Progetto Laurea Magistrale Plus

(Students enrolled for the first time in the Academic Year 2020/21, undertaking the internship in the company in 2021/2022)

University infos

Laurea degree: PHYSICS
University tutor / Thesis supervisor: Prof. Matteo Galli
Courses / Expertize of the university tutor: Integrated photonics for classical and quantum applications

Company infos

Company name: CEA-Leti
Company Tutor(s): Sylvain Guerber and Daivid Fowler
Role in the company of the tutor(s): R&D engineers in silicon photonics

Contents and infos on project and internship

Project title: Design and optimization of antenna gratings for optical phased arrays
Activity scenario and targets of the internship - Area/Department/office/lab (where the trainee will be involved): CEA-LETI Grenoble/Department of optoelectronics (DOPT)/Silicon Photonics Laboratory First six months (2021) : Within the context of solid-state LIDAR systems, the student will develop grating based antennas for optical phased arrays based on silicon photonics platforms. He/She will characterize existing test structures and simulate new design concepts. The second 6-month term of the internship will consist of characterizing and understanding the performance the new designs and suggesting further refinements.
Background / Expertize of the student required for the internship: Master studies including semiconductors, photonics, nanotechnologies, .
Potential thesis topics: Highly integrated solid-state LIDAR systems based on integrated photonics
Company location and place of work: (Full address) CEA-Leti – Optics and Photonics Department – 17 rue des Martyrs – 38054 Grenoble - France
Time length of the internship: **12 MONTHS (6 Grenoble + 6 Grenoble)**
Benefits provided by the company (at least reimbursement of 500€ per month): Reimbursement of >=500€ per month in Grenoble
Specific company requests: Strongly motivated students with good exam scores, team working and flexibility skills to work in a multi-disciplinary environment (photonic component design, optical characterization, simulations)
Other comments: The student will work with several highly-qualified people in the field of design and optical characterization, with state-of-the-art equipment. He/She will get a pratical insight into various aspects of integrated silicon photonics technology in one of the largest technological R&D institutes in Europe.