



 **Mathieu LEONARDON**

From France to Finland 

Project: **Neural Network Compression**

Research topic: **Engineering**

Finnish Institution: **Tampere University**

French Institution: **IMT Atlantique**

Dates of mobility: **05/09/2022 to 13/05/2022**

Program: **Maupertuis Programme (Short Mobility)**



## PRESENTATION

[Mathieu Léonardon](#) is part of the Algorithm-Architecture Interaction team at [IMT Atlantique](#) and with the [Lab-STICC](#) (CNRS). He is specialized in artificial neural networks and graph signal processing. More generally, he is interested in the hardware and software implementation of computationally intensive algorithms in real-time environment. His first contributions were on the implementation of error correcting codes on hardware and software targets for the 5th generation of mobile telephony. He is one of the creators of [AFF3CT](#), a software toolbox that simulates communication systems but also a library to develop SDR systems. He more recently contributed on the field of Embedded Machine Learning, with the proposal of pruning methods and their implementation on various targets.

## ACTIVITIES IN FINLAND

During his stay, Mathieu Léonardon visited the [CPC](#) team, led by [Pekka Jääskeläinen](#), where he presented his team's recent advances on Neural Network compression. Then, the visit focused on drone systems and event cameras leading to a better reduced power consumption and a much higher throughput. The fruitful collaboration introduced the idea of writing a Master's degree internship of a student from [IMT Atlantique](#), with a focus on the use of PoCL-R for drones and the use of neural networks on these platforms, in the [University of Tampere](#) that will start in April 2023. Finally, this short mobility was a great opportunity to meet [Anthony Trioux](#) from [Université Hauts-de-France](#), who has common research interest with Mathieu, and [Zaid Al-Ars](#) from [Delft University](#), who works on the domain of Big Data.