

INVITATION to the Experiential Learning Days for Students on Radiology

Organised by: The Institute of Mathematics and Basic Sciences in cooperation with the Artúr Görgey Chemical Defense and Information Center (GAVIK), with additional speakers from IDEAS Science Ltd, and CryDet Ltd.

Focus: "Military Methods and Possibilities of Radiation Detection of Radioactive Materials."

Dates and Languages:

- November 27 (Monday) in English, Starting time: 9 a.m.
- December 01 (Friday) in Hungarian, Starting time: 9 a.m.

Location of both days: Lecture Hall 11, Knowledge Transfer Center (TK Building), MATE, Szent István Campus

Overview: This Experiential Learning Day is designed to offer students a unique blend of theoretical knowledge and practical experience, closely aligned with the MATI Institute's course on "Remote Detection and Measurement of Radioactive Substances."

Morning Sessions:

- **Interactive Lectures:**
 - Attendees will have the opportunity to listen to expert presentations covering the possibilities of radiation detection and military methods.
 - The session is open to all interested students, with no registration required for this part.

Afternoon Sessions:

- **Hands-on Practical Exercises:**
 - Participants will engage in hands-on emergency measurements, including dose rate measuring, pollution measuring, and isotope identification.
 - These activities will be guided by top military experts in the field.
 - **Note:** Participation is limited to a total of 25 people. This session is exclusively for students enrolled in the related C-subject and those who have pre-registered. (see links below)

Detailed Program:

November 27 (Monday)

- **8:30 a.m. - 8:55 a.m.:** Reception and Assembly
 - Greeting guests and participants,
- **9:00 a.m. - 9:10 a.m.:** **Welcome and Introduction**
 - Dr. László Székely, Director of MATI Institute, sets the stage for the day's events.
- **9:10 a.m. - 9:25 a.m.:** **Spotlight on Alpha Radiation Detection**

- Dr. István Róbert Nikolényi discusses the challenges and breakthroughs in alpha radiation detection, with a focus on the innovative RemoteAlpha project.
- **9:25 a.m. - 11:45 a.m.: Military Expertise in Radiation Detection**
 - Presentations by GAVIK's top military officers and specialists, covering:
 - The operation and strategic importance of nuclear weapons.
 - Risks associated with depleted uranium ammunition.
 - Hungarian Defense Forces' capabilities in radiation detection.
 - These presentations address the common misconceptions surrounding nuclear risks, radiating explosives, and their detectability. It provides a unique opportunity to hear directly from some of the foremost practical experts in the field. The session will not only impart valuable knowledge but also allow for an interactive Q&A, where participants can engage with the experts and have their questions answered.
- **10:45 a.m. - 11:05 a.m.: Break**
 - A chance to refresh and network with fellow participants and speakers.
- **11:45 a.m. - 12:05 p.m.: Behind the Scenes of RadiZcan Development: Challenges and Innovations in Radiation Detection**
 - Presentation by Györgyi Bela, Béla Mihalik (IDEAS Science Kft.), Zalán Mészáros (MH-GAVIK), and Zoltán Csiki (Crydet Kft.)
 - Research and development in radiation detection are inherently complex. This presentation will showcase a recently completed project, resulting in the development of the RadiZcan system, a mobile radiation detection pod. The speakers will reveal behind-the-scenes insights into the development process, highlighting the challenges and innovative solutions encountered along the way.
- **12:05 p.m. - 12:10 p.m.: Transition to Practical Session**
 - Briefing on the afternoon's practical activities.
- **12:10 p.m. - 1:45 p.m.: Lunch Break**
- **1:50 p.m. - 3:30 p.m.: Hands-On Practical Session**
 - Under military experts' guidance, participants engage in emergency measurements, including dose rate, pollution measuring, and isotope identification.
 - Note: Limited to 25 participants – only related C-subject students and pre-registered participants.
 - **Registration link for November 27 (Monday 1:50 p.m. - 3:30 p.m.)- English (deadline: November 25):** <https://forms.gle/85E8TT5PZ4avwd9Z9>

Only the first 19 registrations are accepted. One day before the event, everyone will receive a confirmation on whether their registration has been accepted.
- **3:30 p.m. - 3:40 p.m.: Closing Remarks**