

Monday 30.8

18:00 *Dinner*

19:30 – 20:00

Opening

20'

Adam Maj (Kraków) – *Welcome*

10'

Reinhard Kulesa (Kraków) – *Memories of Andrzej Balanda*

20:00 – 21:20

Key-note Lectures

Chair: Muhsin Harakeh (GSI/KVI)

lecture-40'

Walter Henning (ANL) – *Nuclear physics experiments*

lecture-40'

James P. Vary (Iowa) – *Ab initio nuclear theory – progress and prospects*

21:30 –

Welcome reception

Tuesday 31.8

7:30 *Breakfast*

8:25 – 10 :30

Computing Atomic Nuclei: Frontiers of Nuclear Structure Theory

Convener: Witek Nazarewicz (Tennessee/Warszawa)

lecture-30'

Achim Schwenk (TRIUMF/Darmstadt) – *Neutron-rich matter and three-nucleon forces*

lecture-30'

Dario Vretenar (Zagreb) – *Relativistic nuclear density functionals*

seminar-15'

Michał Warda (Lublin) – *Theoretical description of cluster radioactivity in Ba isotopes*

lecture-30'

Wojtek Satula (Warszawa) – *Isospin mixing around N=Z*

seminar-15'

Kazunari Kaneko (Fukuoka) – *Mirror energy difference at high spins in the mirror pair ^{67}Se and ^{67}As*

10:30–11:00

Coffe break

11:00–13:00

Superheavy Nuclei

Convener: Matti Leino (Jyväskylä)

lecture-30'

Dieter Ackerman (GSI) – *Superheavy elements at GSI – investigating exotic nuclear matter*

lecture-30'

Sergey Dmitriev (Dubna) – *Radiochemical investigation of superheavy elements*

seminar-15'

Benoit Gall (Strasbourg) – *Pushing the limits of spectroscopy of heavy elements with S^3*

lecture-30'

Paul Greenlees (Jyväskylä) – *Gamma and electron spectroscopy of the heaviest elements*

seminar-15'

Trine Wiborg-Hagen (Oslo) – *Spectroscopy of transfermium nuclei using the GABRIELA setup*

13:00

Lunch

Free afternoon

18:00

Dinner

19:00 – 22:00

Proton-rich Nuclei

Convener: Mike Bentley (York)

lecture-30'

Bob Wadsworth (York) – *Spectroscopy of $N \sim Z$ nuclei above mass 60*

lecture-30'

Tommi Eronen (Jyväskylä) – *Mass measurements of proton rich-nuclei with JYFLTRAP*

lecture-30'

Bertram Blank (Bordeaux) – *Two-proton radioactivity as a tool of nuclear structure*

seminar-15'

Leonid Grigorenko (Dubna) – *Recent advances in theoretical studies of two-proton radioactivity*

20:45-21:00

Coffe break

lecture-30'

Dirk Rudolph (Lund) – *Proton-rich nuclei studied with RISING*

seminar-10'

Timothy Brock (York) – *Isomer spectroscopy of very neutron-deficient ^{94}Pd*

lecture-20'

Moshe Gai (Yale) – *The structure of ^{12}C and stellar helium burning*

22:15 –

Midnight school

Symmetries in Nature - Symmetries in Nuclei

Tutor: Jerzy Dudek (Strasbourg)

Wednesday 01.09

7:30

Breakfast

8:25 – 13:00

Neutron-rich Nuclei

Convener:

Faiçal Azaiez (Orsay)

lecture-30'

Hiroyoshi Sakurai (RIKEN) – Recent results and future plans at RIKEN

lecture-30'

Daniel Bazin (MSU) – Recent results from MSU on neutron-rich

lecture-30'

Didier Beaumel (Orsay) – Shell structure evolution inferred from transfer reactions

seminar-10'

Lucia Caceres (GANIL) – Shell and shapes in the ^{44}S nucleus

seminar-10'

Megumi Niikura (Orsay) – Lifetime measurements of low-lying states in neutron-rich Zn isotopes by the plunger technique

seminar-10'

Juho Rissanen (Jyväskylä) – Nuclear structure studies of neutron-rich nuclei performed by JYFLTRAP

10:30–11:00

Coffe break

lecture-30'

Reiner Krücken (München) – Recent Results from REX-ISOLDE

lecture-30'

Giacomo De Angelis (Legnaro) – The structure of neutron rich nuclei studied by deep inelastic reactions: recent results from LNL

lecture-30'

Krzysztof Rykaczewski (ORNL) – Recent results from Oak Ridge

seminar-10'

Miguel Madurga (Tennessee) – Beta decay spectroscopy of ^{81}Zn from an isotopically pure radioactive beam

seminar-10'

Eda Sahin (Legnaro) – The evolution of the $Z=28$ shell gap towards ^{78}Ni : Neutron-rich Cu isotopes

seminar-10'

Caterina Michelagnoli (Legnaro) – Lifetime measurements in the $N=Z$ nucleus ^{44}Ti

13:00

Lunch

Free afternoon

18:00

Dinner

19:00 – 22:20

Beyond Nuclear Physics

Convener:

Christoph Scheidenberger (GSI)

lecture-30'

Joseph Pochodzalla (Mainz) – Hypernuclei

lecture-30'

Jürgen Gerl (GSI) – Nuclear techniques for landmine detection

seminar-15'

Christoph E. Düllmann (Mainz/GSI) – TASCAs experiments with the reaction $^{244}\text{Pu} + ^{48}\text{Ca}$ leading to element 114: high cross sections and the new nucleus ^{277}Hs

lecture-20'

Andrzej Rybicki (Kraków) – What is the role of nuclear effects in ultrarelativistic reactions at 158 GeV/nucleon ?

lecture-20'

Marek Kowalski (Kraków) – First results of charged particle production in the ALICE experiment at LHC

20:55-21:10

Coffe break

lecture-30'

Peter Thirolf (München) – Laser particle acceleration: status and perspectives for nuclear physics

seminar-10'

Alexander Pasternak (St. Petersburg) – Nuclear transitions and new standards of length and time

lecture-30'

Ludwik Pieńkowski (Warszawa) – Nuclear cogeneration

Thursday 02.9

7:30

Breakfast

8:25 – 10 :30

Computing Atomic Nuclei: Frontiers of Nuclear Structure Theory

Convener:

Witold Nazarewicz (Tennessee/Warszawa)

lecture-30'

Morten Hjorth-Jensen (Oslo) – Modern theory of effective interactions

lecture-30'

Stuart Pittel (Delaware) – The density matrix renormalization group and the nuclear shell model

lecture-30'

Frederic Nowacki (Strasbourg) – Large-scale shell model calculations and nuclear structure

seminar-10'

Nobuo Hinohara (RIKEN) – Local QRPA vibrational and rotational inertial functions for large-amplitude quadrupole collective dynamics

seminar-10'

Takahiro Mizusaki (Tokyo) – Filter diagonalization: a new method for large-scale shell-model calculations

seminar-10'

Jacek Okołowicz (Kraków) – Impact of exceptional point threads on nuclear observables

11:00–18:00

Excursion

18:00

Dinner

19:00 – 20 :30

Nuclear Theory Models

Chair: Jacek Dobaczewski (Warszawa/ Jyväskylä)

seminar-15'

Krzysztof Pomorski (Lublin) - *On optimal in energy shapes of fissioning and rotating nuclei*

seminar-15'

Andrzej Góźdz (Lublin) – *Nuclear collective models and partial symmetries*

seminar-10'

Leszek Próchniak (Lublin) – *A symmetry of the CPHC model of odd-odd nuclei and its consequences for properties of M1 and E2 transitions*

seminar-10'

Kamila Sieja (Strasbourg) – *Shell evolution and core excitations in semi-magic nickel and tin isotopes*

seminar-10'

Katarzyna Mazurek (Kraków/GANIL) – *Poincare shape transitions in hot rotating nuclei*

seminar-10'

Timur Shneidman (Dubna) – *Cluster interpretation of reflection-asymmetric type bands structures in actinides*

seminar-10'

Shuhrat Kalandarov (Dubna) – *Angular momentum dependence of cluster emission from highly excited nuclei*

seminar-10'

Yuri Anischenko (Omsk) – *Fission rate and time of highly excited nuclei in multi-dimensional stochastic calculations*

21:00-

Poster Session (Antałówka Conference House)

Chair: Marta Kicińska-Habior (Warszawa)

Friday 03.9

7:30

Breakfast

8:25 – 12:40

Collective Modes

Convener: Angela Bracco (Milano)

lecture-30'

Takashi Nakatsukasa (RIKEN) – *Self-consistent description of nuclear photoabsorption cross sections*

lecture-20'

Sunniva Siem (Oslo) – *Soft dipole modes - overview and recent results*

lecture-30'

Franco Camera (Milano) – *Prompt dipole gamma emission*

seminar-10'

Concetta Parascandolo (Napoli) – *Dynamical dipole mode in fusion heavy-ion reactions by using stable and radioactive beams*

seminar-10'

Michał Ciemala (Kraków) – *Search for Jacobi shape transition in hot rotating ⁸⁸Mo nuclei with the GDR γ -decay*

seminar-10'

Sandro Barlini (Firenze) – *Fission fragment and light charged particles distribution for ⁴⁸Ti+⁴⁰Ca at 600 MeV: some preliminary results*

seminar-10'

Roberto Nicolini (Milano) – *Inelastic scattering as a tool to search for highly excited states up to the region of the Giant Quadrupole Resonance*

10:30–11:00

Coffe break

lecture-30'

Umesh Garg (Notre Dame) – *Nuclear incompressibility and symmetry energy from compression-mode Giant Resonances*

seminar-10'

László Stuhl (Debrecen) – *High resolution study of the Gamow-Teller strength distribution in Sc isotopes*

lecture-20'

Indranil Mazumdar (Mumbai) – *Search for GQR and rare shape transition in hot rotating nuclei*

lecture-30'

Walter Reviol (St. Louis) – *Tidal waves and onset of collectivity above N = 126*

seminar-10'

Katarzyna Hadyńska-Klęk (Warszawa) – *Coulomb excitation of the presumably super-deformed band in ⁴²Ca - preliminary results from the first AGATA Demonstrator experiment*

12:40

Conference photo

13:00

Lunch

Free afternoon

18:00

Dinner

19:00 – 22:00

Nuclear Reactions and Spectroscopy with Novel Techniques

Convener: Marek Lewitowicz (GANIL)

lecture-30'

Silvia Leoni (Milano) – *Reaction dynamics and nuclear structure studies of neutron rich nuclei*

lecture-25'

Wojciech Królas (Kraków) – *Neutron-rich nuclei populated in deep-inelastic collisions: reaction mechanism features important for spectroscopy*

lecture-30'

Navin Alahari (GANIL) – *Accessing the neutron rich frontier at VAMOS: from gentle rearrangement to equilibration*

seminar-10'

Katarzyna Wrzosek-Lipska (Warszawa) – *Coulomb excitation of ¹⁰⁰Mo*

seminar-10'

Joann Borgensztajn (Zielona Góra) – *A novel method of automatic particles identification for large CsI(Tl) detection systems*

20:45-21:00

Coffe break

lecture-30'

Hans-Jürgen Wollersheim (GSI) – *Coulomb excitation of exotic nuclei*

- seminar-10' **Ivano Lombardo (Catania)** – *The strong role of N/Z degree of freedom in $^{48}\text{Ca}+^{48}\text{Ca}$ reactions at 25 MeV/nucleon*
- seminar-10' **Nihal Buyukcizmeci (Selçuk)** – *Investigating the isotopic effects in nuclear fragmentation*
- seminar-10' **Yuriy Stepanenko (Kyiv)** – *$^7\text{Li}(^{48}\text{O}, ^{17}\text{N})^8\text{Be}$ reaction mechanism and $^{17}\text{N} + ^8\text{Be}$ potential; $^{16}\text{N} + ^9\text{Be}$ optical potential from $^7\text{Li}(^{48}\text{O}, ^{16}\text{N})^9\text{Be}$ reaction analyses*

Saturday 04.9

7:30 *Breakfast*

8:25 – 12:30 **Structure of Light Nuclei and Astrophysics**

Convener: **Tohru Motobayashi (RIKEN)**

- lecture-30' **Hisashi Horiuchi (Osaka)** – *Overview on the cluster structure and the alpha-condensation*
- lecture-30' **Christian Beck (Strasbourg)** – *Clusters in light nuclei*
- lecture-30' **David Jenkins (York)** – *Nuclear clustering studied by gamma-ray spectroscopy*
- seminar-10' **Sandrine Courtin (Strasbourg)** – *Radiative capture in the $^{12}\text{C}+^{16}\text{O}$ system: structural vs statistical aspects of the decay*
- seminar-10' **Vivek Parkar (Huelva)** – *Dipole polarizability of weakly bound nuclei*
- seminar-10' **Takamasa Kuboki (Saitama)** – *Measurement of interaction cross sections for neutron rich Na isotopes*
- 10:30–11:00** *Coffe break*
- lecture-30' **Silvio Cherubini (Catania)** – *The Trojan Horse method in nuclear astrophysics*
- seminar-10' **Chiara Mazzocchi (Milano)** – *Nuclear astrophysics deep underground: the LUNA experiment*
- seminar-10' **Natalia Targosz-Ślęczka (Szczecin)** – *Enhanced pycnonuclear reactions in metallic environments*
- seminar-10' **Adam Kozela (Kraków)** – *First measurement of R-correlation in free neutron decay*
- seminar-15' **Zbigniew Majka (Kraków/FAIR)** – *Status of the FAIR project*
- seminar-15' **Marek Lewitowicz (GANIL)** – *Status of the SPIRAL2 project*

12:45 – 13:30 **Special Lecture**

Chair: **Marek Jeżabek (Kraków)**

Michał Heller (Kraków) – *Lemaître's Primeval Atom and contemporary standard world model*

13:30 *Lunch*

15:00 – 17:30 **Nuclear Lifetimes and Collectivity (Antałówka Conference House)**

Chair: **Hans Geissel (GSI)**

- lecture-30' **Wolfram Korten (Saclay)** – *Recent experimental advances for measuring nuclear collectivity*
- seminar-15' **Paul Garrett (Guelph)** – *Using beta-decay to map the E2 strength in the Cd isotopes and the downfall of vibrational motion*
- seminar-10' **Vasiliki-Anastasia Anagnostatou (Guildford)** – *Measurements of picosecond lifetimes in the transitional nucleus ^{100}Pd using the RDDM in inverse kinematics*
- seminar-10' **Farheen Naqvi (Köln/GSI)** – *Isomer spectroscopy of ^{125}Cd and ^{127}Cd*
- seminar-10' **Rakesh Kumar (New Delhi)** – *Enhanced E2 transition strength in $^{112,114}\text{Sn}$*
- seminar-10' **Aurore Dijon (GANIL)** – *Lifetime measurement in neutron rich Fe and Co isotopes applying the recoil distance Doppler Shift Method to Deep Inelastic Reactions*
- seminar-10' **Dan Gabriel Ghita (Bucharest)** – *In beam experiments for measuring sub-nanosecond lifetimes using fast LaBr_3 : Ce detectors at the Bucharest FN Tandem accelerator*
- seminar-10' **Mustafa Rajabali (Leuven)** – *Nuclear structure systematics in odd-odd neutron-rich gallium isotopes*
- seminar-10' **Mehdi Nasri Nasrabadi (Isfahan)** – *Relative even and odd parity levels within the nuclei in the iron region*
- seminar-15' **Oliver Roberts (York)** – *Novel detector development for the PARIS project*

19:30 **Closing and Conference Banquet**

Sunday 05.9

7:30 *Breakfast*

6:30

9:00

10:30

Bus Departures to Kraków