

Conference 2019

The 2019 NSFS conference was held at Hanasaari in Espoo/Helsinki, Finland on June 10 – 14, 2019.

Proceedings

Proceedings of the Conference

Scientific programme

NSFS 2019 Final Scientific Programme

Individual contributions

Opening and Bo Lindell Award

Next level in radiation protection: Setting the scene

Actions for justification

New methods and technologies

Medical applications 1: Focus on high dose procedures and safety deviations

Medical applications 2: Collaboration, guidelines and deep-learning to improve optimization

Radiation and nuclear safety research

Nuclear waste management strategies

Modern radioecology

New methods in emergency preparedness

Non-ionizing radiation

Policies, actions and research to support radiation and nuclear safety

Next level in radiation protection: Conclusions

Opening and Bo Lindell Award

S1-01

Bo Lindell Lecture: Making a difference

Mette Øhlenschläger, Danish Health Authority

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S1-02

The fabulous history of radiation protection – Can we learn from the past?

Jack Valentin, Jack Valentin Radiological Protection

Acknowledging the English translations of Bo Lindell's books on radiation, radioactivity and radiation protection.

S1-02-Valentin-2019

Next level in radiation protection: Setting the scene

S2-02

A boost to radiation protection by the Nordic co-operation

Sigurður Magnússon, ¹NKS, ²Icelandic Radiation Safety Authority

S2-02-Magnusson-2019

S2-03

Overview of European radiation protection research activities

Teemu Siiskonen, Radiation and Nuclear Safety Authority (STUK)

S2-03-Siiskonen-2019

S2-04

Nuclear safety knowhow as a national strategy

Marja-Leena Järvinen, Radiation and Nuclear Safety Authority (STUK)

S2-04-Jarvinen-MarjaLeena-2019

S2-05

Current international activities in the field of radiation protection dosimetry and calibrations

Paula Toroi, IAEA

S2-05-Toroi-2019

Actions for justification

S3-01

Health technology assessment – Could RP influence the choice of medical technologies and methods.

Eva G. Friberg, Norwegian Radiation and Nuclear Safety Authority

S3-01-Friberg-2019

S3-02

Nordic participation in European Action Week -Inspections of justification in radiology

Eva G. Friberg, Norwegian Radiation and Nuclear Safety Authority

S3-02-Friberg-2019

S3-03

A road-map for developing referral guidelines for diagnostic imaging in the Russian Federation

Aleksandr Vodovатов, St-Petersburg Research Institute of Radiation Hygiene

S3-03-Vodovатов-2019

New methods and technologies

S4-01

An on-line system for calculating staff doses – the PODIUM project

Anja Almén, Swedish Radiation Safety Authority

NOT AVAILABLE

S4-02

NaCl pellets as prospective dosimeters for hospital applications: preliminary experience from Skåne University Hospital

Lovisa Waldner, Lund University, Sweden

NOT AVAILABLE

S4-03

Spectra Recording Semiconductor Detectors for Medical Imaging
Joonas Tikkanen, Radiation and Nuclear Safety Authority (STUK)
S4-03-Tikkanen-2019

S4-04

Ionizing radiation detection with mobile phones
Panu Pousi and Jan Morelius, Radiation and Nuclear Safety
Authority (STUK)
S4-04-Pousi-2019

Medical applications 1: Focus on high dose procedures and safety deviations

S5-01

INVITED: Radiation protection of patient in cardiology
Joanna Sierpowska, Siun Sote, Finland
NOT AVAILABLE

S5-02

**Radiation protection of staff in cardiology and interventional
radiology**
Timo Mäkelä, Oulu University Hospital, Finland
S5-02-Makela-2019

S5-03

**Patient dose variations in cardiology: KAP values and skin
doses**
Jukka Järvinen, Turku University Hospital, Finland
S5-03-Jarvinen-Jukka-2019

S5-04

**Reporting on radiation safety deviations of medical x-ray
practices in Finland**
Elina Hallinen, Radiation and Nuclear Safety Authority (STUK)
S5-04-Hallinen-2019

Medical applications 2: Collaboration, guidelines and deep- learning to improve optimization

S6-01

INVITED: Effective collaboration between authorities and CT Manufacturers on CT dose optimization

Alexandra Karoussou- Schreiner, ¹on behalf of Heads of European Radiological Competent Authorities (HERCA), ²Radiation Protection Department, Ministry of Health, Luxembourg

S6-01-Karoussou-2019

S6-02

INVITED: From image quality to care outcome

Mika Kortensniemi, Helsinki University Hospital

S6-02-Kortensniemi-2019

S6-03

Nordic guidelines for dose reduction of radiosensitive organs of patients in conventional radiography and fluoroscopy

Anders Widmark, ¹Norwegian Radiation and Nuclear Safety Authority, ²Norwegian University of Science and Technology

S6-03-Widmark-2019

S6-04

Harmonization of radiation protection, imaging and dosimetry practices of I-131 therapy in Finland

Tommi Noponen, Turku University Hospital, Finland

S6-04-Noponen-2019

Radiation and nuclear safety research

S7-01

Cores-Consortium for radiation safety research

Pia Vesterbacka, Radiation and Nuclear Safety Authority (STUK)
S7-01-Vesterbacka-2019

S7-02

Recent Nordic research collaboration results obtained under the NKS-B program

Kasper G. Andersson, NKS, Technical University of Denmark
S7-02-Andersson-2019

S7-03

Radiation protection research: is Nordic cooperation a way forward to ensure sustainable competence and high-quality research?

Christopher Rääf, Lund University, Sweden
S7-03-Raaf-2019

Nuclear waste management strategies

S8-01

INVITED: The role of safety culture and holistic ALARA / ALARP in the optimisation of radioactive waste management in a new nuclear build

Peter Bryant, The Society for Radiological Protection (SRP-UK)
S8-01-Bryant-2019

S8-02

Introducing the concept of the isodose for optimization of decontamination activities based on typical Northern European houses

Yvonne Hinrichsen, ¹Technical University of Denmark, ²Lund University, Sweden
S8-02-Hinrichsen-2019

S8-03

Upper estimates for effective doses from release of ³⁶Cl activity during plasma cutting of the DR3 reactor tank

Jens Søgaard-Hansen, Danish Decommissioning

S8-03-Sogaard-Hansen-2019

S8-04

Difficult to measure beta emitters (^{55}Fe and ^{63}Ni) in activated pressure vessel steel – theoretical versus experimental analysis

Susanna Salminen-Paatero, University of Helsinki

S8-04-Paatero-Susanna-2019

S8-05

Radiation protection of the decommissioning Hot Cells

Quang Le Nghi Trong, Danish Decommissioning

S8-05-Le-NghiTrong-2019

S8-06

Simple contamination, Comprehensive solution – A case study

Mikkel Øberg, Danish Decommissioning

S8-06-Øberg-2019

Modern radioecology

S9-01

A new MiniPANDA detector for measurement of environmental samples

Timo Hildén, Radiation and Nuclear Safety Authority (STUK)

S9-01-Hilden-2019

S9-02

Radon concentration in water in Iceland

Gísli Jónsson, The Icelandic Radiation Safety Authority

S9-02-Jonsson-2019

S9-03

Assessment of the radiation environment around the European Spallation Source before its start

Christian Bernhardsson, Lund University, Sweden

S9-03-Bernhardsson-2019

S9-04

A radionuclide model for the main basins of the Baltic Sea – Identification of representative biota

Ville Kangasniemi, EnviroCase, Ltd

S9-04-Kangasniemi-2019

S9-05

Feasibility of a HMO-process in drinking water treatment technology for removing natural radioactivity and avoiding generation of NORM

Siiri Suursoo, University of Tartu, Estonia

S9-05-Vaasma-Suursoo-2019

New methods in emergency preparedness

S10-01

Novel gamma radiation detector for Finnish early warning network

Sakari Ihantola, ¹Radiation and Nuclear Safety Authority
(STUK), ²Helsinki Institute of Physics

S10-01-Ihantola-2019

S10-02

Design principles of enhanced dose rate monitoring network

Tuomas Peltonen, Radiation and Nuclear Safety Authority (STUK)

S10-02-Peltonen-2019

S10-03

Who Is emergency worker? The Finnish answer

Antero Kuusi; Radiation and Nuclear Safety Authority (STUK)

S10-03-Kuusi-2019

S10-04

Voluntary Radiation Measurement Team

Jukka Sovijärvi, Finnish Radiation and Nuclear Safety
Authority (STUK)

S10-04-Sovijarvi-2019

Non-ionizing radiation

S11-01

Genomic instability and non-ionizing radiation

Jonne Naarala, University of Eastern Finland

S11-01-Naarala-2019

S11-02

The health effects derived from UV radiation and sunbed use

Riikka Pastila, Radiation and Nuclear Safety Authority (STUK)

S11-02-Pastila-2019

S11-03

Use of non-ionizing radiation in beauty care

Pasi Orreveteläinen, Radiation and Nuclear Safety Authority (STUK)

S11-03-Orrevetelainen-2019

S11-04

Sunbed use in Iceland 2004 – 2018

Edda Lina Gunnarsdóttir, Icelandic Radiation Safety Authority

S11-04-Gunnarsdottir-2019

Policies, actions and research to support radiation and nuclear safety

S12-01

Improved radiation safety in Finland with graded approach in the new regulatory framework

Tommi Toivonen, Radiation and Nuclear Safety Authority (STUK)

S12-01-Toivonen-2019

S12-02

Radon action plan of Finland

Päivi Kurttio, Radiation and Nuclear Safety Authority (STUK)
S12-02-Kurttio-2019

S12-03

Implementing 3S in practice – Conducting the 3S inspections

Marko Hämäläinen, Radiation and Nuclear Safety Authority (STUK)

S12-03-Hamalainen-2019

S12-04

National best practices: Implementing guide for security arrangements of radiation sources

Tuomas Siru, Radiation and Nuclear Safety Authority (STUK)

S12-04-Siru-2019

S12-05

Methods and challenges of communication in radiation protection

Johanna Vahtola, Radiation and Nuclear Safety Authority (STUK)

S12-05-Vahtola-2019

S12-06

Radon at work places – concentrations during working hours vs. long term average

Olli Holmgren, Radiation and Nuclear Safety Authority (STUK)

S12-06_Holmgren-2019

S12-07

Nordic project to establish diagnostic reference levels for pediatric patients

Hanne N. Waltenburg, Danish Health Authority

S12-07-Waltenburg-2019

S12-08

Collecting relative frequencies and assessing radiation doses of pediatric radiology procedures involving ionizing radiation: Data collection methods and first results

Andreas Jahnen, Luxembourg Institute of Science and Technology (LIST)

S12-08-Jahnen-2019

S12-09

Comparison of measured eye lens doses at the forehead and at collar level

Henrik Roed, Danish Health Authority

S12-09-Roed-2019

S12-010

Lowered dose limit to the lens of the eye- Results from 2018 at Forsmark NPP

Ann-Sofie Gustafsson, Forsmarks Kraftgrupp AB

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S12-011

INVITED: Global Cooperation in Radiation Protection – case Saudi Arabia

Pekka Ottavainen, STUK International Ltd.

S12-011-Ottavainen-2019

Next level in radiation protection: Conclusions

Brief summary of the highlights of sessions 1-12

Tommi Toivonen, Radiation and Nuclear Safety Authority (STUK)

S13-01-Toivonen_Summary-2019

Overview of programme sessions

Programme Overview					
	Monday 10 June	Tuesday 11 June	Wednesday 12 June	Thursday 13 June	Friday 14 June
Morning	Excursions: Olkiluoto NPP (whole day) VTT Centre for Nuclear Safety (afternoon, 2 h) New Children's Hospital (afternoon, 1 h)	Registration Session 1: Opening and Bo Lindell Award Session 2: Next level in radiation protection	Session 5: Medical applications 1 Session 6: Medical applications 2	Session 8: Nordic nuclear safety research, nuclear waste management strategies Session 9: Modern radiocology	Session 12: Non-ionizing radiation Session 13: Research to support regulatory control
Afternoon	BNCT radiotherapy unit at the Helsinki University Hospital (afternoon, 1 h)	Session 3: New methods and technologies Session 4: Justification of new methods and technologies	Session 7: Radiation safety research, Horizon Europe 22 NSFS General Assembly Board Meetings	Session 10: New methods in emergency preparedness Session 11: Safety and security interface	Session 15: Graded approach for radiation safety Closing session, ends at 14:30
Evening	19:00 Registration & Welcome Cocktail Reception at Hanaholmen	19:00 Conference Dinner at Hanaholmen	18:00 Young Scientist Evening	18:00 Program to be confirmed	