



## Poster programme

Of

The Fourth International Conference on Radiation And Application

**ICRAA'4**

April 13-15, 2025

Jointly Organized by

The University of Sciences and Technologies Houari-Boumediene - **USTHB**

And

The Algerian Atomic Energy Commission - **COMENA**

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## Poster programme

**Saturday 12th, 2025**

16h00-19h00

Registration & Welcome Reception

# Poster session 1: Sunday 13/04/2025 - 14H00 19H20

## Topic 3: Radiological and Medical Physics

ID	Title	Authors ( <u>Presenting author</u> )
T3-P1	Study on dosimetric characteristics of $\beta$ -irradiated YAG:Ce	<u>R. Berreksi</u> , D.E. Kdib, S.A.A. Sahbi, A. Boukerika, Y. Larbah, S. Saadi
T3-P2	Effect of heating rate on $\beta$ -irradiated Cerium doped Y <sub>2</sub> .97Al <sub>4</sub> Ga <sub>1</sub> O <sub>12</sub> :Ce <sub>0.03</sub> thermoluminescence glow dosimetric peak and its kinetic parameters	<u>S.A.A. Sahbi</u> , D.E. Kdib, R. Berreksi, A. Boukerika, Y. Larbah, S. Saadi
T3-P3	Performance testing of the DXTRAD Ring TL Detector used for Extremity Dosimetry Monitoring.	<u>A. Meziane</u> , S. Nateche, M. Aït-Ziane
T3-P4	Assessment of increased radiation exposure from 18FDG PET/CT in children	<u>D. Ben-Sellem</u> , N. Ben-Rejeb
T3-P5	Contribution of computed tomography to the total effective dose of 99mTc-MIBI hybrid parathyroid imaging	<u>D. Ben-Sellem</u> , N. Ben-Rejeb
T3-P6	Assessment of Inhaled Dose of Natural Uranium in a Nuclear Research Laboratory: A Workplace Monitoring Approach	<u>M. Mebarka</u>
T3-P7	Radon exhalation rates of some building materials using can technique method	<u>M. Bakale</u> , L. Chabouni, R. Chahdane, M. Mezaguer - Lekouaghet, M. Aït-Ziane, Z. Lounis-Mokrani
T3-P8	Optimization of cytogenetic parameters for use in biological dosimetry	<u>M. Mezaguer</u> , N. Bennoui, A. Biout, L. Aberkane, K. Aouragh, S. Souilah and S. Allali.
T3-P9	Optimization of the optical performance of an air-core Ag-PTFE dosimeter for brachytherapy	<u>N. Boughaba</u> , B. Bouzid, N. Yahlali
T3-P10	Radiation protection consideration in clinical facility design for accelerator-based Boron Neutron Capture Therapy	<u>L. Zaidi</u> , M. Belgaid, S. Taskaev
T3-P11	Calculations of absorbed dose in voxelized phantom using Monte Carlo simulation	<u>S. Merai</u> , F. Benrachi, N. Laouet
T3-P12	Validation of bladder preparation in prostate cancer radiotherapy	<u>A. Mamache</u> , A. Merzoug, A. Sidi Moussa
T3-P13	Controlling proton therapy with a variable external magnetic field: an approach with nanoparticles	<u>A. Boukorra</u> , A.A.S. Dib, F. Rahal
T3-P14	Saturation yield in medical cyclotron performance evaluation	<u>Kh. Bensadallah</u> , A. Taibi, S. Rahabi, A. Falleh, A. Amimour
T3-P15	: Sensitivity Analysis of Neutron and Photon Equivalent Doses in Organs During Prostate radiotherapy Using Monte Carlo Simulation	<u>A. Alem-Bezoubiri</u> , F. Bezoubiri, M. Speiser, H. Donya
T3-P16	Radioprotective and Radiosensitizer Properties of Silymarin/Silibinin in Response to Ionizing Radiation	<u>F. Arghidash</u>
T3-P17	Assessment of a new technetium radiopharmaceutical (99mTc-NPMIDA) intended for diagnosis in nuclear medicine	<u>S. Achour</u> , R. Khelili, A. Kiared, R. Nouri
T3-P18	Preparation, characterisation and calibration of two fundamental reagents for the immunoradiometric (IRMA-125I) TSH assay.	<u>N. Hamdi</u> , D. Asselah, R. Nouri, S.A. Megatli

<b>T3-P19</b>	Hippocampal Preservation: A Major Challenge for Physicists in Pediatric Brain Tumor Radiotherapy.	<b><u>R. Amimour</u></b> , L. Naoun, B. Bacha
<b>T3-P20</b>	Heavy Metal Contamination in Herbal Medicines: Determination by ICP-OES	<b><u>Z. Lamari</u></b> , H. Negache, M. Arabi, R. Cheriguene, L. Guerda, A. Ouafek
<b>T3-P21</b>	Radiation protection in radiotherapy: current status and challenges	<b><u>H. Graine</u></b> , B. Makoudi, M. Alliti, M. Sadaoui
<b>T3-P22</b>	Investigating $\gamma$ H2AX as biomarker of DNA damage in blood samples and cell lines following exposure to $\gamma$ rays.	S. Gais, A. Biout, <b><u>F. Yakoubi</u></b> , Y. Boubekour, S. Allali, K. Aouragh, B. Mansouri, M. Souidi, F. Fazouan., A. Djefal
<b>T3-P23</b>	Radiation Safety in Nuclear Medicine: Addressing Gender- Specific Challenges for Female Workers and Patients at Medical Facilities	<b><u>L. Ong'ayo</u></b>
<b>T3-P24</b>	Radiological Justification Criteria of Pediatric Computed Tomography in Kenya	<b><u>L. Ong'ayo</u></b>
<b>T3-P25</b>	Radiation Doses and Size-Specific Dose Estimate From Pediatric Head CT Examinations	<b><u>A. Merad</u></b> , S E. Marouk, N. Toutaoui, F. Meddad, R. Ait Challal
<b>T3-P26</b>	In vitro cytotoxic activity and radioprotective effect of formulation on monkey kidney epithelial cells (Vero line)	<b><u>H. Negache</u></b> , A. Ouafek, R. Cheriguene, L. Guerda, Z. Lamari
<b>T3-P27</b>	Radiological control tests on the efficiency of the manual Tc- 99m production cell	<b><u>A. Benbetka</u></b> , I. Benzian, R. Abaidia
<b>T3-P28</b>	Crude leaves Rosemary Extract from Algeria: Radioprotection Conferred to DNA of Vero Cells	Z.Lamari, <b><u>R. Cheriguene</u></b> , L. Guerda, M.Ousmaall
<b>T3-P29</b>	Assessment of Leakage Radiation and Radiobiological Impacts in Gamma Knife Radiosurgery: Dosimetric and Biological Analysis	<b><u>B.N. Mohammeda</u></b> , A.H. Ismail, E.M. Tahir;
<b>T3-P30</b>	Identification the Rabbits species via bone mass attenuation coefficient and Element trace concentration using XRF technique	<b><u>R.D. Haider</u></b> , A.H. Ismail, Z.A. Hussein
<b>T3-P31</b>	Stratification of Risk of Thyroid Cancer: A Machine Learning Model to Identify High-Risk Cases and Analyze the Link with Recurrence	<b><u>F. Bouchelaghem</u></b> , B. Bouchelaghem, S. Neheoua, A. Ghezal
<b>T3-P32</b>	Reducing Ring Artifact Noise in CT Imaging for Medical Diagnosis Using the Denoising Convolutional Neural Network (DnCNN)	<b><u>F. Mokeddem</u></b>
<b>T3-P33</b>	Monte Carlo simulation of Shielding Prototype for Am-Be neutron source.	<b><u>A. Sehili</u></b> , M. Sadoudi, T. Segueni
<b>T3-P34</b>	AI-Driven Evaluation of VMAT Plan Complexity: Assessing Key Parameters and Predictive Correlations	<b><u>S. Malki</u></b> , L. Naoun, S.E. Chouaba, D.E.C. Belkhiat, B. Bacha
<b>T3-P35</b>	Uncertainties Estimation For Dose Rate Of Treatment Beams In External Radiotherapy: Deterministic Vs. Monte Carlo Approach	<b><u>Z. Sakhri-Brahimi</u></b> , A.Merad, N. Toutaoui-Kkelassi, H. Benmahdjoub, O.A. Meghnous, A. Khelifi, K.E. Laterech, F. Meddad
<b>T3-P36</b>	Study of the Feasibility of Calibration of Ionization Chamber in Machine Specific Reference at the SSDL	<b><u>S. Hayoune</u></b> , T. Medjadj

# Poster session 2: Monday 14/04/2025 - 08h30-12h30

## Topic 1: Interaction Radiation-Matter

ID	Title	Authors ( <i>Presenting author</i> )
<i>T1-P1</i>	Assessment of thermal neutron capture cross section for the $^{197}\text{Au}(n, \gamma)^{198}\text{Au}$ reaction	<u><i>F. Meddad</i></u> , M. Boussaid, N. Belouadah, K. Boukeffoussa and T. Seguini
<i>T1-P2</i>	Exploring the Weibel Instability: Self-Generated Magnetic Fields, Plasma Dynamics, and Energy Absorption through Inverse Bremsstrahlung	<u><i>R. Naceur</i></u> , A. Sid
<i>T1-P3</i>	Semi empirical formula for (n,d) reaction cross section at 14-15 MeV	<u><i>S. Nehaoua</i></u> , A. Ghezal, F. Bouchelaghem, N. Benaidja
<i>T1-P4</i>	Evaluation of neutron capture cross-section at 25 keV for $^{165}\text{Ho}$ and $^{166}\text{Ho}$ isotopes using Talys code	<u><i>A. Dib</i></u> , N. Belouadah
<i>T1-P5</i>	Novel semi empirical systematic for (n,t) cross section at 14,6 MeV	<u><i>A. Ghezal</i></u> , S. Nehaoua, Nouri Benaidja
<i>T1-P6</i>	Excitation functions of (n, $^3\text{He}$ ) and (n, t) reactions on $^{93}\text{Nb}$	<u><i>L. Yettou</i></u> , N. Belouadah, N. Amrani, N. Taibouni, F. Kadem, M. Belgaid
<i>T1-P7</i>	Nuclear Gamma-ray emission induced by protons on Aluminium	<u><i>A. Belhout</i></u> , D. Moussa, N. Hebouche, D. Kerrai, Y. Rahma, W. Yahia-Cherif, S. Damache, S. Ouziane, A. Chafa, M. Debabi and S. Ouichaoui
<i>T1-P8</i>	Study of nucleon-natCa reaction cross sections in the framework of the optical model potential. Comparison to experimental data and TALYS code predictions	<u><i>W. Yahia Cherif</i></u> , S. Damache, Y. Rahma, A. Belhout, D. Moussa, S. Ouichaoui
<i>T1-P9</i>	Determination of cross sections for (n, p) reaction on Ge isotopes induced by 14 MeV neutrons	<u><i>N. Belouadah</i></u> , L. Yettou, F. Kadem, N. Osmani, N. Taibouni and M. Belgaid
<i>T1-P10</i>	Radiological Risks measurements in Red Clay	<u><i>N. Taïbouni</i></u> , A. Amokrane, N. Belouadah, T. Azli, L. Yettou, O. Ben Azouz
<i>T1-P11</i>	Nuclear ground state properties of superheavy nuclei	<u><i>M. Ouhachi</i></u> , M.R. Oudih
<i>T1-P12</i>	Occurrence of Bubble Structures in Z=8-20 Nuclei Using Skyrme-HF Plus BCS Approach	<u><i>S. Berbache</i></u> , A. Bouldjedri, A. Boubir
<i>T1-P13</i>	Quantum Machine Learning Application on the Determination of First Excited State Energy in Nuclei	<u><i>S. Akkoyun</i></u> , C.M. Yeşilkanat
<i>T1-P14</i>	Exploring the Interplay of Dark Energy Models and Cosmic Radiation	<u><i>A. Bensaid</i></u>
<i>T1-P15</i>	Dipolar Bose Gases Under the GUP	<u><i>A. Tahar Taiba</i></u> , A. Boudjema
<i>T1-P16</i>	The KM3NeT Neutrino Telescope	<u><i>A.B. Bouasla</i></u> , R. Attallah
<i>T1-P17</i>	The Effect of Simultaneous Variation in Zenith Angle and Geographical Latitude on the Earth's Upper Atmosphere	<u><i>H. Marif</i></u> , D. Benmorsli, J. Lilensten
<i>T1-P18</i>	The Differential and Integral Cross Sections of The Electron- Biomolecule (Uracil and Thymine)	<u><i>S. Mokrani</i></u> , H. Aouchiche, C. Champion
<i>T1-P19</i>	L2-Subshell Coster-Kronig Transition Probabilities for Lanthanide	<u><i>S. Meddah</i></u> , A. Kahoul, S. Daoudi

<b>T1-P20</b>	Relativistic Calculation of Radiative Vacancy Transfer Probabilities from K-shell to L2-subshell for Selected Elements	<b><u>B. Berkani</u></b> , A. Kahoul, J. M. Sampaio
<b>T1-P21</b>	Evaluation of Gamma-Rays Shielding Properties of PVC/Heavy Transition Metal Carbides Composites in Healthcare Applications	<b><u>A. Hadjal</u></b> , A. Saim, A.S.A. Dib, A. Tebboune and N.Belkaid
<b>T1-P22</b>	Empirical calculation of jump ratios $r_{L3}$ and jump factors $J_{L3}$ for lanthanides	<b><u>I. Hamied</u></b> , A. Kahoul, S. Daoudi
<b>T1-P23</b>	Zirconium To Neodymium Empirical $2s_{1/2}$ Transition Fluorescence Yields	<b><u>A. Bendjedi</u></b> , A. Kahoul, S. Daoudi, Y. Kasri
<b>T1-P24</b>	Polar Field Reversal of Iota Horologii	<b><u>A. Boulkabou</u></b> , Y. Damerdji
<b>T1-P25</b>	Elastic and charge-transfer cross sections of He <sup>+</sup> /He at lower energy	<b><u>S. Lias</u></b> , F. Bouchelaghem, L. Aissaoui
<b>T1-P26</b>	A Novel Orange-Emitting Phosphor: Praseodymium(III)- Doped Potassium Zinc Diphosphate for LED Applications	<b><u>R. Belbal</u></b> , B. Kahouadji, L. Gacem
<b>T1-P27</b>	A Comparative Study of Analytical and Numerical Methods in Stark Effect Analysis for Lyman $\alpha$ Spectrum	<b><u>A. Bekhouche</u></b> , I. Hannachi, R. Stamm
<b>T1-P28</b>	Radiological Study of Long lived Natural Radionuclides: Population Exposure and Risque Assessment	<b><u>S. Boukhalifa</u></b> , A.A. Benkhada, A.-K Fertas, R. Khelifi
<b>T1-P29</b>	Energy spectra with the Klein-Gordon equation for the lithium dimer using the Feynman approach	<b><u>A. Ghobrini</u></b> , H. Boukabcha, I. Ami
<b>T1-P30</b>	Electron beam enlargement modelling in the environmental scanning electron microscope at the low gas temperature.	<b><u>R. Belkorissat</u></b>
<b>T1-P31</b>	Eigensolutions of ro-vibrational bound states of the energy- dependent general molecular potential in the case of diatomic molecules	<b><u>A. Haddouche</u></b> , R. Yekken and S. Boufas
<b>T1-P32</b>	Study of Ro-Vibrational Energy Spectrum in the Case of the Energy-Dependent Kratzer Potential Applied to Diatomic Molecules	<b><u>S. Boufas</u></b> , R. Yekken
<b>T1-P33</b>	ab-initio calculations of oscillator strengths for Ti II	<b><u>F.Z. Boualili</u></b> , M. Nemouchi
<b>T1-P34</b>	Radiation-Matter Interaction and Instabilities for Inertial Confinement Fusion	<b><u>H. Benmakrelouf</u></b> , K. Bendib-Kalache, A. Bendib
<b>T1-P35</b>	Stopping Power Calculation of Heavy Ions in A Compound Target Using the Readjusted Bohr Model	<b><u>I. Hamache</u></b> , A. Guesmia, A. Belalia
<b>T1-P36</b>	Study of the Influence of Ion Charge-State Dependence on the Electronic Sputtering Yield Induced in Case of MeV Iq <sup>+</sup> Heavy Ions Incidents on Gold Thin Films	<b><u>A. Boubir</u></b> , S. Mammeri, M. Saad, M. Salhi
<b>T1-P37</b>	Proton's Model for <sup>4</sup> He, <sup>7</sup> Li, <sup>12</sup> C, <sup>16</sup> O ions stopping power in Aluminum, Copper, Silver and Gold targets for the energy range 1 to 14 MeV/n	<b><u>S. Foul</u></b> , M. Chekirine, R. Khelifi
<b>T1-P38</b>	Quantum-mechanical analysis of transport coefficients for NO <sup>+</sup> in Helium gas	<b><u>L. Aissaoui</u></b> , I. Ghodbane

# Poster session 3: Monday 14/04/2025 - 14H00 19H20

## Topic 2 & Topic 4

### Topic 2: Nuclear Techniques and Detection

ID	Title	Authors ( <i>Presenting author</i> )
T2-P1	Measurement of Scintillation Light Yield in Sol-Gel	<u>B. Zahra</u> , H. Mekki , L. Guerbous, M. S.-E. Hamroun , A. Bourenane
T2-P2	Characterization of SiC Thin Layers Elaborated by RF Magnetron Sputtering Technique for Radon sensing	<u>N. Ait Kaci</u> , S. Kaci, H. Menari, K.H. Bentoumi, A. Nechaf, A. Lachemet
T2-P3	Experimental stopping power data for alpha particles in Calcium Fluoride	<u>N. Smati</u> , D. Moussa, S. Damache, W. Yahia Cherif, M. Saad
T2-P4	Influence of Fpe and Resolution of Hpge Detector in Environmental Gamma Ray Measurements	<u>M. Fares</u>
T2-P5	Simulation and Modeling of Neutron Tomography Systems for Realistic Image Generation and Accurate 3D Reconstruction	<u>A. Bourenane</u> , O. Dendene, L. Boukerdja, R. Bouchama
T2-P6	Spectral and Chemical Characterization of Valued Pillared Clays	<u>H. Cherifi-Naci</u> , H. Aksas
T2-P7	Comparative study of the Calcination-Reduction of Ammonium Uranyl Carbonate (AUC) and Ammonium Di-Uranate (ADU)	<u>A. Amrane</u> , A. Said, Y. Melhani, N. Aoudia, S. Ladjouzi, N. Ait Bouziad, Y. Hammoum, A. Telmoune.
T2-P8	Influence of stoichiometry on uranium dioxide properties, comparison of methods for obtaining the O/U ratio	<u>Y. Melhani</u> , N. Ait Bouziad, A. Amrane, Y. Hamoum, A. Said, S. Ladjouzi, A. Telmoune, N. Aoudia
T2-P9	Characterization of liquid radioactive waste by Gamma-ray spectrometry analysis	<u>N. Bayou</u> , T. Azli,
T2-P10	Enhancing the manufacturing process and corrosion resistance of MTR-type fuel plates through NaOH pickling optimization of the AlMgSi cladding alloy	<u>F.Z.S. Mokhtar</u> , M. Khalfa, A. Sahli, L. Mesai, Y.Larbah, B.Rahal
T2-P11	Applications the Criteria of Luminescence in Rare Earth Doped Scintillator Materials (YPO4:Ce3+)	<u>M. Taibeche</u> , B. Kahouadji, L. Guerbous, N. baadji and A. Bouhemadou
T2-P12	Effect of process control agent on the hyperfine properties of Fe93.5Si6.5 nanostructured powders.	<u>M.E. Ayad</u> , M. Hemmous, A. Guittoum, T. Kacel, S. Kamariz, S. Maar
T2-P13	Effect of thickness on the physical properties of evaporated Fe/Si (100) thin film	<u>S. Maar</u> , M. Hemmous, A. Guittoum, T. Kacel, M.E. Ayad , S. Kamariz
T2-P14	Effect of ethanol concentration Structural and Hyperfine Properties of (Ni60Co40)85Fe15 Nanoparticles	<u>S. Kamariz</u> , M. Hemmous, A. Guittoum, T. Kacel, M.E. Ayad, S. Maar
T2-P15	Validation of the ko-NAA Method at the NUR Research Reactor for Multi-Elemental Analysis of Geological Samples	<u>A. Guesmia</u> , L. Hamidatou, H. Slamene, M.E. Benamar
T2-P16	Use of nuclear detection techniques for uranium prospecting and exploration: Example of the Tin Séririne sedimentary basin (South East of Algeria)	<u>R. Chahdane</u> , S. A. Mokhtar, M. Amieur
T2-P17	Validation of energy dispersive X-ray fluorescence (ED-XRF) Analysis results Through instrumental	<u>A. Arabi</u> , S. Benarous, A. Azbouche, T. Azli, Z. Chekired, L. Boudraa, H. Silhadi

	neutron activation analysis (INAA) as a High-Precision Method	
<b>T2-P18</b>	Blue method for calculating errors of the strong coupling constant at LHC	<b><u>L. Kellouche</u></b>
<b>T2-P19</b>	Monte Carlo calculation of Self-shielding factor for instrumental Neutron Activation Analysis: Determination of lanthanide concentration in Algeria phosphates	<b><u>S.E. Addali</u></b> , A. Azbouche, R. Khelifi, S. Benarous
<b>T2-P20</b>	Monte Carlo Simulation of End-Window X-ray Tubes with Rhodium Targets: Insights into Energy and Thickness Optimization for ED-XRF	<b><u>M.I. Khadir</u></b> , A. Azbouche, A. Bouldjedri
<b>T2-P21</b>	Innovative Machine Learning Approaches to Neutron Spectra Unfolding	<b><u>R. Boufenar</u></b> , M. Fares
<b>T2-P22</b>	Silicon Irradiation with High-Energy Proton Beam	<b><u>D. Kerrai</u></b> , A. Belhout, D. Moussa, S. Ouichaoui, W. Yahya-Cherif, Y. Rahma, S. Damache, M. Debabi, S. Ouziane
<b>T2-P23</b>	Thermal neutron cross section measurement for the	<b><u>A. Taibi</u></b> , T. Azli
<b>T2-P24</b>	Geant4 application software in labVIEW requiring no C++ coding	<b><u>A.C. Chergui</u></b> , Lakhdar Guerbous, Mohamed Fouzi Belazreg
<b>T2-P25</b>	Neutron Activation Analysis at the CRND NAA Facility Using the NUR Reactor for Trace Element Profiling of Whole Blood in Breast Cancer Research	<b><u>Z. Bouhila-Khodja</u></b> , A. Hadri, D. Boukhadra, S. Benbouzid, A. Chettah, Y. Amrane and R. Nouri.
<b>T2-P26</b>	Synthesis and Spectral Properties of Li <sup>+</sup> Co-Doped (GdxY1-x)2O3: Eu3+ Nanopowders	<b><u>F. Riahi</u></b> , L. Guerbous, N. Bensemma, C. Djebbari
<b>T2-P27</b>	Radiological Characterization in Drinking Water Samples from Bordj-Bouarreridj Region, East Algeria	<b><u>H. Kebir</u></b>
<b>T2-P28</b>	Study by DFT of Structural, elastic, thermal and optoelectronic properties of single perovskites for detection and scintillator	<b><u>K. Hamiche</u></b> , Y. Sefir, A. Zitouni

#### **Topic 4: Nuclear Reactor Physics**

<b>ID</b>	<b>Title</b>	<b>Authors (<u>Presenting author</u>)</b>
<b>T4-P1</b>	Neutronic and Thermal-Hydraulic Study of the Steady State Research Reactor	<b><u>O. Mokhtari</u></b> , L. Radji
<b>T4-P2</b>	Contribution to the Cooling of a Nuclear Reactor after Shutdown	<b><u>A. Bouam</u></b> , A. Dadda Khorsi, A.L. Deghal Cheridi, K. Messilem, Sd. Rahmani Bouzina, A. Dahia, H. Taguemount & L. Bouam
<b>T4-P3</b>	Simulation and Analysis of SPERT reactivity insertion transients using the PARET computer code	<b><u>M. Bouaouina</u></b> , A Hadjam, D Saad
<b>T4-P4</b>	Importance Measures in Probabilistic Safety Assessment of a Nuclear Research Reactor	<b><u>M. Boufenar</u></b> , M. Azzoune
<b>T4-P5</b>	Importance Factors Analysis of the Reactor Protection System (RPS) for the Nuclear Safety of the MTR Research Reactor	<b><u>D. Kemikem</u></b> , S. Mellal
<b>T4-P6</b>	SB-LOCA Accident Simulation in a Research Reactor: A Thermal-Hydraulic Analysis	<b><u>A.L. Deghal Cheridi</u></b> , A. Hadjam, A. Dadda, A. Dahia, A. Bouam

<b>T4-P7</b>	Security of computer and communications systems in NPPs of generation III and III+	<b><u>Y. Kaloune</u></b> , D. Boukhadra, A. Bouhzila
<b>T4-P8</b>	Multipoint kinetics modeling of a pressurized water reactor core and analysis of its behavior to reactivity insertions	<b><u>B. Djaroum</u></b> , B. Mohammedi, K. Halbaoui, M.F. Belazreg, S. Laouar, S. Mechraoui, S. Medguedem, A. Khelil
<b>T4-P9</b>	Assessment of Safety Margins for Positive Reactivity Insertions: A Case Study of the NUR Research Reactor	<b><u>M. Azzoune</u></b> , M. Boufenar, D. Lababsa
<b>T4-P10</b>	Handling of Prolonged Power Outages in a Nuclear Center: Risks, Security, and Solutions	<b><u>D. Boukhadra</u></b> , Z. Bouhila, M. Mebarka, K. Remil
<b>T4-P11</b>	Advancements and Ongoing Challenges in Small Modular Reactors (SMR)	<b><u>N. Amrani</u></b> , A. Tokuhira
<b>T4-P12</b>	Comprehensive Neutronic Analysis of the Advanced Small Modular Reactor CAREM-25: Validation of OpenMC model	<b><u>K. Ziche</u></b> , A. Guessoum, R. Abed, N. Amrani
<b>T4-P13</b>	Comparative study of a Loss of Flow Accident (LOFA) analysis in the IAEA 2MW reactor benchmark using two calculation codes	<b><u>Y. BENSEMANE</u></b> , K, SIDI ALI, O. TIHALA



## Poster session 4: Tuesday 15/04/2025 - 08h30-12h30

### Topic 5: Radiation in Industry, Life and Environment

ID	Title	Authors ( <i>Presenting author</i> )
T5-P1	Applications and Importance of Radiochemical Separation Techniques in Biology, Geology, and Environmental Science	<u>M. Messaoudi</u> , A. Brahimi, A. Ouanezar, A. Malki, R. Lamouri, F. Arbaoui, S.A. Amzert and F. Rebhi
T5-P2	Radiological Impact Assessment of a Hypothetical Accident at the G.A. Siwabessy Research Reactor: Human and Environmental Exposure Using HotSpot and ERICA codes.	<u>S. Roby</u> , F.Z. Dehimi, A. Maâchou,
T5-P3	Comparative study of Iodine-131 released during a nuclear accident	<u>A. Dadda Khorsi</u> , A. Bouam, A. Dahia, A. L. Cheridi Deghal, A. Kentouche, B. Bouali
T5-P4	Identifying the National NORM Inventory a First Step to Prevent its Spreading	<u>F. Zidouni</u> , M. Bogusław
T5-P5	Vitrification of a solid residue from the purification of an effluent	<u>Y. Mouheb</u> , D. Moudir, N. H. Kamel, F. Aouchiche, A. Maachou
T5-P6	Operational safety assessment for disposal zone in near- surface repository site	S. Zare Ganjaroodi, M. Fani, A.M. Farsani, <u>N. Amrani</u>
T5-P7	Modelling the Dispersion of Respirable and non-Respirable Radioactive Release.	<u>A. Ghezziel</u> , A. Ghadbane, A. Loubar
T5-P8	Gamma Radiation Pretreatment for Enhanced Cellulose Extraction from Date Palm Waste	<u>S. Benamer-Oudih</u> , A. Nacer khodja, D. Tahtat, S. Djenadi, Y. Benrezkellah
T5-P9	Rare Earth Elements Distribution in Clays: A Study via ko- Instrumental Neutron Activation Analysis	<u>L. Hamidatou</u> , A.K. Aklouf
T5-P10	Comparative study of the retention kinetics of total phenolic compounds from olive oil mill discharges by adsorption, conventional and under microwave irradiation, on natural soils	M. Arabi-Hocine, <u>B. Mansouri</u> , A. Elias
T5-P11	Investigation of Nuclear Radiation Shielding Properties of BaO, V <sub>2</sub> O <sub>5</sub> , and TeO <sub>2</sub> -Based Glasses	<u>A. Alomari</u> , O. Bawazeer, S. Al-Qahtani, A. Ismail, T. Alnaemi, I. Alshaikhi, A-W. Ajlouni
T5-P12	Kinetic study of the effect of gamma irradiation dose on the adsorption of Rovamycin by a composite material	M. Arabi-Hocine, <u>K. Remil</u> , C. Bouarnouna, I. Ghebraoui, M. Bouarnouna, B. Mansouri
T5-P13	Adsorption of Sr <sup>2+</sup> Ions from Aqueous Solution: Optimization Study	<u>A. Brahimi</u> , N. Boucherit, M.L. Yahiaoui, M. Messaoudi, A. Bouaichaoui, A. Ouanezar, A. Malki, F. Rebhi, N. Kaci and R. Lamouri
T5-P14	Assessment of the Radioactivity Level of Algerian Phosphate Wastewater	<u>S. Soltani</u> , T. Azli, F. Zidouni
T5-P15	Design and development of Supervisory environment GMSAS for radiological early warning Monitoring system for National Network detection	<u>M.F. Belazreg</u> , A. Hammadi, M. Maache, M. Boudria, D. Taieb-Errahmani, A.C. Chergui A. Yaiche and A. Messaadi
T5-P16	Development of a Cost-Effective System for Environmental Radiation Monitoring and Mapping	<u>H. Mekki</u> , A. Bourenane, K. Remita, B. Zahra, N. Hebboul
T5-P17	Natural material treated by heat used to remove uranium from diluted solution	<u>M. Bellaloui</u> , M. Bennemla, N. Bayou
T5-P18	Application of environmental isotopes in the study of groundwater resources in arid zones.	<u>D. Khous</u> , H. Chorfi, M. E. Cherchali, A.S. Moulla, S.A. Ouarezki

<b>T5-P19</b>	Assessing Aquifer Recharge in the Southwestern Saharan Atlas: Insights from Isotopic and Precipitation Analysis	<b><u>H. Chorfi</u></b> , D. Khou, M.S. Belksier, A. Zeddouri, S. Ouarezki, M.E. Cherchali
<b>T5-P20</b>	Effect of soil organic matter and clay content on activity concentrations of caesium-137 variations at the field scale.	<b><u>A. Dilmi</u></b> , S. Benarousse, A. Azebouche, I. Chaïbi, S. Radjemi, A. Arabi
<b>T5-P21</b>	Radiological Scanning of the Environment around Draria site	<b><u>A. Hammadi</u></b> , D.Taieb Errahmani, M.Maache, M.Boudria, M. Ziouche
<b>T5-P22</b>	Study of the head on collision of two dust acoustic solitary waves in a strongly coupled dusty plasma where the electrons and the ions are kappa-distributed	<b><u>S. Kadi</u></b> , R.Annou, A.Tahraoui, A.Ferdi, W.Saddok
<b>T5-P23</b>	Influence of Carbonates on Radium Sorption in Soils: Distribution, Toxicity, and Environmental Risks	<b><u>A. Kessab</u></b> , K. Guimeur, A. Mecelti, N. Mebriouk
<b>T5-P24</b>	Development setup of low-level gamma-ray spectrometry using an MCNP – Gammavision combined method.	<b><u>T. Azli</u></b> , S.Mazidi, S. Benbouzid, A. Hadri, Y. Amrane, M. Aliane
<b>T5-P25</b>	Natural radioactivity concentration measurement and the estimation of radiological impact in "ACHASTA" bentonite deposit by using $\gamma$ -Ray Spectrometry technique.	<b><u>S. Achour</u></b> , S. Bouzid, T. Azli, D. Groune
<b>T5-P26</b>	Application of Nuclear Techniques in the fight against desertification: Soil-to-Plant Transfer Factors as Indicators of Soil Degradation	<b><u>H. Silhadi</u></b> , S. Benarous, A. Azbouche, A. Arabi, A. Dilmi, L. Boudraa
<b>T5-P27</b>	Radioactivity Evaluation of U-238, Th-232 and K-40 in Tea Samples	<b><u>F. Kadem</u></b> , R. Bensedira, N. Belouadah , L. Yettou
<b>T5-P28</b>	pH-Sensitive Alginate/PVP Matrix for Oral Delivery of Penicillin via Gamma Irradiation Crosslinking	<b><u>D. Tahtat</u></b> , H. Bendjedda, S. Benamer, A. Nacer Khodja
<b>T5-P29</b>	Study of the effect of solar radiation on Plants: a case study of the sunflower plant	<b><u>M. Boukabcha</u></b> , K. El Miloudi
<b>T5-P30</b>	Assessment of Terrestrial Radiation Based on Ambient Gamma Dose Rates Measured by the National Radiological Early Warning System	<b><u>A. Hammadi</u></b> , <b><u>M. Boudria</u></b> , <b><u>M.Maache</u></b> , <b><u>F. Belazreg</u></b>
<b>T5-P31</b>	Assessment of the soil redistribution rate by using Beryllium-7 in semi-arid region of northern Algeria	<b><u>A. Kessaissia</u></b> , A. Azbouche, B.Morsli, A.S Moulla