



Training Workshop on Mobile Radiological Mapping Using Instrumented Uncrewed Aerial and Ground Vehicles

**Hosted by the
Government of the Austria**

through the

Seibersdorf, Austria

13 - 17 May 2024

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Information Sheet

Introduction

Radiological mapping using ground and aerial instruments is increasingly used in areas such as nuclear security, radiation protection, remediation, nuclear emergency and preparedness, and others.

The UAV (Uncrewed Aerial Vehicle) and UGV (Uncrewed Ground Vehicle) Systems became effective tool for basic radiation detection, uncontrolled radioactive sources search, investigation of illegal handling of radioactive materials, characterization of sites with potential contamination or exceeded NORMs.

This modern technology is characterized by high deployment flexibility, application operability and the speed of obtaining results for further decision-making. There are also significant aspects of radiation protection when using these technologies in contaminated areas of high dose rate fields.

The workshop will allow participants to gain knowledge about modern radiation detectors for field

measurements, mobile platforms used for radiation detection and gamma spectroscopy, methods of radiological data processing and analysis, as well as to acquire basic practical skills from real measurements in field conditions.

Objectives

The goal of the workshop is to share knowledge and experience between experts and workshop participants. The event will offer an introduction to cutting-edge technology, a comparison of the performance of various application systems based on UAVs and UGVs for typical radiation applications, as well as a demonstration of robustness for working in field conditions.

Topics:

- Field gamma spectroscopy and new detectors,
- Current ground and aerial (mobile) gamma spectroscopy instrumentation,
- Outline of field measurement strategies for typical radiological mapping scenarios,
- Principles of radiological data processing and postprocessing, data analyses, and metrology,
- Practical field measurement using UGV and UAV based systems,
- Implementation of photogrammetry for radiological mapping,
- Data handling and interpretation, spatial interpolation techniques for data visualisation.

Target Audience

This training workshop is aimed at radiation specialists involved in radiation monitoring, field measurement and radiation mapping in various application areas. Advanced knowledge in nuclear instrumentation is preferred.

Working Language(s)

English

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **1 February 2024**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed in above Topics Section.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than pages (including figures and tables) and should not exceed words. It should be sent electronically to Mr Petr Sladek, the Scientific Secretary of the event (see contact details in below Visas Section), not later than. Authors will be notified of the acceptance of their proposed presentations by.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)** which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **1 February 2024**.

Visas

Participants who require a visa to enter Austria should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Austria.

Organization

Scientific Secretary

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.