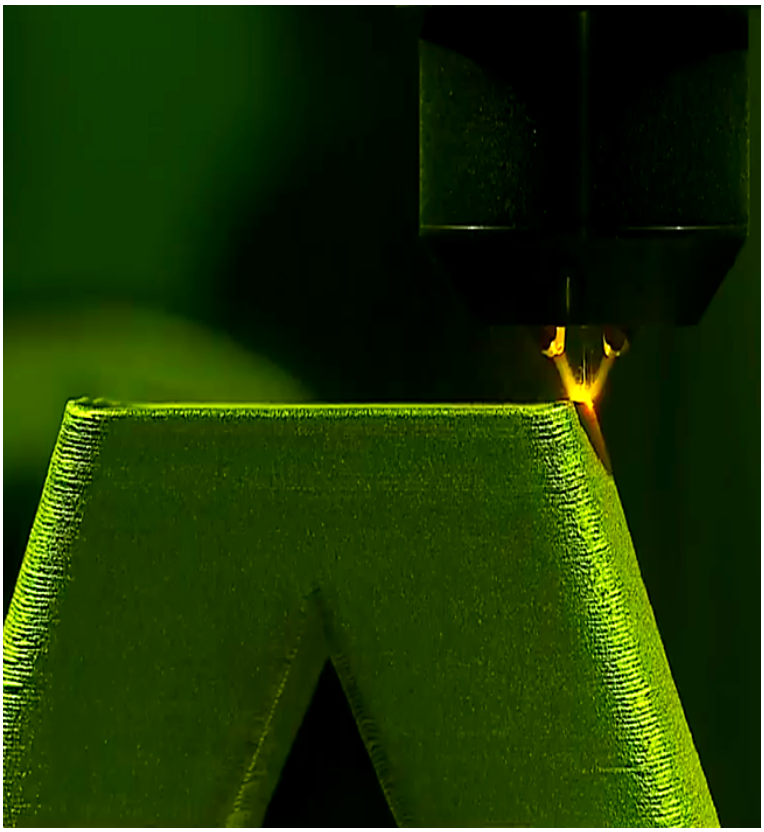
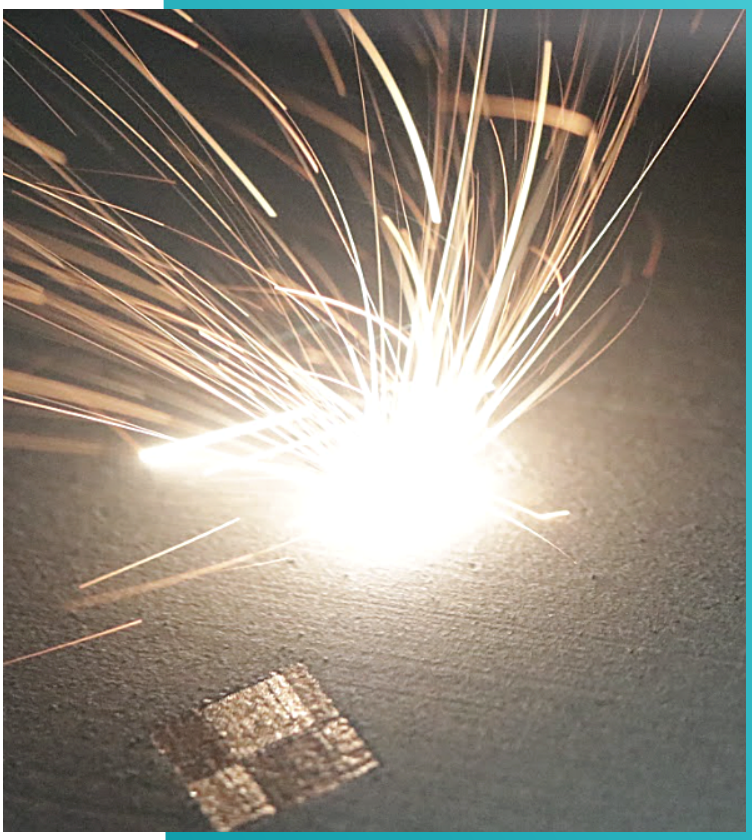
METALS IN ADDITIVE MANUFACTUING

Symposium - O





XIX Brazil MRS Meeting

August 30th to September 03rd

IUMRS ICEM 2021

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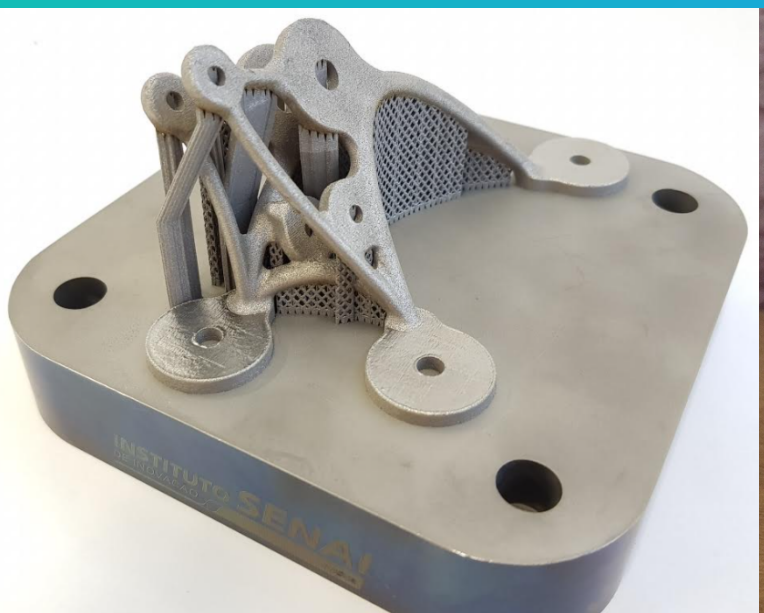
SCOPE OF THE SYMPOSIUM

Additive manufacturing (AM) is a growing range of technologies that allows the production of components with functionalities that were otherwise not possible to achieve. Much has been discussed on the ability of building metallic parts with complex geometries without the use of expensive tooling taking advantage of additive techniques. However, it is mandatory to understand processing, microstructure and performance relationship of metallic AM parts. Typically, each layer goes through localized melting, rapid solidification and multiple heating-cooling cycles. As a consequence, metallic AM materials can exhibit unique microstructures and properties. Furthermore, alloys development to build a property gradient and to better suit additive processes are also the target of researchers that aimed to enhance the understanding and benefit from the gains offer by AM parts.



SYMPOSIUM AREAS

(but not limited)

- *Correlation between AM processing conditions and microstructure/material performance;*
- *Alloy design and development in AM;*
- *Processing of materials and properties of metallic AM;*
- *AM Thermal cycle modeling/simulation;*
- *AM metallic alloys: Ferrous, Ni, Ti, Al, etc.;*
- *Special materials: High entropy alloys, intermetallic; alloys, metal matrix composites;*
- *Metallic Powders for Additive Manufacturing;*
- *Properties gradients in metal AM parts;*
- *Post heat treatments of AM metallic components.*

SUBMIT YOUR ABSTRACT UNTIL THE 25TH OF APRIL!

https://www.sbpmat.org.br/19encontro/submission/

KEYNOTE SPEAKERS

Professor Stefania Bruschi, University of Padova, Italy

AM research field: Evaluation of integrity of Additive Manufactured metal alloy surfaces machined under various lubricating/cooling conditions both at conventional and micro-level and development of correlation with the machined part service life.

Professor Moataz Attallah, University of Birmingham, UK.

Holds a chair in advanced materials processing and is director of AMPLab. His research on AM of metals is focused on the process impact on the microstructure and structural integrity development.

Professor Anthony Rollett, Carnegie Mellon University, USA.

Prof. Rollett has been focusing his efforts on additive manufacturing, or more precisely, modeling and understanding the microstructures that are formed during the additive manufacturing of metallic parts.

Jorge Vicente Lopes da Silva, CTI Renato Archer, Brazil

Director of CTI Renato Archer, one of the main research centers for additive manufacturing in Latin America. Dr. Silva is an experienced researcher in AM and one of the pioneer of this technology in Brazil.

SYMPOSIUM ORGANIZERS

- *Ana Sofia C. M. D´Oliveira, Ph.D. - UFPR*
- *Fernando J. G. Landgraf, Dr. Eng. - USP*
- *Henrique R. Oliveira, M.Sc. - ISI-Laser*
- *Milton S. F. Lima, Dr. Eng. - IEAv*
- *Leandro J. da Silva, Dr. Eng. - UFU*

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