

Monday, July 18

08:30-09:00	OPENING	
Quantum technology applications/Ion beam modification of materials – Chair: Gihan Velisa		
09:00 - 09:30	David Jamieson <i>The University of Melbourne, Australia</i> Accelerators for a new technology era: 28-Si enrichment and donor doping for quantum devices (online)	I-1
09:30 - 10:00	Roger Webb <i>University of Surrey, UK</i> Implanted Layer Exchange Production of Isotopically Pure Si and Ge Layers for Quantum Computers	I-2
10:00 - 10:20	Stefan Facsko <i>Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden-Rossendorf, Germany</i> Transnational Access to European Ion Beam Centers: RADIATE and beyond	O-1
10:20 - 10:40	Mandla Msimanga <i>Tshwane University of Technology, South Africa</i> A broad beam ion implantation technique based on heavy ion elastic recoil	O-2
10:40 - 11:00	Coffee Break	
Ion beam analysis and applications 1 – Chair: Roger Webb		
11:00 - 11:30	Mikko Laitinen <i>University of Jyväskylä, Finland</i> ToF-ERDA – applications, data and detectors	I-3
11:30 - 11:50	Olli Tarvainen <i>STFC Rutherford Appleton Laboratory, UK</i> Ion source and low energy beam transport prototyping for a single-ended heavy ion ToF-ERDA facility	O-3
11:50 - 12:10	Gyula Nagy <i>Uppsala University, Sweden</i> In-situ characterization of synthesis and controlled oxidation of TiN thin films	O-4
12:10 - 12:30	Mikko Kivekäs <i>University of Jyväskylä, Finland</i> Elastic scattering and recoiling cross-sections measured by ToF-ERDA for low energy heavy ions	O-5
12:30 - 14:00	Lunch	
Ion beam analysis and applications 2 – Chair: Stefan Facsko		
14:00 - 14:20	Michael Kokkoris <i>National Technical University of Athens, Greece</i> Measurement and evaluation of differential cross sections for protons on natO in the energy range E= 4-6 MeV, suitable for EBS	O-6
14:20 - 14:40	Johan Meersschant <i>IMEC, Belgium</i> High-accuracy Rutherford backscattering spectrometry	O-7
14:40 - 15:00	Fotis Maragkos <i>National Technical University of Athens, Greece</i> Systematic R-matrix Calculations for the $^{12}\text{C}(3\text{He},\text{p})^{14}\text{N}$ reaction suitable for NRA applications	O-8
15:00 - 15:20	Evangelia Taimpiri <i>National Technical University of Athens, Greece</i> Differential cross section measurements of the $^6\text{Li}(d, n\gamma_{1-0})^7\text{Be}$, $^6\text{Li}(d, p\gamma_{1-0})^7\text{Li}$, $^7\text{Li}(d, d\gamma_{1-0})^7\text{Li}$ and $^{19}\text{F}(d, p\gamma_{1-0})^{20}\text{F}$ reactions suitable for PIGE applications	O-9
15:20 - 15:40	Coffee break	
15:40 - 17:30	Poster Session A	

Tuesday, July 19

Accelerator Mass Spectrometry – Chair: Mihai Straticiu		
09:00 - 09:30	Christine Hatte <i>Silesian University of Technology, Gliwice, Poland, LSCE, Universite Paris-Saclay, France</i> Soil dynamics revealed by cosmogenic nuclides	I-4
09:30 - 09:50	Karin Hain <i>University of Vienna, Austria</i> Developing Ion-Laser InterAction Mass Spectrometry (ILIAMS) for the analysis of environmental ⁹⁹ Tc	O-10
09:50 - 10:10	Iuliana Stanciu <i>IFIN-HH, Romania, TUM, Germany</i> Accelerator Mass Spectrometry of Plutonium: beyond isotopic ratios	O-11
10:10 - 10:40	Martin Martschini <i>University of Vienna, VERA Lab, Austria</i> Ion-Laser InterAction Mass Spectrometry – isobar suppression in AMS at eV-energies	I-5
10:40 - 11:00	Coffee Break	
Accelerator technology and development 1 – Chair: Timo Sajavaara		
11:00 - 11:20	Sergey Kutsaev <i>RadiaBeam Technologies, USA</i> Radioisotope replacement with compact electron accelerators	O-12
11:20 - 11:40	Eleni Ntemou <i>Uppsala University, Sweden</i> Energy deposition by keV ions in single crystalline self-supporting Si and SiC foils	O-13
11:40 - 12:00	Niels Claessens <i>IMEC, KU Leuven, Belgium</i> RBS applied to 3D nanostructures	O-14
12:00 - 12:20	Mihai Radu <i>IFIN-HH, Romania</i> Low-energy accelerated protons effects on a blood brain barrier model	O-15
12:20 - 12:35	Stephanie Stodola <i>National Electrostatics Corporation, USA</i> NEC: 2020 - 2022 In Review	S-1
12:35 - 14:00	Lunch	
Applications to art and archaeology 1 – Chair: Michael Kokkoris		
14:00 - 14:20	Thomas Calligaro <i>Centre de Recherche et de Restauration des Musées de France, France</i> Carbon mapping in steel using ¹² C(d,p gamma) ¹³ C in external beam	O-16
14:20 - 14:40	Charbel Koumeir <i>GIP ARRONAX, France</i> High energy beam analysis of cultural heritage materials from middle age to the renaissance	O-17
14:40 - 15:00	Roxana Bugoi <i>Horia Hulubei National Institute for Physics and Nuclear Engineering, Romania</i> A pilot study on glass finds from the Geto-Dacian Cărlomănești and Gruiu Dării settlements, Buzău county, Romania	O-18
15:00 - 15:20	Hanan Sa'adeh <i>The University of Jordan, Amman, Jordan</i> Quantification and Speciation of Lead in Air Particulate Matter Collected from an Urban Area in Amman, Jordan, Using PIXE and XANES Techniques	O-19
15:20 - 15:35	Radu Vasilache <i>Canberra Packard, Romania</i> Canberra Packard activities for developing new methods of measuring doses and LET in charged particle beams	S-2
15:35 - 15:50	Matteo Corbo <i>CAEN Spa</i> CAEN New Product Lines, Innovation and Integration	S-3
15:50 - 16:10	Coffee Break	
16:10 - 18:00	Poster Session B	

Wednesday, July 20

High-power laser driven accelerators – Chair: Dan Gabriel Ghita		
09:00 - 09:30	Paolo Tomassini <i>ELI-NP, LDED</i> High-brightness GeV scale e-beam acceleration with the Resonant Multi-Pulse Ionisation injection	I-6
09:30 - 10:00	Satyabrata Kar <i>Queens University of Belfast, UK</i> Advances in laser-driven ion sources and perspectives (online)	I-7
10:00 - 10:20	Domenico Doria <i>ELI-NP, Romania</i> Recent results of the commissioning of the 1 PW laser system of ELI-NP	O-20
10:20-10:40	Coffee break	
10:40 - 11:00	Lucian Tudor <i>ELI-NP, Romania</i> Characterization of laser-accelerated protons based on the excitation of nuclear isomeric states	O-21
11:00 - 11:20	Alexandru Magureanu <i>ELI-NP, Romania</i> Imaging diagnostics for laser plasma accelerators	O-22
11:20 - 12:00	Lunch	
12:00 - 19:00	Excursion	

Thursday, July 21

Ion beam modification of materials – Chair: Gihan Velisa		
09:00 - 09:20	Maria-Diana Mihai <i>Horia Hulubei National Institute for Physics and Nuclear Engineering, Romania</i> Ionization-induced transition from synergistic to competitive effect in defective KTaO_3	O-23
09:20 - 09:40	Zoran Jovanovic <i>Vinca Institute of Nuclear Sciences, Serbia</i> The effects of keV and MeV ion beam irradiation on the physicochemical properties of glassy carbon	O-24
09:40 - 10:00	Ali Biganeh <i>Nuclear Science and Technology Reserch Institute (NSTRI) of Iran</i> Ion beam based Coincidence Doppler broadening spectroscopy of thick sample	O-25
10:00 - 10:20	Hafez Taghipour Aslani <i>University of Sistan and Baluchestan, Zahedan, Iran</i> Differential cross sections measurement of $^{11}\text{B}(d, p\gamma_{1,2})^{12}\text{B}$ reactions for analytical applications	O-26
10:20 - 10:40	Coffee Break	
Applications to art and archaeology 2 – Chair: Thomas Calligaro		
10:40 - 11:00	Sabin Adrian Luca, Florentin Perianu, Raluca Teodorescu <i>Brukenthal National Museum, Romania</i> Some ideas on the absolute dating of the site Tartaria-Gura Luncii, Alba county, Romania	O-27
11:00 - 11:20	Dragos Mirea <i>Horia Hulubei National Institute for Physics and Nuclear Engineering, Romania</i> Characteristic X-ray study over a set of bracelets found in funerary context at Vânători, Galați county	O-28
11:20 - 11:40	Sabin Adrian Luca, Raluca Teodorescu, Florentin Perianu <i>Brukenthal National Museum, Romania</i> The absolute dating of the first wave of Neolithic colonization in Romania, Cristian I, Sibiu County	O-29
11:40 - 11:55	Christophe Derycke <i>Thales</i>	S-4
11:55 - 13:00	Lunch	
Application to life science – Chair: Mihai Straticiuc		
13:00 - 13:30	Maria Teresa Pinheiro <i>Instituto Superior Técnico, Portugal</i> Energetic ion beams for nanotoxicology and cancer therapy (online)	I-8
13:30 - 13:50	Mihaela Bacalum Ultra-high dose rate irradiation induces senescence and cell cycle arrest of B16 cells <i>Horia Hulubei National Institute for Physics and Nuclear Engineering, Romania</i>	O-30
Accelerator technology and development 2 – Chair: Ion Burducea		
13:50 - 14:10	Ionel Chirita <i>INCDIE ICPE-CA, Romania</i> Normal Conducting Magnets and Power Converters – ICPE-CA Participation to the In-Kind Contribution of Romania to the FAIR Project	O-31
14:10 - 14:30	Adrian Rotaru <i>ELI-NP, Romania</i> Ion Manipulation using the novel Harmonic Ion Transport System Developed at ELI-NP	O-32
14:30 - 14:50	Coffee break	
15:00 - 17:00	Visit Brukenthal National Museum (Brukenthal Palace / History Museum Altemberger House)	
17:00 - 18:30	ECAART International Committee Meeting	
18:30 - 22:00	Conference dinner	

Friday, July 22

Simulation and fundamentals – Chair: Roxana Bugoi		
09:00 - 09:30	Roy Shiloh Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany Electron acceleration using nanophotonic structures	I-9
09:30 - 09:50	Iuliana-Mariana Vladisavlevici West University of Timisoara, Romania Theoretical Study of Laser Energy Absorption towards Novel Bright Proton and Electron Sources	O-33
09:50 - 10:10	Osman Murat Ozkendir Tarsus University, Turkey Trace of Thermoelectricity on the XAFS Spectroscopy	O-34
10:10 - 10:40	Coffee Break	
10:40 - 11:30	Final remarks & closing	