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Advanced Research Areas in Additive Manufacturing





Introduction

DRDO is funding multi-institutional and multi-disciplinary directed research projects to Academia and National Research Institutes to develop cutting edge defence technologies. The funding is focused on translational research for developing the crucial and futuristic technologies in defined research domains through a network of DRDO Industry Academia – Centre of Excellences (DIA-CoEs) at premier and capable academic institutes and universities in the country.

To foster the research in academia, DFTM invites project proposals in advanced research areas of Additive Manufacturing, that will be taken up through DIA-CoEs for directed research. Received proposals will be scrutinized by DFTM and forwarded to respective DIA-CoEs as per research verticals for further evaluation.

Forms for submission are provided at drdo.gov.in/drdo/adv-tech-center

Fully furnished project proposals shall be submitted to DFTM through techforesight.drdo@gov.in



Advance AM Process

Project Proposals sought in following Research Areas

Cold Spray AM for producing dense, stress-free metal components

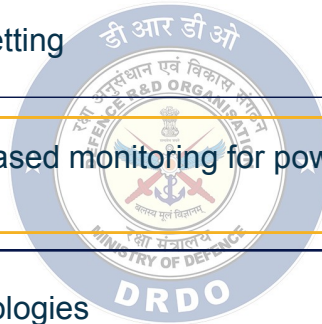
Wire Arc Additive Manufacturing for Large-Scale Parts

High-Speed Sintering and Binder Jetting

Widespread Integration of Sensor-based monitoring for powder bed fusion, DED and other AM processes

Superscalable volumetric AM technologies

Enhanced design Tools allowing more effective lightweight structures and complex geometries





Machine Learning and AI for Process Adjustments

Project Proposals sought in following Research Area

Machine Learning for Automatic defect Detection and corrective actions



Multi Material AM and Functionally Graded Materials



Project Proposals sought in following Research Areas

Polymer-Metal Composites

Functionally Graded Materials

Multi -material deposition techniques

Commercialization of Multi-Material Printing





High Performance Polymers and Ceramics

Project Proposals sought in following Research Areas

Multifunctional Polymers

Ceramics

Advanced High Temperature Materials (SIC and PEEK)



Hybrid Manufacturing



Project Proposals sought in following Research Area

Merging additive and subtractive methods to enable precise finishing and complex geometries





ICME

Project Proposals sought in following Research Area

Integrated Computational Materials Engineering





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