

# Staff Optical Engineer

Sense Photonics is seeking an experienced and creative optical engineer for our Research Triangle, NC or San Francisco offices. The candidate will play a critical role in building the next generation of LiDAR systems for autonomous vehicles, UAVs, industrial automation and other applications. The position will focus on developing manufacturable solutions for the challenging needs of our systems. We are looking for a person with deep technical expertise, experience modelling, simulating and designing modules which transferred to mass production, and who is a hands-on experimentalist as well, with an ability to construct free space optical systems for characterization and validation. The candidate should be a team player who is keen on tackling intellectual and technological challenges, and who is interested in working in an exciting space in a fast-paced start-up environment.

## JOB RESPONSIBILITIES

- Simulate, model and design optical components and modules, such as lenses, diffusers, lidar receivers and emitters, including tolerancing, designing for broad temperature ranges, and designing for manufacturability.
- Invent, design and validate novel schemes and devices for delivering and collecting optical energy per system requirements
- Work with mechanical engineers in the company and at third parties to transfer the designs to production.
- Develop optical setups for characterization of optical modules
- Develop optical setup for in-line and end-of-line testing of modules and systems at our manufacturing facilities
- Document the design, present it to the engineering team and to management in design reviews

## REQUIREMENTS

- Strong, in-depth understanding of free-space optics and in building systems for mass production (thousands to millions of units per year).
- Specific experience in optical modelling, ideally in Zemax, using sequential and non-sequential ray tracing
- Experience designing custom lenses
- Proven experience in hands-on characterization of optical systems
- Experience working with optomechanical engineers and in transferring design to mass production
- Experience with non-standard optical components is a big plus
- Team player
- Excellent verbal and written communication skills

## QUALIFICATIONS

- PhD in Electrical Engineering, Physics, or a similar discipline
- At least 5 years industry experience in a optical design and characterization

## ABOUT US

We are passionate about building the next generation of LiDAR systems for autonomous vehicles, industrial robotics and many other applications. Our core technology – protected by over 200 patents – enables a simple, high-performance, solid state solution, with no moving parts, that can uniquely meet the rigorous performance, reliability and cost requirements for automotive and industrial applications.

Sense Photonics has offices in Research Triangle Park, NC, Silicon Valley, CA and Edinburgh, UK. We are backed by leading VC firms and strategic investors and have developed partnerships with leading automotive and robotics customers. We are building an innovative, world-class company that designs and builds the world's best 3D sensors and software solutions. Sense Photonics is also an equal opportunity employer – all applicants will be given equal consideration.