

Research Support Specialist III Electrical Engineer

January 2022

Cornell University embraces diversity and seeks candidates who will contribute to a climate that supports students, faculty and staff of all identities and backgrounds. If you don't meet 100% of job qualifications, but see yourself contributing, please submit an application. We strongly encourage individuals from underrepresented and/or marginalized identities to apply. We're a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

The Cornell Laboratory for Accelerator-based ScienceS and Education (CLASSE) studies particle beams and accelerators, photon science, particle physics and the early universe, and serves students, the public and scientists from Cornell and around the world. The research missions of this laboratory are in many respects unique in the world. The Research Support Specialist III reports to the Manager of Technical Services in the Electronics group. Primary responsibilities of the position include, but are not limited to:

- Design complex specialized electronic equipment for the operation of a large-scale accelerator complex comprised of: Cornell Electron Storage Ring (CESR), Synchrotron, Linac, and CBETA. Included in new designs are analog and digital control circuits as well as sophisticated programmable logic devices (fpga's) requiring specialized software tool experience.
- Design multilayer printed circuit boards for control system applications paying attention to high speed effects, signal flow, and proper design rule adherence.
- Perform research and analysis on the best design techniques for specific projects.
- Generate specifications for large equipment development projects and acquisitions.
- Plan and conduct experiments for new equipment design.
- Trouble shoot complex electronic system failures.
- Plan and implement preventative maintenance programs for accelerator electronic systems.
- Develop recommendations for system improvements, modifications, and upgrades.
- Provide guidance and training to new employees in all of our system topologies, proper test procedures and design techniques.

What we need:

Master's degree in electrical engineering with 3 to 5 years of relevant experience or equivalent combination. Experience with power electronics, low-level programming of fpga devices, digital logic, analog circuitry, printed circuit board design, and trouble-shooting complex electronic control systems. Mechanical design for electronics enclosures, heat sinking and proper cooling. Good visual acuity and small-motor skills are needed for the testing and assembly of high-density electronic circuits and surface mount components. Effective communication, judgement, and teamwork skills are essential. Capable of adapting to the changing needs of a research environment. Able to receive directions and to communicate effectively across all research groups in the laboratory. Work effectively and cooperatively within a team environment.

What we would like:

Extensive experience designing electronics based on programmable-logic devices, analog circuitry, power switching circuits, including mastery of: programmable logic software, printed circuit layout software, and electronic simulation software. Skilled in the use of surface mount technology and the tools of the trade are desirable. Large project

management experience. Familiarity with OpenVMS, Unix, and Windows operating systems, and EPICS control systems is a plus.

Visa sponsorship is not provided for this position. Please apply online at <https://cornell.wd1.myworkdayjobs.com/CornellCareerPage> (posting #WDR-00029464).

Cornell University requires all employees, whether they work on campus or work fully remotely, to be fully vaccinated against COVID-19, or to have obtained a university-approved medical or religious exemption. For additional information on this requirement, visit: <https://hr.cornell.edu/covid/university-response/vaccination>.

Cornell provides great benefits that include comprehensive health care options, generous retirement contributions, educational benefits (Employee Degree, Tuition Aid, Cornell Children's Tuition Assistance Programs), access to wellness programs, and employee discounts with local and national retail brands. Our leave provisions include three weeks of vacation and 13 holidays, including winter break from December 25th through January 1st.

Cornell has been nationally recognized as an award-winning workplace for our health, wellbeing, sustainability, and diversity initiatives. For more information, follow the link: [Benefits at Cornell](#).

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans and Individuals with Disabilities. We also recognize a lawful preference in employment practices for Native Americans living on or near Indian reservations. Cornell University is an innovative Ivy League university and a great place to work. Our inclusive community of scholars, students, and staff impart an uncommon sense of larger purpose, and contribute creative ideas to further the university's mission of teaching, discovery, and engagement.