

Internship proposal

Data Engineer / Scientist in Lidar atmospheric measurements

Topic: Study and validation of the metrological performances of a scanning Doppler Lidar in terms of wind measurements

Leosphere, founded in 2004, is the world leader in ground-based and wind turbine-nacelle mounted Coherent Pulsed Doppler Lidars for atmospheric observation. The company designs, develops, manufactures, sells and services turnkey remote-sensing instruments for wind measurement and aerosol characterization.

As part of Vaisala, the world leading company in environmental measurements, Leosphere employs altogether 140 professionals who together build high-technology solutions based on the Lidar measurement technologies. These solutions allow better mitigating atmospheric risks and taking advantages of atmospheric resources in the fields of wind energy, meteorology, aviation weather and air quality.

Our people enjoy what they do. Leosphere is a great place to work in: job satisfaction is high. Leosphere is always seeking young and motivated talents to join its innovative team.

Job description

Research and development teams of LEOSPHERE are constantly improving Lidar (Light Detection and Ranging) remote sensors in terms of metrological performances, functionalities and reliability.

The scientific and technological research department is launching a project in order to study in detail the metrological performances of scanning Lidar Doppler instrument by performing atmospheric experiments at different sites with several test units. The objective is also to establish a metrological validation protocol for each lidar unit after manufacture and service to ensure their operation and performance against specifications. The scientific objective is to achieve a fine validation of the instrument approved by recognized experts in the world.

Your missions will consist in:

- Carry out measurement campaigns with Lidar sensors in the atmosphere
- Process Lidar data in order to calculate key performance indicators in terms of metrology
- Compare the data collected in real atmospheric conditions with results obtained with indoor test benches and existing theoretical frameworks
- Produce a technical report and if possible, a scientific publication on the main results obtained on metrological performance



You will be the research engineer in charge of atmospheric experiments for this project. You will work in close collaboration with the optoelectronic engineers in charge of test bench measurements and with those in charge of development of new versions. To carry out this subject, you will be supervised by a senior engineer and an atmospheric scientist.

Desired qualifications and skills

Skills below are for guidance only.

Academic & Technical skills

- Graduate student with M.S. or *grandes écoles* degree (or about to graduate) in either Data processing, Physics, Atmospheric sciences, Metrology
- Strong programming skills in either PYTHON (preferred) or MATLAB
- Strong knowledge in Data processing, Metrology and general physics is necessary.
- Being able to process large amount of data.
- Prior knowledge in Lidar or Radar Physics would be ideal but is not mandatory.

Soft skills

- Being able to work in a start-up like environment: flexibility, creativity
- Abstraction and analytical skills
- Boldness and good work ethic
- Inquisitiveness

Job context

Workplace: Paris-Saclay high-technology business cluster:
Address: Tech Park, 6A Rue René Razel 91 400, 91400 Saclay
Job type and duration: 6 month "Stage" (Internship)
Starting date: To be discussed, ideally first quarter 2021

To apply, please email :

(1) a complete CV

(2) up-to-date university transcripts (optional)

(3) a short statement describing your motivation, research interests and goals that shows that you handle the job technically (you can add past achievements including personal projects)

(4) names and contacts of 3 references (optional)

**Email should be addressed to job@leosphere.com with this code in the title:
STAGELEO2021**

