




PERSONAL INFORMATION



ERHAN RAUL - VICTOR




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Sex Male | Date of birth 28/10/1981 | Nationality Romanian

POSITION **Research scientist**

WORK EXPERIENCE

- July 2013 – present     **Research scientist**  
 Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Nuclear Physics, Reactorului 30, 077125, Bucharest - Magurele, Romania  
*Business or sector* Scientific research, Education
- November 2019 – September 2022     **Senior Researcher**  
 Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Joliot-Curie 6, Dubna, 141980  
*Business or sector* Scientific research, Education
- November 2017- November 2019     **Postdoctoral Researcher**  
 Department for Neutron Materials Characterization, Institute for Energy Technology, P.O. Box 40, 2027 Kjeller, Norway  
*Business or sector* Scientific research, Education, Industry
- October 2016 – November 2017     **Senior Researcher**  
 Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Joliot-Curie 6, Dubna, 141980  
*Business or sector* Scientific research, Education
- January 2013 – October 2016     **Research scientist**  
 Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Joliot-Curie 6, Dubna, 141980  
*Business or sector* Scientific research, Education
- May 2008 – July 2013     **Junior Researcher**  
 Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Nuclear Physics, Reactorului 30, 077125, Bucharest - Magurele, Romania  
*Business or sector* Scientific research, Education

December 2005 – January 2013 **Junior Researcher**  
 Joint Institute for Nuclear Research, Frank Laboratory of Neutron Physics, Joliot-Curie 6, Dubna, 141980  
**Business or sector** Scientific research, Education

## EDUCATION

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2008-2012 **PhD degree**  
 University of Bucharest, Faculty of Physics, Romania  
 ▪ Simulations and virtual instrumentation for development of new neutron spectrometers

2005-2007 **Master of Science**  
 University of Bucharest, Faculty of Physics, Romania

2001-2005 **Bachelor of Science**  
 University of Bucharest, Faculty of Physics, Romania

## SPECIALIZED COURSES AND WORKSHOPS

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2021 **Particle and Heavy Ion Transport Code System (PHITS) Course**  
 01.02 - 05.02.2021, Online Basic course, Japan Atomic Energy Agency Nuclear Science and Engineering Center (JAEA), Japan

2020 **Solution Scattering from Biological Macromolecules**  
 05.05 - 02.06. 2020, EMBL Online Lecture Course, Germany

2018 **JCNS Workshop – Trends and Perspectives in Neutron Instrumentation**  
 29.10 – 01.11.2018, Tutzing, Germany

2018 **Polarised Neutron School, Polarised Neutrons for Condensed-Matter Investigations 2018**  
 01.07-06.07.2018, Neutron and Muon Facility at the Rutherford Appleton Laboratory, United Kingdom

2018 **SwedNess course in Neutron Reflectivity & GISANS**  
 28.05 – 02.06. 2018, Uppsala Universitet, Sweden

2018, 2012 **Neutron Delivery Systems - workshops**  
 Institute Laue-Langevin, Grenoble, France

2011 **Neutron Instrument Design School**  
 06.06 -18.06.2011, European Spallation Source, Lund, Sweden

2008 **7th Summer School on Condensed Matter Research**  
 16.08 - 22.08.2008, Paul Scherrer Institute, Switzerland

2007 **11th JCNS Laboratory Course - Neutron Scattering**  
 03.09 – 14.09.2007, Julich Centre for Neutron Science, Germany

2007 **4th Central European Training School on Neutron Scattering**  
 23.04 - 27.04.2007, KFKI, Budapest, Hungary

## PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	C1	C2	C1	C1	B2
Norwegian	A1	A2	A1	A1	A1
Russian	A2	A2	B1	B1	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills

Team spirit, good communication skills.

Organisational / managerial skills

Project and grant coordinator within the Romania – JINR scientific framework program.

Job-related skills

Ability to work in different environments, mental and physical ability to work extended periods.

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)

Systems: Experienced user of UNIX, Linux, MacOS and Windows operating systems.

Software: VITESS - Monte Carlo simulation of neutron scattering instrumentation (VITESS-experienced user, McStas - beginner); User of various scientific software packages used in data analysis and data treatment; Molecular visualization, graphical programs; Latex user, Office tools (Word, Excel, PowerPoint).

Technical skills

Neutron and X-ray scattering and diffraction experiments (soft matter, solid state physics etc.) proposals at large scale facilities and ability to assist with the users tasks.

Driving licence

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## ADDITIONAL INFORMATION

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Publications 21 scientific articles  
Conferences 50+ international conferences

## ANNEXES

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### Awards and diplomas

FLNP prize 2014: Monte Carlo simulation of neutron spectrometers and neutron scattering experiments, Belushkin A.V., Bodnarchuk V.I., Ioffe A.I., Manoshin S.A., Erhan R., for Applied and methodical research - 1st prize

Molecular Dynamics Simulation of Human Lactoferrin Apoprotein, 39th meeting of the PAC for Condensed Matter Physics JINR Dubna, 20.01-21.01 2014 - 2nd place for best poster presentation

XV Conference of Young Scientists and Specialists AYSS-2011: Monte Carlo simulations of neutron optics devices, Raul Victor Erhan - for scientific methodic in technical work - 2nd prize

## Publication list

1. SANS, RAMAN and SEM studies of lead-germanate glasses doped with the manganese oxide, S. Rada, R.V. Erhan, V. Bodnarchuk, L. Barbu-Tudoran, E.Culea, Journal of Alloys and Compounds Volume 882, 15 November 2021, 160721, <https://doi.org/10.1016/j.jallcom.2021.160721>
2. Small Angle Neutron Scattering Reveals Dimeric Glucose Oxidase from *Aspergillus niger* at pH 5.9, Erhan, R.V., Bodnarchuk, V., Radulescu, A. et al. J. Synch. Investig. 14, S5–S10 (2020). <https://doi.org/10.1134/S1027451020070125>
3.  $\beta$ -Lactoglobulin associative interactions: a small-angle scattering study, European Biophysics Journal, L. Anghel, A. Rogachev, A. Kuklin, R.V. Erhan, April 2019, Volume 48, Issue 3, pp 285–295
4. Heterogeneities in the silver oxide-lead-germanate glasses, Journal of Alloys and Compounds, S. Rada, M. Rada, R.V. Erhan, V. Bodnarchuk, L. Barbu-Tudoran, E. Culea, Volume 770, 5 January 2019, Pages 395–404
5. Structural aspects of human lactoferrin in the iron-binding process studied by molecular dynamics and small-angle neutron scattering, The European Physical Journal E, L. Anghel, A. Radulescu, R.V. Erhan, September 2018, 41:109
6. Concept of Small-Angle Diffractometer in Classical Configuration at the Cold Moderator of the IBR-2 Reactor, Journal of Surface Investigation: X-ray, Synchrotron and Neutron Techniques, M.V. Avdeev, R.A. Eremin, V.I. Bodnarchuk, I.V. Gapon, V.I. Petrenko, R.V. Erhan, A.V. Churakov, D.P. Kozlenko, July 2018, Volume 12, Issue 4, pp 638–644
7. Spectroscopic Characterization of a Lead–Lead Dioxide Automobile Battery, Journal Analytical Letters, S. Macavei, M. Rada, M. Zagrai, S. Rada, V. Bodnarchuk, R. Balan, R. Erhan, Volume 51, 2018, Issue 17, Pages 2673–2683
8. Structural aspects of lactoferrin and serum transferrin observed by FTIR spectroscopy, Chemistry Journal of Moldova, G. Duca, L. Anghel, R. V. Erhan, 2018, Volume 13, no.1, Pages: 111–116
9. The Effects of Operational Parameters on the Iron(III) Uptake by Micro-Algae *Dunaliella salina*, CLEAN - Soil Air Water, L. Anghel, G. Duca, L. Cepoi, I. Iatco, L. Rudi, R. V. Erhan, July 2018, Volume 46, Issue 7
10. Expected performance of time-gradient magnetic field SESANS diffractometer at pulsed reactor IBR-2, V Bodnarchuk, V Sadilov, S Manoshin, R V Erhan and A Ioffe, Journal of Physics Conference Series 862(1):012003, June 2017
11. Geometric factor in the spin-echo small-angle neutron scattering technique based on magnetic fields that increase linearly with time, Journal of Surface Investigation. X-ray, Synchrotron and Neutron Techniques, V.I. Bodnarchuk, V.V. Sadilov, S.A. Manoshin, R. Erhan, M. V. Avdeev, S.P. Yaradaikin, November 2016, Volume 10, Issue 6, pp 1129–1132
12. Evolution of the germanium–oxygen coordination number in lithium–lead–germanate glasses, M. Rada, N. Aldea, Z.H. Wu, Z. Jing, S. Rada, E. Culea, S. Macavei, R. Balan, R.C. Suciuc, R.V. Erhan, V. Bodnarchuk, Journal of Non-Crystalline Solids, ISSN:0022-3093, eISSN:1873-4812, 437, 2016, 10–16
13. Structural properties of composite elastomeric membranes using small-angle neutron scattering, E. M. Anitas, I. Bica, R.V. Erhan, M. Bunoiu, A.I. Kuklin, Romanian Journal of Physics 60(5):653–657, July 2015
14. Estimation of the influence of scattered magnetic fields on the polarization of a beam of thermal neutrons during their propagation through an electromagnet-zero-field-chamber system using the Monte Carlo method, A. B. Rubtsov, S. A. Manoshin, V. I. Bodnarchuk, R. V. Erhan, S. V. Grigoriev, Journal of Surface Investigation. X-ray, Synchrotron and Neutron Techniques, November 2013, Volume 7, Issue 6, pp 1120–1123
15. Formation of the magnetic fractal structure in CoSiO<sub>2</sub> granular nanocomposite system at percolation threshold, E.B. Dokukin, R.V. Erhan, A.Kh. Islamov, M.E. Dokukin, N.S. Perov, E.A. Gan'shina, Physica Status Solidi b, ISSN:0370-1972, Wiley-VCH, Volume 250, Issue 8, August 2013, 1656–1662
16. Magnetic system for small angle neutron scattering investigations of nanomaterials at YuMO-SANS instrument, A I Kuklin, M Balasoiu, S A Kutuzov, Yu S Kovalev, A V Rogachev, R V Erhan, A A Smirnov, A S Kirilov, O I Ivankov, D V Soloviov, W Kappel, N Stancu, M Cios, A Cios, V I Gordeliy, Journal of Physics: conference series, ISSN:1742-6588, eISSN:1742-6596, 351, 1, 012022(8)
17. Silver behenate and silver stearate powders for calibration of SAS instruments, M. Nyam-Osor, D. V. Soloviov, Yu. S. Kovalev, A. Zhigunov, A. V. Rogachev, O. I. Ivankov, R. V. Erhan, A. I. Kuklin, Journal of Physics: conference series, ISSN:1742-6588, eISSN:1742-6596, 351, 1, 012024
18. New opportunities provided by modernized small-angle neutron scattering two-detector system instrument (YuMO), A.I.Kuklin, D.V.Soloviov, A.V.Rogachev, P.K.Utrobina, Yu.S. Kovalev, M.Balasoiu, O.I.Ivankov, A.P. Sirotnin, T.N.Murugova, T.B.Petukhova, Yu.E.Gorshkova, R.V. Erhan, S.A.Kutuzov, A.G.Soloviev, V.I. Gordeliy, Journal of Physics:Conference Series, IOP Publishing, 291, 012013, 1-7
19. A concept for the modernization of a SANS instrument at the IBR-2M pulsed reactor, R.V. Erhan, S. Manoshin, G. Pepy, A.I. Kuklin, A.V. Belushkin and N.V. Zamfir, Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, ISSN:0168-9002, eISSN:1872-9576, Elsevier Science Limited, Volume 634, Issue 1, Supplement, 1 April 2011, Pages S161–S164
20. SANS of interacting magnetic micro-sized Fe particles in a Stomaflex creme polymer matrix, M. Balasoiu, E.M. Anitas, I. Bica, R. Erhan, V.A. Osipov, O.L. Orelovich, D. Savu, S. Savu, A.I. Kuklin, Optoelectronics and Advanced Materials - Rapid Communications, ISSN:1842-657, INOE, Volume 2, 11, 730–734
21. Microstructure of magnetite doped elastomers investigated by SAXS and SANS, M.Balasoiu, M.L.Craus, A.I. Kuklin, J. Plestil, V. Haramus, A. Islamov, R. Erhan, E.M. Anitas, M. Lozovan, V. Tripadus, C. Petrescu, D. Savu, S. Savu, I. Bica, Journal of Optoelectronics and Advanced Materials, ISSN:1454-4164, eISSN:1841-7132, INOE, Volume 10, 11,2932–2935