

Ruđer Bošković Institute
Experimental Physics Department
Bijenička cesta 54
HR 10001 Zagreb, Croatia

Curriculum Vitae

Born: Osijek, Croatia, 1967.

Elementary and secondary schools: Osijek, 1986, subject: natural science.

Academic education:

- Faculty of Natural Sciences and Mathematics, University of Zagreb, Department of Physics (theoretical nuclear physics). Graduated 1993 with the B.Sc. thesis *PTQM calculations of energy levels and electro-magnetic transitions in the ^{103}Ag nucleus*
- Nuclear physics and elementary particle physics, University of Zagreb, M. Sc. thesis *Study of energy dependence of cross sections in the $^{12}\text{C}+^{12}\text{C}$ reaction*, 1998.
- Ph.D. thesis *Study of the weak absorption in the collisions of Carbon and Oxygen nuclei in the energy range between 5 and 10 MeV per nucleon*, double-supervised theses Z. Basrak, Zagreb and F. Haas, Strasbourg, at two universities, University L. Pasteur and University of Zagreb, January, 2001.

Employment: Ruđer Bošković Institute, Zagreb, Department of experimental physics, junior assistant (since 1995), assistant (since 1998), senior assistant (since 2001), research associate (since 2003) and senior research associate (since 2008).

Careers: Senior research associate since October 2006.

Project management:

since January 2007, scientific project of Croatian Ministry of science, education and sports: *The experimental research of nuclei: nuclear structures and reactions* (098-1191005-28900); since January 2009, scientific Croatian-French project (within program *Cogito*): *Correlations in nuclei: nucleon pairs and clusters*

FP7 projects: since November 2007, member of the project CLUNA - Clustering phenomena in nuclear physics: strengthening of the Zagreb - Catania - Birmingham partnership (FP7 -REGPOT-2007-3).

Long-term visits:

- Institut de Recherches Subatomiques, IReS, Strasbourg:
 - April-August 1995 (experimental work of M.Sc. thesis);
 - since 1998 several months per academic year within the convention between University of Zagreb and University L. Pasteur (ULP), Strasbourg (experimental work for Ph.D.);
 - invited professor at ULP April-June 2006.
- LPC, Caen, October-December 1998, within INDRA collaboration.
- Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali di Legnaro,
 - post-doctoral fellowship in experimental physics October 2001 - October 2003;
 - several months per year within PRISMA+CLARA/AGATA collaboration, since 2003.

Field of research:

Study of the collision of light nuclei with closed or semi-closed shells: narrow structures in the reaction cross sections, nuclear molecular states, and refractive effects like nuclear rainbow and associated Airy oscillations.

Study of heavy-ion collisions: multinucleon transfer reactions, deep inelastic collisions, processes of fusion and fission, and nuclear structure studies of moderately neutron rich nuclei populated in multinucleon transfer reactions.

Experiments:

- Several experiments at the Tandem accelerator Vivitron in Strasbourg (PSD detectors and Q3D magnetic spectrometer, ICARE charged particle multi-detector array, Euroball γ -detector, BRS detector for binary fragments) using light-heavy ions ($A=12$ to 32) in the energy range between 5 and 10 MeV per nucleon.
- Experiments at Tandem + ALPI + PIAVE accelerators of the Laboratori Nazionali di Legnaro (GASP γ -detector, PISOLO time-of-flight spectrometer, electrostatic deflector, CORSET, PRISMA spectrometer, PRISMA+CLARA set-up) using different beams (isotopes of S, Ca, Fe, Ni, Zr, Se, Xe...) on heavy targets (isotopes Ni, Zr, Sn, Sm, Er, Pb and U) at energies close to the Coulomb barrier.
I actively participated to the development and building of the focal plane detectors of the PRISMA spectrometer (MWPPAC and IC). I have been (and I am presently) spokesperson in several heavy-ion measurements within international collaborations using the magnetic spectrometers PISOLO and PRISMA.
- Astrophysics measurements at the Laboratori Nazionali del Sud in Catania and at the Dynamitron accelerator in Stuttgart.
- GANIL, Caen, France: experiments with the magnetic spectrometer VAMOS and associated γ array EXOGAM

Conferences:

- 7th Int. Conf. on Clustering Aspects of Nuclear Structure and Dynamics, Rab, Croatia, June 1999: member of the local organizing committee;
- FUSION06, International Conference on Mechanisms and Nuclear Structure at the Coulomb barrier, Island of San Servolo, Venezia (Italy), March 19-23, 2006: member of the organizing committee and co-editor of the conference proceeding (AIP conference proceeding No. 853.)
- Co-chair of the international conference *Nuclear structure and dynamics*, Dubrovnik, May 2009.