

Industrial Day – Project Submission Form

Please complete this form to provide information about the projects your company will present during Industrial Day. This information will help us organize and communicate available Master's Thesis (TFM) opportunities to students.

Company Name
Eurecat – Technology Centre of Catalonia

Project Title
Study of High-Power Ultrasound for Fiber Orientation in 3D Printing

Project Description
<p>This project investigates the use of high-frequency ultrasound to create standing wave fields capable of orienting fibers within composite materials during 3D printing. Ultrasound-assisted fiber alignment has significant potential for producing advanced composite parts with enhanced mechanical properties.</p> <p>The work will involve reviewing the state of the art, designing an experimental setup including an ultrasound generator integrated with a 3D printer, and evaluating options for using existing low-frequency equipment or low-cost MHz generators. Test samples will be manufactured and analyzed to characterize fiber orientation and mechanical performance. The expected outcome is a proof of concept demonstrating the feasibility and benefits of ultrasound-assisted fiber alignment in additive manufacturing.</p>

Responsible Person
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Is there financial support available? (Yes/No)

Yes

No

Number of available positions
1

Thank you for your collaboration and participation in Industrial Day.