

## INVITED TALKS

**Dieter Ackermann** (GANIL, Caen, France): *Probing SHN Structure and Stability — Synthesis and Decay Studies*

**Alejandro Algora** (IFIC Valencia, Spain): *Pandemonium Free Data for Reactor Applications*

**Melina Avila** (Argonne National Laboratory, USA): *Exploring  $\alpha$ -induced Reactions and Their Astrophysical Significance*

**Benjamin Bally** (CEA Saclay, DRF/IRFU, France): *Recent Developments and Applications of the Projected Generator Coordinate Method (a Personal Account)*

**Michael Block** (GSI Darmstadt and Helmholtz Institute Mainz, and Johannes Gutenberg University, Mainz, Germany): *Exploring the Structure of the Heaviest Nuclei Through Precision Measurements at Low Energy*

**Letizia Bonizzoni** (University of Milan, Italy): *Fission Track Dating of Obsidian Artifacts: A Geochronological Approach to Provenance*

**Maxime Brodeur** (University of Notre Dame, USA): *Testing the Standard Model with the Help of St. Benedict*

**Tomasz Cap** (National Centre for Nuclear Research, Warsaw, Poland): *Convergence of Stochastic Models in Nuclear Fission: Analysis of Langevin and Random Walk Approaches*

**Jolie Cizewski** (Rutgers University, New Brunswick, USA): *Experimental Techniques for Surrogate Neutron-induced Reactions with Radioactive Ion Beams*

**Pierre Delahaye** (GANIL, Caen, France): *Search for BSM Physics with  $\beta$  Decay: The MORA (Matter's Origin from RadioActivity) Experiment*

**Fanny Farget** (GANIL, Caen, France): *Latest Developments at GANIL/SPIRAL2*

**Luis M. Fraile** (CERN, Meyrin, Switzerland): *Fast Scintillator Detectors for Nuclear Spectroscopy, Medical Imaging and Hadrontherapy Monitoring*

**Ronald Garcia Ruiz** (Massachusetts Institute of Technology, USA): *Radioactive Molecules Are Dying to Reveal New Physics*

**Paul Garrett** (University of Guelph, Canada): *The Continuing Saga of the Cd isotopes: Multiple Shapes or Vibrational Structures?*

**Ruben de Groot** (KU Leuven, Belgium): *Laser Spectroscopy Studies of Short-lived Isotopes Using Ion Traps*

**Robert Grzywacz** (University of Tennessee, Knoxville, USA): *Beta Delayed Neutron Emitters — Exploring Decays of Unexplored Nuclei*

**Katarzyna Hadyńska-Klęk** (University of Warsaw, Poland): *A Guide on How to Travel Around the World with the Coulomb Excitation Tools in the Suitcase*

**Łukasz Iskra** (IFJ PAN, Kraków, Poland): *Nuclear Physics Program to Be Developed at the DONES Facility Using Pulsed Deuteron and Neutron Beams*

**Agnieszka Korgul** (University of Warsaw, Poland):  *$\beta^-$ -decay Spectroscopy of Indium Isotopes across the  $N = 82$  Shell Closure at the ISOLDE Decay Station*

**Michał Kowal** (National Centre for Nuclear Research, Warsaw, Poland): *Statistical Analysis of Deformation Effects on Level Densities and Fission Probabilities in Superheavy Nuclei*

**Dean Lee** (Michigan State University, USA): *Nuclear Lattice Simulations and Evidence for Multimodal Superfluidity*

**Marek Lewitowicz** (GANIL, Caen, France): *European Nuclear Physics Infrastructures: Current Status and Perspectives*

**Tomasz Malkiewicz** (CSC — IT Center for Science Ltd., Espoo, Finland): *Applications of High-performance Computing in Nuclear Physics*

**Jie Meng** (Peking University, China): *Relativistic Density Functional Theory for Nuclear Structure and Dynamics*

**Theodoros Mertzimekis** (National and Kapodistrian University of Athens, Greece): *Innovative Instrumentation Solutions for Marine Exploration: the EU FET Project RAMONES*

**Kenjiro Miki** (Tohoku University, Sendai, Japan): *Progress in 3n System Studies and the Next Steps: New Multineutron Experiments*

**Kouji Morimoto** (RIKEN Nishina Center, Saitama, Japan): *Status of New Element Search at RIKEN*

**Steve Pain** (Oak Ridge National Laboratory, USA): *Single-particle Spectroscopy and Resonance Strengths in  $N = Z$  Nuclides*

**Marek Płoszajczak** (GANIL, Caen, France): *Atomic Nucleus at the Edge of Stability*

**Krzysztof Pomorski** (National Centre for Nuclear Research, Warsaw, Poland): *On Isotopic Structure of Fission Fragments*

**Bertis C. Rasco** (Oak Ridge National Laboratory, USA): *Preliminary  $\beta$ -spectrum Measurements with the  $\beta$ -spectrum Module with Implications for Long-Lived Reactor  $\nu$  Calculations*

**Ante Ravlić** (FRIB, MSU, East Lansing, USA): *Beta Decay and Electron Capture in Heavy and Superheavy Nuclei*

**Hideyuki Sakai** (RIKEN Nishina Center, Saitama, Japan): *Spin Entanglement in Quasi-elastic and  $(p, 2p)$  Reactions*

**Marcus Scheck** (University of the West of Scotland, UK): *Can We Use Mössbauer Spectroscopy to Search for CP-violating Moments?*

**Achim Schwenk** (Technical University of Darmstadt, Germany): *Neutron-rich Nuclei and Matter in Neutron Stars*

**Jagjit Singh** (University of Manchester, UK): *Probing Structure and Reactions of Two-neutron Halos in the  $N = 28$  Isotones:  $^{40}\text{Mg}$  and  $^{39}\text{Na}$*

**Elżbieta Stephan** (University of Silesia, Katowice, Poland): *Experimental Studies of the Deuteron-Proton Breakup Reaction*

**Călin A. Ur** (ELI-NP, Măgurele, Romania): *Experiments with Extreme Light at ELI-NP*

**Piet Van Duppen** (KU Leuven, Belgium): *Towards a Thorium-229 Isomer Based Nuclear Clock: Recent Progress*

**Jessica Warbinek** (CERN, Meyrin, Switzerland): *Recent Results from Laser Spectroscopy at CRIS: Towards More Exotic Isotopes and Beyond Nuclear Structure Studies*

**Michael Wiescher** (University of Notre Dame, USA): *Stellar Neutron Sources — an Interplay Between Quantum Coupling and Shell Mixing*

**Michael Wiescher** (University of Notre Dame, USA): *Nuclear Astrophysics and the Bomb*

## SEMINARS

**Osama Ahmad** (KU Leuven, Belgium): *High-resolution Laser Spectroscopy of Light Gold Isotopes at CRIS: Investigation of the Island of Deformation and Shape Coexistence*

**Kalle Auranen** (University of Jyväskylä, Finland): *Recoil-Decay Tagging Studies of Neutron-deficient Actinium Nuclei at JYFL-ACCLAB*

**Marta Babicz** (University of Zurich, Switzerland): *Advanced Background Rejection and Rare Process Searches in the LEGEND Experiment*

**Riccardo Biasissi** (University of Padova, Italy): *Probing Key  $^{19}\text{F}(p, \gamma)^{20}\text{Ne}$  Resonances with Innovative Targets at LUNA*

**Mark Bissell** (CERN, Meyrin, Switzerland): *Recent Advances in the Study of the Bohr–Weisskopf Effect — New Measurements and an Improved Theoretical Description*

**Martin Bordeau** (University of Strasbourg, France and RIKEN Nishina Center, Saitama, Japan): *Upper Limit for the  $^{248}\text{Cm}(^{50}\text{Ti}, xn)^{298-x}\text{Og}$  Reaction Cross Section*

**Alessandro Compagnucci** (University of Edinburgh, UK): *Underground Measurements of the  $^{14}\text{N}(p, \gamma)^{15}\text{O}$  Reaction at LUNA*

**Ian Cox** (University of Tennessee, Knoxville, USA): *Superaligned  $\alpha$  Decay of  $^{104}\text{Te}$*

**Konrad Czerski** (University of Szczecin, Poland): *Observation of Thermal Deuteron–Deuteron Fusion in Accelerator Experiments at sub-keV Energies*

**Irene Dedes** (IFJ PAN, Kraków, Poland): *Model Independent Identification of  $C_{2v}$  Symmetry in the  $^{236}\text{U}$  Nucleus*

**Marie Deseyn** (KU Leuven, Belgium): *Towards Precise Nuclear Charge Radii of Silicon Isotopes Using Muonic X-ray Spectroscopy*

**Davide Genna** (University of Milan and INFN Milan, Italy): *Tracking the Evolution of Nuclear Structure in Neon Isotopes Toward the  $N=20$  Island of Inversion*

**Xiao-Tao He** (Nanjing University of Aeronautics and Astronautics, China): *Light Superheavy Nuclear Structure Study by PNC-CSM Method*

**Yannen Jagathen** (National Centre for Nuclear Research, Warsaw, Poland): *Mass-asymmetry Impact on Fusion Probability: Insights from the  $^{220}\text{Th}$  System Using Multidimensional Stochastic Dynamics*

**Robin Kjus** (CEA Saclay, DRF/IRFU, France): *Investigating Shape Coexistence in  $^{74}\text{Se}$  Using Coulomb Excitation*

**Henna Kokkonen** (University of Jyväskylä, Finland): *Decay Spectroscopy Studies on the Two New Isotopes of Astatine*

**Nikita Kozyrev** (Johannes Gutenberg University, Mainz, Germany): *Probing the Neutron Skin Puzzle in  $\text{Pb-208}$ : Precision Polarized Electron Scattering at Mainz*

**Magdalena Kuich** (FRIB, MSU, East Lansing, USA): *Nuclear Reaction Cross-section Measurements in Mirror Nuclei  $^7\text{Li}$  and  $^7\text{Be}$  Using Active-Target Time Projection Chamber*

**Gururaj Kumar** (KTH Royal Institute of Technology, Stockholm, Sweden and GSI Darmstadt, Germany): *Advances in Radon Based Earthquake Forecasting using Sensor Networking*

**Shayan Kumar** (GANIL and University of Caen Normandie, Caen, France): *Towards the Limits of Stability — New Decay Study of the Lightest Mendeleviums*

**Dario Lattuada** (National Laboratories of the South (LNS), INFN Catania, and Kore University of Enna, Italy): *Experimental Studies of  $\gamma$ -induced Reactions for the  $p$  Process*

**Nicholas Lightfoot** (University of Surrey, Guildford, UK): *Reaction Rates with Temperature Dependent Cross Sections Using Quantum Dynamical Reaction Theory in the  $(n, {}^{186}\text{Os})$  Reaction*

**Massimiliano Luciani** (University of Milan and INFN Milan, Italy): *Search for Shape Coexistence in Ca Isotopes by Complete Low-Spin Spectroscopy via  $(n_{th}, \gamma)$  Reactions*

**Bhoomika Maheshwari** (GANIL, Caen, France): *Quantum Computing Algorithm for Shell Model States*

**Ilaria Michelon** (University of Geneva and CERN, Meyrin, Switzerland):  *$\beta$ -decay Spectroscopy of Laser-polarised  ${}^{47}\text{K}$  at VITO-ISOLDE*

**Michał Mikołajczuk** (University of Warsaw, Poland and GSI Darmstadt, Germany): *In-flight  $\gamma$ -ray Spectroscopy and Half-life Measurements of  ${}^{129}\text{In}$  and  ${}^{128}\text{Cd}$*

**Jan Miśkiewicz** (University of Warsaw, Poland): *Two-neutrino  $0^+ \rightarrow 0^+$  Double  $\beta$  Decay of  ${}^{48}\text{Ca}$  in the DFT-NCCI Framework*

**Peng Shuai** (Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China): *Impact of the  $\beta$  Decay Ground-state Feeding of  ${}^{63}\text{Mn}$  on the Urca Cooling Process*

**Margareta Sigmund** (Ruder Bošković Institute, Zagreb, Croatia): *Neutron-rich Light Nuclei Studied via Reactions with the  ${}^9\text{Li}$  Beam*

**Franziskus von Spee** (IJCLab, Orsay, France): *Measurement of Nuclear Magnetic Moments Near Doubly Magic  ${}^{132}\text{Sn}$*

**Michał Stepaniuk** (University of Warsaw, Poland): *Gamma-ray Emission in Competition with Neutron Emission in the  $\beta$  Decays of  ${}^{87-91}\text{Br}$*

**Bram van den Borne** (KU Leuven, Belgium): *Investigating the Evolution of Nuclear Structure Below  $Z = 50$  with Ag*

**Robbe Van Duyse** (KU Leuven, Belgium): *Towards High Precision Optical Spectroscopy of Trapped Radioactive Ions*

**Michał Warda** (Maria Curie-Skłodowska University, Lublin, Poland): *Cluster Radioactivity in Heavy and Superheavy nuclei. The Evolution of the Super-asymmetric Fission Valley*

**Jonathan Wilson** (IJCLab, Orsay, France): *Fission Studies with the nu-Ball2 Array*

**Bogusław Włoch** (LP2i, Bordeaux, France): *Simultaneous Measurement of Fission,  $\gamma$ , and Multi-neutron Emission in Surrogate Reactions at Heavy-ion Storage Ring*

**Magda Zielińska** (CEA Saclay, DRF/IRFU, France): *Multiple Shape Coexistence in  $^{100}\text{Zr}$*

## POSTERS

### Posters with oral presentations

**Aleksander Augustyn** (National Centre for Nuclear Research, Warsaw, Poland): *Fission Barriers of Actinides Using Fourier-over-Spheroid Parametrization within the Macroscopic–Microscopic Model*

**Indu Bala** (Inter University Accelerator Centre, New Delhi and Indian Institute of Technology Roorkee, India): *Rotations in the  $^{152}\text{Gd}$  Nucleus*

**Alice Barbon** (University of Catania and INFN Catania, Italy) *Characterization and Simulation of Silicon Carbide Devices in the SAMOTHRACE Ecosystem*

**David Godos Valencia** (National Autonomous University of Mexico, Mexico City, Mexico and University of Huelva, Spain): *Experimental Study of the  $\beta$  decay of  $^{46}\text{Mn}$  and its Connection to  $^{44}\text{Ti}$  Nucleosynthesis*

**Jerzy Grębosz** (IFJ PAN, Kraków, Poland): *Online Data Analysis and Visualization for Large-Scale Nuclear Spectroscopy Studies*

**Victor Guadilla** (University of Warsaw, Poland): *Decay Modes of  $^{39}\text{Ti}$ : Search for Two-Proton Radioactivity*

**Piotr Jachimowicz** (University of Zielona Góra, Poland): *Candidates for Three-quasiparticle K-isomers in Even–Odd Fm–Cn Nuclei*

**Anna Kawęcka** (Chalmers University of Technology, Gothenburg, Sweden): *Transfer Across an Isobaric Multiplet: ( $d,p$ ) of  $^{17}\text{F}$  and  $^{17}\text{O}$*

**Bernadett Kruzsi** (University of Debrecen and HUN-REN Institute for Nuclear Research (ATOMKI), Debrecen, Hungary): *Spectroscopy of Negative Parity Bands in  $^{105}\text{Pd}$*

## Other posters

**Clémentine Azam** (CEA Cadarache, DES/IRESNE, Saint-Paul-Lez-Durance, France): *Role of the Effective Interaction in Bohr–Hamiltonian Calculations*

**Mouna Bouhelal** (Echahid Cheikh Larbi Tebessi University, Tebessa, Algeria): *Shell-Model Description of the Spectroscopic Properties of  $^{25}\text{Al}$ – $^{25}\text{Mg}$  Mirrors at Excitation Energies of Astrophysical Significance*

**Mouna Bouhelal** (Echahid Cheikh Larbi Tebessi University, Tebessa, Algeria): *Nuclear Structure of Rare Isotopes in the  $sd$ -Shell Region*

**Marcell Begala** (HUN-REN Institute for Nuclear Research (ATOMKI), Debrecen, Hungary): *Lanthanum Bromide Detector Array of ATOMKI (LABDA)*

**Gokul Das Haridas** (University of Szczecin, Poland): *Low-energy  $DD$  Fusion in Metallic Targets: Role of the  $0^+$  Resonance and Background Characterization in Terrestrial-Laboratory Measurements*

**Piku Dey** (University of Warsaw, Poland): *Measurements of Octupole Collectivity in  $^{90,91}\text{Zr}$*

**Dominik Duda** (IFJ PAN, Kraków, Poland): *Gamma Spectroscopy of Neutron-deficient Nuclei Close to  $^{70}\text{Br}$  Using the EAGLE Array and Ancillary Detectors at the Heavy Ion Laboratory in Warsaw*

**Caterina Garofalo** (University of Catania, Italy): *Probing Short-range Correlations in Heavy-ion Double Charge Exchange Reactions*

**Corentin Hiver** (University of Warsaw, Poland): *Complex Simulations of the Heavy-ion Detection Mechanism for the Modernized Version of the Recoil Filter Detector at HIL UW*

**Katharina Ide** (Technical University of Darmstadt, Germany): *Investigation of a Sudden Increase in Collectivity at  $^{170,172}\text{W}$*

**István Kuti** (HUN-REN Institute for Nuclear Research (ATOMKI), Debrecen, Hungary): *Investigating Possible Wobbling Motion in  $^{103}\text{Pd}$*

**Aleksandra Lenartowicz-Gasik** (National Centre for Nuclear Research, Otwock, Poland): *Energy Spectrum Measurements for Conventional and Ultra-high Dose Rate (FLASH) Electron Beams*

**Adam Malinowski** (University of Warsaw, Poland): *In Search of New Excited States of  $^{57}\text{Cu}$*

**Zsolt Mátyus** (University of Debrecen and HUN-REN Institute for Nuclear Research (ATOMKI), Debrecen, Hungary): *Experimental Study of the  $^{29}\text{Si}(p, \gamma)^{30}\text{P}$  Reaction for Classical Nova Nucleosynthesis*

**Hannes Mayr** (Technical University of Darmstadt, Germany): *Coulomb Excitation of  $^{212}\text{Ra}$  at HIE-ISOLDE*

**Ritankar Mitra** (Bose Institute, Kolkata, India): *Breakup Studies of  $^7\text{Be}$  on  $^{12}\text{C}$  at 5 MeV/u*

**Anu Nagpal** (University of York, UK): *To Derive the Distribution of Magnetisation in Neutron-rich Potassium Isotopes*

**Bożena Nerlo-Pomorska** (Maria Curie-Skłodowska University, Lublin, Poland): *On the Shape Coexistence and Possible Shape Isomers in the Pt–Hg–Pb Neutron-deficient Nuclei*

**Clemens Nickel** (Technical University of Darmstadt, Germany): *First Data on Lifetimes of the First  $2^+$  and  $4^+$  States of  $^{200}\text{Pt}$*

**Jan Orliński** (University of Warsaw, Poland): *Anisotropic Flow of Strange Hadrons in Relativistic Heavy Ion Collisions Measured with HADES*

**Daniel Paulitsch** (CERN, Meyrin, Switzerland and University of Innsbruck, Austria): *Beta-detected Nuclear Magnetic Resonance (Beta-NMR) at ISOLDE to Determine the Distribution of Magnetisation in Halo Nuclei*

**Iwona Piętka** (University of Warsaw, Poland): *Coulomb Excitation of  $^{110}\text{Cd}$  Studied with AGATA at LNL*

**Anthony Roitman** (McGill University, Montreal, Canada): *MIRACLS: Laser Spectroscopy in an MR-ToF Device and the Charge Radii of Exotic Magnesium Isotopes*

**Rajat Roy** (Indian Institute of Technology Ropar, Punjab, India and ELI-NP, Măgurele, Romania): *Study of Neutron Cross Sections in  $(\alpha, n)$  Reactions*

**Gayatri Sarkar** (Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India): *Theoretical Investigation of  $^{64}\text{Cu}$  Production in a p-induced reaction: Medical and Industrial Perspectives*

**Paulina Sekrecka** (University of Warsaw, Poland): *In Beam  $\gamma$ -ray Spectroscopy of  $^{134}\text{Sm}$*

**Aleksandra Skruch** (University of Warsaw, Poland): *Measurement of the  $^{15}\text{N}(\alpha, \gamma)^{19}\text{F}$  Reaction at the Felsenkeller Laboratory*

**Andrej Špaček** (University of Warsaw, Poland): *Expanding the EAGLE Array at HIL: The FLASH Campaign for Fast-Timing Spectroscopy*

**Krzysztof Stasiak** (University of Łódź, Poland): *Homogeneity and Thickness Measurement of Large-area Targets for the  $(n, cp)$  Reaction Cross Section Studied at n\_TOF CERN*

**Sreelakshmi Thulichery** (University of Szczecin, Poland): *Measurement of Proton Induced Reactions on Lithium at Ultra Low Energies*

**Polytimos Vasileiou** (National & Kapodistrian University of Athens, Greece): *Investigation of Triaxiality in Low-lying Collective Bands of Even-Even Er Isotopes*

**Urban Vernik** (Technical University of Darmstadt and EMMI, GSI Darmstadt, Germany): *Exploring New Chiral Interactions for Neutron-rich Nuclei*