



Electrical Engineer - Instrumentation

At Geometrics, we manufacture highly precise scientific instruments to measure properties of the Earth's sub-surface. Our instruments are used outdoors in the harshest of conditions and provide quality data to our customers, enabling them to solve complex problems in environmental sciences, natural resource exploration and infrastructure development. Our R&D team is a diverse and dynamic group of scientists, engineers, geophysicists and technologists working hard to design real-life solutions to earth and subsurface physics problems.

Our customers continually challenge us to develop easier-to-use instruments that take them closer to their solutions through better precision in measurements that can be recorded in wider range of environmental conditions. Geometrics is focused on meeting these challenges using emerging technologies such as autonomous platforms, cloud computing, IoT, and machine learning to provide innovative solutions.

About You:

- An Engineer who embraces challenges
- Great at working within experienced cross-disciplinary teams
- Comfortable with design thinking approach to solving complex problems
- Dream to understand the nature and the environment we live in
- Willing to work with customers in the field to improve user experience

Your Responsibilities:

- Perform all aspects of system engineering including: concept, architecture, block/functional diagrams, system level schematics, schematic capture, PCB design and complete documentation
- Use various design tools and techniques for design of analog and digital electronic circuits including low noise analog circuits, op-amps, filters, A/D and D/A converters, microprocessors, signal processors, communications processors, power supplies, etc.
- Implement board and system simulation models through SPICE and/or MATLAB or equivalent tools, such as PSPICE, LTSPICE, XSPICE or GNUSPICE
- Perform development, hands-on design, debugging and support of analog/digital as well as real-time embedded electronics
- Develop firmware/embedded software for microprocessors/microcontroller/FPGA
- Analyze design tradeoffs and interact with marketing personnel to determine system requirements
- Write and maintain Test Instruction/Assembly Instruction to manufacturing for product release
- Help customer service/marketing team answer technical questions from customers
- Participate in field deployments to gain/improve user experience of instruments

Requirements:**Necessary:**

- MS in Electrical Engineering with 3 years' industry-relevant experience or BS in EE with 5 years' industry-relevant experience or equivalent working experience
- Familiar with low noise analog and digital circuit design
- Experience in developing ARM/FPGA firmware
- Experience with Cadence Orcad PCB Designer tools
- Familiar with TCP/IP, UDP, UART, USB...protocols
- Well versed in object-oriented thought processes, standard algorithms and structures, and their typical use cases
- Self-driven problem solver with initiative to recognize and accept challenges
- Excellent verbal and written communication skills and the ability to collaborate with cross functional teams

Desired:

- Experience in designing and developing portable geophysical instrument
- Experience in designing interface circuits or peripherals for PC-compatibles.
- Experience in developing full-stack solutions in the IoT paradigm from hardware device driver level to data management in the cloud and graphical user interfaces
- Experience in developing embedded software using RTOS or embedded Linux
- Knowledge of Newtonian and optics physics

Physical requirements include:

- Ability to work in excess of a 40-hour week if necessary
- Ability to walk, stand, and sit for periods of time in an office and at times an outdoor environment for field work and testing equipment
- Must have manual dexterity to operate computer keyboard, standard office equipment and Geometrics products
- Must be able to lift/move objects up to twenty-five pounds, possibly more.
- Able to see and hear to participate in "in-person" and "virtual" meeting, with shared computer screens and other remote technology
- May need to work from Geometrics Corporate office in San Jose, CA for extended periods of time
- Ability to travel (Valid Drivers License and Passport, domestic and internationally)

To apply, please send your resume and cover letter to: **careers@geometrics.com**, include your name and EE22 in the subject line. At this time, Geometrics is not able to sponsor applicants for work visas. www.geometrics.com

Geometrics is an EEO/AA Employer. Veterans/Disabled and other protected categories are encouraged to apply.

This position requires access to export-controlled information and employment is contingent on obtaining U.S. Government export control authorization, to the extent required by law.