Hybrid architectures for semiconductor quantum systems

Record number : OPR-1407

Overview

RESEARCH DIRECTION

Mathieu Juan, Professeur - Institut quantique

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ADMINISTRATIVE UNIT(S)

Faculté des sciences
Département de physique

LEVEL(S)

3e cycle

LOCATION(S)

Département de physique et Institut quantique de l'Université de Sherbrooke

Project Description

The Quantum Physics group at the National Research Council Canada and the M1 Quantum Lab group at the Université de Sherbrooke are looking for graduate students to participate in the development of new quantum devices aimed at realizing hybrid architectures in which semiconductor quantum systems are coupled to superconducting microwave resonators, in order to develop new quantum technologies such as quantum sensors or transducers with performance superior to their classical counterparts. Students will participate in the design and fabrication of samples as well as experimental measurements in the laboratory. Students will gain experience in nano-fabrication, quantum electronics measurements, quantum photonics measurements, and cryogenics. A strong background in condensed matter physics is a major asset, as is programming experience with Python.

Discipline(s) by sector

Sciences naturelles et génie

Physique

Funding offered

Yes

Partner(s)

Conseil National de la Recherche du Canada (CNRC)

The last update was on 1 June 2026. The University reserves the right to modify its projects without notice.