric Nanogenerator for active human motion detection" in the Journal, Nano Energy, published by Elsevier.

**Impact Factor: 16.8** 



Mr Harshendra N Shet K, Assistant Professor Senior Scale, Department of Electrical and Electronics Engineering has published a research article titled "Comparative assessment of global warming potential of gasoline, battery, and hybrid vehicles in India" in the Journal, Renewable and Sustainable Energy Reviews, published by Elsevier.

**Impact Factor: 16.3** 

**Dr Dayananda K Pai**, Professor and Head, **Dr Mahesha G T**, Professor, **Dr Vishnu G Nair**, Associate Professor, Department of Aeronautical & Automobile Engineering, **Dr Sudhakar Y N**, Associate Professor, Department of Chemistry along with **Ms Priyanka**, Research Scholar at Department of Aeronautical & Automobile Engineering and **Mr Nakul Desai**, Research Scholar at Department of Chemistry have published a research article titled "Emerging role of graphitic carbon nitride in advanced supercapacitors: A comprehensive review " in the Journal of Energy Chemistry, published by Elsevier.

### **Impact Factor: 14**















**Dr Shiva Kumar**, Professor, Department of Mechanical and Industrial Engineering has published a research article titled "Machine learning-based optimization and performance analysis of cooling towers" in the Journal of Building Engineering, published by Elsevier.

**Impact Factor: 6.7** 



**Dr Manish Varun Yadav**, Assistant Professor Senior Scale, Department of Aeronautical & Automobile Engineering has published a research article titled "Design and optimization of flexible DGS-based microstrip antenna for wearable devices in the Sub-6 GHz range using the nelder-mead simplex algorithm" in the Journal, Results in Engineering, published by Elsevier.

**Impact Factor: 6.0** 



The Mighty MIT scaled a new height in the research front by recording over 2000 publications within a single calendar year, 2024. This achievement reflects an impressive growth rate of 42% compared to the previous year. With this momentum, MIT is poised to surpass 2300 publications by year-end. Notably, about 85% of the publications featured in Q1 and Q2 journals showcasing the institution's commitment to impactful and high-quality research. About 30% of publications involved international collaborations while about 45% of publications were the result of interdisciplinary research. Moreover, about 14% of publications involved student authorship.

In the year 2024, the average publication stands at approximately three publications per faculty member. The institution aspires to enhance the research output to a greater level in the coming years with additional infrastructure and support facilities extended for promoting research.



MIT Manipal achieved a significant milestone in the calendar year 2024 by filing the 500<sup>th</sup> patent. This milestone is a testament to the collaborative spirit, exceptional leadership, and supportive ecosystem at MAHE.

### PhD AWARDEES: FACULTY MEMBERS



Dr Anita S Kini, Assistant Professor, Department of Computer Science & Engineering, successfully defended her Doctoral thesis titled "EARLY-STAGE DISEASE DETECTION AND CLASSIFICATION OF SOME MEDICINAL PLANTS USING SOFT COMPUTING TECHNIQUES" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 30 September 2024. The research work was guided by Dr Prema K V, Associate Director and Professor & Head, Department of Computer Science & Engineering, MIT, Bengaluru and co-guided by Dr Smitha N Pai, Professor & Head, Department of Information & Communication Technology, MIT, Manipal.



**Dr Laxman Kudva P**, Assistant Professor Senior Scale, Department of Civil Engineering, successfully defended his Doctoral thesis titled "INVESTIGATION OF STRENGTH AND SHRINKAGE PROPERTIES OF NO AGGREGATE CONCRETE" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 11 October 2024. The research work was guided by Dr Gopinatha Nayak, Professor and co-guided by Dr Kiran Kumar Shetty M., Professor, Department of Civil Engineering, MIT Manipal.



**Dr Ramnath Shenoy**, Assistant Professor Senior Scale, Department of Humanities & Management, successfully defended his Doctoral thesis titled "INVESTIGATION ON PRINTABILITY, STRENGTH AND BARRIER PROPERTIES OF COATED ECOFRIENDLY PAPERBOARDS AS PACKAGING MATERIALS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 21 October 2024. The research work was guided by Dr Prakasha Shetty, Former Professor, Department of Chemistry, MIT Manipal.



Dr Nikita Goel, Assistant Professor in the Department of Instrumentation & Control Engineering, successfully defended her Doctoral thesis titled "PERFORMANCE ANALYSIS OF DRONE ASSISTED COOPERATION FOR NEXT GENERATION WIRELESS COMMUNICATION" for the award of PhD degree by the National Institute of Technology, Kurukshetra on 07 November 2024. The research work was guided by Dr Vrinda Gupta, Associate Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Kurukshetra.



Dr Ramakrishna Vikas Sadanand, Assistant Professor Senior Scale in the Department of Mechanical and Industrial Engineering, successfully defended his Doctoral thesis titled "MECHANICAL CHARACTERIZATION OF THERMOMECHANICALLY TREATED AA6061 HYBRID METAL MATRIX COMPOSITES" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 10 December 2024. The research work was guided by Dr Sathyashankara Sharma, Senior Professor, Department of Mechanical and Industrial Engineering, MIT Manipal and co-guided by Dr Raghavendra Prabhu P, Deputy Registrar, MAHE Bengaluru.



Dr Aruna Prabhu, Assistant Professor Senior Scale, Department of Mechanical and Industrial Engineering, successfully defended his Doctoral thesis titled "INVESTIGATION ON THE PERFORMANCE OF ORDER RELEASE METHODS IN A PURE FLOW SHOP WITH BOTTLENECK WORKLOADS FOR ROTOR BLADE MANUFACTURING" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 11 December 2024. The research work was guided by Dr Raghunandana K, Professor, Department of Mechanical and Industrial Engineering, MIT Manipal and co-guided by Dr Yogesh Pai P, Professor and Head, Department of Humanities and Management, MIT Manipal.



Dr Avinash A R, Assistant Professor Senior Scale, Department of Civil Engineering, successfully defended his Doctoral thesis titled "PERFORMANCE APPRAISAL OF BASE ISOLATED FRAMES WITH MASONRY INFILL" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 23 December 2024. The research work was guided by Dr A Krishnamurthy, Professor (Retired) and co-guided by Dr Kiran Kamath, Professor, Civil Engineering, MIT, Manipal.

### PhD AWARDEES: FULL TIME RESEARCH SCHOLARS



Dr Amrish V Narayan, Full-time Research Scholar, Department of Civil Engineering, successfully defended his Doctoral thesis titled "GEOCHEMICAL AND STABLE WATER ISOTOPIC CHARACTERIZATION OF SHARAVATI RIVER CATCHMENT, INDIA" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 11 October 2024. The research work was guided by Dr Udaya Shankara H N, Former Professor and co-guided by Dr K Balakrishna, Professor, Department of Civil Engineering, MIT Manipal.



Dr Jagadisha, Full-time Research Scholar, Department of Civil Engineering, successfully defended his Doctoral thesis titled "EFFECT OF MANUFACTURED SAND AND STEEL SLAG AGGREGATE ON STRENGTH AND DURABILITY PROPERTIES OF HIGH-PERFORMANCE CONCRETE: AN EXPERIMENTAL APPROACH" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 14 October 2024. The research work was guided by Dr Balakrishna Rao K, Professor and co-guided by Dr Gopinatha Nayak, Professor, Department of Civil Engineering, MIT Manipal.



Dr Aishwarya Balakrishnan, Full-time Research Scholar, Department of Biomedical Engineering, successfully defended her Doctoral thesis titled "PARKINSON'S DISEASE STAGE PREDICTION AND PROGRESSION MODELING BASED ON GAIT ANALYSIS USING MACHINE LEARNING APPROACH" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 14 October 2024. The research work was guided by Dr M Jeevan, Associate Professor and co-guided by Dr Pramod K, Assistant Professor-Selection Grade, Department of Biomedical Engineering, MIT Manipal and Dr Manikandan N, Additional Professor, Department of Physiotherapy, MCHP, Manipal.



Dr Harish Bhat N, Full-time Research Scholar, Department of Aeronautical & Automobile Engineering, successfully defended his Doctoral thesis titled "DESIGN AND DEVELOPMENT OF EVOLUTIONARY FPGA BASED AUTONOMOUS UNMANNED AERIAL VEHICLE" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 14 October 2024. The research work was guided by Dr Shreesha C, Professor & Head, Department of Instrumentation & Control Engineering, and co-guided by Dr Satish Shenoy B, Professor, Department of Aeronautical & Automobile Engineering, MIT Manipal.



Dr Deepika D, Full-time Research Scholar, Department of Chemistry, successfully defended her Doctoral thesis titled "DESIGN AND SYNTHESIS OF NOVEL FIVE-MEMBERED HETEROCYCLES OF MEDICINAL IMPORTANCE" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 23 October 2024. The research work was guided by Dr Santhosh L Gaonkar, Professor, Department of Chemistry, MIT Manipal.



Dr Rajendra Doddappa Uppar, Full-time Research Scholar, Department of Mechanical Engineering, successfully defended his Doctoral thesis titled "SYNTHESIS AND CHARACTERIZATION OF VEGETABLE OIL BIO-LUBRICANT WITH NANOPARTICLES AS AN ADDITIVE AND EXPERIMENTAL STUDY IN CI ENGINE" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 18 November 2024. The research work was guided by Dr Shiva Kumar, Professor, and co-guided by Dr Dinesha P, Professor, Department of Mechanical & Industrial Engineering, MIT Manipal.



**Dr Mithesh Kumar**, Full-time Research Scholar, Department of Civil Engineering, successfully defended his Doctoral thesis titled "DEVELOPMENT OF HIGH-VOLUME FLY ASH STRUCTURAL CONCRETE WITH SEWAGE SLUDGE AND SEWAGE SLUDGE ASH" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 22 November 2024. The research work was guided by Dr Shreelaxmi Prashanth, Associate Professor, Department of Civil Engineering, MIT Manipal.



**Dr Adithya Prakash**, Full-time Research Scholar, Department of Physics, successfully defended her Doctoral thesis titled "EVALUATION OF COPPER OXIDE THIN FILMS GROWN BY SPRAY PYROLYSIS TECHNIQUE FOR SOLAR CELL APPLICATIONS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 25 November 2024. The research work was guided by Dr Mahesha M G, Associate Professor, Department of Physics, MIT Manipal.



**Dr Jayalakshmi K**, Full-time Research Scholar, Department of Physics, successfully defended her Doctoral thesis titled "INVESTIGATION ON MAGNESIUM ION CONDUCTING SOLID POLYMER ELECTROLYTE FILMS FOR ENERGY STORAGE APPLICATIONS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 05 December 2024. The research work was guided by Dr Ismayil, Associate Professor, Department of Physics, MIT Manipal.



Dr Gayathri S, Full-time Research Scholar, Department of Biotechnology, successfully defended her Doctoral thesis titled "NETWORK PHARMACOLOGY AND IN VITRO STUDIES TO VALIDATE THE PHYTOCHEMICALS AGAINST ALZEIMER'S DISEASE AND TYPE 2 DIABETES" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 09 December 2024. The research work was guided by Dr Fayaz S M, Associate Professor, Department of Biotechnology, MIT Manipal and co-guided by Dr Raghu Chandrasekhar H, Professor and Head, Department of Pharmaceutical Biotechnology, MCOPS Manipal.



Dr Maithili K, Full-time Research Scholar, Department of Chemistry, successfully defended her Doctoral thesis titled "SYNTHESIS AND CHARACTERIZATION OF NEW PEROVSKITE MATERIALS FOR OPTOELECTRONIC APPLICATIONS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 13 December 2024. The research work was guided by Dr M Selvakumar, Associate Professor, Department of Chemistry and co-guided by Dr Mahesha M G, Associate Professor, Department of Physics, MIT Manipal.



Dr Priyanka Mahesha, Full-time Research Scholar, Department of Chemistry, successfully defended her Doctoral thesis titled "SYNTHESIS OF NEW CHALCONE DERIVATIVES: PHOTOPHYSICAL AND METAL ION SENSING STUDIES" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 13 December 2024. The research work was guided by Dr Nitinkumar S Shetty, Associate Professor, Department of Chemistry, MIT Manipal and co-guided by Dr Suresh D Kulkarni, Associate Professor, DAMP Manipal.



Dr Sabhya, Full-time Research Scholar, Department of Physics, successfully defended her Doctoral thesis titled "INVESTIGATION OF CO-DOPED HAFNIA THIN FILMS FOR DEVICE APPLICATIONS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 16 December 2024. The research work was guided by Dr Mohan Rao K, Professor, Department of Physics, MIT Manipal.



Dr Arnab Mukherjee, Full-time Research Scholar, Department of Biotechnology, successfully defended his Doctoral thesis titled "SYSTEMATIC IDENTIFICATION OF VOLATILE LEADS TO TARGET LUNG CANCER" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 16 December 2024. The research work was guided by Dr Mukunthan K S, Associate Professor, Department of Biotechnology, MIT Manipal.



**Dr Sindhu D G**, Full-time Research Scholar, Department of Physics, successfully defended her Doctoral thesis titled "REGGE TRAJECTORIES AND DECAY PROPERTIES OF MULTIQUARK HADRONS" for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 30 December 2024. The research work was guided by Dr Akhilesh Ranjan, Assistant Professor - Selection Grade, Department of Physics, MIT Manipal.

### STUDENTS IN ACTION

### **TECHSHILA NEWS**

#### ThrustMIT Achieves Successful Rocket Motor Tests

ThrustMIT reached a significant milestone during 07-08 October 2024, with the successful static test firing of their in-house developed M-Class and J-Class SRAD (Student Research and Development) solid rocket motors. The M-Class motor, boasting an impulse of 9146 Newtons, and the J-Class motor, delivering 1210 Newtons of impulse, empower the team to launch fully indigenous rockets to altitudes of 10,000 feet, marking a new standard in student-led rocketry.



Previously while competing in the Spaceport America Cup in New Mexico, USA, the team had used commercially sourced motors. Hence, this achievement highlights ThrustMIT's growing expertise in developing indigenous rocket propulsion systems and sets the stage for their participation in the SRAD category at future Spaceport America Cup events.

### ProjectAUV Shines at IROS 2024

The ProjectAUV team from MIT, Manipal, secured 4<sup>th</sup> position globally and won "The Gulf Spirit Award" for the Best Business & Technical Pitch at the International Conference on Intelligent Robots and Systems (IROS) 2024, held during 14 - 18 October 2024 by Khalifa University, Abu Dhabi.



### **Team Combat Robotics Triumphs**

Team Combat Robotics clinched first place at NITK Surathkal's Engineer'24 on 20 October 2024. Their 15 kg bots, BloodmooN and Callisto, outperformed five competing teams to secure victory and won a cash prize of ₹50,000.



### MotoManipal Excels at MotoStudent India

MotoManipal showcased excellent performance at MotoStudent India Season 3, organized by FMAE at Kari Motor Speedway, Coimbatore, on 23 October 2024.

The team won 1st place in Brakes and 2nd place in Acceleration, achieving a top speed of 132 km/h with their in-house 84V battery pack and lightweight aluminum 6061 chassis.



#### Team Karting Manipal Shines at FKDC

Team Karting Manipal secured 4th position overall at the Formula Karting Design Challenge (FKDC) Season 8, held at Kari Motor Speedway, Coimbatore, on 14 October 2024. The team's performance showcased their dedication and expertise in kart design and racing.



### Formula Manipal Secures 2<sup>nd</sup> Place at NXP AIM Grand Finale

Formula Manipal achieved 2<sup>nd</sup> place at the NXP AIM Grand Finale, held at the NXP office in Noida on 24 October 2024. The national competition challenge involved designing the fastest obstacle-avoiding model for a physical buggy and implementing a machine learning model for traffic sign detection. Earlier, the team won the NXP AIM regional finale at RVCE, Bengaluru.



### Cryptonite Team Wins EnigmaXplore 2.0

The Cryptonite team clinched 1st place in the Capture the Flag competition, EnigmaXplore 2.0, organized by IIIT Nagpur on 24 October 2024. Competing against 230 teams, the team demonstrated exceptional cybersecurity and problem-solving skills to emerge as the champions.



### Cryptonite Team Secures 3<sup>rd</sup> Place in CS-Mining CyberAl Cup

The Cryptonite team clinched 3rd place globally in the CS-Mining CyberAl Cup competition, held on 12 November 2024. Avanish Money Srivats (Computer Science), Nishant Gunda (Computer Science), and Gurmann Singh Ajmani (Data Science) represented the team that excelled in this challenging multi-month event.

Participants were assigned the task of applying knowledge discovery techniques to solve complex real-world problems in voice recognition, text mining, and malicious payload detection. The competition served as a prelude to the ICONIP 2024 conference, scheduled for 02-06 December 2024, at the University of Auckland, New Zealand.



### AeroMIT Impresses at Tech Maker Event

AeroMIT showcased their innovative customizable winged aircraft kit at Tech Maker, held at Kalam Labs, Lucknow, on 26 October 2024. The kit features a modular structure with interchangeable wings, offering a hands-on experience to explore aerodynamics and design.

AeroMIT stood out as the only team to present a fully operational and polished prototype, earning distinction among esteemed institutions like IIT Roorkee, IIT Kanpur, IIT Guwahati, and BITS Pilani. The team also signed an MoU with MAHE and Kalam Labs to conceptualize, design, and develop DIY kits in space, science, and robotics, enabling Kalam Labs to manufacture, market, and distribute the kits to schoolchildren nationwide.



### MIT Student Projects Showcase at Byndoor Utsav

The Byndoor Utsav Education Expo & Science Exhibition, held at Byndoor Government Junior College during 01-03 November 2024, featured an array of MIT student projects and working models. Highlights included presentations by Mars Rover Manipal, Dronaid, RoboManipal, and Team Combat Robotics.

The features of these projects were explained to visitors by Dr Adarsh S, Assistant Director (Development), and Mr Ganesh Nayak, Student Project Officer. Additionally, Dr Meenatchi Sundaram S, Additional Professor, Instrumentation & Control Engineering, and research scholar Mr David John Saldahna represented the startup M/s Biobreath Health Solutions Pvt Ltd. The event attracted a large number of visitors, including students from various elementary, high schools, and colleges across Byndoor Taluk.



## Science & Technology Exhibition at Kundapura Showcases Student Innovations

The Science & Technology Exhibition at Bhandarkars' Arts & Science College, Kundapura, held during 02-05 December 2024, featured an impressive array of student project working models. Exhibits included the Mars Rover Manipal, Robo-Manipal, AeroMIT, Dronaid, and SWARM Robotics.

Prof Nagaraja, Consultant, Mr Ganesh Nayak, Student Project Officer, and two members of the SWARM Robotics team provided the explanation about the projects to the visitors. The exhibition attracted a large crowd, with students from the host institute as well as numerous elementary, high school, and college students from Kundapura Taluk visiting the stalls to explore these projects.



### MIT Student Team Secures Prize at Smart India Hackathon (SIH) 2024

Nitewatch, a student team of MIT, Manipal emerged victorious, winning a cash prize of Rs. 1 Lakh in the Smart India Hackathon (SIH) 2024, held at IIT Jammu during 11-12 December 2024. The team worked on the problem statement titled "Recovery of Deleted Data and Associated Metadata from XFS and BTRFS Filesystems," provided by the National Critical Information Infrastructure Protection Center (NCIIPC).

A team Nitewatch comprising Yogesh Prashant Rane, Krish Pandey, Lakshit Verma, Misha Jain, Poorvi Kanodia, Uttam Singh Somvanshi won Smart India Hackathon 2024. The team was mentored by Dr Nisha P Shetty, Associate Professor, Department of Information and Communication Technology.



### Formula Manipal Team Secures 2<sup>nd</sup> Position in NXP AIM Grand Finale

The Formula Manipal team achieved second place at the NXP AIM Grand Finale, held at the NXP office in Noida on 24 October 2024.

The team was recognized for designing a cutting-edge obstacle-avoiding model for a physical buggy, coupled with implementing a machine learning model for traffic sign detection.



#### MIT Students Win Best Paper Award at ICFAMEAD

A team of sixth-semester BTech students from the Department of Aeronautical and Automobile Engineering at MIT, Manipal, received the Best Paper Award at the International Conference on Futuristic Advances in Mechatronics, Engineering for Aerospace and Defence (ICFAMEAD-2024) at Symbiosis Institute of Technology, Symbiosis International (Deemed University), Pune, India held during 04-05 October 2024.

The paper, titled "A MATLAB GUI-Based Approach to Wing Design and Aerodynamic Performance Evaluation," was authored by Mr Kanak Agarwal, Mr Suhas K S, and Mr Rohit Krishna under the supervision of their faculty mentor Dr Manikandan M, Assistant Professor Senior Scale, Department of Aeronautical & Automobile Engineering.



## MIT Team Qualifies for Final Round in National Fluid Power Challenge 2024

MIT Team involving BTech students, Hrishikesh Shastry (IP Engineering) and Chris D'Souza (Mechatronics), alongside Dr Deepak D, Professor, Department of Mechatronics Engineering and Dr Subraya Krishna Bhat, Assistant Professor, Department of Mechanical & Industrial Engineering, have qualified for the final round of the M S Yoganarasimha Prize for Innovation in Design Contest at the national Fluid Power Challenge (FPC) 2024.

Out of 30 initial entries, 21 teams advanced to present their design ideas, projects, and prototypes online. After two elimination rounds, the team secured their place in the final competition, held during 04-05 October 2024, highlighting innovative approaches in fluid power engineering.



### MIT Students participate in India Semiconductor Workforce Development Program Training

A team of 37 students of MIT, Manipal have successfully completed the Cohort 3 Level 1 training of the India Semiconductor Workforce Development Program (ISWDP), a prestigious initiative by the Indian Institute of Science (IISc) aimed at nurturing semiconductor talent in India held in October 2024. ISWDP is a program designed to bridge the gap between academic knowledge and industry requirements in semiconductor development. Organized in collaboration with leading industry partners, Samsung and Synopsys, this initiative aims to empower students and professionals with the technical skills and expertise needed to thrive in the fast-evolving semiconductor industry.

The Advanced Level Cohort 3 of ISWDP involved rigorous training and evaluation in various aspects of semiconductor technology, including design, fabrication, and testing. Participants were assessed based on their performance in industry-aligned tasks and projects, ensuring practical exposure to cutting-edge innovations. The level 1 training covered the basics of semiconductor device technology, Technology CAD and TCAD based technology design workflow with emphasis on basic 2D device creation, device simulation and analysis.

The team ISWDP has recognized two exceptional students from the Manipal Institute of Technology (MIT), Karnataka, as top performers in its Cohort 3 - Advanced Level. Ashutosh Surendra Shukla and Anshuman Swaroop stood out among their peers, achieving a commendable percentile score of 99.18 and a percentage of 92 respectively. This accomplishment highlights their outstanding skills and proficiency in advanced semiconductor technologies.

Moreover, in the level 1 training Best Performing six students from the group were recognized and awarded with the Certificate of Appreciation. Dr Pallavi Mane, Professor and Head of Department of Electronics and Communication Engineering facilitated the students for participation in the program.

### Team Databaes Qualifies for the Smart India Hackathon 2024 Finals

Student team 'The Databaes' comprising students of Cyber Physical Systems students, has qualified for the finals of Smart India Hackathon 2024. The team involved Tarini Sai Padmanabhuni as Team Leader, and Shashank Nayak, Kritika Sinha, Nagbhushan Pai, Akshita Jain, and Pritam Patra as members.

### MIT students Secure First Place in the CyberAl Cup 2024

A student team of MIT Manipal involving Mr Parva Chowdhary, Mr Aditya Shah of Information Technology and Ms Komal Mathur of Computer Science and Engineering secured the first place in the CyberAl Cup 2024 at the 31st International Conference on Neural Information Processing (ICONIP2024), held in Auckland, New Zealand during 02-06 December 2024. The team received the award certificate and the cash prize of 3000 NZD.

'I have no idea what you just asked'.

#### **COS Team of Girls Completed Agumbe Tour**

A team of three girls of Centre for Outdoor Studies (COS) successfully completed a three-day tour of Agumbe during 11 - 13 October 2024. The team, comprising Ira (MIT), Riana (MCHP), and Sanika (MSLS), planned and executed the tour by themselves. The team members were also part of the Sikkim tour earlier this year and continue to be active members of COS.



### MIT Team Awarded a Certificate of Merit at Dare to Dream 4.0

Ms Ahona Rakshit, Ms Bhavana M S and Ms Ishita Singh were awarded a Certificate of Merit in the individual category of "Dare to Dream 4.0," a prestigious national hackathon organized by the Defence Research and Development Organisation (DRDO), Ministry of Defence, Government of India on 18 October 2024. This recognition, equivalent to a "special mention," was granted for their problem statement "Cognitive Listening Device".



Navmarg Research and Innovation Pvt Ltd wins 5<sup>th</sup> Smart IDEAthon 2024

Navmarg Research and Innovation Pvt Ltd, a student startup of MAHE has been declared the winner of Smart



IDEAthon 2024, a prestigious event organized in collaboration with Startup India, Invest India, and Northeastern University (Boston). After competing in the Semi-Finals, the team made it to the top 8 finalists and was declared the winner at the Finals held on 13 December 2024, at GITAM University, Bengaluru Campus, Karnataka. The team received a cash prize of INR 2,00,000, and a Fully sponsored two-week Boston Immersion Program at Northeastern University, USA in March 2025.

### Best Capstone Project Competition Award at BOSCH

MIT, Manipal team consisting of Ms Pragya Sujit Kumar and Mr Srikar Bharadwaj R from Mechatronics Engineering secured first place in the Capstone Project Competition conducted by Bosch Global Software Technologies (BGSW) on 13 December 2024 in Bosch, Adugodi Campus, Bengaluru for their project titled 'Design of Onboard Charger for E-Bike application'.



### Ms Anusha Chatterjee Receives Best Paper Award at ARIIA 2024

Ms Anusha Chatterjee, a BTech student of Biomedical Engineering, honored with the Presentation Award at the ARIIA 2024 Conference for the paper titled "Early Alzheimer's Detection: Comparing ResNet50 and EfficientNetB0 on MRI Data." Mr K Sri Parthiv, Dr Mithun Kanchan, and Dr Omkar S Powar are the co-authors.



### Mr Dwane Jospeh Joel Receives Best Poster Presentation Award at ARIIA 2024

Mr Dwane Jospeh Joel, a BTech Student of Biomedical Engineering, received the Best Paper Award at the ARIIA 2024 Conference for the poster presentation titled "Deep Learning Approach for Early Detection and Classification of Skin Lesions". Mr Anshuman Sharma, Dr Omkar S Powar, and Dr Mithun Kanchan are the co-authors.



### Team METAL Shines at 'Samsung Solve for Tomorrow 2024'

Recognizing their groundbreaking contributions to environmental sustainability, Team METAL has emerged as the winner of the prestigious 'Samsung Solve for Tomorrow (SFT) 2024' grand finale, held in New Delhi on October 4, 2024. The team, comprising Ms Shambhavi Sinha (BTech CCE, Department of Information and Communication Technology, MIT), Mr Arpit (BSc Physics, Department of Atomic and Molecular Physics, MAHE), and Abhijit Kumar (BSc CSDA, IIT Patna), earned the distinguished title of "Environment Champions" for their innovation in water purification.



### Ms Jayasree Madireddy Selected for NXP Women in Tech (WIT) Program 2024

Ms Jayasree Madireddy, third semester student of Computer Science and Engineering was selected among the top 75 participants for NXP Women in Tech (WIT) Program. NXP in collaboration with Futurewiz, designed the program to bridge the gender imbalances in the semiconductor design industry. This program aims at offering 1-year specialized training to 50 women students currently completing their BE / BTech Electronics / Computer Science in India.

#### Ms Anusha Pai Receives Best Paper Award

Ms Anusha Pai, a PhD scholar working under guidance of Dr Dasharathraj Shetty, Associate Professor, Department of Data Science and Computer Applications received the Best Paper Award at the 3<sup>rd</sup> International Conference on Innovative Research and Development (ICIRD-2024) held on 08 November 2024 at Shinawatra University, Thailand. She received the award for her paper titled "Cultural Authenticity Meets Digital Marketing: A Uses and Gratification Analysis of Instagram Engagement for Mangalorean Cuisine". Dr Sandeep S Shenoy, Shreepathy Ranga Bhatta, Nikita Panwar, and Ruth Samantha Stephen Almeida are the other co-authors.



#### Mr Kiran R Receives Best Oral Presentation Award

Mr Kiran R, Research scholar, Department of Physics, MIT Manipal, received the Best Oral Presentation Award for his work at the 4th International Conference on Global Trends in Sustainable Technology and its Applications in Applied Sciences (ICGTSTAS-2024), held at REVA University, Bengaluru, during 24-25 October 2024. The award recognizes his research conducted under the mentorship of Dr Sudha D Kamath, Professor & HOD, Department of Physics, MIT Manipal.



### Mr Tejas Receives Best Poster Award

Mr Tejas, Research Scholar, Department of Physics, received the Best Poster Presentation Award for his work at the 4<sup>th</sup> International Conference on Global Trends in Sustainable Technology and its Applications in Applied Sciences (ICGTSTAS-2024), held at REVA University, Bengaluru, during 24-25 October 2024. He worked under the supervision of Dr Sudha D Kamath, Professor & HOD, Department of Physics, MIT Manipal.



#### Ms Ankitha Rao Receives Travel Grant

Ms Ankitha Rao, Research Scholar, Department of Electronics and Communication, received a student travel grant award of USD1500 to attend and present her work in 26<sup>th</sup> IEEE Electronics Packaging Technology Conference held in Singapore during 03-06 December 2024. She presented her paper titled "Screen printed temperature sensor using novel kish graphite/ reduced Graphene oxide conductive ink for wearable applications." She worked under the supervision of Dr Somashekara Bhat. Dr Shounak De, Mr Nakul Shetty, and Dr Ramakrishna Nayak were the Co-authors.



### Vandana Akshath Raj Wins Best Paper Award at IEEE DISCOVER 2024

Mrs Vandana Akshath Raj, a research scholar from the Electronics & Communication Department of Engineering, received the Best Paper Award in the Healthcare track at the 2024 IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits, and Robotics. She presented her paper titled "Performance Analysis of Advanced Filtering Techniques for Removal of EEG Muscle Artifacts" at the conference, organized by IEEE Mangalore Subsection at St Joseph Engineering College, Mangaluru during 18-19 October 2024. Her research focuses on improving EEG signal processing, contributing to advancements in biomedical engineering. The work was supervised and co-authored by Dr Subramanya G Nayak, Professor, and Dr Ananthakrishna T, Associate Professor, from the Department of Electronics & Communication Engineering, MIT, Manipal.



## Varanasi Naga Akhil Named Finalist in Edge Al Innovation Challenge 2024

Varanasi Naga Akhil, a BTech CCE student, was recognized as a finalist in the prestigious Edge Al Innovation Challenge 2024. The competition, held on 04 October 2024, brought together some of the brightest minds in artificial intelligence and emerging technologies.



### Shambhavi Sinha Shines in National Entrepreneurship & Innovation Competitions

Ms Shambhavi Sinha, a BTech Computer and Communication Engineering student, has achieved remarkable success in two prestigious national competitions, showcasing her innovative solutions in environmental sustainability and digital technology.



She was selected among the Top 5 teams in the Young Entrepreneurs Track held in October 2024, from over 480 applications representing 100+ universities and colleges across India. Representing Navmarg Research and Innovation Private Limited, she advanced with a project focusing on cutting-edge digital solutions for water sustainability. Additionally, Ms Sinha was declared the Winner of Samsung Solve for Tomorrow 2024, where she was honored as an 'Environment Champion' in the Youth Track on 04 October 2024 for her groundbreaking

technology in arsenic removal from groundwater. She was awarded a \$50,00,000 grant for incubation at FITT, IIT Delhi.

## Aditya Saha excels at Underwater Robotics Challenge 2024 in Abu Dhabi

Aditya Saha, a student of BTech Computer Science Engineering, showcased remarkable participation in the 2024 Underwater Robotics Challenge at IROS'24 Abu Dhabi, held at Khalifa University, UAE.



## Siddhan Baranwal Named Campus Ambassador for GeeksforGeeks (GFG)

Mr Siddhan Baranwal, a BTech Information Technology student, has been selected as the Campus Ambassador for GeeksforGeeks (GFG), representing Manipal Institute of Technology for a year-long tenure. In this role, he will serve as a bridge between MIT and the GeeksforGeeks community, promoting various learning opportunities, coding initiatives, and technical events offered by GFG.



MCA Students Successfully Complete Website Development Project for Manipal Marathon

Sachin Pawa and Rohit Raj, both second-year MCA students, successfully completed a consultancy project on website development for Manipal Marathon. The project was undertaken under the guidance of Dr Poornima P K, Associate Professor, DSCA.

### **SPORTS NEWS**

### MAHE INTER-COLLEGIATE TABLE TENNIS

MIT A and MIT B teams emerged as champions in the MAHE Inter-Collegiate Table Tennis Tournament for men was held on 29 September 2024 at MIT, Manipal.



### MAHE INTER-COLLEGIATE CHESS

MIT A and MIT B teams claimed the top honors in a well-contested MAHE Inter-Collegiate Chess championship on 30 September 2024.



### MAHE INTER-COLLEGIATE CROSS COUNTRY (MEN & WOMEN)

The MIT team put up an exceptional performance at MAHE Inter-Collegiate Cross Country (Men & Women) competition held on 02 October 2024 and secured the championship title.



### MAHE INTER-COLLEGIATE SQUASH (MEN & WOMEN)

MIT A team triumphed, demonstrating superior skill and endurance, at MAHE Inter-Collegiate Squash (Men & Women) tournament held on 04 October 2024.



### MAHE INTER-COLLEGIATE BASKETBALL (MEN & WOMEN)

The MIT A teams dominated both the men's and women's divisions claiming victory in MAHE Inter-Collegiate Basketball tournament held during 05-06 October 2024.



### MAHE INTER-COLLEGIATE BOXING (MEN & WOMEN)

The MIT team emerged as the overall champions in the MAHE Inter-Collegiate Boxing (Men & Women) competitions held on 07 October 2024.



### MAHE INTER-COLLEGIATE KARATE (MEN & WOMEN)

The MIT team emerged as champions, solidifying their dominance in martial arts in the MAHE Inter-Collegiate Karate (Men & Women) competitions held on 17 October 2024.



### MAHE INTER-COLLEGIATE BADMINTON (MEN & WOMEN)

The MIT Women's A and B teams clinched the winner's title, while MIT Men's B secured the runners-up position in the MAHE Inter-Collegiate Badminton (Men & Women) tournament held during 19-20 October 2024.



### MAHE INTER-COLLEGIATE SWIMMING (MEN & WOMEN)

MIT team's outstanding performance in swimming led them to clinch the championship title at the MAHE Inter-Collegiate Swimming (Men & Women) competitions held during 28- 29 October 2024.



### WINNERS OF MAHE INTERCOLLEGIATE COMPETITIONS



### **ALUMNI MATTERS**



# Mr Ambar Atal awarded 'The Young Achiever' by the World Marketing Congress

Mr Ambar Atal, an alumnus of MIT, Manipal (Industrial Production Engineering, Batch of 2005) received The Young Achiever Award by the World Marketing Congress. Mr Ambar is currently associated with Taylor and Francis, New Delhi as Commercial Business Manager. Prior to this Ambar was associated with Cambridge University Press as Strategic Alliances Manager.



# Mr Siddhant Vora receives recognition at Times Drive Green Conclave

Mr Siddhant Vora an alumnus of MIT (2015, Mechatronics) received recognition from Honourable Minister Shri Nitin Gadkari at Times Drive Green Conclave and Awards for building the Fastest Growing EV Brand of the Year - Ampere. Mr Siddhant is currently associated with Greaves Electric Mobility. He was previously associated with Ola as well as Ola Electric.

### **ALUMNI VISITS**

**Mr Jithin Sunny**, Director at XEA Innovations and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2021), visited MIT on 7 October 2024.

Ms Ritika S, Software Engineer at Boeing and alumna of MIT, Manipal (Computer and Communication Engineering, Batch of 2023), visited MIT on 23 October 2024.

Ms Tista Choudhary, Customer Success Manager at Guide CX (Consultant) and alumna of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2015), visited MIT on 25 October 2024.

Mr Nikhil Rayaprolu, CEO of Catalift and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2022), visited MIT on 25 October 2024.

**Mr Gaurav D Samant**, Founder CEO at Peryton, COO of Catalift and alumnus of MIT, Manipal (Aeronautical and Automobile Engineering, Batch of 2022), visited MIT on 25 October 2024.

Mr JP Shetty, alumnus of MIT, Manipal (Civil Engineering, Batch of 1995), visited MIT on 11 November 2024.

**Mr Gururaj Rao**, Associate Principal Engineer at Arcadis - Bangalore and alumnus of MIT, Manipal (Civil Engineering, Batch of 2000), visited MIT on 11 November 2024

Mr Mathew Koshy, Retd. Chief General Manager at NLCIL and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 1983), visited MIT on 13 November 2024.

**Mr Samanth HS**, Senior Engineer at Afcons Infra and alumnus of MIT, Manipal (MTech in Construction Engineering and Management, Batch of 2023), visited MIT on 15 November 2024.

Ms Darga Shafeeqa Almaas, Senior Developer at Optum and alumna of MIT, Manipal (Computer and Communication Engineering, Batch of 2021), visited MIT on 19 November 2024.

Mr Rushi Kalamkar, Researcher at Fraunhofer IPK and alumnus of MIT, Manipal (Industrial and Production Engineering, Batch of 2021), visited MIT on 27 November 2024.

Mr Vyshnav V, Commander in the Indian Navy and alumnus of MIT, Manipal (Aeronautical and Automobile Engineering, Batch of 2016), visited MIT on 29 November

Mr Purvab Suvarna, Senior Program Manager at Amazon and alumnus of MIT, Manipal (Computer Science and Engineering, Batch of 2013), visited MIT on 29 November 2024.

Mr Shiv Gandhi, Business Consultant at Google and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2014), visited MIT on 30 November 2024.

Mr Nishant Rajan, Director at GE Healthcare Pvt Ltd and alumnus of MIT, Manipal (Computer Science and Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Anuj Ahuja, Head of International Business at GROZ Engineering Tools Pvt Ltd and alumnus of MIT, Manipal (Mechanical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Nitin Tiwari, Senior Engineering Manager and Physical Design Engineer at Intel Technology India Pvt Ltd and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Satish Kumar Gurram, Director at GUT Pvt Ltd and alumnus of MIT, Manipal (Printing Technology, Batch of 2000), visited MIT on 14 December 2024.

Mr Hemang Kapoor, Proprietor at Protech Solution and alumnus of MIT, Manipal (Industrial and Production Engineering, Batch of 2001), visited MIT on 14 December 2024.

Mr Vijay VS, Program Director at Tata Consultancy Services and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Nitin Agarwal, Director at SNN Estates and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Sukhdeep Kohli, Managing Partner at SMD Steel and alumnus of MIT, Manipal (Mechanical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Rajeev Ranjan Pandey, Senior Deputy General Manager (Civil) at Rail Vikas Nigam Ltd and alumnus of MIT, Manipal (Civil Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Alok Kumar, Director R&D - Analog Mixed Signal Design at NXP Semiconductor and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Mahesh Kumar Damani, Director of Product Management at Amazon.com and alumnus of MIT, Manipal (Chemical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Amit Goyal, Regional Head North America Low Carbon at DNV and alumnus of MIT, Manipal (Chemical Engineering, Batch of 2000), visited MIT on 14 December

Mr Piyush Pushkal, National Sales Manager at Intel India and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Ravindranath RA Shenoy, Senior Manager at Amazon and alumnus of MIT, Manipal (Computer Science and Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Nitin Kapur, Program Deliver Manager at National Broad Band Network and alumnus of MIT, Manipal (Mechanical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Venugopal Chaudhary, Chief Business Officer at PINE Labs and alumnus of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Dhrubaivoti Chatteriee, Head of Marketing and Raw Material at MCPI and alumnus of MIT, Manipal (Chemical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Sujay Regmi, Owner at Aptus Engineering and alumnus of MIT, Manipal (Mechanical Engineering, Batch of 2000), visited MIT on 14 December 2024.

Mr Anand Hemchandra Raut, Senior ASIC Engineer at NVidia Graphics Pvt. Ltd. and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2013), visited MIT on 24 December 2024.

Ms Alka Kumari, Digital Architect at Sonata Software and alumna of MIT, Manipal (Master of Computer Applications, Batch of 2006), visited MIT on 27 December 2024.

Mr Nimesh Prakash, Director of Cloud Engineering at Oracle and alumnus of MIT, Manipal (Master of Computer Applications, Batch of 2006), visited MIT on 27 December 2024.

Ms Sugandha Goel, Business Analyst at Vodacom -South Africa and alumna of MIT, Manipal (Electrical and Electronics Engineering, Batch of 2006), visited MIT on 30 December 2024.

Mr Rohit Mathur, Vice President - HR at HSBC and alumnus of MIT, Manipal (Electronics and Communication Engineering, Batch of 2006), visited MIT on 30 December 2024.

### **APPRECIATION OF SERVICE**

MIT, Manipal acknowledges the immense contribution of the following personalities who recently superannuated from service



Dr Chandrashekara S Adiga Professor Dept of Electrical & Electronics Engg

Date of Joining: 07 Aug 1990 Date of Superannuation: 31 Dec 2024



Mr Umananda K V
Assistant Professor Senior Scale
Dept of Aeronautical & Automobile Engg

Date of Joining: 19 Oct 2009 Date of Superannuation: 31 Dec 2024



Mr Laxminarayana Adiga P

Deputy Engineer (Lab)

Dept of Chemical Engg

Date of Joining: 23 Sept 1993 Date of Superannuation: 31 Dec 2024



Mr R Manohar Deputy Engineer (Lab) Dept of Mechanical & Industrial Engg

Date of Joining: 01 Apr 1991
Date of Superannuation: 31 Dec 2024



Mr Ananda Moolya Senior Technician (Lab) Dept of Mechanical & Industrial Engg

Date of Joining: 16 Aug 1988 Date of Superannuation: 31 Dec 2024



Mr Arun Kumar Shetty
Senior Technician
Workshop

Date of Joining: 28 Jan 1991 Date of Superannuation: 31 Dec 2024

#### **VISION**

Excellence in Technical Education through Research, Innovation and Teamwork.

### **MISSION**

Educate students professionally to face societal challenges by providing a healthy learning environment grounded well in the principles of Engineering, Research, and Teamwork.

### **VALUES**

Discipline
Integrity and Trust
Holistic Learning
Ethics and Professionalism
Concern for Society and Environment

#### **GOAL**

To be a world class technical institution fostering innovation, leadership and entrepreneurial spirit.



# FILUS MIT NEWSLETTER, DECEMBER 2024 EDITION

### **PUBLISHED BY**

Dr Shankaranarayana Bhat M, Associate Director (FD&W), and Additional Professor (ECE) Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal 576104, Karnataka

⊠ focus.mit@manipal.edu





Silver Reunion of MIT Alumni (1995-99 Batch)