



## POSITION ANNOUNCEMENT

**Job Title:** R&D Engineer - Optical Systems [Computational Imaging]  
**Job Type:** Full-time  
**Location:** Boulder, CO, USA; Hybrid work environment

### **Position Summary**

Double Helix Optics Inc, an innovator in 3D imaging technologies, seeks an Optical Systems R&D Engineer to join a dynamic team expanding the boundaries of 3D imaging and ranging technologies.

This job will focus on hands-on R&D and product development activities, from prototyping to optical system performance characterization and design transfer for product manufacturing. Double Helix Optics utilizes computational optical imaging approaches to capture 3D information at microscopic and macroscopic scales. The candidate filling this position will be responsible for the implementation of prototype systems, analytical characterization of opto-mechanical system performance, implementation of optical and material assembly processes, and participation in R&D design processes. The ideal candidate will have a good working knowledge of optical design and performance, typical characterization equipment such as profilometers, wavefront sensors, etc., optical alignment techniques and tolerances that relate to optical system performance, and data analysis in tools such as MATLAB or Python.

### **Primary Responsibilities**

- Participate in concept development and design considerations, identification of prototype components, opto-mechanical implementation, integration, testing, and performance characterization.
- Perform opto-mechanical system setup and experiments to verify that design meets system requirements.
- Analyze measurement data to determine results and prepare and present results for team review.
- Perform product performance QC testing.
- Travel to partnering labs and/or relevant research conferences as needed.

### **Key Technical Qualifications**

- Well versed in a broad range of optics concepts including geometrical optics, physical optics, Fourier optics, diffractive optics, illumination, and optical alignment techniques.
- Experience in detailed optical setup and alignment.
- Experience with optical system tools such as autocollimators, alignment telescopes, wavefront sensors, spatial light modulators, profilometers, etc.
- Knowledge of ray tracing tools such as Zemax or CodeV.
- Strong MATLAB experience required.

### **Background Qualifications**

- Ph.D. or master's degree in optics or related field, with 3+ years' relevant work experience with optical systems (relevant work experience can come from Ph.D. or master's work).
- Highly self-motivated and a solid team player with excellent oral and written communication skills.
- Strong attention to detail and record keeping, clear information presentation skills.
- Quick learner, able and interested in acquiring new skills and competences.
- Ability to work independently and collaborate effectively with internal and external teams.
- Knowledge of DHO's engineered PSF core technologies and related technologies is a plus.

Double Helix Optics is an Equal Opportunity Employer

*Send resume and cover letter to [scott@doublehelixoptics.com](mailto:scott@doublehelixoptics.com)*