

09:10 Welcome & introduction to the PhD Day - Michèle Coeck

Session 1 Exploring Innovative Nuclear Systems Chair: Federico Di Croce		
Oral presentations	Poster display 09:00 – 18:00	Other PhD research in this domain
09:20 Introduction by the Chair	Author attendance 10:45 – 11:15 & 12:20 – 12:50	Fourth and first year PhDs
09:30 Flavia Guidubaldi <i>First generation targets for the ISOL facility of MYRRHA - A Si/Ti target for Al and Mg isotopes</i>	Alejandra Ichina Lopez <i>Characterization of MOX spent nuclear fuel</i>	Federico Di Croce <i>Neutronic experiments at VENUS-F in support of lead-cooled small modular reactor deployment</i>
09:45 Lennert Quanjel <i>Laser-ionized radioactive ion beams at day 1 of ISOL@MYRRHA</i>		Diego Mondaray Muñoz <i>Reactor kinetics applied to LFR technology</i>
10:00 Antoine Larbanois <i>Techno-economic model of the inclusion of SMRs in the Belgian energy system</i>		Noa Eeckhaut-Racon <i>Bayesian optimization algorithms applied to ISOL ion source tuning and characterization</i>
10:15 Daan Houben <i>Robust data assimilation for LFR nuclear data improvement</i>		Casper Janssen <i>Effect of Pb chemistry on hydraulics in lead-cooled reactors</i>
10:30 Hendrik De Boeck <i>Towards insights of formation, growth and degradation of thin oxide films on steels in liquid lead</i>		Gabriel Simanjuntak <i>Radiological impact assessment of Lead-Cooled SMRs using advanced atmospheric dispersion modelling</i>
		Antoine Mouchamps <i>Nuclear fuel cycle optimization: identifying deployment strategies under multiple constraints</i>
		Violette Vandervelden <i>Building societal resilience against false information on emerging nuclear technologies</i>

10:45 – 11:15 | Coffee break, poster exhibition and information booth BNS-YG | Central square

Session 2 | Guaranteeing Nuclear Safety

Chair: Narcís Gay Villaret

Oral presentations	Poster display 09:00 – 18:00	Other PhD research in this domain
11:15 Introduction by the Chair	Author attendance 10:45 – 11:15 & 12:20 – 12:50	Fourth and first year PhDs
11:25 Alejandro Vieyra Huerta <i>Oxidation and corrosion mechanisms in actinide oxide systems</i>	Muhammed Salojee <i>Complex aluminum alloys with various silicium contents</i>	Narcís Gay Villaret <i>Development of a molten salt electrorefining process suited for the recycling of HALEU fuel production scraps</i>
	Marta Baran <i>Local approach modelling with experimental support for small fracture toughness tests</i>	Sahil Valiyev <i>Weldability of advanced EU-developed steels</i>
	David Bermúdez Parra <i>Modelling and experimental determination of the fracture toughness of ITER structural materials</i>	Willem Brabants <i>Changing of the Guard: Managing safety and security interactions in a context of nuclear technological innovation</i>
		Oriol Serra Soler <i>Sintering kinetics and mechanisms in UO₂ and MOX nuclear fuels for LFR-SMRs</i>
		Guilhem de Bodin de Galember <i>Integration of advanced fuel reprocessing for lead-cooled fast reactors: towards a closed fuel cycle</i>
		Alberto Milazzo <i>Optimizing dissolution and chemical processing of fast reactor MOX fuel</i>
		Francisco Miranda <i>Casting light on tungsten for ITER: Unraveling irradiation effects</i>

Session 3 | Exploring the Nuclear Lifecycle
Chair: Ali Aouf

Oral presentations	Poster display 09:00 – 18:00	Other PhD research in this domain
11:40 Introduction by the Chair	Author attendance 10:45 – 11:15 & 12:20 – 12:50	Fourth and first year PhDs
11:50 Nemanja Glušica <i>Experimental and numerical characterization of the mechanical anisotropic properties of Boom Clay</i>	Hossam Hassan <i>Durability assessment of innovative binders for radioactive waste immobilization</i>	Ali Aouf <i>Deep learning for 3D porous media reconstruction of clay and cement-based materials</i>
12:05 Flora Mbouyom Tchudjeu <i>Novel assays of difficult-to-measure radionuclides in the context of a sustainable waste management</i>		Victor Casas Molina <i>Machine learning for accurate and efficient uncertainty quantification in radiological waste characterization</i>
12:20 Lara Bruneel <i>Development of novel extractants for selective Americium separation</i>		Tang Mingzhe <i>Evolution of transport, microstructural and hygro-mechanical properties of cementitious materials subjected to coupled chemical degradation via a multiscale approach</i>
		Hoai An Pham <i>Impact of carbonation on corrosion, mechanical and transport properties of blended cements</i>
		Kazi Fatema <i>Development of safe and secure AI models for nuclear decommissioning information management</i>
		Victoria Xia <i>Building a Quantitative AOP Framework for Smart Remediation of NORM and Legacy Sites</i>
		Lara Vanbriel <i>Circular and nature-based innovations for stabilizing radiological contamination in soil</i>
		Khiem Nguyen Thai <i>Innovative circular concrete for nuclear applications</i>
		Mario Antonio Gonzalez Sandoval <i>Dynamic system identification and digital twins for underground infrastructure monitoring</i>
		René Blommaert <i>Advanced tomography imaging for evaluating radioactive waste conformity for safe final disposal</i>

12:20 – 13:20 | Walking sandwich lunch, poster exhibition & information booth BNS-YG | Central square

13:20h – 13:35 | Presentation by the SCK CEN PhD Council and the BNS-YG

Session 4 Guaranteeing Radiation Protection		
Chair: Federica Roberto		
Oral presentations	Poster display 09:00 – 18:00	Other PhD research in this domain
13:35 Introduction by the Chair	Author attendance 12:50 – 13:20 & 15:10 – 15:40	Fourth and first year PhDs
13:45 María Luz Olaguibe <i>Biophysical modelling across different radiation therapy modalities</i>	Daniela Passeri <i>Advancement of computational dosimetry for complex radiation fields</i>	Cynthia Van Rompaey <i>Long-term storage of organ-on-chip: from deep space exploration to organ preservation on Earth</i>
	Sachith Welarathna <i>Bringing computational dosimetry in interventional radiology and cardiology to the hospitals</i>	Bernard Osangir <i>Integromics - Towards integration of big biomolecular data to enable systems biology</i>
	Jonas Jacobs <i>Robust quantification of radiological data acquired with UAVs</i>	Federica Roberto <i>Optimization of computational dosimetry of workers in dismantling and decommissioning using machine learning</i>
	Manon Thiercelin <i>Adoption of circular economy practices in NORM management</i>	Elena Tamagnini <i>AI-Driven dynamic radiological source-term model for radiation protection in D&D</i>

Session 5 | Exploring Nuclear Medicine
Chairs: Thijs de Kock and Justine Henriot

Oral presentations	Poster display 09:00 – 18:00	Other PhD research in this domain
14:00 Introduction by the Chairs	Author attendance 12:50 – 13:20 & 15:10 – 15:40	Fourth and first year PhDs
14:10 Thomas Staes <i>Ti-based core-shell shaping for $^{225}\text{Ac}/^{213}\text{Bi}$ separation</i>	Jasmijn Moonen <i>Preclinical characterization of new FAPI radioligands for metastatic tumor targeting</i>	Justine Henriot <i>A whole-body physiologically based pharmacokinetic model for personalized ^{161}Tb-PRRT</i>
14:25 Jasper Mampaey <i>Developing radiation stable and selective surface interactions for direct ^{213}Bi generators</i>	Claire Van de Meerendonk <i>Cell membrane coated lanthanide nano particles (CMC-LnNP) to treat glioblastoma</i>	Thijs de Kock <i>Understanding the RNA regulatory interactome landscape of radiation response in glioblastoma</i>
14:40 Samuele Servi <i>Separation and purification of medical radioisotopes by solvent extraction in milliflow reactors</i>	Thibaut Schwindenhammer <i>Metal microanalysis as input for dosimetry of therapeutic radiopharmaceuticals</i>	Mirthe Vandenputte <i>Mapping the recruitment and dissolution kinetics of DNA damage repair factors after high-energy ion radiation to identify synthetic vulnerabilities in brain cancer</i>
14:55 Adnane Zerguit <i>Prediction of ^{225}Ac dose-response, based on ^{177}Lu-pharmacokinetics</i>	Eline Daems <i>Alpha-Particle Therapy as an Innovative Targeted Approach for Aggressive Cancer Treatment</i>	Luis Escobar <i>Modular phage-based nanocarriers for radioligand therapy</i>
		Angelo Alves <i>Development of CAIX-Targeting Radioligands to Improve Tumor Retention</i>
15:10 – 15:40 Coffee break, poster exhibition & information booth BNS-YG Central square		
15:40 Niels Van Winnendael <i>Development of TRNT radiopharmaceuticals targeting Hsp90</i>		Michael Gloria <i>Development of a clinical microscale dosimetry framework for radiopharmaceutical therapy</i>
15:55 Gil Josse <i>Biosynthetic toolboxes for the extraction of radionuclides</i>		Fleur Hermans <i>FAP-based Targeted Radionuclides as Immune Modulators in Ovarian and Breast Cancer</i>
16:10 Sara Van Mechelen <i>Targetome profiling of metastatic ovarian cancer</i>		
16:25 Sarah Waelkens <i>Glioblastoma avatars for preclinical evaluation of treatment response</i>		

16:40 | Closing words - *Peter Baeten, Director General SCK CEN & Thomas Pardoen, President of the SCK CEN Scientific Council*

17:00 – 18:00 | Reception

Information booth

BNS-YG

Belgian Nuclear Society – Young Generation

Graduated 2025-2026

Abdo Shamseldin 6 October 2025 <i>Evolution of the Chemo-Hygro-Mechanical properties of tunnel lining concrete exposed to different temperatures and relative humidities</i>	Hussein Zahran 15 October 2025 <i>Prediction of fatigue behaviour in fusion and generation IV reactor materials: numerical, experimental, and machine learning study</i>	Kaat Spoormans 4 November 2025 <i>Tumor absorbed dose-response relationships in targeted radionuclide therapy</i>
Francisco Javier Giménez del Rey 28 November 2025 <i>From primers to porewater: unravelling methanogenesis and microbial dynamics in Boom Clay</i>	Santiago Ramos Garces 1 December 2025 <i>Enhanced performance of automatic tuning in isotope separation online systems through Bayesian optimization</i>	Timothej Patocka 3 December 2025 <i>Intrinsic resuscitation from the copper-induced viable-but-nonculturable state in <i>Cupriavidus metallidurans</i></i>
Filip Kolesar 3 December 2025 <i>Development of a new extraction system for selective americium separation from spent nuclear fuels</i>	Tiffany Thao Nguyen 13 January 2026 <i>Medical radioisotope supply chain design for security: efficiency, alignment, and speed</i>	Chih-Cheng Chang 19 January 2026 <i>Assessment of the mechanical properties of fusion materials by small specimen testing</i>
Michelle Andersson 27 February 2026 <i>Modeling of kidney absorbed dose heterogeneity and toxicity in radiopharmaceutical therapy with ^{161}Tb and ^{177}Lu radiolabeled peptides</i>	Selim Uygur 13 March 2026 <i>Process impact on cation distribution and phase purity of sintered $(\text{U,Ce})\text{O}_{2\pm x}$</i>	Koray Iroc 27 March 2026 <i>Advanced microstructural characterization of fusion materials: irradiation effects</i>
Stijn Van Leuven 4 May 2026 <i>Advancing wet deposition modelling in atmospheric transport models: applications in environmental radioactivity</i>	Abubaker Danfour 19 May 2026 <i>Multiscale study of delayed ettringite formation in concrete</i>	Stef Geelen 8 June 2026 <i>Improving radiological monitoring using drones</i>
Emil Rehnberg 17 June 2026 <i>Development of 3D models to study cardiac ageing in space</i>	Evangelia Charalampopoulou 24 June 2026 <i>Transmission electron microscopy study on the liquid metal corrosion mechanisms of the DIN 1.4970 austenitic stainless steel fuel cladding for MYRRHA</i>	Isabeau De Bie 8 July 2026 <i>Targeting noradrenergic pathways to protect the juvenile brain against radiation-induced damage</i>

Pieter Troosters 18 August 2026 <i>Development of new ligands for the selective separation of americium</i>	Val Abecia 31 August 2026 <i>Influence of redox conditions and organic matter on the partitioning and mobility of naturally occurring radionuclides (NOR's) in geothermal systems</i>	Jens Peter Frankemölle 31 August 2026 <i>Modelling of near-range atmospheric dispersion and the ambient dose equivalent</i>
Tommy Mai 31 August 2026 <i>Thermal conductivity measurement methods for dispersion MTR fuel characterization</i>		