



COIMBATORE INSTITUTE OF TECHNOLOGY, COIMBATORE – 641 014
(Government Aided Autonomous Institution, Affiliated to Anna University -Chennai)
Department of Mathematics

MATHEMATICS ASSOCIATION

And

KANITHAVAANI MATHEMATICAL SCIENCE SOCIETY
(Affiliated to Vigyan Prasar, DST, Government of India)

EXPERT TALK

Linear Algebra driving Robotics and Machine Learning towards Innovation
REPORT ON MATHS INAUGURATION EVENT

DATE: 1/10/2024

TIME: 2:30-4:30 p.m

VENUE: LBCH,CIT

The event "Linear Algebra Driving Robotics and Machine Learning Towards Innovation" took place on October 1, 2024, from 2:30 to 4:30 PM at Coimbatore Institute of Technology. This successful event was attended by students from the AI and DS and CSE departments. It began with a tribute to 'Mother Tamil,' which created a unifying atmosphere, followed by an official welcome by Dr. R. Lavanya, Head of the Mathematics Department. She expressed her delight at organizing the first program by the department and briefly discussed the importance of linear algebra.

After the welcome address, the chief guest, Mr. R. Sakthi Vignesh, Software Team Lead at Kawasaki Robotics India Pvt Ltd, was honored with a memento as a token of appreciation. Mr. Sakthi Vignesh then took the stage and delivered a highly informative and engaging speech. He began by introducing himself and spoke about the inventors of both old and new generations, setting the stage for the significance of mathematical concepts in innovation.

His session focused on the application of linear algebra in robotics and machine learning. He covered topics such as rigid bodies, rigid linkages, rigid body motions, frame points, vectors, and both 2D and 3D rotations in robotics. Mr. Sakthi Vignesh made the concepts accessible by showcasing a numerical computation and visualization of a planar RR arm model using Python animation, which captivated the students and made the learning process interactive. His practical demonstration helped bridge the gap between theory and real-world applications, providing students with valuable insights into how mathematical principles drive innovation in robotics.

The event concluded with a vote of thanks, acknowledging the contributions of the chief guest, the head of the department, the faculty members, and the students who participated in making the event a grand success. Finally, the event ended on a patriotic note with the National Anthem, leaving everyone inspired and united.