

Opportunity Title: NIH NCI Computational Physicist

Opportunity Reference Code: NIH-NCI-2021-01

Organization National Institutes of Health (NIH)

Reference Code NIH-NCI-2021-01

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Description The National Institutes of Health (NIH) is offering a research opportunity in the DCEG/Radiation Epidemiology Branch. The participant will be involved in two major projects on medical radiation dosimetry. First, he/she will conduct normal tissue dose calculations for proton therapy patients using Monte Carlo simulations of proton therapy procedures to support the US pediatric proton patient study. The participant will be involved in dosimetry for patients treated by both conventional passive scattering and modern pencil beam scanning modalities.

Additionally, the participant will be involved in patient-specific nuclear medicine dosimetry, which will contribute to establishing a new epidemiological study of second cancers in thyroid cancer patients. He/she will work directly with the collaborators at the University of California San Francisco to extract pediatric thyroid cancer patient data from the hospital electronic database and to estimate normal tissue doses by using Monte Carlo simulations combined with patient-specific SPECT/CT images.

Participant Benefits

The participant will receive a competitive monthly stipend for living and other expenses, as determined by the NIH. Stipends are typically based on academic level, discipline, and experience. You may also be eligible to receive a health insurance allowance, reimbursement of travel/training, and/or a relocation allowance, determined on a case-by-case basis.

Proof of health insurance is required for participation in this program, and may be purchased through ORAU health insurance plan.

Appointment Length

The initial appointment is typically full-time for up to one year. Appointments may be renewed annually up to four additional years upon recommendation of NIH/NCI, contingent on the availability of funds. The desired appointment start date is August 2, 2021, however, the exact start dates will be determined at the time of selection and in coordination with the selected candidate.

Nature of the Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOE, NIH, NCI or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

If you have any questions, please send an email to nihiprograms@orau.org.




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Qualifications

The ideal candidate should have the following:

- A Ph.D. degree in physics, medical physics, health physics, or related discipline.
- More than 10 years of expertise with Monte Carlo simulations of proton treatment procedures in clinical settings will be preferred.
- Strong expertise in the proton Monte Carlo code, TOPAS, will be particularly preferred.
- Certification in medical physics, proton therapy, or Monte Carlo radiation simulations will be favorably considered.

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Communications and Graphics Design** (1 )
 - **Computer, Information, and Data Sciences** (3 )
 - **Engineering** (4 )
 - **Life Health and Medical Sciences** (4 )
 - **Physics** (1 )