



Joint ICTP-IAEA Workshop on Edge Artificial Intelligence for Environmental and Radiation Sensing

DESCRIPTION:

This workshop is dedicated to exploring the transformative potential of Edge Artificial Intelligence (EdgeAI) and Tiny Machine Learning (TinyML) in advancing environmental and radiation sensing technologies.

MORE INFORMATION:

By enabling powerful, real-time data analysis directly on resource-constrained devices, EdgeAI and TinyML offer a crucial shift from cloud-dependent processing. This paradigm allows for the deployment of intelligent, ultra-low-power sensors in remote, infrastructure-poor, or time-critical environments. Participants will learn how these technologies facilitate tracking climate-related changes, monitor environmental parameters and provide rapid, localized radiation detection. Ultimately, the focus is on developing and deploying robust, autonomous, and cost-effective sensing solutions essential for proactive disaster management, environmental protection, and public safety.

TOPICS:

- Introduction to EdgeAI and TinyML
- Low-Power Edge Devices for Environmental Monitoring
- Small Size, Weight, and Power (SWaP) Radiation Detection Instrumentation
- Deploying Machine Learning Models on Edge Devices
- Case Studies & Applications
- Data Collection and Preprocessing for EdgeAI
- Energy-Efficient AI Model Design
- Scalability and Sustainability of EdgeAI Solutions



14 - 18 September 2026



Bishkek - Kyrgyzstan



**Deadline:
31 May 2026**

DIRECTORS:

A. Soltobaev, ISOC, Kyrgyzstan
B. Moldobekov, CAIAG, Kyrgyzstan
M. Matos, IAEA, Austria
T. Sultanov, ISOC, Kyrgyzstan

LOCAL ORGANIZER:

M. Zennaro, ICTP, Italy

FURTHER INFORMATION:

E-mail: smr4190@ictp.it



Web: <https://indico.ictp.it/event/11116/>

Female scientists are encouraged to apply.

GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

