GUEST LECTURE & ENGINEERING EXPO REPORT

59th Engineers' Day Celebrations

Nadimpalli Satyanarayana Raju Institute of Technology (NSRIT), Visakhapatnam

Honouring the legacy of Bharat Ratna Sir M. Visvesvaraya — a guest lecture on Next-Generation Technologies in Civil Engineering Applications, followed by a visit to the student Engineering Expo

TOPIC OF THE GUEST LECTURE
Next-Generation Technologies in Civil Engineering Applications

OCCASION 59th Engineers' Day	**DATE** 15th September 2026
RESOURCE PERSON Er. S. Soma Sekhar Naidu, Founder & MD, D2D Engineers	**TIME** 2:00 PM – 4:00 PM
VENUE [Seminar Hall / Auditorium], NSRIT, Visakhapatnam	**FORMAT** Guest Lecture + Engineering Expo Visit
PARTICIPANTS B.Tech Civil Engineering students & faculty	**ORGANISED BY** [Department of Civil Engineering], NSRIT

ABOUT THE RESOURCE PERSON

Er. S. Soma Sekhar Naidu, M.E., AMIE, AIV (Chartered Engineer), is the Founder & Managing Director of Desire 2 Design (D2D) Engineers, Visakhapatnam — an ISO 9001 certified structural consultancy and turnkey construction firm delivering structural design, architectural planning, geotechnical investigation, NDT testing, DGPS surveys, waterproofing, project management and construction execution. Through MoUs with more than ten engineering colleges, he has made industry-linked training a core part of the firm's work. At the invitation of NSRIT, he joined the institution's 59th Engineers' Day celebrations as the guest speaker.

9+	50+	500+	1000+
Branches	Professionals	Students Trained	Projects Completed

ABOUT THE OCCASION

IN TRIBUTE TO SIR M. VISVESVARAYA

Engineers' Day is observed across India every year on 15th September, the birth anniversary of Bharat Ratna Sir Mokshagundam Visvesvaraya (1861–1962) — the engineer behind the Krishna Raja Sagara dam, the automatic sluice gates at Khadakvasla and Hyderabad's flood-protection works. The programme began with a floral tribute to his portrait, and Er. Naidu opened his address by drawing on this legacy: that engineering is ultimately a service to society, and every new tool must serve that purpose.



Floral tribute to Sir M. Visvesvaraya at the start of the programme



Students assembled in the seminar hall for the session

OBJECTIVES OF THE SESSION

- Commemorate Engineers' Day by connecting students with the values and vision of Sir M. Visvesvaraya.
- Introduce next-generation technologies and their applications in how civil engineering projects are designed, built and maintained.
- Map each technology to the specific career roles it is creating in the construction industry.
- Encourage students to take their academic projects beyond the classroom, as showcased in the Engineering Expo.
- Help students plan the skills they should build during their degree to be industry-ready.

GUEST LECTURE — NEXT-GENERATION TECHNOLOGIES IN CIVIL ENGINEERING APPLICATIONS

The guest lecture on Next-Generation Technologies in Civil Engineering Applications walked students through eight technologies — explaining how each one is applied on real projects and the job roles it leads to.

- **BIM & Digital Twins** — 3D models that carry cost, schedule and asset data through a project's life. Careers: BIM modeller, BIM coordinator.
- **Artificial Intelligence** — Design optimisation and automated detection of construction defects. Careers: computational design, construction-tech analyst.
- **Drones, LiDAR & GIS** — Rapid site surveys, earthwork volumes and progress mapping. Careers: GIS engineer, drone survey specialist.
- **Structural Health Monitoring** — IoT sensors tracking strain, vibration and cracks in service. Careers: structural audit engineer, NDT specialist.
- **Smart & Sustainable Materials** — UHPC, self-healing and geopolymer concrete, GFRP bars. Careers: QC & materials engineer, R&D engineer.
- **3D Concrete Printing** — Walls printed in days with far less formwork. Careers: construction technology engineer.
- **Precast, Modular & Prefab Construction** — Factory-made components assembled quickly on site. Careers: precast design and production engineer.
- **AR / VR & Robotics** — Virtual walkthroughs, on-site overlays and robotic layout. Careers: visualisation specialist, automation engineer.

SESSION HIGHLIGHTS

After paying tribute to Sir M. Visvesvaraya, Er. Naidu used the Engineers' Day platform to show students where the profession is heading. Drawing on D2D's own work in structural design, NDT testing and DGPS surveys, he explained how each technology is already changing everyday site and design practice, and why fundamentals in structures, materials and surveying remain the base on which these tools are used. Students and faculty followed the session with keen interest and interacted with him on career choices and emerging fields.



Er. Naidu presenting next-generation technologies in civil engineering



Er. Naidu with faculty and students in the seminar hall

ENGINEERING EXPO

Following the guest lecture, Er. Naidu visited the Engineering Expo organised by NSRIT as part of the Engineers' Day celebrations. Student teams displayed working models and project charts — including a water filtration model, an RCC pipe house single-bed room unit and road and bridge network models — and he spent time at each stall understanding the idea behind it.

- **Student Interaction** — Engaged directly with presenting teams, asking about the problem each project set out to solve and how it works.
- **Practical Feedback** — Offered suggestions on design assumptions, materials, cost and constructability to make the ideas field-ready.
- **Industry Perspective** — Pointed out where student concepts — such as low-cost pipe housing and water treatment — have real applications in practice.
- **Encouragement** — Appreciated the effort and creativity on display and encouraged teams to keep developing their work.



Discussing the water filtration model with student team



Reviewing the RCC pipe house single-bed room model



Examining the working of a student model



Reviewing a road and bridge network model with faculty

CAREER GUIDANCE FOR FUTURE ENGINEERS

- **Master the Fundamentals** — Technology changes fast, but strong basics in structures, materials and surveying stay relevant.
- **Pick a Technology Early** — Start learning one tool — BIM, GIS or drone surveying — during your degree itself.
- **Learn on Site** — Site exposure builds the judgement needed to use these tools correctly.
- **Know the Codes** — IS codes are the language of professional practice — read them, not just their summaries.
- **Take Projects Seriously** — Expo and final-year projects are the first portfolio an employer sees.
- **Serve Society** — Follow Sir Visvesvaraya's example — let integrity and public safety guide every decision.

OUTCOME & CONCLUSION

The 59th Engineers' Day programme at NSRIT combined commemoration with practical learning. The guest lecture linked the legacy of Sir M. Visvesvaraya to next-generation technologies and their applications in civil engineering, while the Engineering Expo gave students a platform to present their ideas and receive direct industry feedback. Together, the two sessions left students with a clearer picture of the skills, tools and values they will need to build successful engineering careers.

FELICITATION

Er. S. Soma Sekhar Naidu was felicitated with a memento and a shawl by the HOD and faculty of NSRIT in recognition of his time, insight and support to the institution. In turn, Er. Naidu felicitated **A. Devi Prasad, HOD**, NSRIT.



Er. S. Soma Sekhar Naidu (MD & Founder, D2D Engineers) felicitated by the HOD and faculty of NSRIT



Er. Naidu felicitating the HOD – A. Devi Prasad

GROUP PHOTO



Er. Naidu with the HOD, faculty and student volunteers of NSRIT



Er. Naidu in a courtesy meeting with the Principal and HOD of NSRIT

> *Every structure we design is a promise to the people who will live and work inside it. Sir Visvesvaraya kept that promise for a century — our job as engineers is to keep it for ours.*
>
> **— Er. S. Soma Sekhar Naidu, Founder & Managing Director, D2D Engineers**