MTS IITM Student Chapter Annual Report (2025)

MTS TECHSYM 2025 & MTS Leadership Connect 2025

Chapter 1: Introduction and Overview of MTS TECHSYM 2025

The Marine Technology Society (MTS) IIT Madras Student Section was established in 2019 under the guidance of **Prof. S. A. Sannasiraj** from the Department of Ocean Engineering, IIT Madras. Since its inception, the section has served as a vibrant platform for students to explore, innovate, and collaborate in the field of marine and ocean technology. Through workshops, seminars, technical events, and interdisciplinary projects, it has actively promoted knowledge exchange and practical engagement in key areas such as offshore engineering, underwater robotics, marine renewable energy, and coastal sustainability.

By fostering strong connections between academia and industry, the MTS IIT Madras Student Section has consistently worked to bridge the gap between advanced research and real-world application - empowering students to contribute meaningfully to the evolving landscape of global marine technology.

Building upon the success of its **previous editions in 2020 and 2023**, the student section proudly organized the third edition of its flagship national-level technical symposium - **MTS TECHSYM 2025**.

This year's event was held under the visionary theme: **"Transforming the Oceans: Sustainable Energy, Autonomous Systems, and Advanced Marine Structures."**

The symposium took place on **February 28, 2025,** at the **National Institute of Ocean Technology (NIOT), Chennai**, marking a significant milestone in the journey of MTS TECHSYM. The event was hosted by the MTS IIT Madras Student Section, in collaboration with NIOT, as a co-hosting partner.

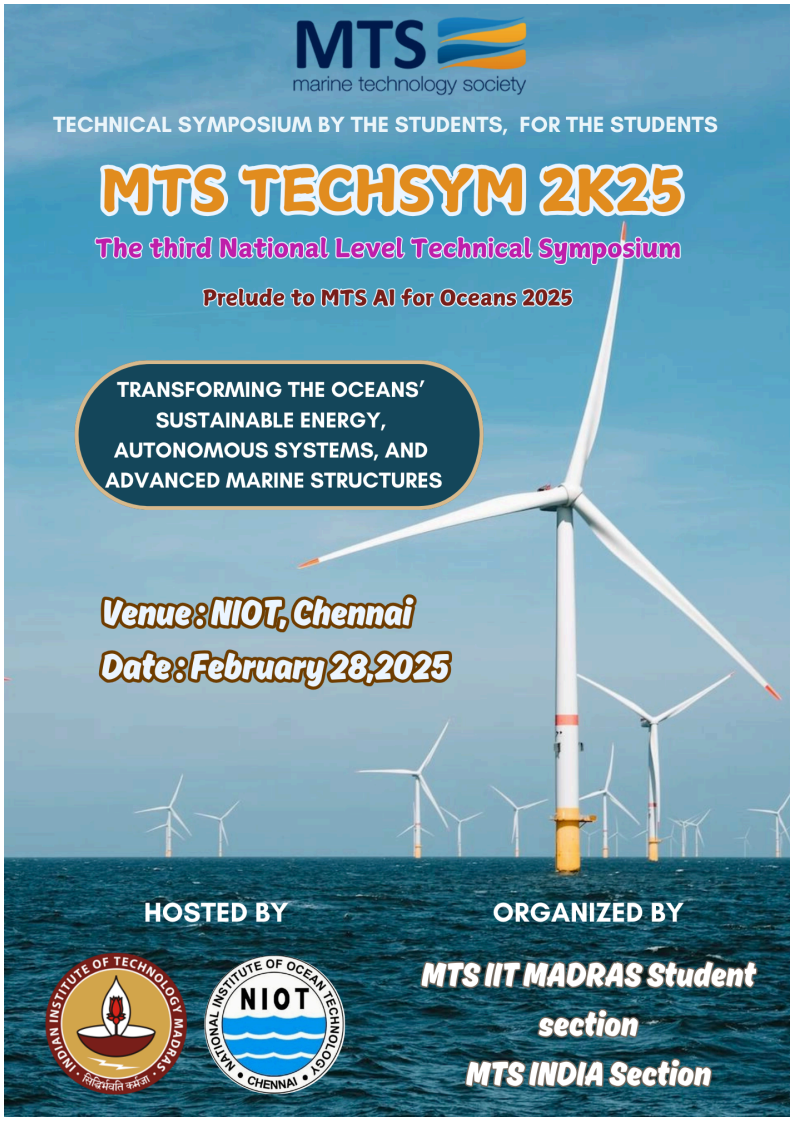
In a major step towards interdisciplinary collaboration, the MTS IIT Madras Student Section partnered with other student bodies to successfully conduct **MTS TECHSYM 2025**. These included:

- IEEE IITM Student Branch
- IEEE Oceanic Engineering Society IIT Madras Student Branch Chapter
- IAHR Southern-India Young Professionals Network (IAHR SI YPN)

These strategic alliances contributed to the creation of an inclusive and multidisciplinary platform, fostering rich discussions and innovative ideas at the intersection of marine science, engineering, and technology.

The symposium brought together over **220 participants from across India**, including students, researchers, academicians, and industry professionals. The event provided a unique environment for networking, knowledge sharing, and collaborative learning—motivating the next generation of marine technologists to address emerging challenges in ocean development and sustainability.

With its growing impact, diverse participation, and continued commitment to academic excellence, **MTS TECHSYM** has firmly established itself as India's premier student-led symposium in marine technology and ocean engineering.



Chapter 2: Planning and Organization:

2.1 Committee Structure

MTS TECHSYM 2025 was meticulously organized by a dedicated team of student volunteers under the leadership of the **MTS IIT Madras Student Section Executive Committee**. The organizing structure was designed to ensure efficient planning, execution, and coordination of the event.

Executive Committee:

- **Chair:** Mr. Krishnavelu Ramachandran
- **Secretary:** Mr. Kurimindla Karthik
- **Joint Secretary:** Mr. Samyak Kumar B
- **Treasurer:** Mr. Vasanthakumar S
- **Joint Treasurer:** Mr. Mohammed Ibrahim
- **Advisory Chair:** Mr. Sridhar Krishnamoorthy
- **Faculty Advisor:** Prof. S. A. Sannasiraj

The broader student organizing team worked across various functional sub-committees, including **registration, event planning, design and publicity, logistics, technical program coordination, ideathon organization, and sponsorship & partnership development**.

Organizing Team Members:

- Mr. Hari Ram N
- Mr. Krishnavelu R
- Mr. Kurimindla Karthik
- Mr. Mohammed Ibrahim
- Mr. Ram Kumar
- Mr. Rushikesh Kamble
- Mr. Samyak Kumar B
- Ms. Sangeetha S
- Ms. Sree Nandhini E
- Mr. Sridhar K
- Mrs. Srimathy K
- Mr. Vasanthakumar S
- Mr. Vallabh Deogaokar
- Mrs. Vijaya Lakshmi T
- Ms. K. V. Harini

All members are affiliated with the **Department of Ocean Engineering, IIT Madras**.

2.2 Timeline and Milestones

The planning and preparation for MTS TECHSYM 2025 began **six months** before the event, following a structured timeline of key milestones to ensure smooth execution:

- **Formation of Organizing Committee:** August 2024
- **Venue Confirmation & Initial Planning:** December 2024

- **Call for Participation and Abstracts:** December 2024
- **Keynote Speaker Confirmation:** January 2025
- **Sponsorship Acquisition:** December 2024 – February 2025
- **Final Logistics Planning:** January – February 2025
- **Event Execution:** February 28, 2025

2.3 Collaborations and Partnerships

The success of MTS TECHSYM 2025 was amplified through strategic partnerships and institutional support. These collaborations played a critical role in providing technical, academic, and logistical resources:

- **National Institute of Ocean Technology (NIOT):** Venue support, technical collaboration, and Food sponsorship.
- **IIT Madras & Department of Ocean Engineering:** Academic guidance and faculty mentorship
- **IEEE IITM Student Branch, IEEE OES IIT Madras Chapter, and IAHR SI YPN:** Extended outreach, student engagement, and promotion

2.4 Sponsorship Support

Generous support from industry and research organizations contributed significantly to the event's success. Key sponsors included:

- **ABCD Centre, Chennai**
- **National Technology Centre for Ports, Waterways and Coasts (NTCPWC), Chennai**
- **Ocean Robotix Pvt. Ltd.**
- **Xsens Movella Pvt. Ltd.**

Chapter 3: Event Inauguration and Distinguished Guests

3.1 Inauguration Ceremony

MTS TECHSYM 2025 commenced with a **traditional lamp-lighting ceremony**, symbolizing the pursuit of knowledge and enlightenment. This auspicious beginning was followed by a **welcome address** delivered by **Mr. Sridhar Krishnamoorthy**, Advisory Chair of the MTS IIT Madras Student Section. He warmly welcomed all the distinguished guests, keynote speakers, student participants, and attendees. In his address, he emphasized the role of student-led symposia like TECHSYM in promoting innovation and addressing challenges in the blue economy through the active involvement of young minds.

3.2 Distinguished Guests

The symposium was graced by several eminent personalities from academia, government, and research institutions. Their presence elevated the event and brought valuable insights into current trends and future directions in marine technology.

★ **Dr. M. Ravichandran**, Secretary, Ministry of Earth Sciences, India

- Delivered the **inaugural address**, emphasizing the critical role of marine technology in advancing India's **Blue Economy initiatives**. He highlighted the Government's commitment to supporting innovation in ocean science and technology.

★ **Dr. N. Anandavalli Narayanan,** *Director, CSIR-Structural Engineering Research Centre (CSIR-SERC)*

- Shared perspectives on **structural engineering applications** in harsh marine environments. She emphasized the importance of **interdisciplinary collaboration** in addressing complex challenges in marine infrastructure development.

★ **Prof. Balaji Ramakrishnan,** *Director, National Institute of Ocean Technology (NIOT)*

- Presented an overview of **NIOT's ongoing research and development projects** and encouraged collaborative initiatives between **academic institutions and research organizations** to promote innovation in ocean technology.

★ **Prof. S. A. Sannasiraj,** *Professor and Faculty Advisor, Ocean Engineering Department, IIT Madras*

- Spoke about the **academic advancements in ocean engineering**, highlighting how **educational institutions** can foster innovation and produce the next generation of marine technology leaders.

★ **Mr. Sridhar Krishnamoorthy,** *Advisory Chair, MTS IIT Madras Student Section*

- In his welcome address, he emphasized the significant role of the MTS Student Section in advancing marine technology through academic-industry collaborations and student-driven initiatives.

★ **Mr. Krishnavelu Ramachandran,** *Chair, MTS IIT Madras Student Section*

- Delivered the **vote of thanks**, expressing heartfelt appreciation to the **Chief Guests, keynote speakers, student participants**, and attendees for their enthusiastic participation. He extended special thanks to **NIOT** for their invaluable support in co-hosting the symposium and helping it reach new milestones.

3.3 Opening Plenary Session

The **Opening Plenary Session** set a compelling tone for the symposium with discussions centered on the theme: **"Innovations for a Sustainable Blue Future."** Speakers addressed the **pressing challenges facing marine ecosystems** and the **transformative role of technology** in creating sustainable solutions. The session served as a thought-provoking start, encouraging participants to engage deeply in the sessions that followed and to envision bold, sustainable innovations for the future of ocean science and engineering.

Chapter 4: Empowering Women and Advancing Marine Technology

4.1 Women in Engineering (WIE) Panel Discussion

One of the most impactful and inspiring sessions of MTS TECHSYM 2025 was the **Women in Engineering (WIE) Panel Discussion**, which underscored the symposium's commitment to **diversity, inclusion, and gender equity in marine technology and ocean engineering**. This session aimed not only to highlight the contributions of women in the field but also to motivate and empower the next generation of women to become leaders in engineering and scientific research.

The panel featured a distinguished group of women professionals and academics who shared their **personal journeys, technical contributions**, and the **challenges they've overcome** in traditionally male-dominated domains. Their stories offered encouragement, strategies, and real-world perspectives to aspiring engineers in the audience.

Esteemed Panelists:

- **Mrs. Hemalatha Sarvesan**, EY GDS
- **Dr. N. Anandavalli**, Director, CSIR-SERC
- **Dr. Vijaya Ravichandran**, Senior Scientist, NIOT
- **Prof. Hong Zhang**, Griffith University, Australia
- **Dr. Barasha Deka**, Assistant Professor, IIT Madras

Key Discussion Highlights:

- Current representation and evolving roles of women in marine technology
- Overcoming systemic and cultural barriers in engineering careers
- Strategies to promote greater gender diversity in ocean-related fields
- Importance of mentorship, peer networks, and institutional support
- Success stories and leadership journeys of the panelists

The session concluded with a lively **Q&A interaction**, where participants—particularly young women—engaged deeply with the panelists, seeking guidance on navigating careers, building confidence, and excelling in both academic and industry environments.

4.2 Early Career Ocean Professionals (ECOP) Talks

The **Early Career Ocean Professionals (ECOP)** segment provided a platform for rising talents to share their experiences and career insights. These talks focused on bridging the gap between education and employment, while also emphasizing the opportunities that lie in interdisciplinary collaboration and entrepreneurial ventures.

Featured Speakers and Topics:

- **Dr. Saichenthur Nandhakumar**, Worley
  "Transitioning from Academia to Industry: Challenges and Opportunities"

- **Mrs. Anulekha Majumdar**, NIOT
  "Research Opportunities in Government Institutions"

- **R. Adm KP Arvindan (Retd.)**, Visiting Faculty, IIT Madras
  "Naval Technology Advancements and Career Prospects"

- **Mr. Arun Kumar Jayaraman**, Movella Technologies
  "Entrepreneurship in Marine Technology"

These sessions offered valuable guidance on **career planning, research fellowships, industry readiness**, and **startup opportunities**, helping young professionals envision their role in shaping the future of marine innovation.

4.3 Invited Expert Talks

MTS TECHSYM 2025 also hosted a series of **technical expert talks** that showcased **emerging trends, breakthrough technologies**, and **applied research** in the marine domain. Delivered by experts from academia, research, and industry, these talks were intellectually stimulating and forward-looking.

Highlighted Topics:

- **“Deep Sea Exploration Technologies”**
  Discussed innovations in submersibles, AUVs, and ocean floor mapping.

- **“Ocean Energy Harvesting”**
  Explored technologies converting wave, tidal, and thermal energy into usable power.

- **“Marine Robotics and Autonomous Systems”**
  Focused on AI-powered unmanned systems for data collection and underwater operations.

- **“Marine Data Analytics”**
  Demonstrated the role of big data and predictive modeling in understanding ocean processes.

Each session included **technical case studies**, real-world applications, and **future research directions**, offering participants a rich overview of **current advancements and career-relevant knowledge**.

Chapter 5: Sustainable Blue Ideathon – Igniting Innovation for a Sustainable Ocean Future

5.1 Introduction: The Vision Behind the Challenge

Each year, **MTS TECHSYM** is built around a unique and thought-provoking theme that resonates with current global priorities in the marine and ocean technology space. For 2025, the symposium adopted the theme:

> **"Ideating Solutions for a Sustainable Blue Future"**

With the belief that today's students are tomorrow's change-makers, **the Sustainable Blue Challenge Ideathon 2025** was conceptualized to empower young minds across disciplines to contribute innovative ideas addressing critical issues faced by our oceans, coastal communities, and marine ecosystems.

This initiative aimed to break academic silos by encouraging **interdisciplinary collaboration**, wherein students from diverse departments—engineering, science, technology, design, and management—could team up to develop holistic solutions. The ideathon was open to participants from institutions across India, leading to a powerful convergence of knowledge, creativity, and vision.

5.2 Ideathon Themes and Participation

To guide participants and spark creativity, MTS IIT Madras Student Section presented **over 10 carefully curated themes**, each rooted in pressing real-world marine challenges:

- Marine Pollution and Waste Management
- Ocean Conservation and Biodiversity Protection
- Sustainable Blue Economy and Aquaculture
- Climate Resilience and Coastal Adaptation
- Renewable Ocean Energy Innovations
- Advanced Underwater Exploration and Mapping
- Ocean Surveillance and Defense Technologies
- Maritime Transportation and Logistics Optimization
- Disaster Management and Early Warning Systems

- Marine Biotechnology and Pharmaceutical Innovations
- Sustainable Tourism and Eco-Marine Recreation
- Data-Driven Solutions for Ocean Monitoring and Forecasting

Participants were required to choose one theme, identify a specific problem, and build an innovative, feasible solution using technology, systems thinking, and/or policy innovation.

5.3 Competition Format

The Sustainable Blue Ideathon was conducted in two competitive rounds:

Round 1: Preliminary Submission

- Students/teams submitted a 3-slide pitch (in PDF format) covering:
    - **Problem Statement**
    - **Proposed Solution**
    - **Feasibility, Impact, and Innovation**
- **Over 40 teams from institutions across the country** submitted their entries, reflecting a broad national outreach.
- A panel of experts reviewed the proposals, evaluating them on:
    - Creativity and novelty of the idea
    - Technical and practical feasibility
    - Potential impact on the marine ecosystem or community
- **16 teams were shortlisted** for the final round.

Round 2: Finale at NIOT

- The shortlisted teams were invited to present at the **National Institute of Ocean Technology (NIOT), Chennai** on **28th February 2025**.
- Each team delivered:

    - A **10-minute live pitch** followed by
    - A **5-minute Q&A session** with a jury panel comprising academia, industry experts, and policymakers.

- Judging criteria included:
    - Technical merit and depth
    - Innovativeness
    - Presentation quality
    - Real-world applicability and scalability

5.4 Winning Projects

The finale showcased outstanding ideas that demonstrated deep insight, creativity, and a passion for sustainable ocean innovation. The top prizes were awarded to:

First Prize:

Team: *Hindustan College of Engineering and Technology, Coimbatore*
Project: *"Dual-Powered System: Ocean Thermal Energy & Solar Power"*

- **Concept**: A hybrid renewable energy system combining ocean thermal energy conversion (OTEC) with solar photovoltaics to power remote coastal communities.
- **Key Features**: Modular design, energy storage capabilities, adaptive control systems.
- **Impact**: A scalable and eco-friendly energy solution with minimal environmental disruption.

Second Prize:

Team: *Hindustan College of Engineering and Technology, Coimbatore*
Project: *"Marine Plastics Cleanup using a Bioinspired Jellyfish Design"*

- **Concept**: An autonomous marine robot that mimics jellyfish motion for efficient microplastic collection across ocean depths.
- **Key Features**: Biodegradable body materials, ML-based plastic detection, energy-efficient propulsion.
- **Impact**: A novel, sustainable, and cost-effective approach to marine plastic pollution.

5.5 Honorable Mentions

Several teams were commended for their creativity and impactful proposals, including:

- **Biodegradable packaging alternatives** to reduce marine litter
- **AI-driven coral reef monitoring systems** to track reef health and aid restoration
- **Low-cost, open-source water quality sensors** for community-level marine data
- **Innovative aquaculture designs** for efficient and sustainable seafood farming

5.6 Ideathon Impact and Legacy

The **Sustainable Blue Ideathon 2025** left a significant mark by:

- Attracting **40+ teams from across the country**, reflecting national-level enthusiasm and reach.
- Fostering **interdisciplinary learning**, encouraging collaboration across technical and non-technical domains.
- Creating a **platform for student innovation**, where raw ideas evolved into polished proposals.
- Establishing a **pipeline of actionable ideas** that can be nurtured further into full-scale R&D or startup initiatives.
- Facilitating **direct engagement** between students, mentors, and industry experts during the live pitch sessions.

5.7 Summary: Shaping a New Wave of Marine Innovators

Through this ideathon, **MTS TECHSYM 2025** truly became a catalyst for transformative ideas and collaborative innovation. It demonstrated how focused challenges, supported by structured mentoring and national outreach, can motivate students to step out of their comfort zones and **solve real-world ocean challenges**. The event not only celebrated academic excellence but also laid the foundation for the **next generation of marine technologists and ocean innovators** across India.

Chapter 6: Valedictory Function and Closing Ceremony – A Grand Conclusion to a Historic Symposium

The **Valedictory Function of MTS TECHSYM 2025** marked the formal conclusion of the national-level symposium, celebrating the efforts, innovations, and collaborative spirit that defined the event. Held in a vibrant and reflective atmosphere, the ceremony brought together all participants, organizers, guests, and supporters to commemorate the achievements of the day and to envision the future of marine technology in India.

6.1 Summary Presentation

The event began with a **comprehensive summary presentation** by the MTS IIT Madras Student Section Organizing Committee. The session offered an overview of the symposium's key highlights, including:

- Insightful keynote addresses and technical sessions

- Impactful Women in Engineering (WIE) and ECOP panels
- Cutting-edge invited expert talks
- The highly successful Sustainable Blue Ideathon competition
- Interdisciplinary participation and student innovation from across the country

The summary emphasized how the event served as a dynamic platform for learning, collaboration, and showcasing ideas that align with the global goals for ocean sustainability.

6.2 Closing Remarks by Esteemed Guests

The closing remarks were delivered by distinguished leaders from the marine technology community, whose words resonated deeply with the participants:

❖ **Dr. R. Venkatesan,** *Founder and Former Chair, MTS India Section*
- Reflected on the remarkable **growth of MTS in India**, especially the increasing involvement of student chapters.
- Applauded the **MTS IIT Madras Student Section** for hosting such a professionally executed and impactful symposium.
- Emphasized the importance of **student-led initiatives** in driving the next phase of innovation in marine technology.
- Shared a **vision for future collaborations**, urging participants to continue their research and entrepreneurial pursuits in the field.

❖ **Mr. Basanta Kumar Jena, Scientist - G, NIOT**
- Highlighted the need to **sustain the momentum** built during the symposium.
- Encouraged participants to **take forward their ideas**, exploring avenues for implementation in industry, academia, and startups.
- Commended the organizing team for fostering an **inclusive and inspiring environment** throughout the event.

❖ **Prof. S. A. Sannasiraj, Faculty Advisor, MTS IIT Madras Student Section**

- Delivered an insightful speech highlighting the active role of the MTS IIT Madras Student Section in contributing to marine technology advancements.

- Stressed the value of such platforms in uniting diverse academic and research backgrounds to collaboratively address national and global ocean challenges.

- Encouraged students to continue their enthusiastic involvement and build on the success of this impactful event.

6.3 Prize Distribution and Recognition

The most awaited segment of the closing ceremony was the **prize distribution**, celebrating excellence and innovation:

- **Winners of the Sustainable Blue Ideathon** were formally recognized for their creativity and technical brilliance.
- **Best Presentation Awards** were conferred upon outstanding student presenters across technical sessions.
- **Cash Prizes and Certificates** were distributed to the winners and finalists.
- **Certificates of Participation** were awarded to all attendees, honoring their engagement and contribution.
- This segment was filled with applause, smiles, and appreciation, marking a high point of celebration.

6.4 Vote of Thanks

The **Vote of Thanks** was delivered by **Mr. Kurimindla Karthik**, Secretary of the MTS IIT Madras Student Section. In a heartfelt address, he extended gratitude to:

- All **distinguished speakers and chief guests** for their guidance and presence
- The **organizing institutions** – IIT Madras and NIOT – for their unwavering support
- **Sponsors and partners** who made the event possible
- All **participants and student teams** from across India
- The **volunteers, organizing committee members**, and **technical staff** who worked tirelessly to ensure a seamless experience

His words reflected deep appreciation, humility, and pride in the collective effort that brought the event to life.

Chapter 7: A Historic Milestone in the MTS TECHSYM Journey

7.1 A Historic Milestone in the MTS TECHSYM Journey

The **Valedictory Function of MTS TECHSYM 2025** was not merely a conclusion—it was a celebration of a transformative journey. With over **220+ participants** representing institutions from across the country, this year's symposium emerged as a **landmark event** in the legacy of MTS India.

The **energy, innovation, and diversity** showcased throughout the event set a new standard of excellence, sparking enthusiasm for marine technology among the youth.

This symposium **ignited inspiration** in countless young minds, encouraging them to pursue careers in the marine engineering domain and nurturing a **pipeline of future ocean professionals and leaders**.

The **positive feedback** from participants, guests, and collaborators echoed a powerful sentiment: **MTS TECHSYM 2025 made a national impact**, creating a ripple effect of curiosity, collaboration, and creativity in ocean science and technology.

7.2 A Great Victory for the MTS IIT Madras Student Section

The triumphant execution of **MTS TECHSYM 2025** stands as a **remarkable achievement** for the **MTS IIT Madras Student Section**. From the initial ideation of themes to the seamless coordination of every event detail, the student team exhibited unwavering **dedication, innovation, and leadership**.

This symposium has set a **new milestone** in the chapter's journey, reinforcing India's student-led contribution to the **global marine technology ecosystem**.

By providing a dynamic platform for knowledge sharing, interdisciplinary collaboration, and technological innovation, the MTS IIT Madras Student Section has successfully planted seeds of **inspiration, progress, and excellence**, ensuring that the voyage of marine technology sails forward into a **sustainable and impactful future**.

Chapter 8: MTS Leadership Connect 2025

In addition to the symposium, the MTS IIT Madras Student Section successfully hosted **MTS Leadership Connect 2025 on March 14, 2025**, the Marine Technology Society (MTS) IIT Madras Student Section had the privilege of organizing MTS Leadership Connect 2025, featuring **Ms. Donna M. Kocak**, a distinguished leader of the Marine Technology Society. The event provided a rare and valuable opportunity for young researchers and students at IIT Madras to engage with a global leader in marine technology and to draw inspiration from her professional journey.

The program began with the Department of Ocean Engineering extending a warm welcome.

- Prof. S. Nallayarasu, Head of the Department, presented an overview of the department's advanced research facilities.

- Prof. S. A. Sannasiraj introduced the MTS IIT Madras Student Section, outlining its vision and initiatives.

- Prof. Sriram shared ongoing activities under IEEE.

- Mr. Karthik Kurimindla, MTS Student Section Secretary, highlighted the history and evolution of MTS TechSym, emphasizing its role in nurturing marine technology leadership in India.

The session also featured distinguished contributions from Prof. M. A. Atmanand, who shared his extensive expertise in Ocean Engineering, and Dr. R. Venkatesan, whose support was critical to the success of the event. Students engaged actively with Ms. Donna during an interactive Q&A, gaining career perspectives and professional guidance.

A highlight of the program was the presentation of Certificates of Appreciation by Ms. Donna to the student volunteers of MTS TechSym 2025, recognizing their dedication and service.

The visit also included a guided tour of IIT Madras's world-class experimental facilities, including the Wave Basin, 2m and 4m Wave Flumes, Shallow Water Basin, and Towing Tank. Ms. Donna expressed her appreciation for the cutting-edge infrastructure and innovative research undertaken by the department.

Overall, MTS Leadership Connect 2025 significantly strengthened the bond between IIT Madras and the global MTS community. It not only inspired students but also reinforced the student section's role as a vibrant hub for marine technology leadership and collaboration.

Chapter 9: Impact Assessment and Future Recommendations

9.1 Key Outcomes

MTS TECHSYM 2025 emerged as a milestone event in the Indian marine technology landscape, successfully fulfilling its objectives of fostering innovation, collaboration, and knowledge sharing. Some of the major achievements include:

- **Nationwide Participation**: With over **220+ students and professionals** participating from premier institutions across India, the symposium created a strong sense of national academic unity and engagement.

- **Promotion of Women in Engineering**: Through the dedicated Women in Engineering (WIE) Panel Discussion, the symposium brought focus to gender inclusivity, encouraging young women to pursue leadership roles in marine and ocean engineering.

- **Innovation through the Sustainable Blue Ideathon**: The ideathon served as a launchpad for over **40 innovative ideas**, addressing key challenges in ocean sustainability, conservation, and

technological advancement.

- **Bridging Academia and Industry**: The symposium created a vibrant platform for **networking and collaboration** among students, researchers, industry professionals, and government organizations, fostering new opportunities for mentorship and project development.

- **Raising Awareness**: The sessions and discussions helped popularize marine engineering as a dynamic and impactful career option for young engineers across disciplines.

9.2 Takeaways and Lessons Learned

Organizing an event of this scale provided invaluable learning for the MTS IIT Madras Student Section and collaborating partners. Key insights include:

- **Early Engagement of Key Speakers**: Reaching out to high-profile speakers well in advance is crucial for ensuring their availability and adding value to the sessions.

- **Diverse Funding and Support**: Securing multiple sponsors and institutional partnerships enhanced the symposium's financial sustainability and expanded its reach.

- **Collaborative Planning**: Involving cross-institutional and interdisciplinary teams led to a richer and more inclusive event experience.

- **Interactive Formats Drive Engagement**: Sessions that allowed for two-way interaction, such as panel discussions and ideathon pitches, saw greater audience involvement and excitement.

- **Technical Preparedness Matters**: Running technical rehearsals for both online and on-site presentations ensured a smooth and glitch-free experience for participants and speakers.

9.3 Recommendations for Future Events

To further elevate the symposium in future editions, the following recommendations are proposed:

- **Two-Day Symposium Format**: Extending the event to two days would provide ample time for deeper technical sessions, workshops, and student research presentations.

- **Hands-on Workshops and Live Demos**: Including practical sessions will allow participants to interact directly with emerging marine technologies and tools, enhancing experiential learning.

- **Mentorship and Career Guidance**: A structured mentorship program connecting students with professionals and alumni can help guide career paths and research interests.

- **Dedicated Student Research Platform**: A poster or project exhibition area should be included to allow students to showcase ongoing or completed research work.

- **Global Outreach and Collaboration**: Establishing ties with international MTS student sections and inviting foreign speakers would provide a broader global perspective.

- **Follow-up on Ideathon Projects**: Creating mechanisms to support the continuation and potential implementation of winning ideathon ideas will increase the real-world impact of the event.

- **Enhanced Industry Involvement**: Proactively involving private companies, startups, and R&D labs will bring new perspectives and increase opportunities for internships and collaboration.

9.4 Long-Term Vision

MTS TECHSYM has positioned itself as a prestigious national platform, nurturing the future generation of ocean professionals. Looking ahead, the vision is to:

- **Evolve into an International Symposium**: Expand participation and collaborations globally, thereby enhancing the quality and reach of the event.

- **Foster Year-Round Engagement**: Move beyond a single annual event to a continuous engagement model with webinars, short courses, and technical meet-ups.

- **Enable Research Partnerships**: Facilitate collaborations between students, faculty, and industry for joint research and development in marine technology.

- **Support Innovation Ecosystem**: Establish MTS TECHSYM as a nucleus for marine tech innovation in India, connecting academia, government, and industry toward sustainable ocean solutions.

Chapter 10: Conclusion and Acknowledgements

MTS TECHSYM 2025 stands as a proud milestone in the journey of the Marine Technology Society's efforts to promote and nurture ocean engineering talent in India. The symposium not only brought together brilliant minds from across the country but also succeeded in highlighting the significance and opportunities within the marine technology domain.

The overwhelming response, with participation from over 220+ students and professionals, is a testament to the growing interest and enthusiasm in this field. The symposium created a space where interdisciplinary ideas could flourish, inspiring students from various departments to explore ocean engineering as a future career path. Furthermore, it offered ocean engineering students a national-level platform to demonstrate their advanced research capabilities and innovative thinking in marine and offshore technologies. Later, MTS Leadership connect 2025 also was successfully conducted.

This achievement would not have been possible without the **unwavering support of the Marine Technology Society (MTS)**, the **MTS India Section**, **Dr. R. Venkatesan,** *Founder and Former Chair, MTS India Section,* **Prof. S A Sannasiraj,** *Faculty Advisor, MTS IIT Madras Student Section and*

Dr Preetha Roselyn J, *Chair, MTS India Section*. whose vision and encouragement enabled us to organize such an impactful event. Their continued dedication to empowering student communities and building a robust marine tech ecosystem in India is truly commendable.

Through this event, the MTS IIT Madras Student Section has not only contributed to the academic and professional growth of participants but also strengthened its role in shaping the future of ocean engineering in the country. We are deeply grateful for the opportunity to serve and contribute to the society's mission.

Report Submitted By:
Mr. Krishnavelu Ramachandran
MTS Member Number: 28595
Chair, MTS IIT Madras Student Section

With heartfelt thanks to the Marine Technology Society for the invaluable opportunity to lead, serve, and contribute to a cause that holds the promise of a sustainable and innovative ocean future.