# STSM Experience: Integrating single emitters to plasmonic ring grating/nanoantenna cavities

Short Term Scientific Missions (STMS) are exchange visits that are addressed to scientists, mainly Early Stage Researchers, allowing them to visit and work in laboratories in other COST countries. In this talk, I will share my STSM experience where I got the chance to work with two pioneer research groups in the field of Quantum Optics.

My PhD work focused on strong light-matter interaction at the nanoscale, where we studied the coupling of an ensemble of emitters to plasmonic cavities consisting of metallic nanoantennas integrated in the center of ring diffraction gratings. Going a step further, we were interested in studying the effect of our structures on single emitters. This motivated me to apply for STMSs that allowed me to learn new techniques for characterizing the optical properties of silicon-vacancy centers in diamond and studying their coupling to plasmonic cavities.

These STSM experiences paved the way for three laboratories to combine their individual expertise in the fields of Quantum Optics and Plasmonics, giving rise to an ongoing collaboration with a joint publication as well as future student exchange programs.