

## Master or Engineer internship 2024-2025

Proposed by : Xin Zhou

Phone number : 0320197826

E-mail : [xin.zhou@iemn.fr](mailto:xin.zhou@iemn.fr) or [xin.zhou@cnrs.fr](mailto:xin.zhou@cnrs.fr)

Research group : Physics

**Title : quantum interference in coupled multiple nanoelectromechanical modes**

**Abstract :** We are offering an exciting internship opportunity for a motivated Master's student to join our cutting-edge research in study of coupled nanoelectromechanical resonators integrated in microwave optomechanical quantum circuits. The focus of the project is on **measuring quantum interference in coupled multiple nanoelectromechanical modes**, a rapidly evolving area that bridges quantum circuits, nanoelectromechanical system, microwave engineering, and nanotechnology.

### Key Responsibilities:

- Work with advanced tools and technologies to couple and measure quantum modes in nanoscale devices.
- Collaborate with a multidisciplinary team of researchers to analyze and interpret experimental data.

### Requirements:

- Enrolled in a Master's program in Physics, Engineering, or a related field.
- Strong background in high frequency signal processing, with familiarity in python and nanoelectromechanical systems being a plus.
- Interest in experimental physics, quantum interference, and precision measurement techniques.
- Good problem-solving skills and the ability to work both independently and as part of a team.

### What We Offer:

- Hands-on experience with state-of-the-art experimental setups.
- The opportunity to contribute to innovative research at the intersection of quantum physics, nanoelectromechanical system, microwave engineering and nanotechnology.
- A dynamic, supportive, and interdisciplinary research environment.

**Application Process:** To apply, please send your CV and a brief cover letter explaining your interest in the project to [xin.zhou@iemn.fr](mailto:xin.zhou@iemn.fr) or [xin.zhou@cnrs.fr](mailto:xin.zhou@cnrs.fr) .