

[Franco-Italian 2-day workshop]: *Imaging techniques for Additive Manufacturing*

About. The workshop focuses on imaging techniques applied to Additive Manufacturing (AM), and aims at highlighting current progress enabled by a range of techniques — from X-ray tomography to infrared imaging and acoustic monitoring — in the broad field of metal AM. It is organized around three subtopics (*process monitoring*, *microstructural* and *mechanical characterization* of additively-manufactured materials and structures) and is jointly organized by the Laboratoire de Mécanique Paris-Saclay (LMPS) and Politecnico di Milano as part of the Franco-Italian MONALISA project (PHC Galilée 2026-2027).

Detailed program:

Day #1: Dec 10, 2026

12:30 - 13:45: Registration of participants

13:45 - 14:30: Welcome and introduction

- *Dr. Marco Borra*, Scientific Attaché, Italian Embassy in Paris.
- *Prof. Paul-Henry Cournède*, Dean of Research, CentraleSupélec.
- *Prof. Rachid Bennacer*, Vice-President of Research, Université Paris-Saclay.
- *Dr. Guillaume Garreta*, Director of International and European Affairs, Université Paris-Saclay.

14:30 - 16:00: X-Ray tomography in AM

- *On-board sensing of PBF-LB/M with Variable Core/Ring Beam Profiles using Optical Coherence Tomography.* Lodovica Casarola and Ali Gokhan Demir, Politecnico di Milano (Italy).
- *Decomposition of the laser scanning sequence in Laser Beam Powder Bed Fusion (LB-PBF) using in operando synchrotron X-ray 3D imaging.* Pierre Lhuissier, SIMaP, Université Grenoble Alpes, CNRS (France).
- *4D characterization of Si particle coarsening kinetics in LPBF AlSi10Mg.* Yubin Zhang, Technical University of Denmark (Denmark).

16:00 - 16:30: Coffee break

16:30 - 18:30: X-Ray tomography in AM

- *3D characterization of the influence of surface integrity on the fatigue properties of additively manufactured Ti64.* Jean-Yves Buffiere, MatéIS, INSA-Lyon, CNRS (France).
- *Learning the heterogeneous behaviour of multi-material AM samples.* Clément Jailin, LMPS, Université Paris-Saclay, CentraleSupélec, ENS Paris-Saclay, CNRS (France).

- *On the use of DVC to quantify the mechanical behaviour of additively-manufactured (meta)materials.* François Hild, LMPS, Université Paris-Saclay, CentraleSupélec, ENS Paris-Saclay, CNRS (France).
- *3D quantification of ductile damage in annealed LPBF AlSi10Mg.* Gabriella Tarantino, LMPS, Université Paris-Saclay, CentraleSupélec, ENS Paris-Saclay, CNRS (France).

18:30 - 19:30: Visit of LMPS facilities (ENS Paris-Saclay site)

Day #2: Dec 11, 2026

08:30 - 10:30: Scanning Electron Microscopy in AM

- *Ditch the electrons. Turn on the light.* Matteo Seita, University of Cambridge (UK).
- *Microstructure design by additive manufacturing: the melt pool overlap as a key design tool.* Maria Teresa Pérez Prado, IMDEA Materials Institute (Spain).
- *Revealing structural and functional properties of different alloys produced by PBF-LB through electron microscopy.* Diego Giovanni Manfredi, Politecnico di Torino (Italy).
- *Understanding the hydrogen storage mechanisms by Scanning Electron Microscopy imaging in TiFe samples synthesized by additive manufacturing.* Thierry Grosdidier, LEM3, Université de Lorraine, Arts et Métiers, CNRS (France).

10:30 - 11:00: Coffee break

11:00 - 12:30: Multiphysics imaging in AM

- *Development of Multiphysics non-destructive methods for the monitoring of metallic Additive Manufacturing (AM) processes and components.* Anaïs Baumard, CEA Saclay (France).
- *Microstructure design in additive manufacturing aided by thermal and acoustic monitoring.* Roland Logé, EPFL (Switzerland).
- *Mechanical Performance of Chemically Heterogeneous Cold Spray Additively Manufactured Deposits.* Sara Bagherifard, Politecnico di Milano (Italy).

12:30 - 13:45: Lunch break

13:45 - 15:30: Multiphysics imaging in AM

- *Development of Advanced L-PBF routes using an open-architecture instrumented system.* Patrice Peyre, PIMM, ENSAM Paris, CNAM, CNRS (France).

- *Rapid Microstructure Estimation in Wire-Laser Directed Energy Deposition Using Infrared Imaging and Solidification/Grain Growth Modelling.* Daniel Weisz-Patrault, LMS, Ecole Polytechnique, CNRS (France).
- *Acoustic resonance test for damage detection in lattice structures.* Alessandro Levati and Stefano Foletti, Politecnico di Milano (Italy).
- *From X-ray Microtomography to Fluid Transport Prediction: Pore Network Reconstruction of Al-Based Cold-Sprayed Coatings.* Francesco Delloro, CMAT, MINES Paris-PSL, CNRS (France).
- *Design of periodic open cellular structure as enhanced catalytic support.* Abdo Toma and Stefano Foletti, Politecnico di Milano (Italy).

15:45 - 16:00: Closure

- *Prof. Véronique Aubin*, Deputy-director of LMPS, Université Paris-Saclay, CentraleSupélec, ENS Paris-Saclay, CNRS (France).

16:00 - 16:30: Visit of LMPS facilities (CentraleSupélec site)

Useful Information:

	10-11 December 2026
	Université Paris-Saclay, CentraleSupélec, ENS Paris-Saclay, CNRS, Laboratoire de Mécanique Paris-Saclay (LMPS)
Organised by:	Sara Bagherifard (Politecnico di Milano), François Hild (LMPS), Clément Jailin (LMPS), Gabriella Tarantino (LMPS).



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