



MATHIEU GABORIT

From France to Sweden



Project: **The acoustic properties of designed-anisotropy porous media**

Research topic: **Physics**

Swedish Institution: **KTH Royal Institute of Technology / Marcus Wallenberg lab**

French Institution: **Le Mans University**

Dates of mobility: **20/04/2023 to 20/05/2023**

Program: **SFVE-A**



PRESENTATION

[Mathieu Gaborit](#) is Associate Professor at the Laboratory of Acoustics ([LAUM](#)) of [Le Mans University](#) and the French National Center of Scientific Research ([CNRS](#)). He defended his co-tutored dual PhD in Acoustics and Engineering Mechanics at Le Mans University and [KTH](#) Royal Institute of Technology in 2019. He is particularly interested in the modelling and manufacturing of controlled-anisotropy porous media.

ACTIVITIES IN SWEDEN

Meeting with among others his former PhD supervisor from KTH, Prof. [Peter Göransson](#), Mathieu Gaborit travelled to the Marcus Wallenberg Laboratory for Sound and Vibration Research ([MWL](#)) to set up a test rig for measuring the anisotropic flow resistivity of 3D printed porous materials alongside Prof. Göransson and Dr. [Stefan Jakob](#). A peer-reviewed publication on this matter was further developed, and the gathered imaging data using an optical microscope will be further applied to measure the difference between the designed geometry and the printed one in order to refine the numerical models. The flow resistivity data was gathered using a custom-made sample holder, and interesting results emerged, notably generating a post-processing strategy.

The mobility was a unique opportunity to develop already existing collaborations between the labs and joint European, French or Swedish funding applications were considered alongside the possibility to host shared post-doctoral researchers or PhD students. Gaborit is already involved with shared supervision of two Master's students, with whom he met in person and discussed their projects.