MVJ COLLEGE OF ENGINEERING, BANGALORE

(An Autonomous Institute)

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# Report on
# VISHWA – 2026
# A National Science Day Celebration

MVJ College of Engineering, in collaboration with the Indian National Academy of Engineering (INAE) Bangalore chapter celebrated National Science Day by hosting VISHWA – 2026 on 13th March 2026 in Dr. M V Jayaraman Auditorium.

The event was graced by Padma Bhushan Dr. B. N. Suresh, Chancellor of IIST, Trivandrum and Chairman, Board of Governors, MVJCE, who presided as the Chief Guest and Dr. K. J. Vinoy, Chairman of the INAE Bangalore Chapter and Professor, Department of ECE, IISc Bangalore.

Two Distinguished Lectures enriched the occasion, delivered by Shri P. S. Krishnan, Distinguished Scientist (Retd.) and former Director, ADE, DRDO, Bangalore, and Shri S. Mahesh Babu, Additional Project Director, Advanced Medium Combat Aircraft (AMCA). Their talks offered deep technical insights and real-world perspectives from India's cutting-edge defence and aerospace programmes.

The event was also graced by the presence of Dr. K. Ramachandra, Former Director, GTRE, Bangalore and Member, Board of Governors, MVJCE, along with Shri S. Ramanathan and Dr. K. G. Narayan, who honoured the occasion with their participation.

The guests arrived at the auditorium at around 10:30 AM, marking the formal commencement of the event. Prof. Devika K extended a warm welcome to the distinguished guests, setting a gracious tone for the proceedings. The programme began on an auspicious note with the lighting of the lamp by the dignitaries, accompanied by an invocation song rendered melodiously by Sriraksha and Arpita, students from the CSE and EC (ACT) departments.



Padma Bhushan Dr. B N Suresh lighting the lamp

Following this, our Principal, Dr. Ajayan K R extended a cordial welcome to the esteemed dignitaries by presenting flower bouquets and delivered the official welcome address, acknowledging their presence and highlighting the significance of the occasion.


Principal, Dr. Ajayan K R presenting a bouquet to Padma Bhushan Dr. B. N. Suresh

Dr. M. Brindha, Dean – Administration, introduced the Chief Guest, Padma Bhushan Dr. B. N. Suresh, highlighting his remarkable achievements and contributions to the fields of science and technology. Following this introduction, Dr. Suresh delivered the Inaugural Address, inspiring the audience with his insights and vision.

Dr. M Brindha, Dean-Administration introducing Padma Bhushan Dr. B. N. Suresh

Padma Bhushan Dr. B. N. Suresh opened his address by highlighting the significance of National Science Day, celebrated in honour of Sir C. V. Raman, India's only Nobel laureate in science for work conducted within the country. He congratulated the young students and researchers, emphasizing that choosing science and technology provides them with the unique opportunity to contribute meaningfully to the nation's growth.

Padma Bhushan Dr. B N Suresh presenting the Inaugural address

Dr. Suresh reflected on India's remarkable progress across sectors such as space, defence, agriculture, industry, and atomic energy since independence. He noted that India now stands at a pivotal phase, driven by strong economic growth, innovation, and technological capability. He expressed pride in India's expanding innovation ecosystem and highlighted advancements in defence technologies, cybersecurity, information sciences, and pharmaceuticals.

Addressing the youth, Dr. Suresh urged them to nurture curiosity, strengthen scientific temper, and aspire to achieve breakthroughs—perhaps even aiming for

India's next Nobel Prize in science. Concluding his speech, he affirmed that the coming decades would be a golden era for science and technology, calling upon students to play an active role in shaping the nation's future.

As a token of gratitude and respect, Our Chairman Shri. M J Balachandar Sir felicitated Padma Bhushan Dr. B. N. Suresh Sir with a memento and a Ponnadai.


Shri. M J Balachandar Sir felicitating Padma Bhushan Dr. B. N. Suresh Sir

Prof. Devika K introduced Dr. K. J. Vinoy, Chairman of the INAE Bangalore Chapter and Professor, Department of ECE, IISc Bangalore to the gathering and invited Sir to deliver the Opening Address.

Dr. K. J. Vinoy delivered the Opening Address, expressing his happiness at being part of VISHWA for the second consecutive year. He appreciated MVJCE's continued collaboration with INAE in celebrating National Science Day and promoting scientific awareness among students. He highlighted the chapter's initiatives in organizing nationally significant events—such as National Engineers' Day, World Environment Day, and National Technology Day—and shared plans to extend these activities across Karnataka to widen their impact.

Dr. K. J. Vinoy delivering the Opening Address

Dr. Vinoy emphasized the importance of motivating the younger generation to pursue careers in science, engineering, and technology, reiterating the role of students in realising India's Vision 2047. Referring to the expert sessions, especially those on aerospace technologies, he encouraged students to actively explore emerging research opportunities and make use of the strong aerospace ecosystem around them. He commended MVJCE for its efforts in organizing the event and assured INAE's continued support in fostering scientific curiosity and innovation among students.

As a token of gratitude and respect, the Principal, Dr. Ajayan K R Felicitated Dr. K J Vinoy Sir with a memento and a Ponnadai.

Principal, Dr. Ajayan K R Felicitating Dr. K J Vinoy

Following this, the Distinguished Lecture Series commenced. The first lecture, titled was presented by Shri P. S. Krishnan, Distinguished Scientist (Retd.) and former

Director, ADE, DRDO, Bangalore, who was formally introduced to the audience by Prof. Devika K.

Shri P. S. Krishnan delivered an insightful lecture titled "Perspectives of UAVs in India" as part of the Distinguished Lecture Series. He provided a clear overview of UAV fundamentals, explaining what UAVs are, how flight is initiated, and the role of feedback control, Digital Flight Control Computers (DFCCs), sensors, and actuators in ensuring stability and navigation.


Shri P. S. Krishnan delivering his lecture on "Perspectives of UAVs in India"

He highlighted the growing importance of UAVs, particularly for continuous surveillance and strategic operations, and explained their USPs and Concept of Operations (CONOPS). The talk featured several indigenous UAV systems developed by ADE, including Lakshya, Nishant, and other successful platforms. He also discussed prominent ongoing projects like Rustom-1, Controlled Aerial Delivery Systems (CAD), Sudarshan, TAPAS, Nirbhay, and Ulka.

His lecture further covered the basics of flight control systems, key concepts of control theory, the roles of gyroscopes, air data sensors, and the stages of system design through systems engineering. He illustrated how sensor characteristics affect modal damping, linking theory to practical design challenges.

In conclusion, Shri Krishnan reinforced the Perspectives of UAVs in India by summarising how UAV technologies are evolving in the country and emphasising their growing importance in strengthening India's technological future.

As a token of gratitude and respect, Padma Bhushan Dr. B N Suresh Sir felicitated Shri P S Krishnan with a memento and a Ponnadai.

Padma Bhushan Dr. B N Suresh felicitating Shri P S Krishnan

Moving on to the next session of the lecture series, Prof. Devika K introduced Shri S. Mahesh Babu, Additional Project Director, Advanced Medium Combat Aircraft (AMCA), and invited him to deliver his lecture.

Shri S. Mahesh Babu delivered an engaging lecture titled "Development of 5th Generation Fighter Aircraft – Engineering Challenges" He began by outlining the transition from the Light Combat Aircraft (LCA) programme to the more advanced AMCA platform, placing India's efforts in the global context of 5th-generation fighters. He discussed the key features, specifications, and capabilities envisioned for AMCA, along with its core design philosophy and complete design lifecycle.

Shri S. Mahesh Babu delivering lecture on "Development of 5th Generation Fighter Aircraft – Engineering Challenges."

He highlighted the innovative modular design of AMCA, comprising 9 major modules and 22 sub-modules, and explained the complexity of its manufacturing processes and maintainability requirements. The audience also gained insights into the cockpit layout, ergonomic studies, Diverterless Supersonic Intake (DSI), scoops and fairings, and the total count of 6205 major structural parts supported by 55 jigs for structural assembly.

Shri Mahesh Babu offered an in-depth overview of the various inboard systems that make AMCA a next-generation platform. These included the fuel system for uninterrupted supply, hydraulic systems, the Advanced Life Support System (ALSS), secondary power system, aircraft escape mechanisms, landing gear arrangement, brake parachute system (BPS), and the fire detection, warning, and extinguishing system. He also discussed the propulsion system, advanced avionics suite, integrated weapon systems, conformal VOR/ILS antenna, Electronic Warfare (EW) systems, and the AESA Radar. Further, he explained the electrical systems architecture, the Simulation Test Rig used for validation, and the incorporation of Industry 4.0 technologies in AMCA development. His lecture provided students with a comprehensive understanding of the engineering challenges involved in creating a 5th-generation fighter aircraft and showcased India's growing capabilities in cutting-edge aerospace technologies.

As a token of gratitude and respect, Dr. K Ramachandra Sir felicitated Shri S Mahesh Babu with a memento and a Ponnadai.

Dr. K Ramachandra Sir felicitating Shri S Mahesh Babu

Following the lecture series, an interactive Q&A session was conducted, during which students enthusiastically engaged with the speakers. They raised numerous

questions related to UAV technologies, fighter aircraft design, system engineering challenges, and the future of aerospace innovations in India. The experts responded with detailed explanations, addressing both technical and conceptual queries, which helped deepen the students' understanding. The session created a vibrant learning atmosphere and reflected the keen curiosity and active participation of the audience.

Interactive Q&A session

Dr. M Brindha, Dean- Administration delivered the Vote of Thanks, expressing heartfelt appreciation to all the distinguished guests and the speakers for their invaluable contributions to the success of the program. She acknowledged the insightful lectures delivered by the esteemed speakers, the support extended by the management, and the enthusiastic participation of the students.