

AUTOMATION AND CONTROL LASER ENGINEER

Radiantis is a globally recognized leader in the design and manufacturing of advanced solid-state lasers and optical parametric oscillators. Our innovative technologies play a pivotal role in fields such as non-linear microscopy, spectroscopy, and a wide range of cutting-edge research applications.

Since our founding in 2006, we have earned the trust of prestigious universities, research centers, and institutions worldwide by delivering high-performance, reliable solutions that meet the exact demands of advanced scientific research, enabling groundbreaking discoveries.

We pride ourselves on fostering a culture of innovation, excellence, and collaboration. We are currently seeking a Control Engineer to join our talented team.

Key Responsibilities:

As a physicist or engineer in this role, you will take on exciting and impactful responsibilities that contribute to the innovation and excellence of our laser systems. You will design and implement the overall control systems for our tunable lasers and optical instruments, including the selection and integration of components such as actuators, sensors, and automation stages to achieve optimal system performance.

Your work will include:

Automation and Control Development

1. Design and implement state-of-the-art automation and control systems for our tunable lasers and optical instruments.
2. Work on optimizing automated system performance by integrating robust control algorithms in Python that manage the behavior of our laser systems and optical instruments.
3. Cross-functional collaboration with other members of the team, including optical and mechanical engineers to translate technical challenges into practical solutions based on a holistic approach to product development.
4. Build user-friendly graphical interfaces (GUIs) to provide seamless interaction with the systems.
5. Implement communication protocols (e.g., I2C, serial, USB) to interface with embedded systems, sensors, and actuators.

Component Selection and Electronics Design

1. Identify and source the best components and modules to meet the demanding requirements of our cutting-edge products.
2. Design or manage the design of custom electronic solutions, including analog and digital circuits, to control lasers and their subsystems.
3. Create and test printed circuit boards (PCBs) to support advanced functionalities, ensuring efficiency and durability.

System Integration and Testing

1. Oversee the integration of hardware and software components into a cohesive and reliable system.
2. Conduct rigorous testing and validation to ensure performance meets or exceeds customer expectations.
3. Troubleshoot and refine systems during the development and prototyping phases.

Knowledge/Skills/Requirements:

We are looking for a self-motivated professional who thrives in a dynamic and collaborative team environment. You will be responsible for the success of your assigned projects. Key qualifications include:

1. A PhD in Telecommunication Engineering, Industrial Engineering or Physics is preferred; a Master with relevant experience will also be considered.
2. Laser Control and Automation:
 - . Experience controlling actuators (e.g., servos, piezo-electrics, step motors).
 - . Designing sub-systems for temperature control of optical components.
 - . Reading analog sensors (e.g., temperature, humidity, photodiodes, spectral sensors).
3. Programming
 - . Proficiency in Python, particularly in developing graphical user interfaces (GUIs).
 - . Experience communicating with embedded computers, sensors, and actuators using I2C and serial protocols.
 - . Knowledge of USB protocol programming is advantageous.
 - . Familiarity with LabVIEW is a plus but not mandatory.
4. Electronic Design
 - . Expertise in designing digital and analog electronics, PCBs, and embedded computing.
 - . Experience with EDA tools such as KiCAD or similar software is desirable.
5. Other Requirements

- . Strong oral and written communication skills in English; knowledge of Spanish is a plus.
- . Willingness to travel for installation and service assignments.

Why Join Us

This position places you at the forefront of laser technology, offering opportunities to push the boundaries by staying at the forefront of emerging technologies in automation, control, and lasers, bringing fresh ideas to improve product functionality and efficiency.

If you are looking to push the limits of cutting-edge technology in an impactful role with a talented team, please send us your resume, and cover letter to cv@radiantis.com including CLE2025 in the subject. We would love to hear from you!