

Please contact Saija Laitinen should technical problems arise during the webinar :



Roy Pöllänen



Saija Laitinen

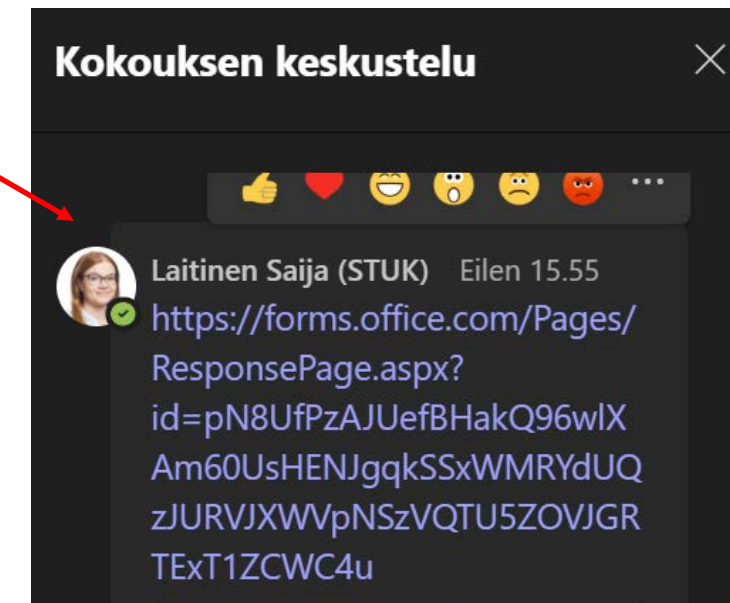
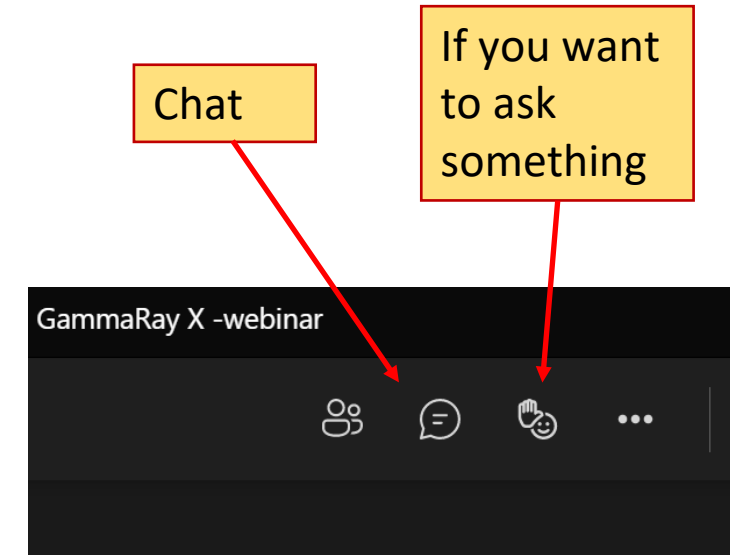


Jani Turunen

Instructions about the webinar regulations

- If you want to ask/comment the presentations: Please use the chat option (this is preferred!)
- If you want to orally comment something during presentations: Please rise your hand
- Link of the webinar feedback is in the top of the chat (and in the e-mail sent in last Friday). Feedback is anonymous and you can use it several times during the webinar.

<https://forms.office.com/Pages/ResponsePage.aspx?id=pN8UfPzAJUefBHakQ96wIXAm60UsHENJgqkSSxWMRYdUQzJURVJXWVpNSzVQTU5ZOVJGRTEt1ZCWC4u>



GammaRay X webinar

20-21.10.2021

Organizing team:

- Roy Pöllänen (STUK)
- Jani Turunen (STUK)
- Kjartan Guðnason (IRSA)
- Henrik Ramebäck (FOI)
- Sven Nielsen (DTU Nutech)
- Anna Banel (IFE)
- Thomas Alexandersen (IFE)



Past seminars

1. GammaSem 2009
2. GammaSem 2010
3. GammaWorkshops 2011
4. GammaWorkshops 2012
5. GammaTest 2013
6. GammaUser 2014
7. GammaSpec 2016
8. GammaSpec 2017
9. GammaRay 2018

**Plan: Anniversary seminar GammaRay X
in Helsinki, STUK, at September 2020**

→ webinar 20-21.10.2021



GAMMARAY X: Seminar for users of gamma-ray spectrometry

Activity type: M: Measurement Strategy
Lead country: Finland (STUK)
Partner countries: Finland (STUK), Sweden (FOI), Norway (IFE), Iceland (IRSA), Denmark (DTU)

Rank

2

Mean overall mark: 5.7
Mean criteria mark: 5.5

Proposal objective

The proposed activity addresses users of gamma spectrometry in the Nordic countries and involves seminar on gamma-ray spectrometry and intercomparison exercises. The scope of this anniversary seminar will be broad and material from the 2019 activity RINFOR will be used.

Evaluator	Nordic Value	Tech/sci standard	Distinct goals	Relevancy to end users	Young scientists	Links to other programmes	Overall mark
1	6	4	2	6	6	4	4
2	7	7	6	7	4	5	6
3	7	6	5	6	6	5	6
4	7	6	6	7	6	6	7
5	7	6	6	7	5	6	6
6	6	4	6	6	6	4	6
7	6	5	4	5	2	5	5
Mean	6.6	5.4	5.0	6.3	5.0	5.0	5.7

Evaluator comments on GAMMARAY X:

- The importance of maintaining an existing community should not be underrated.
- The workshop has been very popular and has provided important information for the Nordic countries. The seminar has also served as a good network and learning possibility for young people.
- The project provides for an excellent learning opportunity for young scientists/staff at the workshops. Therefore high rating for participation of young scientists.
- Expensive for a seminar with few expenses – I suggest a reduction on up to 50 %.

- Number of participants: ~80 → One of the most popular NKS events
- Participants are from:
 1. Finland
 2. Sweden
 3. Denmark
 4. Norway
 5. Iceland
 6. Belgium
 7. Germany
 8. France
 9. Japan
- Note: UTC times are used in the program!

15.10.2021


GammaRay X Webinar Program

Wednesday, 20 October 2021			
Start (UTC)	End (UTC)	Speaker	Title
Opening session			
7:00	7:10	Roy Pöllänen, STUK	Opening and general information
7:10	7:40	Mark Dowdall, DSA	Invited lecture: A Wide Spectrum: NKS Gamma Spectrometry Activities Over Two Decades
7:40	8:25	Marie-Christine Lévy, CEA	Invited lecture: Focus on measurements and corrective factors of low-energy X- and gamma-rays
8:25	8:45	-	Break
Detection limits & coincidence correction			
8:45	9:05	Henrik Rameback, FOI	Recent work on detection limits in gamma ray spectrometry
9:05	9:15	Tim Vidmar, SCK CEN	Validation of EFFTRAN for TCS corrections
9:15	9:35	Henrik Rameback, FOI	Interlaboratory comparison (ILC) on simulated air filter + discussion
9:35	10:30	-	Lunch break
Uncertainties & efficiencies			
10:30	11:15	Alexander Mauring, IFE	Invited lecture: Estimating measurement uncertainties when the normal GUM approach fails
11:15	11:35	Marc Breidenbach, AMETEK GmbH	Optimizing the detector model to improve the overall quality of efficiency transfer calculations
11:35	11:50	Roy Pöllänen, STUK	Renewal of efficiency calibrations in STUK
11:50	12:10	-	Break
Equipment & development			
12:10	12:30	Riina Virta, HIP	Passive Gamma Emission Tomography (PGET) for verifying spent nuclear fuel
12:30	12:45	Leen Verheyen, SCK CEN	Automatic liquid nitrogen filling system in the gamma ray spectroscopy lab
12:45	13:05	Sakari Ihanntola, STUK	Novel Detector for Finnish Early Warning Network
13:05	13:20	-	Break
13:20	13:30	Jani Turunen, STUK	Radical improvements to STUK's laboratory analysis capability
13:30	13:45	Hussam Badran, STUK	Non-destructive sample analysis using coincidence technique with the upgraded PANDA device
13:45	14:00	Timo Hilden, STUK	New multi-detector coincidence devices at STUK

15.10.2021



Thursday, 21 October 2021			
Start (UTC)	End (UTC)	Speaker	Title
Laboratory measurement and development			
7:00	7:15	Sven Poul Nielsen, DTU	Update on gamma spectrometry at DTU Risø
7:15	7:25	Satu Rautio, Loviisa NPP	Gamma measurements at Loviisa Power Plant
7:25	7:35	Eric Dorval, VTT Technical Research Centre of Finland	An overview of gamma-spectrometry activities at VTT
7:35	7:55	Nicola Markovic Barseback Kraft AB	Source homogeneity assumption in object gamma spectrometry
7:55	8:05	Julia Puputti, University of Oulu	Callio Lab – multidisciplinary underground research centre
8:05	8:20	-	Break
Field measurements, nuclear forensics and applications			
8:20	8:50	Harri Toivonen, HT Nuclear	Invited lecture: Simulation of radiation in-field operations for training, exercises, and capability testing
8:50	9:20	Mark Dowdall, DSA	NKS RINFOR: Improvement of National Nuclear Forensics Gamma Spectrometric Core Capabilities
9:20	9:40	Eric Tischenbach, Mirjan	AEGIS Field Measurement
9:40	10:30	-	Lunch break
Applications, software			
10:30	10:50	Matti Kalliokoski University of Helsinki	Gamma-ray imaging with a GeG device
10:50	11:10	Joonas Tikkanen, STUK	Fluence spectrum of an X-ray irradiator: How to obtain fluence from a measured spectrum with MC data
11:10	11:20	Mats Eriksson University of Linköping	On the use of principal component analysis, PCA, in gamma spectrometry
11:20	11:30	Sigurður Emil Pálsson, University of Iceland	Using first responder gamma spectrometric software for teaching and emergency response
11:30	11:50	-	Break
NORM, nuclear fuel & waste			
11:50	12:20	Antti Kallio, STUK	Invited lecture: Measurements supporting NORM-regulation in Finland
12:20	12:40	Aleksandr Jermolajev, Ignalina NPP	Radiological characterization of radioactive waste and clearance of radioactive waste from regulatory control at Ignalina NPP
12:40	12:50	Thomas Bandur Aleksandersen & Anna Banel, IFE	How IFE contributes to handle challenges associated with LSA waste and contamination?
12:50	13:10	-	Break
Webinar round up			
13:10	13:40	Invited lecturers Facilitator Roy Pöllänen	Panel discussion
13:40	13:50	Roy Pöllänen, STUK	Summary, webinar reporting, future gamma spectrometry meetings/seminars/webinars

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- Invited lecturers:
 - Mark Dowdall (DSA)
 - Marie-Christine Lépy (IRSN)
 - Antti Kallio (STUK)
 - Alexander Muring (IAEA -> IFE)
 - Harri Toivonen (HT Nuclear)
 - Participants were encouraged to give also short (~5-10 min) presentations.
 - For the speakers:
 - Please send your presentation to Saija unless you have already done that. Presentations will be later put in the NKS website (pdf format).
 - Please be careful about the timing (because of the nature of the webinars). General rule: **The presentations should not start earlier and end later than the time mentioned in the program! → Saija will give you a note ~1-5 min before the expected end of the presentation.**