



ISOE International Symposium

Tours, 21 – 23 June 2022



Programme



Supported by





ISOE International Symposium

Tours, 21-23 June 2022

The European Technical Centre of the Information System on Occupational Exposure (ISOE) is pleased to organize, in collaboration with and the support of Electricité de France (EDF), the 2022 ISOE International Symposium on Occupational Exposure Management at Nuclear Facilities.

The Symposium will be held in Tours, France, from the 21st to the 23rd of June 2022. It is co-sponsored by the OECD Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA).

The Symposium is targeted at all those concerned with radiological protection at nuclear power plants: radiation protection managers and staff members, maintenance and operation planners, contractors, exposed workers, regulatory body representatives and international organisations. It is also opened to research reactors and professionals from other nuclear fuel cycle installations sharing common radiological protection issues.

Dealing with occupational radiation protection at the design, operation and decommissioning stages of installations, as well as accident situations, this new meeting point of radiation protection professionals under the heading of ISOE will be a great opportunity to share, at the international level, experiences and practices favouring a continuous improvement of radiation protection.

Furthermore, the accompanying Technical Exhibition will give participants the opportunity to see the latest developments from industrial and commercial companies active in fields of radiation protection.

Prior to the Symposium, on Monday 20 June 2022, two meetings devoted to specific audiences have been organised:

- A Radiation Protection Managers meeting
- A Regulatory Body Representatives meeting

We are looking forward to welcoming you in Tours,

Caroline SCHIEBER
Head of ISOE-ETC
On behalf of the Programme Committee



ISOE International Symposium

Tours, 21-23 June 2022

PROGRAMME COMMITTEE MEMBERS

Lucie D'ASCENZO	ISOE ETC, CEPN – France
Laure-Anne BELTRAMI	ISOE ETC, CEPN – France
Borut BREZNIK	Krško NPP – Slovenia
Charlotte GUENAULT	ASN – France
Monika FÁRNÍKOVÁ	Temelin NPP – Czech Republic
Swen-Gunnar JAHN	ENSI – Switzerland
Timo KONTIO	Loviisa NPP – Finland
Jizeng MA	IAEA
Francesco MANCINI	SOGIN – Italy
Hans MEIJER	Borssele NPP – Netherlands
David MILLER	ISOE NATC, University of Illinois – USA
Guy RENN	Sizewell B NPP – United Kingdom
Caroline SCHIEBER	ISOE ETC, CEPN – France
Thorsten STAHL	GRS – Germany
Torgny SVEDBERG	Ringhals NPP – Sweden
Philippe WEICKERT	EDF UNIE-GPEX – France

CONFERENCE LANGUAGE

The conference language will be English.

SYMPOSIUM VENUE

The Symposium will take place at:

Palais des Congrès de Tours
26 Boulevard Heurteloup
37000 Tours



ISOE International Symposium

Tours, 21-23 June 2022

DEDICATED MEETINGS – MONDAY 20 JUNE 2022

The ISOE Symposium will be preceded by two dedicated meetings devoted to specific audience.

If you wish to participate to one of those meetings, please contact the relevant person as indicated below in order to register to one of these meetings.

The registration to these meetings is free of cost.

Radiation Protection Managers Meeting	
09:00 - 17:00	Location: Palais des Congrès de Tours <i>Contact-person:</i> Philippe WEICKERT , EDF – philippe.weickert@edf.fr
Regulatory Body Representatives Meeting	
09:00 - 17:00	Location: Palais des Congrès de Tours <i>Contact-person:</i> Charlotte GUENAU L, ASN – Charlotte.GUENAU@asn.fr



ISOE International Symposium

Tours, 21-23 June 2022

PROGRAMME

TUESDAY 21 JUNE 2022

08:30 - 09:15	Registration
09:15 - 10:00	Opening Ceremony (ETC, OECD NEA, IAEA, EDF, ASN)
Session 1.	RP at the Design Stage
Chairpersons	V. Rees (ONR, UK), C. Schieber (ISOE ETC – CEPN, France)
10:00 - 10:20	Radiation Protection optimization at Design stage: application to EPR2 M. Longeot (EDVANCE/EDF), S. Poirrier (EDVANCE/Framatome), France
10:20 – 10:40	Computation of dose equivalent rates during the loading of spent nuclear fuel in a transport cask using Monte Carlo simulation F. Hoareau (EDF R&D), V. Buforn, C. Gaubert (EDF DIPDE), F. Thibaud (EDF DCN), France
10:40 - 11:25	Coffee-break, Visit of Exhibition, Posters
Session 2.	New RP Technologies
Chairpersons	P. Arends (ANVS, Netherlands), T. Stahl (GRS, Germany)
11:25 - 11:45	NextGen RP: Applying Remote and Automated Technologies to Enhance and Optimize Nuclear Power Plant Radiation Protection Operations D. Perkins, K. Kim, P. Tran, D. Cool (EPRI), USA
11:45 - 12:05	ECHO: an innovative device for the measurement of beta contamination in high and fluctuating gamma environments L. Bardou (EDF UNIE-GPEX), T. Le Noblet, V. Maussire (CARMELEC), France
12:30 - 14:00	Lunch Break



ISOE International Symposium

Tours, 21-23 June 2022

Session 3. Source-Term Management Chairpersons <i>B. Breznik (Krško NPP, Slovenia), G. Ranchoux (EDF DP2D, France)</i>	
14:00 - 14:30	ALARA tools: Source Term Control at CNE Cernavoda C. Chitu, A. Nedelcu (Cernavoda NPP), Romania
14:30 - 15:00	Impacts of Ag-110m on Radiation Field Generation: Review of an innovative experiment E. Moleiro, A. Rocher (EDF UNIE-GPEX), T. Tribollet (Civaux NPP), France
15:00 - 15:30	Application of Inline Gamma and CZT D. Perkins, J. McElrath, M. Mura (EPRI), L. Whiteker (Monticello NPP), USA
15:30 - 16:15 <i>Coffee-break, Visit of Exhibition, Posters</i>	
Session 4. ISOE & UNSCEAR Chairpersons <i>J. Ma (IAEA – ISOE co-Secretariat), C. Schieber (ISOE ETC – CEPN, France)</i>	
16:15 - 16:45	30 th Anniversary of ISOE Program of Global Nuclear Utilities and Regulatory Agencies B. Boyer, ISOE Chair
16:45 - 17:15	Occupational exposure to ionizing radiation: UNSCEAR Global Survey and ISOE DATA F. Shannoun, V. Holahan, UNSCEAR



ISOE International Symposium

Tours, 21-23 June 2022

WEDNESDAY 22 JUNE 2022

Session 5.	Job Experiences (Part I)
Chairpersons	<i>J. Bonnefon (EDF DIPDE, France), L.-A. Beltrami (ISOE ETC – CEPN, France)</i>
09:00 - 09:20	ALARA in Repair of Reactor Vessel Flange Surface at Krško NPP B. Breznik (Krško NPP), Slovenia
09:20 - 09:40	Case Report of Incident with High Exposure of Radiation J. Isokivelä (Forsmark NPP), Sweden
09:40 - 10:00	Radiation protection measures during the steam generator heat transfer tubes cleaning at Dukovany NPP J. Novak, R. Svoboda (Dukovany NPP), Czech Republic
10:00 - 10:45	<i>Coffee-break, Visit of Exhibition, Posters</i>
Session 6.	Experiments and new R&D Developments
Chairpersons	<i>H. Meijer (Borssele NPP, The Netherlands), P. Weickert (EDF UNIE-GPEX, France)</i>
10:45 - 11:05	3D-CZT Gamma-Ray Spectrometers and Imaging Spectrometers for Source Term Characterization at Palisades Nuclear Plant M. Mayers (H3D, Inc.), D. Nestle (Palisades NPP), W. Kaye (H3D, Inc.), USA
11:05 - 11:25	ASTRE Development S. Poumerouly, C. Monier, A. Geay, M. Charwath, S. Tonnoir, V. Lombard (EDF R&D), France
11:25 - 11:45	Development and Operations of the Ultra-Compact Embeddable Gamma Camera Nanopix F. Carrel, V. Schoepff, Y. Moline, G. Amoyal, J.P. Poli, M. Gendreau, M. Morenas, M. Imbault, J.M. Bourbotte, R. Woo, C. Lynde, M. Michel (CEA LIST), R. Abou Khalil, Z. Mekhalifa (Orano DS), C. Helbert, L. Tondut (ORANO Etablissement de la Hague), France
11:45 - 12:15	Synthesis of RPM and RB meeting days
12:30 - 14:00	<i>Lunch Break</i>



ISOE International Symposium

Tours, 21-23 June 2022

Session 7. Chairpersons	RP Aspects of Post-Accident Situations <i>C. Guenault (ASN, France), R. Svoboda, (Dukovany NPP, Czech Republic)</i>
14:00 - 14:30	Health Effects from the Chernobyl and the Fukushima Accidents E. Cléro (IRSN), France
14:30 - 15:00	Ten years at the Fukushima Daiichi Nuclear Power Station, then and now T. Suzuki (TEPCO D&D Engineering Company), Japan
15:00 - 15:30	The role of the radiological protection expert in stakeholder involvement in the recovery phase of post-nuclear accident situations: Some lessons from the Fukushima-Daiichi NPP Accident T. Schneider (CEPN), France

15:30 - 16:15	<i>Coffee-break, Visit of Exhibition, Posters</i>
---------------	---

Session 8. Chairpersons	Job Experiences (Part II) <i>S.-G. Jahn (ENSI, Switzerland), V. Riihluoma (STUK, Finland)</i>
16:15 - 16:35	Corium stabilization: a challenging Radiation Protection project C. Peretti (EDF DIPDE), France
16:35 - 17:15	ALARA Experience with PWR Thermal Sleeve Replacement at Sizewell B G. Whyberd-Mills, R. Parlone, G. Renn (Sizewell B NPP), United Kingdom

19:30	Symposium Dinner at City Hall
	Address: 2 Boulevard Heurteloup 37000 Tours





ISOE International Symposium

Tours, 21-23 June 2022

THURSDAY 23 JUNE 2022

Session 9. Chairpersons	RP and Decommissioning <i>E. Thoelen (ENGIE Electrabel, Belgium), I. Calavia (CSN, Spain)</i>
09:00 - 09:20	ISOE Working Group on Radiological Protection Aspects of Decommissioning Activities at Nuclear Power Plants (WGDECOM) – Outcomes and feedback G. Ranchoux (EDF DP2D), L.-A. Beltrami (ISOE-ETC – CEPN), France
09:20 - 09:40	Decommissioning project, management and planning aspects for the decommissioning of Research Reactor Ispra1 E. Amoroso, D. Manes, S. Ravera, K. Harralabos, P. Capoferro, E. Grossi (SOGIN), Italy
09:40 - 10:00	Radiological investigations in hard-to-access zones during D&D operations by remote OSL/FO dosimetry S. Magne, M. Horpin (CEA LIST - Laboratoire Capteurs Fibres Optiques), W. Husson (CEA LIST - Laboratoire Capteurs Architectures Electroniques), S. Dogny (ORANO), P.G. Allinei, O. Guéton, M. Ledieu (CEA DEN - DTN-SMTA-LMN), B. Leibovici (SDS Group), France
10:00 - 10:20	Development of a Cask for Interim Storage and Final Geological Disposal in Switzerland Approach, Challenges and Realization S. Pudollek (Nagra), E. Neukäter, R. Graf (Mühleberg NPP), Switzerland
10:20 - 11:05	<i>Coffee-break, Visit of Exhibition, Posters</i>
Session 10. Chairpersons	RP Indicators <i>J. Isokivelä (Forsmark NPP, Sweden), C. Schieber (ISOE ETC – CEPN, France)</i>
11:05 - 11:25	Improving occupational radiation exposure using ALARA tools: performance indicators C. Chitu, A. Nedelcu, L. Samson (Cernavoda NPP), Romania
11:25 - 11:45	Dose per RCA-hour; a useful radiological protection indicator? R. Parlone, G. Renn (Sizewell B NPP, United Kingdom), B. Joerger (Penly NPP, France)
11:45 - 12:05	RP Management Recovery Plan at EDF: Indicators and Tools P. Weickert (EDF UNIE-GPEX), France
12:05 - 12:20	Distinguished Papers and Closure of the Symposium



ISOE International Symposium

Tours, 21-23 June 2022

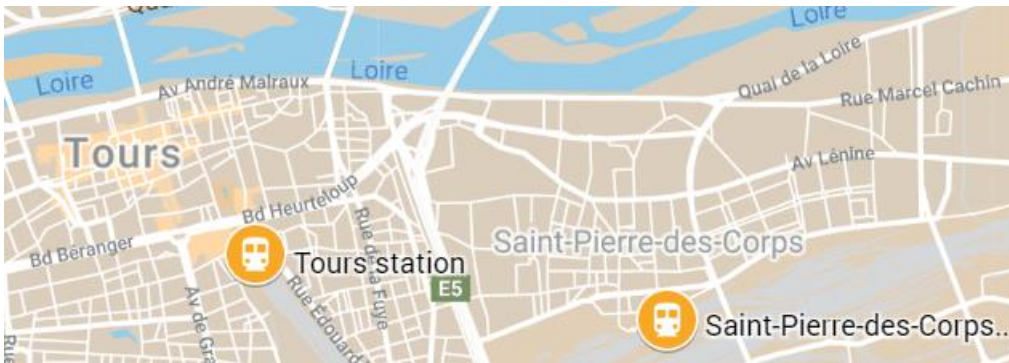
FRIDAY 24 JUNE 2022

Technical Visit to Civaux NPP is cancelled

HOW TO GET TO TOURS?

Tours is located at about 250 km from Paris.
The high-speed train TGV is the fastest way to get to Tours.

There are 2 Railway Stations: Tours Centre and Saint-Pierre-des-Corps



Journey time:

- From Paris to Tours Centre: 1h10
- From Paris Charles de Gaulle Airport to Saint-Pierre-des-Corps: 1h45

REGISTRATION TO THE SYMPOSIUM

	Registration Fees	Online Registration
Participant	500 € VAT included	Registration form
Commercial Booth	2000 € VAT included	Booth Registration form

Payment of the fees must be done after online registration and receipt of the invoice

Information can also be found on ISOE website: www.isoe-network.net