

## 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.

<b>Company Name</b>
Eurecat – Technology Centre of Catalonia

<b>Project Title</b>
Design and Fabrication of Vibroacoustic Metamaterials Using 3D Printing

<b>Project Description</b>
<p>This project aims to develop vibroacoustic metamaterials capable of controlling sound and vibration propagation within specific frequency ranges. Metamaterials are periodic structures with unique acoustic properties, and additive manufacturing offers an efficient way to design and prototype these advanced solutions.</p> <p>The work will involve reviewing the state of the art, selecting the target application and frequency range, designing metamaterial structures using CAD tools, and simulating their acoustic response through finite element analysis (COMSOL). Prototypes will be manufactured using 3D printing technologies and validated experimentally, potentially in collaboration with external acoustic laboratories. The expected outcome is functional metamaterial prototypes with tailored acoustic properties for industrial or research applications.</p>

<b>Responsible Person</b>
Miquel Domingo Marcel Janer

<b>Contact email</b>
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**Is there financial support available? (Yes/No)**

Yes

No

<b>Number of available positions</b>
1

Thank you for your collaboration and participation in Industrial Day.