

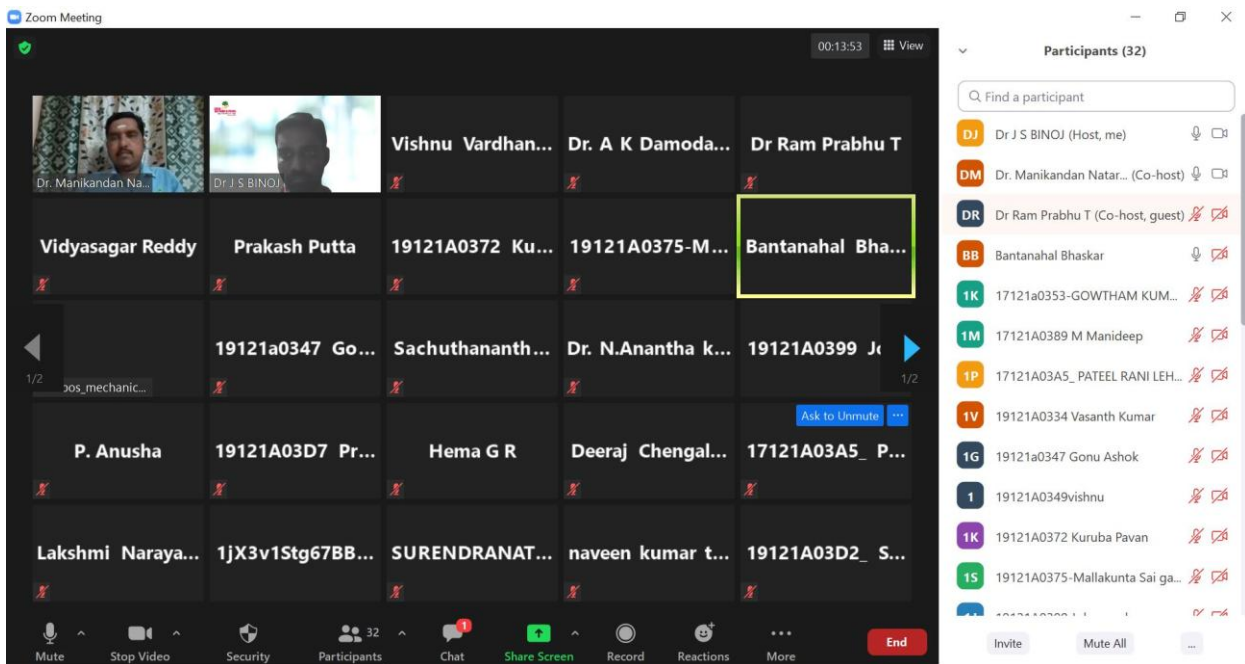
Department: ME | Date: 19th December, 2020

Report On One Day Online Guest Lecture on

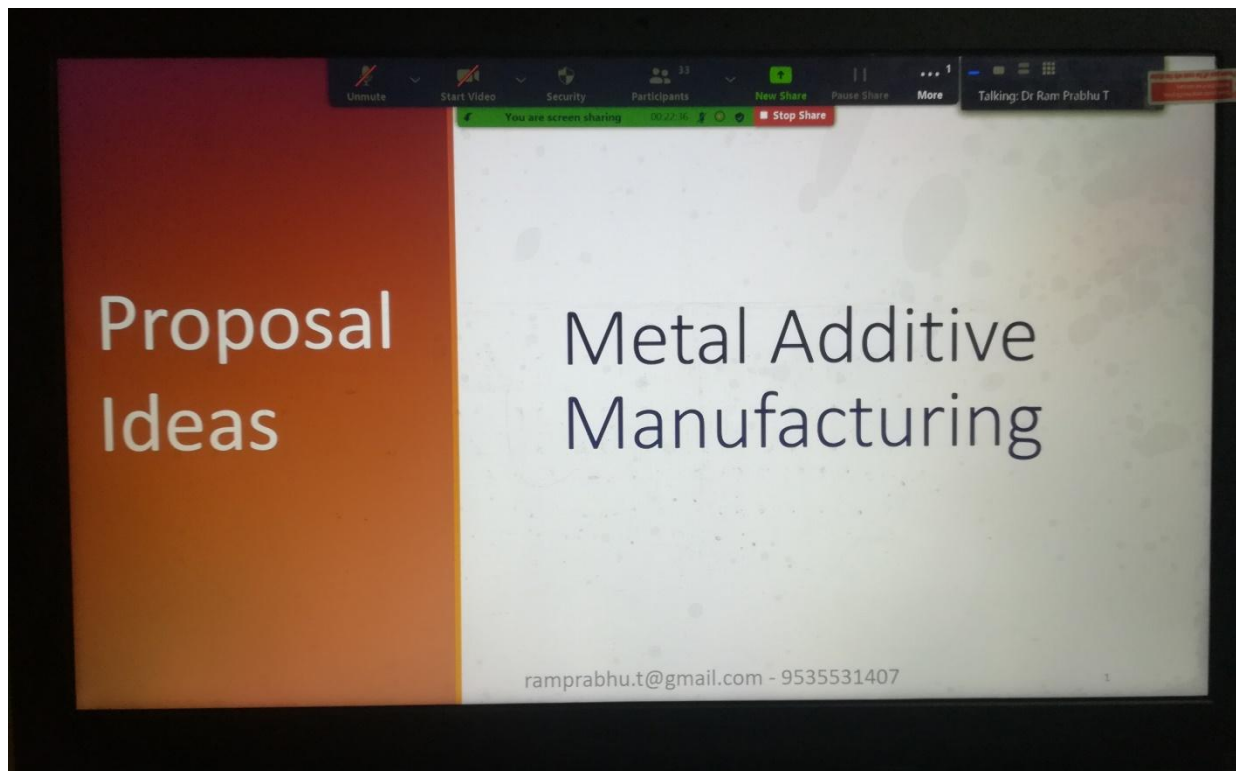
"METAL ADDITIVE MANUFACTURING - SCOPE FOR RESEARCH AND FUNDING OPPORTUNITIES"

A recent advent of the additive manufacturing route is quite promising to provide the solutions to several challenges such as long development cycle time, cost, more wastage experienced in the traditional manufacturing processes. Additive manufacturing (AM) is a promising technique to fabricate the complex shape special alloys such as Ti alloys, nickel-based superalloy, Special steels and Al alloys components. Among various AM techniques, Laser powder bed fusion (L-PBF) is commercially very successful due to the advantages of greater design flexibility, reduction in overall production time, eliminating tooling and machining cost. L-PBF is a three-dimensional (3D) metal printing technique that involves layer by layer fabrication of a component to achieve near-net-shapes without any complications.

In this technique, the user-defined 3D CAD data is fed into the system. The system converts it to a machine-readable file that decides the laser path. The laser selectively scans the powder bed and forms the shape layer by layer with a large degree of design flexibility. With this objective, an online guest lecture on "METAL ADDITIVE MANUFACTURING - SCOPE FOR RESEARCH AND FUNDING OPPORTUNITIES" was organized in the department on 19th December 2020. Dr. T. Ram Prabhu, Deputy Director/Scientist, Defense R and D Organization, India was the resource person. The program started with the felicitation to the speaker Dr. T. Ram Prabhu.

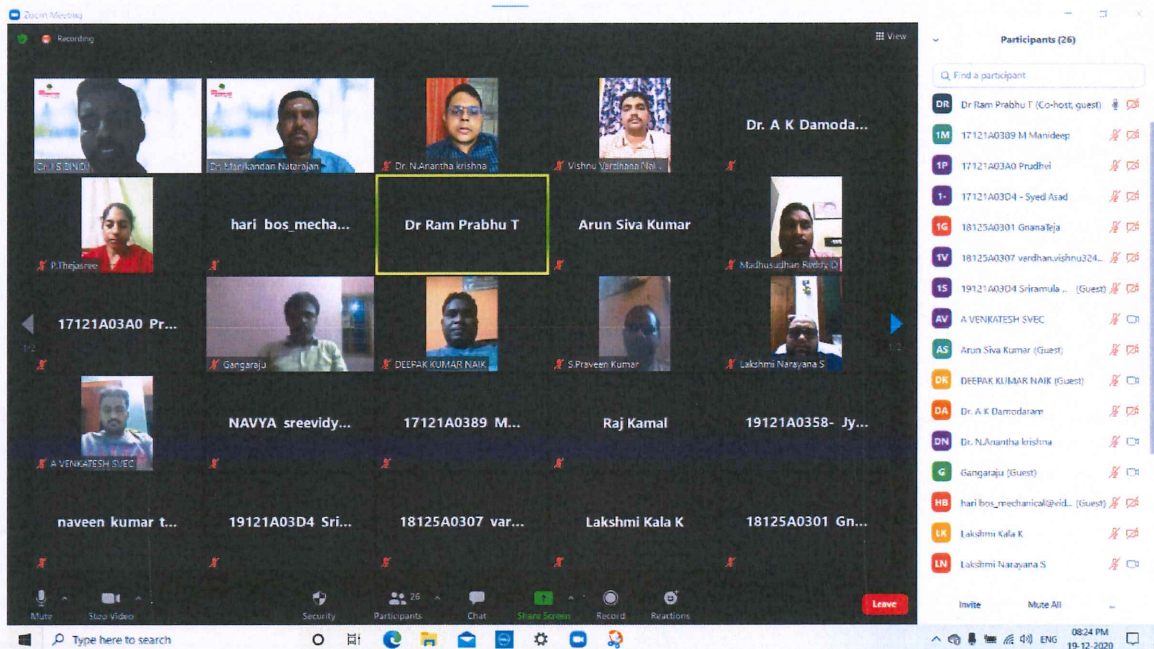


Felicitation to Dr. T. Ram Prabhu by Dr. T. Hariprasad, (Professor & BOS, ME) and Program Conveners



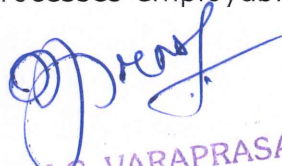
Lecture delivered by Dr. T. Ram Prabhu on Metal Additive Manufacturing – Proposal Ideas

Dr. T. Ram Prabhu presented a lecture on "Proposal Ideas - Metal Additive Manufacturing" in which he explained the concepts on history of additive manufacturing (AM), principles, types of AM processes and metallurgical concepts as well as the current importance of AM in various application sectors. Moreover, Dr. T. Ram Prabhu emphasized the need and development made in manufacturing sectors and major influencing parameters to be considered while performing the AM processes.



Faculty listening to the lecture delivered by Dr. T. Ram Prabhu, Deputy Director/Scientist, Defense R and D Organization, India

Secondly, Dr. T. Ram Prabhu discussed on the highlights and various grades available in aluminium alloys, titanium alloys, super alloys, special steels and its applications in AM. Moreover, Dr. T. Ram Prabhu made awareness among the students with real time AM applications in defense sector and emphasized on challenges and opportunities available in the field of AM processes. Finally, Dr. T. Ram Prabhu concluded with exploring the applications and future scope in AM processes employable to various industries.


Dr. M.C. VARAPRASAD
Professor & Head
Dept. of Mechanical Engineering
Sree Vidyanikethan Engineering College
TIRUPATI - 517 102