

Job Description for Professional Posts

Reference:NA2024/21

Position and Grade:	Associate Nuclear Physicist (EXFOR)
Organizational Unit:	Nuclear Data Service Unit Nuclear Data Section Division of Physical and Chemical Sciences
Duty Station:	Vienna
Type/Duration of Appointment:	FT – JPO, 1 year

Organizational Setting

The Department of Nuclear Sciences and Applications (NA) implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Division of Physical and Chemical Sciences is responsible for assisting and advising Member States in research and development for the nuclear sciences, especially the physical and chemical sciences. Specifically, the Division provides support to Member States in the following fields: production of radioisotopes and radiolabelled products for applications in health care and industry; radiation source applications; research reactor utilization; applications of accelerators and nuclear instrumentation; nuclear and atomic data for applications; controlled nuclear fusion and isotope hydrology and geochemistry.

Additionally, the nuclear science activities carried out by the Nuclear Data Section and Physics Section in the Division of Physical and Chemical Sciences of the Department of Nuclear Sciences and Applications fall under Major Programme 1.

The Nuclear Data Section (NDS) is primarily responsible for the generation and maintenance of a number of high-quality and fundamental nuclear and atomic databases and providing services to users worldwide. The main means of dissemination is via the NDS website, which provides interactive tools to present the required data.

Main Purpose

As a member of the Nuclear Data Service Unit, the Associate Nuclear Physicist contributes to the compilation and dissemination of experimental and evaluated nuclear data and their bibliographies. The Associate Nuclear Physicist is provided with opportunities for practical exposure to programme

development and execution in the scientific area of nuclear data under the guidance of senior professionals.

Role

The Associate Nuclear Physicist contributes to the IAEA nuclear databases such as EXFOR as (1) a compiler collecting nuclear data and their bibliographies; (2) an indexer identifying and classifying publications relevant to nuclear databases; (3) an analyst reviewing the contents of nuclear databases for quality assurance; and (4) a programmer developing tools to support compilation and dissemination of nuclear data.

Partnerships

The Associate Nuclear Physicist maintains professional relationships with IAEA scientific and technical staff and with external stakeholders measuring, evaluating, and using nuclear data.

Functions / Key Results Expected

- Scan, identify and classify scientific publications relevant to the nuclear databases.
- Prepare nuclear data and bibliography inputs to the IAEA nuclear databases.
- Analyse the IAEA nuclear databases for improvement of their completeness and quality.
- Develop tools for compilation and dissemination of the nuclear data and their bibliographies.

Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.
Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

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Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Analytical thinking	Associate	Gathers and analyses information, identifying critical relationships and patterns among data and proposes workable solutions.
Technical/Scientific Credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/scientific methods and concepts.

Expertise	
Expertise	Description
Physics/Nuclear Physics	Basic knowledge in nuclear physics or related field
Information Technology/Computer Programming	Experience in programming in a language such as Python

Education, Experience and Language Skills

- University degree in physics, chemistry, library science, or a related field. A higher degree is an asset.
- Minimum of two years of experience in the field of research or application in physics, chemistry, or library science at national or international level.
- Experience in basic or applied nuclear physics experiment or calculation is an asset.
- Experience in programming is an asset.
- Fluency in written and spoken English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.

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