

**Programme of the 20th Nuclear Physics Workshop
25.09–29.09 2013 Kazimierz Dolny, Poland**

[Version: 18.09.2013]

Wednesday, 25th September

16.00–16.30 Coffe-break

16.30–16.40 Openning of the workshop

16.40–17.20 **S. Szpikowski**: Classical versus (?) Quantum world.

17.30–18.30 Dinner

18.40–19.20 **J. Suhonen**: Theoretical studies of rare weak processes in nuclei.

19.20–20.00 **G. Colò**: Progress in nuclear structure beyond the mean-field approximation.

20.30– Welcome reception/Vernisage

Thursday, 26th September

08.00–08.45 Breakfast

Thursday, morning session:

09.00–09.30 **N.V. Giai**: Treating Coulomb exchange contributions in Relativistic Mean Field calculations: why and how?

09.30–10.00 **J. Meng**: New generation of relativistic approach for nuclear structure.

10.00–10.30 **K. Bennaceur**, J. Dobaczewski and F. Raimondi: Density-independent interactions for nuclear structure calculations.

10.30–10.50 Coffe-break

10.50–11.20 **B.G. Giraud**, S. Karataglidis: New facts about nuclear density functional calculations.

11.20–11.50 **S. Péru**, M. Martini: Microscopic mean field approximation and beyond with the Gogny force.

11.50–12.20 **H. Liang**, T. Nakatsukasa, Z. Niu and J. Meng: Finite amplitude method in covariant density functional theory.

12.20–12.50 L.J. Jiang, S. Yang, H.Q. Gu, B.Y. Sun and **W.H Long**: Relativistic interpretation of nuclear tensor effects.

13.00–14.00 Lunch

Thursday, afternoon session:

- 15.30–16.00 **P. Ring**, Jinniu Hu, and Jie Meng: Self-consistent Relativistic Brueckner-Hartree-Fock theory for finite nuclei.
- 16.00–16.30 **J.L. Egido**: Pairing fluctuations in atomic nuclei.
- 16.30–16.50 Coffe-break
- 16.50–17.20 **P. Danielewicz**: Constraints on Symmetry Energy.
- 17.20–17.50 **D. Ward**, G. Carlsson, S. Åberg: Alpha particle formation and decay rates from Skyrme-HFB wave functions.
- 17.50–18.20 J.P. Błocki, **A.G. Magner**, P. Ring: Nuclear symmetry energy and isovector dipole-resonance structure within the effective surface approximation.
- 18.20–18.50 **P. Quentin**, J. Bartel, B. Nerlo-Pomorska, K. Pomorski: Intrinsic vortical currents and rotational bands in well deformed nuclei.
- 18.50–19.20 **W. Urban**: Mechanism of nuclear deformation – experimental search.
- 19.40– ... Barbecue

Friday, 27th September

07.30–08.15 Breakfast

08.30–14.00 Excursion

14.00–14.45 Lunch

Friday, afternoon session:

15.00–15.30 **A. Afanasjev**: Microscopic description of rotation: from ground state to the extremes of ultra-high spin.

15.30–16.00 B-N. Lu, J. Zhao, E-G. Zhao and **S-G. Zhou**: Fission barriers in multi-dimensional constraint covariant density functional theories.

16.00–16.20 Coffe-break

16.20–16.50 **A. Sobiczewski**, Yu.A. Litvinov: Neutron drip line within realistic nuclear models.

16.50–17.20 W. Brodziński, P. Jachimowicz, M. Kowal, L. Próchniak, **J. Skalski**: Superheavy nuclei - predictions on their structure & stability.

17.20–17.50 **N. Wang**: Nuclear mass predictions for super-heavy nuclei and drip line.

17.50–18.20 **A.K. Nasirov**, W. von Oertzen, A.I. Muminov and R.B. Tashkholdjaev: Peculiarities of clusters formation in true ternary fission of ^{252}Cf and $^{236}\text{U}^*$.

18.20–18.50 **T. Cap**, K. Siwek-Wilczyńska, I. Skwira-Chalot, and J. Wilczyński: Transfer-reemission processes in the $^{197}\text{Au} + ^{197}\text{Au}$ reaction at 23 MeV/nucleon bombarding energy.

19.00–20.00 Dinner

20.15–21.00 Poster session

Saturday, 28th September

08.00–08.45 Breakfast

Saturday, morning session:

09.00–09.30 **J. Kvasil**, V.O. Nesterenko, D. Bozik, W. Kleinig and P.-G. Reinhard: Nuclear vorticity in giant resonances: Skyrme RPA analysis.

09.30–10.00 **V.O. Nesterenko**, J. Kvasil, P.-G. Reinhard and A. Repko: Low-energy E1 strength: interplay of pygmy and vortical toroidal flows.

10.00–10.30 **F.A. Ivanyuk**: The optimal shape of rotating and fissioning nuclei within the liquid drop model.

10.30–10.50 Coffe-break

10.50–11.20 **J. Dudek** (for collaboration TetraNuc): Recent Progress and Prospects in Research of Discrete Symmetries in Nuclei.

11.20–11.50 S. Tagami , M. Shimada , Y. Fujioka , **Y.R. Shimizu** and J. Dudek: Nuclear tetrahedral states and high-spin states studied by quantum number projection method.

11.50–12.20 **M. Jentschell**: The negative parity bands in ^{156}Gd .

12.20–12.50 **N. Minkov** and P. Walker: Influence of the octupole mode on nuclear high-K isomeric properties.

12.50–13.20 **F. Knapp**, N. Lo Iudice, P. Vesel, F. Andreozzi, D. Bianco and A. Porrino: Selfconsistent multiphonon calculation of E1 response in ^{132}Sn .

13.20–14.20 Lunch

Saturday, afternoon session:

- 15.00–15.30 **M. Krzysiek** et al.: Study of the soft dipole modes in ^{140}Ce via inelastic scattering of ^{17}O .
- 15.30–16.00 **S. Åberg**, BG. Carlsson, Th. Døssing, P. Möller: Collective effects in nuclear level density.
- 16.00–16.30 Z. Sosin, **J. Kallunkathariyil**: Semi-classical, microscopic approach to the liquid drop model and the emergence of alpha clusters.
- 16.30–16.50 Coffe-break
- 16.50–17.20 **M. Matsuo**, N. Hinohara, K. Sato, K. Yoshida, T. Nakatsukasa, K. Matsuyanagi: Quadrupole shape dynamics in view from a theory of large amplitude collective motion.
- 17.20–17.50 **A. Gusev**, A. Gózdź, S. Vinitzky: Resonance tunnelling of clusters through repulsive barriers.
- 17.50–18.20 A. Karczewska, **P. Rozmej**, Ł. Rutkowski: New nonlinear equations in the shallow water wave problem.
- 18.20–18.50 **H. Krappe**: How to misinterpret statistics.
- 18.50–19.00 Closing
- 19.30–20.00 Concert
- 20.30– ... Conference dinner

Sunday, 29th September

- 08.30–09.30 Breakfast
- 09.30–13.00 Departure day (walking tour around Kazimierz)
- 13.00–13.45 Lunch