

Job Position: Research Engineers & Scientists – Sensors and Devices

Job Description

X-wave Innovations, Inc. (XII) is a Research and Development (R&D) firm located in Gaithersburg, Maryland. We conduct state-of-the-art research and product development in the fast-evolving areas of Sensor Technologies, Ultrasound, Nondestructive Testing (NDT)/Structural Health Monitoring (SHM), Artificial Intelligence/Machine Learning (AI/ML) and Signal/Image Processing, Electronic Systems and Control, and Advanced Materials Processing. We have several job openings for highly self-motivated R&D Engineers and Scientists with strong interest and track record in the fields of Sensors and Instrumentation, Ultrasound, NDT/SHM, Electromagnetics, Additive Manufacturing, Hardware/Software, etc. Excellent work ethics, as well as good writing/communication skills, are expected. **US citizen or Permanent Resident is preferred.**

Qualifications

- Ph.D. or MS with 5+ years of hands-on R&D experience in relevant fields.
- Strong background and knowledge in designing, modeling, simulating, fabricating, testing, and integrating Sensors/transducers (Piezoelectric/EMAT/Eddy Current/Magneto-resistive/etc.) and systems.
- Hands-on experience in sensor and instrumentation (e.g., electronic circuitry, embedded hardware/software and system design, test and experiment design and construction, etc.).
- Solid background in Ultrasonics and Acoustics, Electromagnetics, and NDT/SHM is highly desired.
- Experience in AI/ML for NDT/SHM and/or advanced material processing (e.g., additive manufacturing, residual stress measurement, etc.) is also highly desirable.
- Experience with the ideation, creation, and maturation of standalone software tools (e.g., semi-analytical approaches, quick-look tools, GUI creation, etc.) is also highly desirable.
- Track record of R&D excellence, including publications.
- Experience in a small R&D organization is a big plus.

Job Duties

- Conduct R&D in the fields of sensors and instrumentation, Electromagnetics, ultrasound, AI/ML, additive manufacturing and relevant applications
- Design and develop prototype systems from concepts
- Create, test, and improve prototype hardware and/or software
- Write research technical reports and proposals

Education

Ph.D. or M.S. in ME, EE, Physics, or related field

We offer competitive salary along with a full benefit package (e.g., medical/dental/vision insurance, 401K, profit-sharing, paid holidays, vacation, etc.). XII is an EEO/AA employer.