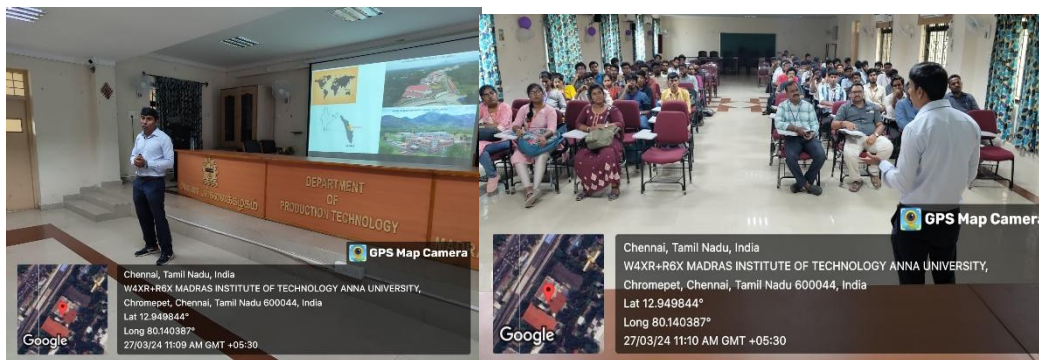


First Prof.SRK Endowment Lecture Series 2024

Guest Name: **Prof. Santhakumar Mohan, IIT Palakkad** Venue: **Prof. SRK Seminar Hall**
Session 1: Topics: **“Recent Trends in Rehabilitation Robotics”** Time: **27/3/2024,11.00 AM**

In the First SRK Endowment Lecture Series Dr. Santhakumar Mohan, IIT Palakkad has delivered the lecture on “Recent Trends in Rehabilitation Robotics”. Professor shared insights into his academic journey leading to IIT Palakkad. He elaborated on robot navigation and visualization through a captivating scenario. Highlighting student projects, he showcased diverse robots, including one with a star-shaped wheel for versatile terrain traversal and stair climbing. Another project featured a mobile robot capable of autonomous travel using real-time GPS data, simplifying user interaction. Notably, they presented underwater robots to DRDO, emphasizing their lightweight design. The session also covered a lower limb rehabilitation robot, addressing manual labor issues in physiotherapy. The speaker shared experiences upgrading surgical robots at hospitals, highlighting human adaptability to robotic procedures. Students and faculty members attend the session.



Resource person: **Mr.R. Durairaj, Head, AI & Space Robotics, ISRO, Trivandrum**

Session 2: Topics: **“Space robotics: Trends and Challenges”**

Venue: **Prof. SRK Seminar Hall,**

Time: **27/3/2024,02.30 PM**

In the afternoon session, the esteemed speaker provided an emphasizing advancements in space launch technology. He detailed his unit's contributions to ISRO, focusing on the production of diverse sensors crucial for space missions, including inertial and vision sensors. The discussion extended to microgravity conditions and the training of space robots, referencing NASA's Canadarm utilized in the International Space Station. Highlighting ISRO's upcoming endeavors, he introduced a humanoid torso robot engineered for space missions, showcasing its capabilities through laboratory videos. Manufacturing processes for spacecraft, from design to acoustics, were elucidated, alongside radiation shielding measures for scientist safety. The session also touched upon the evolution of space technology from SPACE 1.0 to 5.0 and current telescope systems like JWST and HST. Moreover, research, entrepreneurial opportunities in space including waste management were explored, concluding with insights into trajectory analysis and satellite fuel requirements for optimal space orbit placement.



L to R: Mr.R.Durairaj, Dr.P.Karthikeyan, Prof K.Ravichandran (Dean, MIT), Retd. Prof S. Venkataswamy, Prof.K.Kalaichelvan, Prof.A.Siddharthan (HOD, Prod.), Mr .R.Ragupathy (brother of Prof SRK)