



## Internship Title

Internship – Monte Carlo simulation of radiation transport in the terrestrial and freshwater environments

## Duration of Internship

12 months

## Organizational Setting

Department: NA (Nuclear Sciences and Applications)  
Division: NAPC (Division of Physical and Chemical Sciences)  
Section: RCRT (Radiochemistry and Radiation Technology Section)  
Unit: TERC (Terrestrial Environmental Radiochemistry Laboratory)

## Main Purpose

The main purpose of the internship is to study and model radiation transport in the terrestrial and freshwater environments by Monte Carlo method in support to research activities conducted within the IAEA Coordinated Research Project K41023 “Improving External Dosimetry for Terrestrial Animals and Plants”.

## Tasks / Key Results Expected

- To develop computational models for radiation transport simulation by Monte Carlo method
- To perform calculations of radiation fields from photon and electron sources in the terrestrial and freshwater environments
- In cooperation with IAEA scientific secretaries and participants of the CRP K41023 to prepare technical reports and scientific publications.

## Knowledge, Skills and Abilities

- Physics, Mathematics (Required)
- Programming (Asset)
- Scientific software, e.g., R-Studio, Matlab, Octave, Mathematica, other (Asset)
- Preparation of scientific documents (Asset)

## Qualifications and Experience

- University degree in Physics, Mathematics, Nuclear Engineering
- Knowledge of nuclear physics and radiation transport modelling
- Knowledge of programming (Fortran, C/C++, Python)
- Excellent written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Russian, Spanish) an asset.



## Internships

The IAEA accepts a limited number of interns each year. The internships are awarded to persons studying towards a university degree or who have recently received a degree (see Internship web pages for further details).

The purpose of the programme is:

- To provide interns with the opportunity to gain practical work experience in line with their studies or interests, and expose them to the work of the IAEA and the United Nations as a whole;
- To benefit the IAEA's programmes through the assistance of qualified students specialized in various professional fields.
- The duration of an internship is normally not less than three months and not more than one year.

## Applicant Eligibility

- Candidates must be a minimum of 20 years of age and have completed at least three years of full-time studies at a university or equivalent institution towards the completion of a first degree.
- Candidates may apply up to one year after the completion of a bachelor's, master's or doctorate degree.
- Candidates must not have previously participated in the IAEA's internship programme.
- Good written and spoken English essential; fluency in any other IAEA official language (Arabic, Chinese, French, Spanish or Russian) an asset.
- Candidates must attach two signed letters of recommendation to their application.