

Position offer : laser and instrumentation engineer

Contact : employment@femtoeasy.eu

Company location: Pessac (Bordeaux, France)

Company presentation

Femto Easy is a start-up specialized in ultrafast laser instrumentation. It was founded in February 2016, and had a promising development. The current workforce is 9 people and to satisfy its needs in R&D, the company wants to recruit a new employee holder of a PhD in Ultrafast Optics.

Femto Easy designs, manufactures and markets scientific and technical instruments associated to ultrafast lasers. This type of laser, so called ultrafast or femtosecond, produces extremely short light pulses, of the order of a few tens to a few hundred femtoseconds (10^{-15} s). This special characteristic of ultrafast lasers allows many applications both in research and in industry (micro-machining, biology, surgery, semiconductor manufacturing...) The ultrafast laser market is rapidly growing and consequently the market of the associated instrumentation also.

Femto Easy offers reliable and robust temporal, spectral and spatial measuring devices for ultrafast lasers. Femto Easy products are unique on the market for their reliability and ease of use. Born into fundamental research, the company devotes a significant part of its resources for R&D to provide the best products on the market. The company is divided into two key teams, an optical team working to develop innovative optical devices to continually improve product performances and quality. A second team is specialized in the development of scientific software. Today, the company has numerous and renowned clients, both on the academic and industrial market. In particular, thanks to the compactness of its devices and the integrability of its software, Femto Easy offers extremely relevant OEM solutions for the industrial market.

Mission

- Design, implementation and qualification of temporal, spectral and spatial measuring instruments, test benches and dedicated subsystems.
- Active participation in optical R&D and signal processing.
- Management and monitoring of optical subcontractors.
- Installation and customer support.
- Assembly and qualification of secondary femtosecond laser sources (OPA, SHG, post-compression...)
- Participation in the procedure and implementation of the new product production.

Activities

1/ R&D :

- Starting from the needs (measuring instruments, subsystems ...), you propose optical solutions and establish a technical file (calculations, plan, technical drawings, nomenclature) in collaboration with the mechanical engineering office.
- You experimentally implement the optical solutions that have been validated.
- Once the demonstrators are done, you propose and make the necessary improvements to achieve a finished product that meets the Femto Easy quality requirement.
- You consult the suppliers and outsourcing companies, analyze the offers and select an offer according to the time / cost / quality constraints.
- Research / Technology survey.
- You are actively involved in improving the products of Femto Easy, identifying innovative technologies and establishing the R&D roadmap.
- You actively participate in the company's development strategy.
- You participate in international collaborations and travel to conduct experiments on specific installations.

2/ Production :

- You participate in the writing of manufacturing files.
- You assemble measuring instruments for femtosecond sources.
- You ensure the qualification of the systems.
- You contribute to the establishment or improvement of the means of production (test benches, tools, storage ...)

3/ Sales department :

- You occasionally have to perform demonstrations when specific technical skills are required.
- You may have to travel for a commercial purpose (demonstrations, exhibitions ...)
- You communicate with the sales department or directly with the customers when your expertise is required.

Profile

Education : PhD

Experience :

- Experience with femtosecond lasers, laser development, characterization of ultrashort pulse, few cycle pulses.
- Experience in installation and development of laser lab.

Knowledge :

- laser working techniques, alignment and measurement related to femtosecond lasers.
- Ultrafast laser physics and non linear optics.
- Drawings reading and conception understanding.
- Scientific software (Python, Scilab, Oslo, Zemax...)
- office software (Word, Excel, Powerpoint, inkscape...)
- Good English level.

Personal skills and motivation :

- Autonomous, dynamic, and versatile, you are able to manage multiple projects at the same time.
- You know how to affirm and defend your technical choices.
- Your interpersonal skills, and your curiosity, allow you to work efficiently with different work field teams.
- Your challenging character and your passion for optics motivate you to join a growing innovative start-up, at the cutting edge of technology.

Permanent contract (CDI) with 4 months of probation period

Gross salary : 30 000 to 36 000 € / year (depending on experience)

Contract starting date : September 2020