

Opportunity Title: ORNL Cybersecurity for Energy Delivery Systems Post-

Master's Research Associate

Opportunity Reference Code: ORNL18-84-EESRD

Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL18-84-EESRD

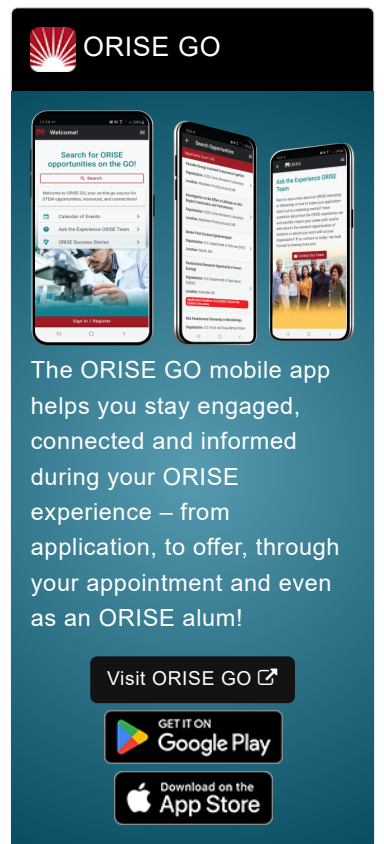
Description The Sensors and Embedded Systems Group within the Electrical and Electronics Systems Research Division at Oak Ridge National Laboratory seeks applications for a Post-Master's Research Associate with emphasis in the area of cybersecurity for energy delivery systems.

The Sensors and Embedded Systems Group develops novel or specialized sensor technologies and performs R&D in sensor applications in order to advance the state of the art measurement technologies, methods and their use in energy and national security applications. A current focus area of the group is the research and development of novel sensing techniques merged with cyber-resilient sensor communication architectures. The primary function of this position is to investigate organizational structures and their interactions within the energy sector and cybersecurity community for the purpose of developing effective communication frameworks and coordinated processes that enable the rapid research, development and distribution of cyber-mitigation solutions for the nation's energy system.

The successful candidate will work with a multidisciplinary team to investigate a framework for rapid identification of malware threats to the energy sector, efficient response to identified threats, and the dissemination of developed solutions from vendors and researchers to end-users. This work will involve analyzing organizational structures and communication processes in order to develop a streamlined approach that coordinates the interactions among energy stakeholders when malware comes to view in the energy delivery system. The candidate will interact with different organizations including, but not limited to, universities, government, utilities, vendors, and National Laboratories to investigate previous cyber incidents and build use cases. An ideal candidate will have knowledge of cybersecurity regulations, requirements and best practices in the energy sector including oil and gas. It is also preferred that the candidate has an understanding of the regulatory bodies and organizations that play a role in securing the Nation's energy infrastructure from cyber-attacks. The candidate will be expected to work independently and in a team environment and will participate in the design of experiments and testing. The candidate will be expected to thoroughly document work performed in the form of reports, presentations and peer-reviewed publications.

Qualifications Candidates must have a master's degree in electrical engineering or computer science and have demonstrated an aptitude to develop complex experiment design and testing. Excellent communication skills including verbal, presentation, and writing skills are required to enable effective interaction with technical peers and program managers. Additionally, this position requires that the candidate work with other members of the team to develop new programs, write proposals, estimate costs and pursue new funding opportunities.

Applicants cannot have received the most recent degree more than five





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years prior to the date of application and must complete all degree requirements before starting their appointment.

The ORNL Postgraduate Research Associates Program is administered by Oak Ridge Associated Universities through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE).

- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
 - **Degree:** Master's Degree.
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([16](#) )
 - **Engineering** ([27](#) )

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