Opportunity Title: ORNL Controls Hardware Team Post Bachelor Associate
Opportunity Reference Code: ORNL16-38-RAD

Organization	Oak Ridge National Laboratory (ORNL)
Reference Code	ORNL16-38-RAD

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Description

Student internship position supporting SNS Controls engineers in the research and development of Matlab/Simulink models for the ring low-level RF system. Models for the tetrode amplifiers, ferrite RF cavities and latency are important for properly understanding the existing control algorithm as well as assessing the correct architecture for the new LLRF control system for the ring.

The candidate must be actively pursuing a Master's degree in Electrical Engineering. They shall have practical knowledge of Matlab and Simulink in the application of modeling continuous and discrete time dynamic systems. The candidate shall have undergraduate course experience automatic control systems with working knowledge of the following: Laplace and Z-transforms, state-space formalism, continuous-to-discrete time conversion of dynamic systems, stability, state feedback, controllability, observability, and optimal control. The ability to design and simulate HDL code for Xilinx FPGAs is highly desirable. Basic knowledge of accelerators and RF systems is a plus. The candidate must be capable of working independently with minimum supervision from managers and/or engineers. Excellent written and verbal communication skills along with a highly professional manner is required.
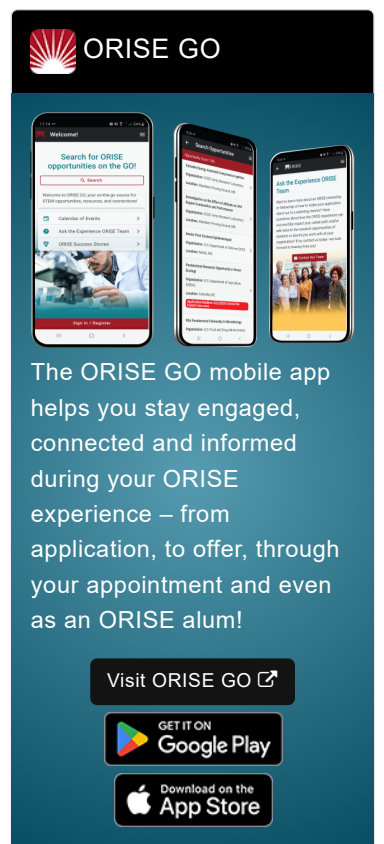
Qualifications

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Applicants cannot have received the most recent degree more than three years prior to the date of application and must complete all degree requirements before starting their appointment.

This appointment is offered through the ORNL Postgraduate Research Associates Program and is administered by ORAU through the Oak Ridge Institute for Science and Education (ORISE).

Eligibility Requirements

- **Degree:** Bachelor's Degree received within the last 36 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (16 👁)

- **Engineering** ([27 👁](#))

Affirmation   I certify that I have completed coursework towards a degree in science, technology, engineering, mathematics, or a related field.

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