The internship is planned in the Department of Materials at the University of the Basque Country (https://cfm.ehu.es/) and will be conducted with prof. Konstantin Guslienko (https://www.ikerbasque.net/en/kostyantyn-gusliyenko) and his co-workers.

The University of the Basque Country (UPV/EHU) is a modern university founded in 1980. It has campuses over the three provinces of the autonomous community: Biscay Campus (in Leioa, Bilbao, Portugalete, and Barakaldo), Gipuzkoa Campus (in San Sebastián and Eibar), and Álava Campus in Vitoria-Gasteiz. The academics staff (about 3.5k ) conduct classes for bachelor/master students (~40k) and Ph.D.-students (~3k). The University is located at 8th place in the Spanish national ranking.

Prof. Guslienko is one of the leading theoretician in the field of magnetism and magnonics with over 30 years of experience in these areas. He is an author of over 170 papers, with more than 20 papers cited over 100 times (H=45). The professor is an expert in magnetic vortex and magnetic skyrmions dynamics. He published a few fundamental papers about spin waves in confined magnetic structures.

For the research planned in the project, the most important is the expertise of prof. Guslienko in the analytical theory of spin wave pinning in magnetic nanostructures, which combines the impact of dipolar effects and surface anisotropy [1,2]. His support will be very valuable for our studies, where we consider the impact of surface anisotropy on magnetization dynamics. During the internship, the Ph.D. student will work on Task 1 and Task 3 of the project, it is. the tasks concerning the development of approximate models for spin wave pinning in periodically patterned structures and for boundary conditions for magnetoelastic excitation in hybrid magnonic-phononic structures. The collaborative work on other tasks will be realized remotely by on-line discussions and exchanging the e-mails . The AMU group has already established long-lasting collaboration with prof. Guslienko which results in a series of publications [3-5]. Therefore, I believe that the extension of this collaboration to further topics, that are in the field of interest of both groups, is very promising.

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