# GammaRay X Webinar Programme (Final, 15.10.2021)

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| **Wednesday, 20 October** |
| **Start (UTC)** | **End (UTC)** | **Duration** | **Speaker** | **Title** |
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| Opening session |
| 7:00 | 7:10 | 10 min | Roy Pöllänen, STUK | Opening and general information |
| 7:10 | 7:40 | 30 min | Mark Dowdall, DSA | **Invited lecture**: A Wide Spectrum: NKS Gamma Spectrometry Activities Over Two Decades |
| 7:40 | 8:25 | 45 min  | Marie-Christine Lépy, CEA | **Invited lecture**: Focus on measurements and corrective factors of low-energy X- and gamma-rays |
| 8:25 | 8:45 | 20 min | - | Break |
| Detection limits & coincidence correction |
| 8:45 | 9:05 | 20 min | Henrik Ramebäck, FOI | Recent work on detection limits in gamma ray spectrometry |
| 9:05 | 9:15 | 10 min | Tim Vidmar, SCK CEN | Validation of EFFTRAN for TCS corrections |
| 9:15 | 9:35 | 20 min | Henrik Ramebäck, FOI | Interlaboratory comparison (ILC) on simulated air filter+ discussion |
| 9:35 | 10:30 | 55 min | - | Lunch break |
| Uncertainties & efficiencies |
| 10:30 | 11:15 | 45 min | Alexander Mauring, IFE | **Invited lecture**: Estimating measurement uncertainties when the normal GUM approach fails |
| 11:15 | 11:35 | 20 min | Marc Breidenbach, AMETEK GmbH | Optimizing the detector model to improve the overall quality of efficiency transfer calculations |
| 11:35 | 11:50 | 15 min | Roy Pöllänen, STUK | Renewal of efficiency calibrations in STUK |
| 11:50 | 12:10 | 20 min | - | Break |
| Equipment & development |
| 12:10 | 12:30 | 20 min | Riina Virta, HIP | Passive Gamma Emission Tomography (PGET) for verifying spent nuclear fuel |
| 12:30 | 12:45 | 15 min | Leen Verheyen, SCK CEN | Automatic liquid nitrogen filling system in the gamma ray spectroscopy lab |
| 12:45 | 13:05 | 20 min | Sakari Ihantola, STUK | Novel Detector for Finnish Early Warning Network |
| 13:05 | 13:20 | 15 min | - | Break |
| 13:20 | 13:30 | 10 min | Jani Turunen, STUK | Radical improvements to STUK's laboratory analysis capability |
| 13:30 | 13:45 | 15 min | Hussam Badran, STUK | Non-destructive sample analysis using coincidence technique with the upgraded PANDA device |
| 13:45 | 14:00 | 15 min | Timo Hilden, STUK | New multi-detector coincidence devices at STUK |

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