

# UT Austin – Portugal Program

February-March 2025

Research visit in the Prof. Akinwande research group

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I spent the months of February and March at UT Austin, particularly in the Microelectronics Research Center at the J.J. Pickle Research Campus, working with the Akinwande Nano Research Group.

This experience was pivotal for my career as a researcher, as I had the opportunity to access to advanced laboratories and cleanroom equipment. I was able to work and discuss ideas with experienced researchers in the area, and work with novel materials that can have a big impact on my PhD work. I was able to perform the integration of 2D materials (MoS<sub>2</sub> and h-BN) with MXenes, a novel family of 2D materials that has been the scope of my PhD project. With these, I was able to fabricate electrical memory devices based on planar architectures and study their characteristic behaviour. This experience raised my ability to adapt to work in a new environment, working with people from different scientific backgrounds.

On a personal side, I was able to visit the United States of America for the first time, and I could experience a different city and culture from my own. Everyone was welcoming and kind, both in the city and particularly at the research center. Austin is a diverse city with lots to explore, from the museums to the local coffee shops, within a rich multicultural environment. It was also lovely to see the Bluebonnet flourishing across the city, particularly in the Pickle center while going to work every day, and walk around the loop of the Lady Bird Lake.