

#### ABOUT INSARM

The Indian National Society for Aerospace & Related Mechanisms (INSARM) was inaugurated by Dr APJ Abdul Kalam in 1999 with the prime objective of promoting R&D activities in aerospace and related mechanisms. INSARM has chapters at Agra, Thiruvananthapuram, Bengaluru, Pune and Hyderabad.

#### ABOUT ARDE

Armament Research & Development Establishment (ARDE), Pune was established in 1958 under Defence Research & Development Organization (DRDO) and over the years it has emerged as a centre of excellence for Conventional Armaments. ARDE has successfully developed and introduced into service many state-of-the-art weapon systems, continuously aiming for self-reliance in critical defence technologies. The multi-disciplinary activities of ARDE encompass research, design, development, testing, evaluation and transfer of technology. The major systems and sub-systems like PINAKA, ATAGS, Electromagnetic Guns, Warheads, New Family of Munitions, MSMC, Arjun Armaments and CSS for LCA are enabling the country to achieve its objective of self-reliance in the field of Armaments.

#### ABOUT MIT-WPU

MIT-World Peace University (MIT-WPU) is known to be among the top education institutions in India since the establishment of the MIT Group of institutes in 1983. The MIT-WPU is recognised by the UGC under the Govt. of Maharashtra act XXXV-2007, since 2017. Today MIT-WPU is at the epicentre for imparting a holistic values based education for promotion of a universal culture of peace and welfare among the youth. It offers UG, PG and Doctoral programs across 08 faculties. The Faculty of Engineering and Technology offers 09 UG, 06 PG and Doctoral programs in 06 streams.

#### ABOUT DIAT

Defence Institute of Advanced Technology (DIAT) is the Premier Deemed University under the Department of Defence Research & Development, Ministry of Defence, Government of India. DIAT is engaged in imparting technical education in niche areas at PG (M.Tech) & PhD levels over the last 60 years, in its various forms & capacities. The main focus of the institute is to evolve as an innovative unique teaching and research university to develop indigenous contemporary defence-related technologies. The University is spread over 496 acres in a scenic beautiful location, overlooking Khadakwasla dam, in Sahyadri Hills.

#### ABOUT THE CITY

PUNE derives its name from the Sanskrit term 'Punyanagara' or 'City Of Virtue'. It was once the centre of power of the mighty Maratha Empire and served as the headquarters of the Peshwa (Prime Minister). Situated on the Deccan Plateau at the confluence of two rivers, it is the second largest metropolis of Maharashtra after Mumbai. Hailed as "Oxford of the East", Pune draws of thousands of students to its educational institutions, while job aspirants make a beeline to its word class IT and automobile companies. A city of strategic importance, it is home to an Air Force base and largest Army Command in addition to several defence institutions. Pune was an important centre in the social and religious reform movement of the late 19th century, and home to prominent social reformer and freedom fighters such as Lokmanya Tilak, Mahatma Phule and Maharshi Karve. Historical attractions include the 8th century Pataleshwar Cave Temple, Shaniwar Wada, Sinhagad Fort, Lal Mahal and Shinde Chhatra. The city is surrounded by a number of forts that have witnessed the glory and bravery of the great Maratha warrior king, Chhatrapati Shivaji. Pune is considered to be the cultural capital of Maharashtra and is constantly buzzing with programs in classical music theatre, literature and spirituality.



#### PATRONS

**Dr G Satheesh Reddy**  
Secretary, DDR&D & Chairman, DRDO

**Dr K Sivan**  
Chairman, ISRO & Secretary, DOS

**Shri PK Mehta, NDC**  
DS, DG (ACE)

**National Advisory Committee**  
Chairman : Dr V Venkateswara Rao, Director, ARDE

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Dr Dasharath Ram, Director DRDL  
Shri U Raja Babu, Director RCI  
Dr MRM Babu, Director ASL  
Dr Girish S Deodhare, Director ADA  
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Shri V Balamurugan, Director CVRDE  
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Shri G Nagesh, President Bengaluru Chapter  
Shri V Kishorenath, President TVM Chapter

#### LOCAL ORGANISING COMMITTEE

##### ARDE

Dr HH Kumar, Sc'G'  
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Shri SM Shelar, Sc'G'  
Shri Sanjay Kumar, Sc'G'  
Shri B Raghavendra Rao, Sc'G'  
Shri Raj Kumar, Sc'G'

**Chairman :** Shri RP Pandey, Sc'G'

**Convener :** Shri PSSRK Prasad, Sc'G'



**Contact Address**  
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**Website :** [www.insarpune.org](http://www.insarpune.org), [secretary@insarpune.org](mailto:secretary@insarpune.org)  
Tel. 2586 5402 Fax : 020-25865102

##### HEMRL

Shri Arvind Kumar, Sc'G'  
Shri Ajay Kumar Vishwakarma, Sc'F'

##### R&DE(Engrs.)

Shri DB Pedram, Sc'H'  
Dr Makarand Joshi, Sc'G'

##### DIAT

Dr DG Thakur, Professor  
Dr Pooja Agrawal, Asst. Professor  
Dr Soumya S, Asst. Professor

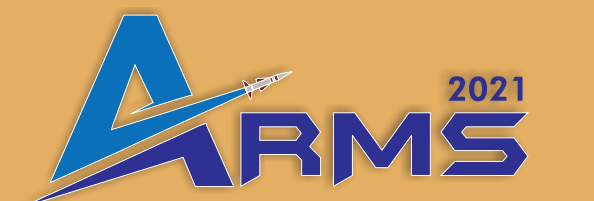
##### MIT-WPU

Dr Sandeep Chavan, Professor  
Dr Ganesh Kakandikar, Professor

##### Secretaries of INSARM

Dr R Srinivasan, Hyderabad Chapter  
Shri NS Murali, Bengaluru Chapter  
Shri Shiju Thomas, Trivandrum Chapter  
Shri KD Diwaker, Agra Chapter

**Member Secretary :** Shri S Harikrishnan, Sc'G'



#### 12<sup>th</sup> National Conference and Exhibition on Aerospace & Defence Related Mechanisms

Conference will be held in hybrid mode  
(In-person and Online)

**02-04 December 2021**  
**Pune, Maharashtra**



#### Recent Innovations and Challenges in Aerospace and Defence Related Mechanisms



**Venue**  
**APJ Abdul Kalam Auditorium**  
**Pashan, Pune**

**Armament Research and Development Establishment**  
Dr Homi Bhabha Road, Pashan, Pune - 411021



#### 12<sup>th</sup> National Conference and Exhibition on Aerospace & Defence Related Mechanisms

#### INTRODUCTION

INSARM has been organising national conferences on Aerospace & Defence Related Mechanisms (ARMS) biennially. Eleven conferences have been organised by various chapters so far and the last conference was held at Hyderabad in 2018. Many government agencies, industries, R&D Labs and academic institutions of India participated in this conference.

#### OBJECTIVES

The objective of the Conference is to focus on the recent advances related to design, development, fabrication, testing and analysis as well as future concept of various aerospace and defence related mechanisms. It enables faster information exchange among mechanisms engineers on various aspects and operational experience of these mechanisms. This conference provides opportunity and a platform to present and build a network among engineers & scientists working in the similar areas.

#### Important Dates

Receipt of extended abstract	20 Mar 2021
Acceptance of Abstract	3 April 2021
Receipt of Full paper	20 Oct 2021
Last date of Registration	25 Nov 2021



#### TECHNICAL PAPERS

##### Call for Papers

Authors are invited to submit original papers for the conference. Selection will be based on **extended abstract** (500 to 800 words). Abstract submission details are available on the conference website. Abstract can be also sent to [arms2021@insarpune.org](mailto:arms2021@insarpune.org). Best papers will be recommended to be published in Defence Science Journal. Option of online presentation will be made available.

##### Topics

The conference topics will be generally on mechanisms for guided rockets, missiles, launch vehicles, satellites, Hypersonic Vehicles, aircraft, interplanetary mission and defence systems having scientific and commercial applications.

##### Areas of specific interest are

- Mechanisms in launch vehicles / Missiles / Aircraft / Helicopters / Satellites / UAVs / Underwater systems
- Design, Analysis, Modelling, Simulation and Testing of Systems of Systems for Aerospace & Defence Mechanisms
- Failure Analysis and Case Studies on Aerospace and Defence Related Mechanism
- MEMs devices, Smart Mechanism
- Warhead, Armaments, Fuzes and Safe Arm Mechanism
- Aerospace Mechanisms for the future
- Automation in Defence equipment and Aerospace industry
- Reliability and Life cycle study of mechanisms
- Robotics, Space docking, Berthing and Rover mechanisms
- Artificial Intelligence for Aerospace Systems
- Multiagent and Swarm Robotics
- Guidance, Navigation and Control for UAVs
- Tribology for Aerospace & Defence Applications
- Ejection systems for Missiles and Launch vehicles, Crew modules, Parachute & Stabilization systems
- Positioning and Pointing Devices
- Recovery Mechanisms

#### REGISTRATION

The conference programme containing details of the registration procedures is available on the website. Participants can register as delegates by sending an e-mail to [arms2021@insarpune.org](mailto:arms2021@insarpune.org).

Participants can register online as delegates by visiting conference webpage at [www.insarpune.org/arms2021.aspx](http://www.insarpune.org/arms2021.aspx)  
A mail can be sent to [arms2021@insarpune.org](mailto:arms2021@insarpune.org) for any clarifications.

#### TUTORIAL

Tutorial sessions will be organized on Recent advances in mechanisms. Topics in emerging research areas will be covered by experts from academia and industry.

**Tutorial Fees :** ₹ 1000/- per person will be charged additionally for attending the tutorials.

REGISTRATION FEE	
General Participants	₹ 2500/-
Members of INSARM	₹ 2000/-
Students	₹ 500/-

#### ONLINE EXHIBITION

An Online Exhibition of newly developed Mechanisms and related products is being planned as part of the conference. Those interested are requested to send / upload their Profile video/ Product brochures. 100 MB storage space will be provided to each participating industry.

**Exhibition Fee :** ₹ 5,000/-

#### SOUVENIR

A Souvenir will be brought out on this occasion. You are requested to advertise your products and give impetus to the conference.

#### ADVERTISEMENT RATES

	Rates	Complementary Registration		Rates
Back cover outside	₹ 50,000/-	3	Full page colour	₹ 20,000/-
Front cover inside	₹ 40,000/-	2	Half Page Colour	₹ 10,000/-
Back cover inside	₹ 30,000/-	2		

#### SPONSORSHIP

Associated industries and institutions are requested to support ARMS 2021 by sponsoring the conference events. Privileges for sponsors are available on the website.

SPONSORSHIP TARIFFS		
	Rates	Complementary Registration
Platinum	₹ 2 Lakhs	6
Gold	₹ 1 Lakh	4
Silver	₹ 50,000/-	2

#### ACCOMMODATION

Outstation Participant's accommodation will be arranged at hotels near the conference venue as per the eligibility on payment basis. Limited accommodation will be reserved for students at concessional rates at ARDE hostel. **Transport and accommodation request may be sent to [arms2021@insarpune.org](mailto:arms2021@insarpune.org).**

#### PAYMENTS

Payments can be made through online transfer or by crossed demand draft in favour of "INSARM PUNE" payable at Pune.

**Bank :** Punjab National Bank **Branch :** PASHAN, PUNE  
**A/c name :** INSARM PUNE **IFSC Code :** PUNB0049500  
**A/c No :** 0495000100162471