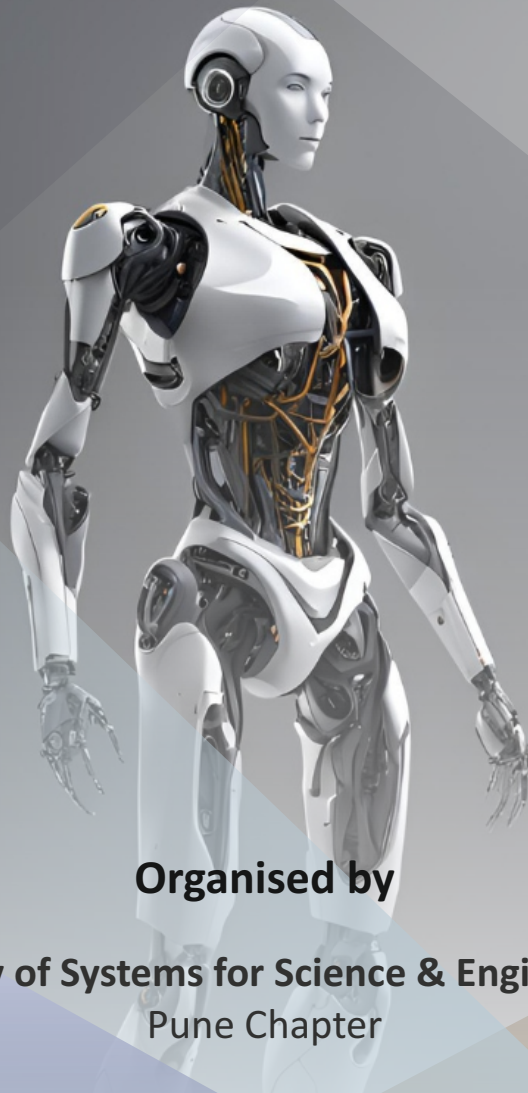


National Workshop on Advanced Legged Robotics

# NWALR-2025

8- 10 May 2025 PUNE



Organised by

Indian Society of Systems for Science & Engineering (ISSE)  
Pune Chapter

In Association with  
**R&DE(E), DRDO, Pune**  
and  
**COEP Technological University, Pune**

Venue:

**Dr. APJ Abdul Kalam Auditorium**

DRDO Estate, Dr. Homi Bhabha Road,  
Pashan, Pune 411 021

# About ISSE

The Indian Society of Systems for Science and Engineering (ISSE) is a professional body for interdisciplinary collaboration to promote a systems engineering approach in science and engineering. ISSE is unique among systems-oriented institutions, having the objective of bringing together scholars and practitioners from academia, business and R&D organizations to promote the systems concept. The society helps its members develop a systematic practice of Systems Engineering and Reliability. It has 13 chapters and about 6,000 members across the country, with its headquarters in Thiruvananthapuram. ISSE conducts various events to popularize system engineering concepts among professionals and students. Additionally, its chapters organize conferences, seminars, and workshops on various themes.

## About R&DE(E), DRDO

Research and Development Establishment (Engineers), Pune is one of the premier laboratories of Defence Research and Development Organization under ACE cluster. R&DE(E) traces its origin to the Inspectorate of Engineer Stores set up at Calcutta during second world war for quality control of indigenously developed stores. Later in 1946, this was amalgamated with Chief Inspectorate of Mechanization at Chakala in Pakistan. After partition, this Inspectorate was shifted to Ahmednagar and was designated as Technical Development Establishment Vehicles (TDEV). To cater the requirements of Corps of Engineers, the spectrum of R&D activities in DRDO had been broadened and R&DE(E) was established on 09th Feb 1962, at Dighi, Pune. Since its inception, the establishment has been developing mobility and counter mobility equipment for the Corps of Engineers and over the years has matured competence in combat engineering, shelters for various applications, ground systems for all missiles, hydraulics, composites and robotics. The Centre for Systems and Technologies for Advanced Robotics (C-STAR) at R&DE(E) is devoted to R&D activities related to advanced robotic systems including the legged robots.

## About COEP Tech

COEP Technological University (COEP Tech), formerly known as the College of Engineering Pune (COEP), is a premier public university in Pune, Maharashtra, India. Established in 1854, it holds the distinction of being the third oldest engineering institution in India, following the College of Engineering, Guindy, and IIT Roorkee. COEP's legacy is built on a rich history of academic excellence and has consistently ranked among the top engineering colleges in India. COEP offers a wide array of undergraduate, postgraduate, and doctoral programs in engineering, technology, and management. The university is renowned for its strong emphasis on research and innovation, fostering a vibrant environment for academic growth and development. COEP's distinguished alumni network spans across various industries and sectors, contributing significantly to the nation's progress.

## About Workshop (NWALR-2025)

Research in robotics has come a long way in the last few decades. From largely dominant industrial focus, robotics is rapidly expanding into human environments. While the most widely studied and practiced mobile robotic systems are wheeled or tracked, legged locomotion offers variety of advantages particularly in terrains where the other forms of locomotion are not suited to operate. The biped and quadruped legged robotic systems have many practical applications in varied areas such as military and security, medical, home services, space, manufacturing etc. The design and development of autonomous legged robots, however, face variety of technological challenges. The purpose of the workshop is to throw light on some prominent technological domains/areas related to the legged robotic systems. To this end, the workshop consists of invited talks by leading researchers on various technologies, their associated challenges and the state-of-art happenings in respective domains. Efforts have been put in to cover as many domains/areas as possible so that participants get benefited the most in the limited time.

## Registration Fees

<b>ISSE members :</b>	<b>Rs. 8000</b>	The registration fee is payable through DD/ NEFT/ IMPS.	
<b>Non ISSE Members :</b>	<b>Rs. 10000</b>	Bank Name :	<b>Punjab National Bank</b>
<b>Students :</b>	<b>Rs. 2000</b>	IFSC Code:	<b>PUNB0049500</b>
		Account Name :	<b>ISSE Pune Chapter</b>
		Account Number :	<b>0495002100015197</b>

DD can be drawn in favour of ISSE Pune Chapter. **Registration to be completed latest by 30 Apr 2025**

## Topics Covered

Legged Robotics-Technologies and Challenges	Dr. S. E. Talole/Dr Kiran Akella, R&DE(E), Pune
Design of Mechanisms and Kinematics	Prof. Sandipan Bandyopadhyay, IIT Madras
Tactical Sensing and Artificial Skin	Prof. Mitradiip Bhattacharya, IISER Bhopal
Intelligence Architecture for Legged Robots	Prof. Rohan Paul, IIT Delhi
Motion Planning in Legged Robots	Prof. Ashish Dutta, IIT Kanpur
RL based Legged Locomotion	Prof. Shishir Kolathaya, IISc Bangalore
Wearable and Rehabilitation Robotics	Prof. Vineet Vashista, IIT Gandhinagar
Compliant Mechanisms-Principles and Design	Prof. GK Ananthasuresh, IISc Bangalore
Battery Science and Technology	Prof. S. B. Ogale, IISER Pune
Vision and Learning Robot Navigation	Prof. K. Madhava Krishna, IIIT Hyderabad
Autonomous Navigation in Robotics	Mr. Chandrajit Ganguly, R&DE(E), Pune
Soft Robotics	Prof. Madhu Vadali, IIT Gandhinagar
Computational Architecture for AI and Robotics	Prof. S. K. Nandy, IISc Bangalore
Multi-robot Systems	Prof. Arpita Sinha, IIT Bombay
Swarm Robotics-Technologies and Challenges	Prof. Krishnendu Mukhopadhyaya, ISI Kolkata
Sessions for Sponsors / Industries	By some leading industries engaged in robotics

## Sponsorship Opportunities

The national workshop is likely to attract delegates from government research organisations, armed forces, PSUs, private industries and academia. Hence, this workshop offers a good marketing opportunity for industries, where many potential users gather at one location. NWALR 2025 offers range of sponsorship/ exhibition/ advertisement packages designed to fit various marketing requirements of the sponsors.

Details of Sponsorship Package	PLATINUM SPONSORS Rs 3,00,000/-	GOLD SPONSORS Rs 2,00,000/-	SILVER SPONSORS Rs 1,00,000/-
Exhibition / display area	Yes	Yes	-
Presentation in technical session	20 minutes	10 minutes	-
Complementary registrations	5 Nos.	3 Nos.	2 Nos.
Display of logo on banners	All banners at venue including dais	All banners at venue	Only on sponsors banner
Printing of logo in workshop proceedings	On cover page and sponsors page	Logo on sponsors page	Logo on sponsors page
Advertisement space in workshop proceedings	Full colour page on inner covers	Full colour page	Full colour page

### Workshop Proceedings - Advertisement Package

Colour full page	Colour half Page	Full page - Grayscale	Half page - Grayscale
Rs 50,000/-	Rs 30,000/-	Rs 25,000/-	Rs 15,000/-





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Prof. Ashish Dutta	IIT Kanpur
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Dr. Makarand Joshi, Director, R&DE(E), Pune

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### Convener

Dr. S. E. Talole R&DE(E)

## About Pune

Pune, a sprawling city in the western ghats of Maharashtra is situated 560 m above mean sea level on the Deccan plateau at the confluence of the Mula and Mutha rivers. The city is the eighth largest metropolis of India and the second largest in Maharashtra. Pune is often termed as Oxford of the east due to presence of premier educational institutes and reputed engineering colleges such as NDA, AFMC, COEP Tech, IISER etc. Pune has been a backbone of industrial development in Maharashtra and the city has been also referred to as 'Detroit of India' due to presence of industries associated with automobile sector. The city is one of the major centres for IT sectors. Apart from educational institutes and industries, Pune hosts several premier research institutions. Pune has rich tradition and culture, which also makes the city cultural capital of Maharashtra. Having the headquarters of Southern Command of Indian Army, Pune is identified as a place of strategic importance as well. Pune is well connected by air, rail and road. The venue of NWALR-2025 is 20 km from the International Airport, 13 km from Pune railway station and 5 km from Chandni chowk junction on Mumbai-Bengaluru highway.

**For registration please visit <https://issepune.in>**

### For further details, contact

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