

PERSONAL INFORMATION

Mihai Straticiuc



 30 Reactorului St., 077125 Magurele, Ilfov, Romania



  || mihai.straticiuc@cern.ch || 

 Skype

Sex Male | Date of birth 05 April 1983 | Nationality Romanian

WORK EXPERIENCE

February 2014 – Present

Research Scientist gr. III

Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering - IFIN HH
Reactorului St., no. 30, 077125 Bucharest-Magurele, Romania
www.nipne.ro

Conducting materials characterization experiments with Ion Beam Analysis techniques, by using the 3 MV Tandetron™. Performing ion beam irradiation and implantation measurements for a wide range of cutting-edge materials, artefacts, nuclear materials and biological samples, under the framework of national and international research projects: NUCLEU - PN 09370204 & PN 09370207, Romania – CERN: LHCb & ELI-BIOMED, Partnership project MPVSSA (288/2014), ROSA project NEWPVSPACE and COST Action FAST (TF1401).

Within LHCb Collaboration, currently, I am involved in radiation hardness tests of the MAROC3 ASIC and Kintex7 FPGA that may be used in the upgraded version of the Ring Imaging Cherenkov (RICH) detector.

As a member of the Romanian Society of Hadrontherapy, during 2015 I have attended workshops, seminars and meetings with experts from different countries, having the main goal to develop and to implement a proton/carbon center for cancer treatment in Romania.

I am actively involved in organizing outreach activities promoting physics and nuclear research to students – from primary to high school, but also to the general public. In the last years the outreach team organized LHCb Masterclass events, IFIN-HH Open Days and TEDxCERN@IFIN-HH (<http://www.nipne.ro/dpp/Collab/LHCb/outreach.html>).

Business or sector Research and Development

January 2013 – February 2014

Research Scientist

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After graduating the PhD most of my research activities were related to one of the recently installed tandem accelerators – the 3 MV machine. Definitely all the scientific and technical challenges raised by the exploitation of an electrostatic particle accelerator highly contributed to my formation as a researcher. Testing the Cockcroft-Walton 3 MV Tandetron™ machine technical parameters in order to obtain the radiation safety authorization from the National Commission for Nuclear Activities Control was one of the main accomplished tasks.

My teaching skills were also improved by being a co-supervisor for two Bachelor of Science theses and giving training for a group of five students that learned how to operate and to use the 3 MV Tandetron™ in the Applied Nuclear Physics experiments.

Curriculum Vitae

Business or sector Research and Development

September 2007 – December
2012

Research Assistant

Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering - IFIN HH
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The central topic approached during the MSc and PhD years consisted in developing a monoenergetic slow positron electrostatic accelerator used for Positron Annihilation Spectroscopy (PAS) studies at IFIN-HH, research that was mainly performed in the framework of the CEEEX M1-C2-8062 project.

A secondary activity was represented by nanomaterials analysis using nuclear methods as: IBA (Nuclear Reaction Analysis, Particle Induced X-Ray Emission and Rutherford Backscattering Spectroscopy) and X-Ray Fluorescence Spectroscopy. The results were reported in two national Partnership projects – NUCNANO (72191) and MinNA (72162), and also in the COST action COINAPO (MP0902).

During the 2012 summer I was involved in the 3 MV Tandetron accelerator commissioning and preliminary tests at IFIN-HH.

Since December 2010 I became a member of the LHCb Collaboration: implementing PYTHIA 6 tunings in Gauss software framework, tuning the MC generators to contribute to a LHCb specific optimization which is not only a way of putting to good use the minimum bias physics results, but plays a key role for the New Physics searches. This work was used in studying the hyperon production at 7 TeV at LHCb.

Business or sector Research and Development

EDUCATION AND TRAINING

October 2009 – September 2012

PhD in Physics

EQF level 8

University of Bucharest, Faculty of Physics, Atomistilor St., no. 405, 077125, Bucharest-Magurele, Romania
www.fizica.unibuc.ro

"Positron source experimental model for multidisciplinary applications" is the title of my PhD thesis. The main task consisted in developing and building an electrostatic accelerator for positrons in the 0.1 - 50 keV range. The main application for this facility is Positron Annihilation Spectroscopy, a nuclear analysis tool widely used in the materials science.

October 2007 – February 2009

MSc

EQF level 8

University of Bucharest, Faculty of Physics, Atomistilor St., no. 405, 077125, Bucharest-Magurele, Romania
www.fizica.unibuc.ro

Positron Annihilation Spectroscopy, Coincidence Doppler Broadening Spectroscopy applied on gamma ray irradiated polyurethane membranes.

October 2003 – June 2007

B. Sc.

EQF level 7

Alexandru Ioan Cuza University of Iasi, Faculty of Physics, 11, Carol I Blvd., 700506, Iasi, Romania
www.phys.uaic.ro
Medical Physics

PERSONAL SKILLS

Mother tongue(s)

Romanian

Curriculum Vitae

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C1	C1	C1	C1
French	B1	B1	A2	A2	A2
Italian	A2	A2	A1	A1	A1

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

Communication skills Able to communicate effectively with a wide range of colleagues, by showing interest, carefully listening to needs and appropriately adjusting my message, as demonstrated during my time at IFIN-HH. Strong presentation skills and confidence demonstrated by experience of delivering presentations in many scientific events, national and international conferences and workshops.

Organisational / managerial skills Excellent skills in coordination and administration of people, projects and budgets at work. Good experience with national research Partnership Grants. Responsible for organizing scientific seminars and training sessions for students at the 3 MV Tandetron™ facility.

Job-related skills PhD and M.Sc. in Physics with extensive experience in the field of positron annihilation spectroscopy and nanomaterials analysis by using nuclear techniques. Proficiency in reading, writing and speaking English and Romanian, basic user with French and Italian. Excellent social skills, including work with other people in multicultural environments.

Computer skills Excellent IT skills, including the use of new and innovative research simulation software such as: Lorentz 3D, CST Particle Studio, FEMM and Molflow.

Excellent technical skills and competences in using specific equipments and devices for the preparation, characterization and applications of positron annihilation spectroscopy and ion beam nuclear analysis experiments.

Advanced skills regarding using computers in scientific research (experimental data processing – ROOT, Origin, SimNRA, GUPIX; graphic design – CorelDRAW; text & presentations editing – Office suite, LaTeX).

Driving license B

ADDITIONAL INFORMATION

Conferences and summer schools

- 1st IPERION CH Training Camp - Heritage Science in Practice, Heritage School of Nájera, Spain, 14th - 18th of November 2016
2. *INT-WS₂ Niobium Implantation Studies*, CAARI2016, 24th Conference on Application of Accelerators in Research and Industry, Fort Worth, Texas, 30th of October – 4th of November, 2016
3. *Electrostatic Ion Accelerators at IFIN-HH*, SHEP2016, Stefan cel Mare University, Suceava, Romania, 21st – 22nd of October, 2016
4. *New External Ion Beam Analysis Setup at the IFIN-HH 3 MV TANDETRON™*, Joint ICTP-IAEA Advanced Workshop on High Sensitivity 2D & 3D Characterisation and Imaging with Ion Beams, 26th - 30th of September 2016
5. *Particle Accelerators: Multi-tools for Science*, Education and Technology, CSSP2016, Carpathian Summer School of Physics, Sinaia, Romania, 26th of June - 09th of July, 2016
6. ENLIGHT 2015, The European Network for LIGHT ion Hadron Therapy Meeting, Krakow, Poland, 18th – 19th of September, 2015
7. Technology & Applications of Particle Accelerators, Joint Universities Accelerator School –

Curriculum Vitae

- JUAS2014, Archamps, France, 10th of February – 13th of March, 2014
8. *New research facilities for Accelerator Mass Spectrometry and Ion Beam Analysis at IFIN-HH*, HIAS 2013 Heavy Ion Accelerator Symposium on Fundamental and Applied Science, Canberra, Australia, 8th -12th of April 2013
 9. IAEA-RER0034 Group Fellowship Training on Nuclear Analytical Techniques in the characterization of artworks and other objects from Cultural Heritage, Seibersdorf, Austria, 4th - 15th of March, 2013
 10. "The 2011 European School of High-Energy Physics", Cheile Gradistei, Romania, 7th - 20th September 2011
 11. CAARI 2010 21st International Conference on the Application of Accelerators in Research and Industry, Fort Worth, Texas, 8th -13th of August, 2010
 12. International School of Physics "Enrico Fermi" Course CLXXVIII - "From the Big Bang to the nucleosynthesis", Varenna, Lake of Como, Italy, 19th -24th of July, 2010
 13. Carpathian Summer School of Physics, Exotic Nuclei and Nuclear/Particle Astrophysics (III) From Nuclei to Stars, Sinaia, Romania, 20th of June - 3rd of July, 2010

Publications About 300 papers published in ISI journals, over 4500 citations. Hirsch-index: 36.
Full publication list – January 2017 updated, is available at:
<https://www.nipne.ro/research/publications/539-publications.html>