

INSO 2024 – First Circular

May 2024

Dear Colleagues,

We have the honor of hosting the first International Nuclear Science Olympiad (INSO), which will be held in New Clark City, Pampanga, Philippines from 31 July to 7 August 2024. In anticipation of this inaugural event, we are pleased to share with you the following information that will help you prepare for the competition.

I. Conduct of the Experimental Exam

Due to logistical challenges associated with using radioactive sources, radiation detectors, and counting systems for experiments, the 1st INSO Scientific Committee has decided that the experimental component of the first INSO will focus on either experimental data processing and/or computational experiments.

In line with this, participants are expected to have a working knowledge of using a spreadsheet application for organizing, managing, and analyzing data. The 1st INSO organizing team will provide a laptop with Microsoft Excel for the participants to use during the experimental exam.

In addition, potential computer codes, software, and/or applications that **may be** utilized during the competition include the following:

- **EpiXS:** A Windows application for photon attenuation quantity generation using EPICS2017 (ENDF/B-VIII) or the EPDL97 (ENDF/B-VI.8) photoatomic libraries. This software can be downloaded from this link: <https://www.pnri.dost.gov.ph/index.php/downloads/software/epixs>
- **SRIM:** The Stopping and Range of Ions in Matter (SRIM) is a collection of software packages which calculate many features of the transport of ions in matter. This software can be downloaded from this link: <http://www.srim.org/>
- **DCAL:** A comprehensive software system for calculating tissue dose and subsequent health risk from intakes of radionuclides or exposure to radionuclides present in environmental media. This software can be obtained from the official website of the US Environmental Protection Agency. This software can be downloaded from this link: <https://www.epa.gov/radiation/dcal-software-and-resources>
- **JANIS:** A Java-based nuclear information software application designed to facilitate the visualization and manipulation of nuclear data. This software can be obtained from the official website of the Nuclear Energy Agency. This software can be downloaded from this link: https://www.oecd-nea.org/jcms/pl_39910/janis

During the competition, the 1st INSO Scientific Committee will provide sufficient instructions on the use of the software/ computer applications that will be included in the final set of experimental problems. Nonetheless, participants are encouraged to be familiar with these computational tools prior to the competition.

We look forward to your participation in the 1st INSO.

1st INSO Organizing Committee