

# Conference Presentations

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

NOT AVAILABLE

### **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, <sup>1</sup>NKS, <sup>2</sup>Icelandic 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, <sup>1</sup>on behalf of Heads of European Radiological Competent Authorities (HERCA), <sup>2</sup>Radiation Protection Department, Ministry of Health, Luxembourg

S6-01-Karoussou-2019

## **S6-02**

**INVITED: From image quality to care outcome**

Mika Kortnesniemi, Helsinki University Hospital

S6-02-Kortnesniemi-2019

## **S6-03**

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

Anders Widmark, <sup>1</sup>Norwegian Radiation and Nuclear Safety Authority, <sup>2</sup>Norwegian 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, <sup>1</sup>Technical University of Denmark, <sup>2</sup>Lund University, Sweden  
S8-02-Hinrichsen-2019

### **S8-03**

**Upper estimates for effective doses from release of <sup>36</sup>Cl 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 ( $^{55}\text{Fe}$  and  $^{63}\text{Ni}$ ) 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, <sup>1</sup>Radiation and Nuclear Safety Authority (STUK), <sup>2</sup>Helsinki 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

NOT AVAILABLE

**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