

## Detailed programme

### 16th International Conference on Modern Trends in Activation Analysis

Sunday / 5 May

14:00	Registration	
16:30	Opening - Zsolt Révay	
17:00	<b>Hevesy Award presentation</b> Award lecture: Elisabete A. De Nadai Fernandes	Sustainable contributions by NAA and metrology to producers and consumers in Brazil's agronomical landscape
18:00	Welcome Reception	

Monday - 6 May

9:00	Opening - Zsolt Révay	
9:15	<b>Young Scientist Award presentation</b> Award lecture: Iaroslav Meleshkovskii	Numerical study on the characterization of FeNdB permanent magnets with fast-neutrons induced (n,n') reactions
10:00	Kattesh V. Katti	Nano-Ayurvedic Medicine—Discovery of a New Medical Modality Through Nuclear Analytical and Radiochemical Techniques—Preclinical and Clinical Investigations
10:30	Coffee break	
<b>Session</b>	<b>Instrumental Neutron Activation Analysis</b>	<b>Chair: Raghunath Acharya</b>
11:00	Mohamed Soliman	Innovative neutron activation approach for analysis of large liquid samples based on short-lived radionuclides
11:20	James A. Davenport	Instrumental Neutron Activation Analysis of Inka Pottery from Fifteen Inka Archaeological Sites in the Lurín Valley, Central Coast of Peru: Insights into Production and Exchange
11:40	Klaus Eberhardt	The research reactor TRIGA Mainz. A highly flexible neutron source for activation experiments
12:00	Katalin Gmélíng	International user access possibilities of Neutron Activation Techniques at the Budapest Neutron Centre (BNC)
12:20	Amares Chatt	Simultaneous multielement speciation analysis using neutron activation
12:40	Lunch break	
<b>Session</b>	<b>Facilities</b>	<b>Chair: Xiaolin Hou</b>
14:00	Seong Pyo Hong	A Customized Rabbit for Diagnosing the HANARO Pneumatic Transfer System for INAA
14:20	Zhao-Ming Pan	Experimental and numerical evaluation of the performance of an integrated activation device for routine neutron spectrum confirmation at THOR-BNCT
14:40	Doruntin Shabani	Investigation of the <sup>99</sup> Mo production via neutron capture <sup>98</sup> Mo(n,γ) <sup>99</sup> Mo with a high-current accelerator-based neutron source
15:40	Jinyu Kim	Development of 4πβ-γ Coincidence Counting System for Absolute Radioactivity Measurement
15:20	Coffee break	
16:00	Poster session	
18:00	ICAA Meeting	

Tuesday - 7 May

<b>Session</b>	<b>Plenary talk, Kaj Heydorn memorial</b>	<b>Chair: Amares Chatt</b>
9:00	Xiaolin Hou	Neutron activation analysis in Denmark, the contribution of Dr. Kaj Heydorn
9:45	Jan Kučera	Radiochemical and preconcentration neutron activation analysis: Recent achievements, present status and trends
10:30	Coffee break	
<b>Session</b>	<b>k0-based activation analysis</b>	<b>Chair: Radojko Jacimovic</b>
11:00	Robbert van Sluijs	Detection limits in k0-NAA
11:20	Attila J. Stopic	Validation of Tb-161 Activation Calculations using k0-NAA
11:40	Kishore B. Dasari	Standardization of k0-INAA method for High f Value at HANARO Reactor, South Korea
12:00	Manh Dung Ho	Study on a dual method using SMELS for neutron flux self-monitoring and quality control in the k0-NAA
12:20	Manish Chand	Significance of Westcott g-Factor for the Assay of Non-1/ν Nuclides using k0-NAA
12:40	Lunch break	
<b>Session</b>	<b>Comparison to other methods</b>	<b>Chair: Katalin Gmélíng</b>
14:00	Noémi Anna Buczkó	Benchmarking handheld XRF spectroscopy against PGAA, NAA for the elemental composition analysis of electronic waste
14:20	Bryan E. Tomlin	Comparative analysis of Florida chert using LA-ICP-MS and INAA
14:40	Wael M. Badawy	Nuclear and complementary analytical methods for elemental abundances investigation of rock samples from Egypt
15:00	Coffee break	
15:15	Technical tours - Meeting point in the Lobby	

Wednesday - 8 May

<b>Session</b>	<b>Plenary talk</b>	<b>Chair: Jan Kučera</b>
9:00	Maria Angela de B. C. Menezes	An overview of the development of neutron activation analysis at the Nuclear Technology Development Centre, Belo Horizonte, Brazil
9:45	Radojko Jacimovic	NAA activities at the JSI, Slovenia
10:30	Coffee break	
<b>Session</b>	<b>Prompt Gamma Activation Analysis</b>	<b>Chair: Boglárka Maróti</b>
11:00	Christian Stieghorst	Machine Learning for Prompt Gamma Activation Analysis
11:20	Paul Zakalek	Time-of-Flight Prompt Gamma Neutron Activation Analysis
11:40	Zsolt Revay	Revision of the analytic database for PGAA
12:00	Jiatong Li	Development of on-line analysis device for selection and smelting process based on PGNAA technology
12:20	Jérémy Roult dit Rouaux	Experimental Database of Gamma Coincidence spectra recorded in Prompt Gamma Neutron Activation Analysis
12:40	Lunch break	
<b>Session</b>	<b>Applications of Activation Analyses</b>	<b>Chair: Eric Mauerhofer</b>
14:00	Lukas M. Schramm	Elemental composition and radionuclide content of diagenetic manganese nodules from the Pacific deep sea
14:20	Antoaneta Ene	Multi-elemental contamination study of soils adjacent to iron and steel industry by INAA and XRF
15:00	Coffee break	
<b>Session</b>	<b>Special Applications 1</b>	<b>Chair: Maria Angela de B. C. Menezes</b>
15:20	Zsuzsanna Macsik	Accelerator produced <sup>233</sup> Pa for nuclear forensics analyses?
15:40	Ewelina Chajduk	Do we need INAA in nuclear forensics? Comparison of the analytical performance of INAA and ICP-MS in the nuclear forensic investigation
16:00	Gabriele Rossini Moreira	Multi-element profiling by NAA of Amazon wood species for forensic timber identification
18:30	Meeting point for Gala dinner in the Lobby	
19:00	Gala Dinner	

Thursday - 9 May

<b>Session</b>	<b>Plenary talk</b>	<b>Chair: Elisabete A. De Nadai Fernandes</b>
9:00	H. Heather Chen-Mayer	Nuclear analytical activities at NIST: methods, history, user facility, and plans
9:45	Paul Zakalek	The High-Brilliance Neutron Source project
10:30	Coffee break	
<b>Session</b>	<b>Fast neutrons / Other particles</b>	<b>Chair: Bryan E. Tomlin</b>
11:00	Peane P. Maleka	High-energy neutron activation analysis of various target materials
11:20	Eric Mauerhofer	Fast Neutron-induced Gamma-ray Spectrometry (FaNGaS)
11:40	Zina Ndabeni	Fast neutron beam facilities at iThemba LABS and the University of Cape Town, South Africa
12:00	Michael John Duke	Developments in the application of medical cyclotrons for neutron activation analysis
12:20	Kazuhiko Ninomiya	Determination of isotopic composition of lead using prompt and decay gamma-rays by muon induced nuclear reaction
12:40	Lunch	
<b>Session</b>	<b>Reference Materials</b>	<b>Chair: Robert R. Greenberg</b>
14:00	Nicholas M. Kaitschuck	Optimization of Neutron Activation Analysis for a Cellulose Reference Material Using Compton Suppression and Gamma-Gamma Coincidence Methods
14:20	Mehmet Sarilar	Reuse of irradiated reference materials contributes to lower running costs in quality control and calibration in NAA
14:40	Hana Cho	The system for certification of reference materials in Korea using standard comparator neutron activation analysis
15:00	Coffee break	
<b>Session</b>	<b>Special Applications 2</b>	<b>Chair: Zsolt Révay</b>
15:20	David Knezevic	Study of spectroscopic properties of <sup>110</sup> Ag using the <sup>109</sup> Ag(nth,2γ) reaction
15:40	Dominik Boya	Szilard-Chalmers investigations of neutron-irradiated gold foils
16:00	Boglárka Maróti	Validation of MCNP and FISPACT calculations to predict the activation of medical radioisotope target materials in the Budapest Research Reactor
16:30	Poster session	

Friday - 10 May

<b>Session</b>	<b>Plenary talk</b>	<b>Chair: H. Heather Chen-Mayer</b>
9:00	Gwang-Min Sun	Current Activities at HANARO Research for Metrological Aspect in Korea
9:45	Raghunath Acharya	Chemical Quality Control of Materials by Conventional and k0-based Internal Monostandard NAA and PGNAA Methods Utilizing Research Facilities at BARC, India
10:30	Coffee break	
<b>Session</b>	<b>Neutron Depth Profiling</b>	<b>Chair: Gwang-Min Sun</b>
11:00	Caijin Xiao	Progress on Neutron Depth Profiling at China Advanced Research Reactor
11:20	Jinhwan Kim	KAERI-NDP System: Development and Performance Analysis
11:40	Robert Neagu	3D Neutron Imaging for Depth Profiling Applications
12:00	Giovanni Ceccio	Investigation of C60 / LiCoO2 cathode for All Solid-State Lithium Ion Batteries using Thermal Neutron Depth Profiling
12:20	Closing - Zsolt Révay	
12:40	Lunch	

## Poster session

Monday - 6 May

Author	Title
Raghunath Acharya	QA/QC of Instrumental Neutron Activation Analysis Methods and Applications Towards Preparation of In-house Reference Materials
Tariq A. Al-Abdullah	Prompt vs delayed Gamma Rays for the Detection of Vanadium in Solid Samples
Johann M. R. Antoine	Elemental characterisation of illicit sildenafil products on the Jamaican market using instrumental neutron activation analysis
Patricia S. Bedregal	Heavy metals from the oil spills incident in the Peruvian Sea, determined by k0-INAA and AAS
Amares Chatt	A review of total, bioaccessible fraction, and speciation analysis of iodine in nutritional materials at nanomolar levels with low overall expanded uncertainties by neutron activation at the
Kishore B. Dasari	Elemental Analysis of Blended Cement Samples in Korea by Neutron Activation Analysis
Michael Fagbemi	Advancements in Instrumentation for Activation Analysis in Nuclear Research
Lylia Hamidatou	Comparative Study by k0-NAA Method of Two Algerian Bentonites Saturated and Unsaturated with Corrosion Inhibitors
Marcelo M. Hidalgo	Curse of dimensionality in NAA data: an investigation on Classification and Clustering analysis
Manh Dung Ho	Correction of uranium fission interferences for k0-NAA at the Dalat Research Reactor
Seong Pyo Hong	Compositional analysis of AuPd nanoparticles Using INAA
Jan Kučera	INAA of bone remains of Bohemian Duke John of Görlitz: An attempt to explain his sudden death in the age of twenty-five years
Letícia Lima	Development of an organic coffee leaves reference material for elemental analysis
Robson C. Lima	Neutron activation analysis: extracting further information from gamma-ray spectra for machine learning approaches
Maria Angela de B. C. Menezes	An approach to apply the neutron activation analysis, k0 method, on irregularly shaped samples
Gabriele Rossini Moreira	Developing an in-house quality control material of bovine tail hair for multi-elemental analysis
Jherson J. Rivas Inga	Proposal of a Laboratory Information Management System (LIMS) for the neutron activation analysis technique applied at Peruvian Institute of Nuclear Energy (IPEN)
Mehmet Sarilar	The INAA facility in Delft: Fully automated, high capacity, high accuracy and opportunities for transnational access.
Christian Stieghorst	Neutron Activation Analysis at MLZ
Yonggang Yao	Instrumental Neutron Activation Analysis of Chang'E-5 Lunar Samples

Thursday - 9 May

Author	Title
Mohd Fitri Bin Abdul Rahman	Comparison of PGNAA Simulation Techniques for Concrete Analysis
Sabah el houda Addali	Monte Carlo calculation of self-shielding factor for instrumental Neutron Activation Analysis: Determination of Lanthanides concentration in phosphates
H. Heather Chen-Mayer	Calibration of a gamma ray Compton camera for radioactivity measurements
Hyunkyung Choi	Mossbauer spectroscopy technique: How to characterize Fe oxides in archaeology
Lahasen Dahing	Identification of Multielement Using Prompt Gamma-ray Technique: Comparison study
Kishore B. Dasari	Investigation of Uranium Analysis using 140Ba/140La induced from 235U Fission Reaction
Michael John Duke	Determination of the silicon content of geological materials by reactor fast neutron activation analysis (FNAA).
Antoaneta Ene	Study of spatial and temporal trace element atmospheric deposition in Romania using moss biomonitoring and combined analytical techniques (INAA, ICP-MS and AAS)
Katalin Gméling	Testing 3D printing raw materials as sample holders in Neutron Activation Analysis
Maria Gracheva	Manganese supply to chloroplasts for optimal photosynthesis
Marcelo M. Hidalgo	Empowering classification algorithms in NAA with augmented data for traceability studies
Nicholas M. Kaitschuck	The Determination of Several Rare-Earth Elements Using Short-and Medium-Lived Epithermal Neutron Activation Analysis Products
Abdollah Khorshidi	Nano-sized 90Y and 188Re production via Medium Reactor and Cyclotron
Jinhwan Kim	Physics-Informed Neural Network as an unfolding-Approach to Gamma Spectroscopy
Robson C. Lima	Optimization of baseline removal and peak area integration in gamma spectrometry
Julien Masseron	Specialty HPGe probe for neutron activation analysis
Yasuji Oura	Flux correction for photon activation analysis
Doruntin Shabani	Innovative approach for sustainable and low-waste production of 99Mo-based radiodiagnostics using accelerator-based neutron source
Hadi Shahabinejad	A novel approach for elemental identification of sealed cargo based on fast neutron activation analysis and artificial neural network