



**Aurélien DEBELLE**

From France to Finland



Project: **Material Science**

Research topic: **Physics**

Finnish Institution: **University of Helsinki**

French Institution: **Université Paris Saclay**

Dates of mobility: **18/05/2022 to 23/05/2022**

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



## PRESENTATION

[Aurélien Debelle](#) is an Associate Researcher and Lecturer in Materials Science at [Université Paris-Saclay](#) in France, with an expertise in irradiation-induced effects in materials. He worked on the development of an integrated approach that combines experiments, atomic-scale modelling and calculations of (experimental-like) signals to get a better understanding of the physical mechanisms at the origin of the microstructural changes in materials subjected to energetic particle bombardment (e.g. in space, nuclear reactors, microelectronics, etc...).

## ACTIVITIES IN FINLAND

The mobility was the opportunity to expand scientific cooperation and test and improve the computational tools he and Phd student Mohamed El-Bakouri, recently developed, but also to complete the results already found. More precisely, the work focused on NiFe atomic-scale data shared by the colleagues from Helsinki, while the French team previously worked (at IJCLab) on Ni and Fe separately. Aurélien also gave a seminar to present the research activities ongoing. After this seminar, another opportunity of collaboration emerged (data processing with the dedicated X-ray diffraction code, [RaDMaX](#)) and this work already started, led by a young Assistant Researcher at the Materials Physics Division. Finally, apart from the scientific discussions, the possibilities of Phd student exchanges and the organisation of a joint workshop in Lapland have been discussed.