

ENGINEERS CONCLAVE-2024
September 26-27, 2024
DRDL, Hyderabad

Theme I: Additive Manufacturing for Defence Applications
Theme II: Defence Manufacturing Technologies

TECHNICAL PROGRAMME

DAY-1: Thursday, 26th Sept. 2024

0830-0915 hrs. - Registration

0915 to 1100hrs. - Inaugural Session – Seminar Hall

- Lighting of lamp and Invocation
- Welcome Address by **Shri U Raja Babu**, Director General – Missiles and Strategic Systems (DGMSS)
- Presidential Address by **Prof Indranil Manna**, President INAE
- Address by Guest of Honour - **Dr. Samir V Kamat**, Secretary DDR&D and Chairman DRDO, Ministry of Defence, Govt. of India
- Address by Guest of Honour - **Dr. Anil Kakodkar**, Former President, INAE; Chancellor, Homi Bhabha National Institute; Member, AEC; Chairman, Rajiv Gandhi Science & Technology Commission, Govt. of Maharashtra; Former Chairman, AEC
- Keynote Address by Distinguished Guest - **Dr. VK Saraswat**, Member, NITI Aayog
- Release of Conclave Souvenir
- Address by Chief Guest - **Shri Rajnath Singh**, Hon'ble Raksha Mantri (invited)
- Vote of Thanks by **Dr. Jaiteerth R Joshi**, Program Director, DRDL Hyderabad & Convener EC-2024

1100 to 1130 hrs. High Tea

Parallel Technical Sessions on the two Themes	
1130 to 1300 hrs.- Session I	
Theme I: Additive Manufacturing (AM) for Defence Applications Seminar Hall	Theme II: Defence Manufacturing Technologies Auditorium
Session – I A: Alloy Development Session Chair: Prof BS Murty, Director, IIT Hyderabad	Session – I B: Ground Based Defence Systems Session Chair: Dr. Sanak Mishra, Former President, INAE; Member of Governing Board, Steel Research & Technology Mission of India

Topic on: Metallurgical Aspects and Critical Issues in AM <i>Speaker: Prof. Satyam Suwas, IISc, Bengaluru</i>	Topic on: Armoured Vehicles <i>Speaker: Shri Nikhil Dhanuka, Deputy General Manager, TATA Advanced Systems, Mumbai</i>
Topic on: Trends in Alloy Development <i>Speaker: Prof. GD Janakiram, IIT Hyderabad</i>	Topic on: Main Battle Tank (MBT) <i>Speaker: TBD</i>
Topic on: Computational (ICME, AI/ML) Approaches for Accelerated Development of AM Alloys <i>Speaker: Prof. G. Phanikumar, IIT Madras</i>	Topic on: Light Tanks <i>Speaker: Shri Arun T Ramchandani- EVP & Head L&T Precision Engineering Systems IC, Larsen & Toubro, Mumbai</i>
1300 – 1400 hrs. – Lunch	
1400 – 1530 hrs.- Session II	
Session – II A: Processing of Powders Session Chair: Dr. R. Balamuralikrishnan, Director, Defence Metallurgical Research Laboratory (DMRL), Hyderabad	Session – II B: Aerospace Defence Systems Session Chair: Dr. R.K. Tyagi, Former Chairman, Hindustan Aeronautics Limited
Topic on: Indigenous Development of Metallic Powders Through IGA <i>Speaker: Dr. R Vijay, Director, ARCI, Hyderabad</i>	Topic on: Fixed Wing Aircraft (Military) <i>Speaker: Shri Jayakrishnan, Chief Executive Officer, Bangalore Complex, Hindustan Aeronautics Limited (HAL), Bengaluru</i>
Title: Plasma Rotating Electrode Process Powders for Additive Manufacturing and Strategic Materials Sustainability <i>Speaker: Prof. G. Appa Rao, University of Hyderabad</i>	Topic on: Fixed Wing Aircraft (Civil) <i>Speaker: Shri Vineet Kumar, Chief Scientist & Head, RNCAC, CSIR-NAL, Bengaluru</i>
Topic on: Emerging Trends in Processing of Powders <i>Speaker: Shri Sachin Shrikant Malgave, Senior Manager (R&D) INDO-MIM Private Limited, Bengaluru</i>	Topic on: Helicopters <i>Speaker: Shri S Anbuvelan, Chief Executive Officer, Helicopter Complex, Hindustan Aeronautics Limited</i>
1530 – 1600 hrs.-High Tea	
1600 – 1730 hrs.- Session III	
Session – III A: Design of AM Machines Session Chair: Dr. Nagahanumaiah, Director, Central Manufacturing Technology Institute (CMTI), Bengaluru	Session – III B: Maritime Defence Systems Session Chair: Dr. Y Sreenivas Rao, Distinguished Scientist, Director General, Naval Systems & Materials (NS & M)
Topic on: Emerging Trends in Machine Development <i>Speaker: Prof. KP Karunakaran, IIT Bombay</i>	Topic on: State-of-Art Technologies in Maritime Systems <i>Speaker: Shri Pankaj Chadha, Vice President & Head - Marine Platforms, Equipment & Systems, L&T</i>
Topic on: Indigenous Development of AM Machines <i>Speaker: Dr. Vishwas Ramadas Puttige, Director & CEO, AMACE Solutions, Bengaluru</i>	Topic on: Aircraft Carrier <i>Speaker: Rear Admiral Bimal Kumar, Indian Navy, New Delhi</i>
Topic on: Real-Time Process Monitoring and Control <i>Speaker: Prof. Murugaiyan Amirthalingam, IIT Madras</i>	Topic on: Weapons Manufacturing (Torpedoes, Missile etc.) <i>Speaker: Shri M Ravi, Executive Director (Unit Head-KBU, IBU & PSG), Bharat Dynamics Limited (BDL), Hyderabad</i>
1730 – 1830 hrs. – 1st Plenary Talk	
An Overview of Challenges in Additive Manufacturing	
Prof. Amaresh Chakrabarti Senior Professor & Chairman of Centre for Product Design and Manufacturing, IISc, Bengaluru	
1900 - 2130 hrs. – Cultural Program and Dinner	

DAY-2:Friday, 27thSept.2024

0930 – 1030 hrs. – 2nd Plenary Talk

Digital Manufacturing Technologies Industry 4.0 and Beyond

Shri JD Patil, Vice-President, INAE

Member of Executive Committee of Management and Advisor (PES & LTSCT) to CMD - L&T
Former Whole Time Director L&T; Trustee of L&T Employee Trust; Director - L&T Semi-Conductor Technologies Limited; Chairman - L&T MBDA Missile Systems Limited; Founding Chairman - Indian Space Association (ISpA); Member of the Board IN-SPACe; Chairman of National Committee on Space & Member of National Council CII; Founding Vice President & Past President of Society of Indian Defence Manufacturers

1030 – 1100 hrs. – High Tea

Parallel Technical Sessions on the two Themes

1100 to 1300 hrs.- Session IV

Theme I: Additive Manufacturing for Defence Applications Seminar Hall	Theme II: Defence Manufacturing Technologies Auditorium
Session-IVA: DfAM, Qualification, Certification and Applications Session Chair: Shri APVS Prasad, Chief Executive (CE), Centre for Military Airworthiness & Certification (CEMILAC), Bengaluru	Session – IV B: Advanced Manufacturing Facility for Defence Applications Session Chair: Dr SK Jha, Chairman and Managing Director at Mishra Dhatu Nigam Limited, Hyderabad
Title: Design for Additive Manufacturing Speaker: Prof. G. Saravana Kumar, IIT Madras	Topic on: Drones- Medium Altitude Long Endurance/Medium Endurance Speaker: Air Vice Marshal KVR Raju, VM (Retd.) General Manager, Adani Defence & Aerospace, Bengaluru
Title: Evolving trends and challenges in application of laser powder bed fusion based additive manufacturing for industrial and strategic contexts Speaker: Dr. U Chandrashekar, Vice Chancellor, Godavari Global University, GIET, Rajahmundry, AP	Topic on: Advanced Artillery Guns Speaker: Dr Rajkumar Singh, Senior Director, Kalyani Centre for Technology & Innovation, R&D of Bharat Forge Ltd., Pune
Topic on: Challenges in Qualification and Certification of AM Products for Space Applications Speaker: Dr. SV Surya Narayana Murthy, VSSC	Topic on: Mission Systems Speaker: Shri Anil Sogi, General Manager (EW & Avionics) Bharat Electronics Limited, Bengaluru
Title: Inspection and Quality Control for Additive Manufacturing in Defence Applications: Status, Trends & Challenges Speaker: Dr. Shyamsunder Mandayam, M/s. Azeriri Pvt. Ltd., Bengaluru	Topic on: Advance Alloys for Defence Manufacturing Speaker: Shri T Muthukumar, Director (Production & Marketing), Mishra Dhatu Nigam Ltd. (MIDHANI), Hyderabad
Topic on: Applications of AM in Healthcare and Medicine Speaker: Dr. Jitendra Sharma, MD & Founder CEO: AMTZ, Distinguished Senior Fellow at NITI Aayog	Topic on: Actuators Speaker: Shri Maneck Eddie Behramkamdin, Vice-President, Godrej Aerospace, Mumbai
Topic on: Challenges in AM Products for Defence Applications Speaker: Dr John Rozario Jegaraj, Scientist F & Head, Centre for Additive Manufacturing, DRDL, Hyderabad	Title: Eco-friendly Coating Technologies for Aerospace Applications Speaker: Dr. Harish C Barshilia, Chief Scientist and Head, Surface Engineering Division, CSIR-National Aerospace Laboratories, Bengaluru

1300 – 1400 hrs. – Lunch

1400 – 1530 hrs.- Parallel Panel Discussion Session on the two Themes

- Coordinator: **Dr G Madhusudhan Reddy**, Former Outstanding Scientist and Director, DMRL, Hyderabad

- Session Chairs

- Coordinator: **Shri Jitendra J Jadhav**, Director & Programme Director (Combat Aircraft), Aeronautical Development Agency, Bengaluru

- Session Chairs

1530 – 1600 hrs.– TEA

1600 – 1730 hrs.- Valedictory Session to bring out the recommendations for respective themes

- Introductory Remarks by **Prof Indranil Manna**, President, INAE
- Summing up of Technical Sessions of two Themes by respective Coordinators
 - Theme-I: Additive Manufacturing by **Dr G Madhusudhan Reddy**, Former Outstanding Scientist and Director, DMRL, Hyderabad
 - Theme-II: Defence Manufacturing by **Shri Jitendra J Jadhav**, Director & Programme Director (Combat Aircraft), Aeronautical Development Agency, Bengaluru
- Address by Co-Chair, Valedictory Session: **Shri G. A. Srinivasa Murthy**, DS and Director, Defence Research & Development Laboratory (DRDL)
- Address by Chairman, Valedictory Session: **Dr. G. Satheesh Reddy**, Former Scientific Advisor to Raksha Mantri & Former DD R&D and Chairman DRDO
- Vote of Thanks by Lt Col Shobhit Rai (Retd), Offg. Executive Director, INAE