**2-Day National Conference on Challenges in**

**Welding and Additive Manufacturing**

February 27-28, 2025 at BITS Pilani, Hyderabad Campus

Organized by

Work Integrated Learning Programmes (WILP) Division, BITS Pilani

in collaboration with

Dept. of Mechanical Engineering, BITS Pilani Hyderabad

under the aegis of

Center for Research Excellence in National Security, BITS Pilani Hyderabad

and

Indian Institute of Welding, Hyderabad Branch

**INVITED TALKS**

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| **Plenary Talk** |
| Technological Challenges of Indigenous Electron Beam Welding and Electro-magnetic Pulsed Welding  Dist. Prof. Archana Sharma, IIIT Naya Raipur |
| **Keynote Talks: Welding Technologies** |
| Applications of Artificial Intelligence/Deep learning Techniques in Welding  Dr. M. Vasudevan, IGCAR Kalpakkam |
| Friction Stir Welding of Similar and Dissimilar Plates and Weldment Properties with Process and Tool Parameters  Prof. Satish Vasu Kailas, IISc Bangalore |
| Comparative Study on Microstructures, Mechanical and Corrosion Properties of Fusion and Solid State Weldments of AA2219 Plates  Prof. G. Madhusudhan Reddy, NIT Warangal |
| Microstructures and Mechanical Properties of Resistance Spot Welded Ultra High Strength Steels  Prof. Murugaiyan Amirthalingam, IIT Madras |
| Influence of Ni- and Si-modified fillers on the microstructure and mechanical properties of Ti-15-3 GTA welds  Prof. N. Kishore Babu, NIT Warangal |
| In Situ Observations and Macro-micro Simulations of Laser-based Welding and Additive Manufacturing of Alloys  Prof. Shyamprasad Karagadde, IIT Bombay |
| Fusion Welding of Advanced High Strength Steels (AHSS) for Automotive Industry  Prof. Mahesh Kumar Talari, NIT Warangal |
| Welding and Joining in Space Sectors  Dr. Agilan M, VSSC ISRO, Trivandrum |
| Resistance welding of conventional and advanced high strength steels: challenges and recent developments  Shri. Kaushal Kishore, R&D, Tata Steel Ltd., Jamshedpur |
| **Keynote Talks: Additive Manufacturing Technologies** |
| Thermal Management Approaches for Distortion Control in AM  Prof. Suryakumar, IIT, Hyderabad |
| Tailoring the Properties of Metal Additive Parts  Prof. G.M. Karthik, IIT-BHU, Varanasi |
| Slicing and Area Filling Strategies for Layered Manufacturing Technologies  Prof. Rakesh Lingam, IIT Dharwad |
| Metal Additive Technologies for Defence Applications: Challenges and Opportunities  Dr. John Rozario Jegaraj, DRDL Hyderabad |
| Laser powder bed fusion of immiscible alloys  Prof. R. Lakshmi Narayan, IIT Delhi |
| Modeling assisted workflows for single crystal processing of Ni based super alloys: Adaptations from Bridgman to Additive  Prof. Abhik N. Choudhury, IISc Bangalore |
| Laser surface processing and additive manufacturing of Steel  Prof. Jyotsna Dutta Majumdar, IIT Kharagpur |
| Lattice Structure based Light-weighing of Automotive and Space Structures Made by Additive Manufacturing  Prof. Srinivasa Prakash Regalla, BITS Pilani Hyderabad |
| Advancements in Welding and Additive Manufacturing: A Tech Talk on Innovation and Application  Shri. Subrata Karmakar, ABB India, Bangalore |
| Challenges in welding for mass production  Shri. Nijagunayya Soppayya, Apollo Heat Exchangers, Tarapur |
| Usage of Additive manufacturing in Locomotive industries  Shri. Vishwanath KN, Wabtec Corporation, Bangalore |

(**Organizing Committee, NCWAM-2025**)