

PRESS RELEASE

PLAST 2026: 3DPlastLab closes its first edition and establishes itself as a new international reference point for innovation in Additive Manufacturing

From plant-based crocodile skin to transparent wood, from end-of-life vehicle waste to devices just 18 microns thick: for four days, material was the true protagonist of additive manufacturing. Universities, industry and design came together amid live-printed prototypes and a Call for Ideas open to international researchers.

Milan, 17 June 2026 – The first edition of 3DPlastLab, the format dedicated to innovation in additive manufacturing hosted within PLAST 2026, has drawn to a close. For four days, the area brought together researchers, designers, start-ups, universities and companies from multiple countries, becoming one of the most visited spaces at the fair. The formula — fostering dialogue between research, industry and design through prototypes and direct exchanges with innovators — placed ideas at the centre, ahead of technologies themselves.

The renewed identity of 3DPlastLab was born from the collaboration between the Plast organisational secretariat and Simone Maccagnan, Business Development Manager at Gimac and CEO & Founder of eXgineering, and was developed, designed and coordinated by Pierpaolo Ruttico, Founder and Managing Director of Indexlab, the digital fabrication laboratory at the Politecnico di Milano.

"The aim of 3DPlastLab was not simply to create a space dedicated to 3D printing, but to build a meeting point for people, skills and visions united by the desire to innovate," says Simone Maccagnan. "We believe that innovation grows when research, industry, design and universities come together. 3DPlastLab was created to foster these connections, accelerate the sector's technological development and generate new business opportunities for the entire additive manufacturing ecosystem."

The innovators of 3DPlastLab: when material becomes the true protagonist

The thread connecting the researchers and companies hosted at 3DPlastLab is a paradigm shift: additive manufacturing no longer controls only the shape of objects, but the very nature of the matter that composes them — matter that becomes designable, sustainable and even "intelligent".

This is clearly visible starting from reinvented nature. Marinella Levi (Politecnico di Milano, +LAB) presents a new generation of 3D-printable composites entirely of plant origin, culminating in a remarkable alternative to leather — a plant-based "crocodile skin" derived from agar-agar and cork — alongside industrially mature thermoset composites reinforced with fibres, from which the spin-offs MOI Composites and MOI Dental were born. Also from the plant world comes the transparent wood of the AI-TW project: Giulio Malucelli (Politecnico di Torino, DISAT) leads the technical core, removing or modifying lignin and infiltrating the wood with transparent polymers to obtain a material that transmits light, provides thermal insulation and could replace glass, with artificial intelligence predicting its behaviour and accelerating scalability; Beatrice Lerma and Doriana Dal Palù (Politecnico di Torino, DAD) explore its perceptual and design dimensions, investigating how both the public and professionals envisage using it in architecture, interiors and sustainable mobility — from bicycles to boats.

From nature, the focus shifts to waste becoming a resource. Elena Casolari (Politecnico di Milano) transforms the heterogeneous plastics from end-of-life vehicles — normally destined for downcycling — into reliable products for the construction industry; Giulia Pelliccia (SDU CREATE, University of Southern Denmark), through the LAYGRADE project, converts sawdust, resin and beeswax into gradient biocomposites capable of varying optical and mechanical properties point by point, for architectural components that modulate light.

The final step is matter rendered functional and programmable. Kostas Grigoriadis (Bartlett School of Architecture, UCL) designs multi-material facades in which structural, solar and ventilation performance are embedded directly in the voxel distribution of the material, eliminating many mechanical systems; Serena Graziosi (Politecnico di Milano) derives from food by-products printable bioactive composites, shaped into wearable, personalised pads for the non-invasive relief of breast pain; Jochen Mueller (Johns Hopkins University) pushes the same logic to the micron scale, printing elastic films just 18 microns thick inside complex devices, from origami structures to electro-active actuators for soft robotics. From the micron to the façade, these projects speak to the same frontier: a future in which geometry, material, sustainability and function are designed together.

Rounding out the picture is Hayden Taylor (UC Berkeley), who proposes a radical paradigm shift from layer-by-layer 3D printing through Computed Axial Lithography (CAL): a technique that adapts the principles of computed tomography to additive manufacturing. An optimised set of light patterns is projected through a rotating volume of photopolymer, and the absorbed dose accumulates volumetrically to generate the complete three-dimensional object within minutes, without support structures.

The Call for Ideas: four visions that anticipate the future

The Call for Ideas confirmed the format's vocation not merely to recount innovation, but to bring it to light. Open to students, researchers, designers and young innovators, it led to the selection of four winning concepts, all sharing a bioinspired approach: OsteoGyroid by William Solórzano-Requejo, a gradient-porosity hip prosthesis inspired by the human femur; Topo IV Disc, conceived by Alejandro de Blas de Miguel together with William Solórzano-Requejo, Francisco Franco Martínez and Andrés Díaz Lantada, a lattice-structure intervertebral disc for more biocompatible spinal implants; Nature Trace #00 by Payvand Azadmanesh and Milan Dragojlovic, which translates nature's growth processes into lightweight, materially efficient structures; and Alpha EEG Headset by Chrystal Bryant, a next-generation device for monitoring brain activity. The projects were printed during the fair and brought to life thanks to the advanced additive manufacturing systems made available by X-Engineering and 3DHub Ferba, two companies at the forefront of industrial 3D printing of complex objects — proof of 3DPlastLab's ambition to become an open laboratory connecting emerging talent and industry.

When industry becomes a sonic experience

Further enhancing the immersive quality of 3DPlastLab was a special sound installation conceived by sound designer Marco Bordini. Through an electroacoustic composition in quadrphony, the productive and human identity of the organisations involved was transformed into an artistic experience that accompanied visitors throughout the event.

Machinery, materials, production environments and voices were recorded, analysed and reworked through granular, spectral and sample-based synthesis techniques, giving rise to an immersive soundtrack distributed across four independent channels. The result was a three-dimensional listening journey that transformed elements of everyday industrial life into narrative material, reinforcing the dialogue between technology, creativity and the human dimension.



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In its first edition, 3DPlastLab has demonstrated that innovation lives not only in products and technologies, but in the relationships and cross-pollination between different worlds that it is capable of generating. A debut that lays solid foundations for the future development of the project.

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