

Day 1: Wednesday, October 8, 2025

08:30-09:00 Registration

09:00-09:10 Opening and practical information

Guillaume Lutter, DTU Sustain

09:10-09:15 Welcome

Claus Hélix-Nielsen, Head of Department, DTU Sustain

09:15-09:25 News from NKS

Kasper Andersson, DTU Sustain & NKS

Session 1: AI in Nuclear Analysis/Gamma-ray spectrometry

09:25-10:15 From Machine Learning to Physics-Informed, Cognitive AI in Nuclear Analysis

Marcus Neuer, innoRIID / Ametek Department for R&D, Invited speaker

10:15-10:45 Coffee/Tea break

10:45-11:30 A Practical Guide to AI Tools for Gamma-Ray Spectroscopy

Alexandr Malusek, Linköping University, Invited speaker

11:30-12:05 AI used in Germanium detector health prediction

Tommy Tallqvist, Mirion Technologies

12:05-13:00 Lunch break

Session 2: Data Analysis & Evaluation

13:00-13:10 Background survey, part 1

Guillaume Lutter, DTU Sustain

- 13:10-13:20 Background survey, part 2
András Kocsonya, Centre for Energy Research
- 13:20-13:40 Data analysis intercomparison
Guillaume Lutter, DTU Sustain
- 13:40-14:00 Problem in U-238 (Pa-234m) determination
Roy Pöllänen, STUK, Online
- 14:00-14:15 Failed peak identifications caused by peak overlaps in gamma-spectrometry and how to resolve them?
András Kocsonya, Centre for Energy Research
- 14:15-14:40 Improvement of reliability of evaluation of environmental spectra by simultaneously applied computer codes
András Kocsonya, Centre for Energy Research
- 14:40-15:05 Tea/Coffee break
- 15:05-15:15 Reducing true coincidence summing effects by using an absorber - practical experiences
Alexander Muring, Institute for Energy Technology (IFE)

Session 3: Instrumentation

- 15:15-16:00 BrightSpec
Vicente Osorio, BrightSpec NV

Session 4: Discussion & Networking

- 16:00-16:30 Free

16:30-21:30 Social activities: Classic Car House visit + Dinner

Day 2: Thursday, October 9, 2025

08:30-09:00 Morning Warm-Up

Session 5: *Laboratory News*

09:00-09:15 Recent activities/development in STUK's gamma ray laboratory

Jani Turunen, STUK

09:15-09:30 Gamma Spectroscopy activities at the Nuclear Security Department of the Center for Energy Research, Hungary

Judith Dembo, HUN-REN Centre for Energy Research

09:30-09:45 Challenges with gamma spectrometry at ESS and how could AI help

Nikola Markovic, European Spallation Source

09:45-10:00 Risø gamma spectrometry laboratory

Guillaume Lutter, DTU Sustain

Session 6: *Software & Methods*

10:00-10:25 LVis & tRAYcy - the basis for a new approach to gamma spectrometry

Marc Breidenbach, AMETEK GmbH ORTEC

10:25-10:35 Ba-133 transmission measurement for geometry validation

Asser Nyander Poulsen, Danish Health Authority, Radiation Protection

10:35-11:05 Coffee/Tea break

11:05-11:30 Practical applications of ISOCS Multi-Efficiency modelling for complex pipe geometries at a nuclear power plant – an in-house development

Ylva Ranebo, RadPhys Consulting AB

11:30-11:45 How to extend efficiency calibration curves to low and high energy-ranges?
András Kocsonya, Centre for Energy Research

Session 7: Applications

11:45-12:10 List Mode: 2D scanning for nuclides in raw waste
Bas Janssen, NRG PALLAS, Online

12:10-12:20 Application of ^{137}Cs and plutonium isotopes for sediment dating in Nebkha sediments in northwest China
Yihong Xu, Anhui Normal University

12:20-13:20 *Lunch break*

13:20-13:40 Test of symmetries of fundamental forces in nuclear reactions using HPGe detectors
Luca Zanini, DTU Sustain

13:40-14:10 Field gamma spectrometry measurements near a nuclear power plant and on Roskilde Fjord
Sven Nielsen, DTU Sustain

Session 8: Ending

14:10-14:20 Closing
Guillaume Lutter, DTU Sustain

14:20-15:00 Open Discussion & Networking