

Job Description Controls Engineer

Type of Job – Full Time – Exempt
Location – Swansey, New Hampshire

Job Summary

The Controls Engineer is part of a team dedicated to advancing Nanotech's machine technology. This position is principally responsible for the controls *engineering* and support of ultra-precision machine systems for the electro-optics manufacturing industry. This position will apply Newtonian physics to motion control problems, arriving at optimal solutions based on commercially available motion controllers, motors, amplifiers, and feedback products. The Controls Engineer IV is expected to be a subject matter expert and mentor junior engineers. The Controls Engineer IV will have the ability to define and resolve complex problems. Typical projects are a *combination* of new development, maintenance, and revision of existing applications.

Core Responsibilities

- Subject matter expert with thorough knowledge of the controls engineering discipline.
- Solve complex controls problems using accepted engineering practices.
- Ability to lead large products.
- Develop new feedback techniques to enhance product performance while maintaining cost effectiveness.
- Conceptualize and engineer new, unique controls systems that meet customer requirements.
- Apply controls theory for servo tuning in both the time and frequency domain using Bode and/or Nyquist analysis to maximize servo performance while maintaining robust stability.
- Identify disturbance sources and attempt to mitigate using servo gains and/or other damping techniques.
- Handle multiple projects simultaneously, meet deadlines, while effectively managing priorities and communicating progress.
- Actively participate in product design reviews and work directly with the engineering staff to develop cost effective solutions.
- Interface with engineers and technicians of the other Moore business units to help coordinate overall technical activities wherever appropriate and desirable.
- Ensure that all relevant data is collected, reviewed, and filed for all projects in accordance with standard procedures.
- Prepare and present detailed technical reports to management and staff.
- Write / publish papers and present at relevant conferences when mutually agreed upon with management.
- Contribute to written instruction and operation manuals for Nanotech's products.
- Perform in-house technical support.
- Help to achieve the completion of all projects within budget and on schedule.
- Travel up to 10% of the time.

Education and Experience

- Master's degree in Controls Engineering from an accredited university and 7+ years of work experience, or a Doctorate in Controls Engineering plus 3+ years of work experience.
- Demonstrated versatility and high competency levels in creativity and technical comprehension.

- Experience with Delta Tau PMAC family of motion controllers or servo motion controllers.
- Computer proficiency in MS Office Suite.

Competencies

- *Excellent interpersonal skills (written & verbal communication, ability to articulate ideas and concepts, capable of positive influence and ability to work alone or as part of a team).*
- Utilize strong verbal and written skills to communicate effectively with technical and non-technical partners at various levels.
- Self-motivated technical leader who can motivate others.
- Excellent organizational skills, with strong attention to detail.
- Maintain professionalism with all visitors and guests.

Experience in the robotics industry is a plus. Someone who can interface with hardware and test software. Must be hands-on the work cannot at be completed at the desk. Electrical engineer focused on controls.