

IVA BOGDANOVIĆ RADOVIĆ
Division of Experimental Physics
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EDUCATION

- BSc in physics (1991), MSc in Physics (1994), PhD in Physics (1997) Faculty of Natural Sciences and Mathematics, University of Zagreb

FELLOWSHIPS

- 1992: one month fellowship at the University of Oxford, Department of Nuclear Physics, Oxford, UK
- 1994: one month fellowship of Republic of Austria at the Atominstitut der Österreichischen Universitäten, Vienna, Austria
- October 1996 - June 1997: Technische Universität München, Garching, Germany
- February 1999 – February 2000: Lise Meitner postdoctoral fellowship at the Institut für Experimentalphysik Johannes Kepler Universität, Linz, Austria

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WORKING EXPERIENCE

- since March 2019 – tenured senior scientist, Laboratory for Ion Beam Interactions, Division of Experimental Physics, Ruđer Bošković Institute, Zagreb
- (2014 – 2019) – senior scientist, (2006 – 2014) – senior scientific associate, (2002 – 2006) – scientific associate in the Laboratory for Ion Beam Interactions, Ruđer Bošković Institute, Zagreb
- (1999 – 2000) - Lise Meitner postdoctoral fellow, Institut für Experimentalphysik Johannes Kepler Universität, Linz, Austria
- (1998 – 2002) – senior assistant, (1991 – 1998) – younger scientific assistant, Laboratory for Ion Beam Interactions, Ruđer Bošković Institute, Zagreb

RESEARCH

- development and application of Ion Beam Analysis (IBA) methods (EBS, NRA, ERDA), development of new scattering chamber for the analysis and characterization of thin films and thin multiplayer samples using Time-of-Flight ERDA, measurements of differential cross sections for elastic scattering and recoil for ion-atom combinations of importance for IBA methods, development of a coincidence scattering techniques for analysis and 3D profiling of light elements in thin transmission targets using broad and microbeam , development of a new scattering chamber for air pollution monitoring using PIXE&RBS&PIGE techniques
- most recently: development of Secondary Ion Mass Spectrometry using MeV ions on the heavy ion microprobe with applications in cultural heritage, forensics and biology, development of the capillary microprobe

PARTICIPATIONS AT THE CONFERENCES

Participation at about 40 international conferences - 15 invited talks, 20 talks.

SCIENTIFIC PAPERS

Author or co-author on 160 scientific papers published in international scientific journals. Total number of citations of those published papers is about 1660, h-index=19 (WoSCC).

SCIENTIFIC PROJECTS

- 2019 – 2022 Team Leader for Horizon2020 INFRARIA project RADIATE – project leader
- 2017 – 2020 – HrZZ project Development of the capillary microprobe for MeV SIMS with application on analysis of biological samples, project leader
- 2017 – 2021 - COST Action CA16101 MULTI-modal imaging of FOREnsic SciEnce Evidence (MULTI-FORESEE)- tools for Forensic Science, Management Committee member from Croatia
- 2017 – 2021 – IAEA CRP project Enhancing Nuclear Analytical Techniques to Meet the Needs of Forensic Sciences (CRP No: F11021), project leader
- 2014 – 2020 – EUROfusion project, WP PFC SP5, support IBA analysis, task holder
- 2013 - 2015 – UKF Fund “Unity through Knowledge” project: “ Study of modern paint materials and their stability using MeV SIMS and other analytical techniques” project in collaboration with Academy of Fine Arts, Vienna (dr. Dubravka Jembrih-Simbürger)
- 2009-2011 - IAEA TC project CRO8008: “Upgrading nuclear analysis techniques for air pollution monitoring”, project leader
- 2011- 2013 - IAEA CRP project „ Assessment of Nuclear Data Needs for Particle Induced Gamma Ray Emission (PIGE)“, project leader
- 2011- 2012 - Bilateral project with Serbia: „Synthesis and modification of titanium based nanocomposite materials by ion and laser beam, project leader
- 2009-2013 - FP7 project „Support of Public and Industrial Research Using Ion Beam Technology – SPIRIT“, associate on the project, local TNA contact person
- 2006-2010 - IAEA CRP project: „Measurements of differential cross sections for elastic scattering of ^1H and ^4He ions from selected light elements“, project leader
- 2004-2006 - bilateral project between Croatia and Slovenia: “Depth profiling of hydrogen and other light elements in thin films using ERDA spectroscopy”, project leader
- 2005-2006 - principal investigator of information technology project of Croatian Ministry of Science: “Automatization of PIXE/RBS measurements“
- 2002 -2005 - principal investigator on IAEA CRP project: „IBA methods for analysis of light elements in solar cells, SiC films and gel polymer batteries using ion microprobe“
- 2003 - 2005 - associate on two HITRA projects and FP6 EU project: FW6-LPAMS - INCO-CT-2004-509178

OTHER SCIENTIFIC ACTIVITIES

- since 2021 – member of the Scientific Advisory Committee for the Centro de Micro-Analisis de Materiales (CMAM) at the University of Madrid, Spain
- since 2019 - chair of the RBI Scientific Council
- since 2019 – chair of the International Advisory Committee of Ion Beam Analysis Conference
- since 2018 – member of the Nuclear Physics Division board of the European Physics Society
- since 2017 – member of the User Selection Panel of Helmholtz Zentrum Dresden Rosendorf (HZDR) Ion Beam Center
- since 2017 - member of the Advisory Editorial Board of Nuclear Instruments and Methods B
- 2016 – 2019 - chair of the Ruđer Bošković Institute Physics Scientific Council
- since 2016 – member of the Ruđer Bošković Institute Scientific Council

- 2018 – 2019 - vice chair of the Ruđer Bošković Scientific Council
- 2020 - Chair Local Organizing Committee for virtual SOFT2020
- chair of the 22nd International Conference on Ion Beam Analysis, 14-19 June 2015, Opatija, Croatia
- opponent at the PhD defense of Yushan Zhou, KTH, Stockholm, Sweden, March 2019
- opponent at the PhD defense of Linus Ross, Lund University, Sweden, June 2016
- opponent at the PhD defense of Mikko Laitinen, University of Jyväskylä, Finland, December 2013
- since 2015, member of the Ion Beam Analysis International Advisory Committee
- guest editor of the IBA 2015 Conference proceedings that is published as a special issue of Nuclear Instruments and Methods B
- 2016 - supervisor of chemistry student Mason Malloy (ERASMUS+ project)
- 2018 - supervisor of chemistry student Katherine Moore (ERASMUS+ project)
- since 2018 - supervising PhD student Marko Brajković
- supervising PhD student Ivana Zamboni (PhD obtained in 2015)
- supervising PhD student Zdravko Siketić (PhD obtained in 2010)
- supervising Dora Plavčić during her diploma work (MSc obtained in 2018)
- supervising Marko Škrabić during his diploma work (BSc obtained in 2011)
- participation in organization of two international conferences “9th International Conference on Nuclear Microprobe Technology and Applications” (in 2004) and “2th International Symposium on Utilization of Accelerators”(in 2005)
- guest editor of Conference proceedings “9th International Conference on Nuclear Microprobe Technology and Applications” that was published in Nuclear Instruments and Methods B
- referee for Nuclear Instruments and Methods B, Fizika B, X-Ray Spectrometry, AIP Conference Proceedings, Journal of Applied Physics, Nuclear Technology and Radiation Protection, Surface and Interface Analysis, Vacuum, Applied Surface Science, Forensic Chemistry, Analytical Chemistry, Atmospheric Pollution Research, Journal of Forensic Science, Surface and Coatings, Aerosol and Air Quality Research, Review of Scientific Instruments
- external reviewer for South Africa’s National Research Foundation
- external reviewer for Czech Scientific Foundation
- 2005-2009 teaching at the Faculty of Natural Sciences and Mathematics, University of Zagreb, 1st year of physics study, topic: Numerical methods
- 2006- today teaching at the postgraduate study Molecular biosciences organized jointly by University of Osijek, University of Dubrovnik and Ruđer Bošković Institute course: Nuclear methods for the analysis of biological materials
- session chair at the CAARI 2006 Conference for the topic: “Ion Beam Analysis of hydrogen detection and profiling”.
- session chair at the CAARI 2008 Conference, Ft. Worth, USA for the topic: “Hydrogen profiling”.
- session co-chair at the CAARI 2014 Conference, San Antonio, USA for the topic: “ New challenges in SIMS”
- scientific secretary and member of the Organizing committee of the 6th Scientific Meeting of the Croatian Physics Society, Primošten 6-10 October 2009
- (2008 - 2010) member of the Managing board of the Croatian Physics Society
- member of the Organizing committee of the 41st International Physics Olimpiad 17-25 July, 2010

- member of the Organizing committee of the 7th Scientific Meeting of the Croatian Physics Society, Primošten 13-16 October 2011