


PERSONAL INFORMATION



Livius Marian Trache

 **Affiliation IFIN-HH Bucharest-Magurele**
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Personal: livius.marian@gmail.com

Sex Male | Date of birth 10/12/1952 | Nationality Romanian

WORK
EXPERIENCE

From June 2012 until present

Senior Scientist gr. I

„Horia Hulubei” National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH),
30 Reactorului str., Magurele, Ifov county, Romania

- Coordinates the scientific activities of Nuclear Astrophysics Group at IFIN-HH Bucharest
- Represents IFIN-HH or Romania in large scientific collaborations
- Research in nuclear physics, fundamental and applied, with his own group
- Scientific Director of IFIN-HH between June 2012 and Aug 2017.

Business or sector Research

From Sept 1993 until
Dec. 31, 2013

Research Scientist/Senior Scientist

Texas A&M University, Cyclotron Institute, College Station, TX 77843-3366, USA

- Research in nuclear physics, in particular nuclear astrophysics

Business or sector Research university

From October 1978 till
October 1998

Physicist and Research Scientist gr. III, then II

National Institute of Physics and Nuclear Engineering, (later „Horia Hulubei” IFIN)
30 Reactorului str., Magurele, Ifov county, Romania

Research in nuclear physics, fundamental and applied, with his own group:

- Nuclear structure and nuclear reactions
- Archaeometry using atomic and nuclear methods
- Nuclear theory
- Detection and data acquisition systems

Business or sector Research

From October 1976 till
October 1978

Physicist

Institute for Research in Electrotechnics (ICPE) Bucharest, Romania

- Research

Business or sector Industrial research

- From January 1982 till April 1983 **Research fellow of the Bundesministerium fur Forschung und Technologie, Bonn, Germany**
 Institut fuer Kernphysik der Universitaet zu Koeln, 77 Zuelpicherstr, Koeln, Germany
- Research in nuclear structure
- [Business or sector](#) Research university
- In 1987-88, 1990-93 **Visiting Researcher**
 Institut fuer Kernphysik der Universitaet zu Koeln, 77 Zuelpicherstr, Koeln, Germany
 Kernfissich Versneller Institut Rijksuniversiteit, Gronigen, The Netherlands
- Academic research in nuclear physics
- [Business or sector](#) Academic research

EDUCATION AND TRAINING

- 1971 - 1976 **Physics student**
 Faculty of Physics, University of Bucharest, Romania
- Nuclear Physics
- 1977 - 1987 **PhD in Physics**
 Central Institute of Physics, Bucharest, Romania
- Nuclear Physics

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	C1	B2	B2	B2
German	A2	A1	A2	A1	A1
Russian	A2	A1	A2	A1	A1

[Common European Framework of Reference for Languages](#)

Digital competence

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

[Digital competences - Self-assessment grid](#)

- Other skills** Research experience in experimental and theoretical nuclear structure, both gamma-ray and charged particles spectroscopy, in the interaction of fermionic and bosonic degrees of freedom in nuclei, the production and study of nuclei far from stability and nuclear astrophysics, nucleus-nucleus scattering, breakup of nuclei at intermediate energies.
- Basic training in experimental nuclear physics, with contributions in equipment design and construction. Experimental work in Europe and USA at various large and medium size nuclear accelerators, including tandems (Bucharest, Cologne and Munich) and cyclotrons (Julich, Germany, Groningen and Texas A&M University) with gamma-ray and neutron detectors and with large magnetic spectrometers. Experienced also in applied nuclear physics, ranging from the analysis of macro-elements (at percent level) and trace elements (at or under part per million level) in archaeological material and in semiconductors using atomic and nuclear methods (XRF, PIXE, neutron activation, proton or deuteron activation), to the detection of nuclear radiation.
- Work at TAMU with MARS group on exotic nuclei and on the astrophysics program with radioactive beams from MARS and with the MDM spectrometer.
- Parallel with the experimental work I did theoretical work on the interplay of single particle and collective degrees of freedom in nuclei (in particular around the closed shells $N=82$, $Z=50$ and $N=Z=28$), on heavy ion elastic scattering and DWBA description of nucleon transfer reactions and on the use of the breakup of radioactive projectiles for nuclear astrophysics. Specialized in indirect methods in nuclear astrophysics using rare ion beams. Current or past collaborations with researchers from other laboratories in Europe, US and Japan (Bucharest, Prague, GANIL Caen, Catania, Surrey, Oak Ridge, Notre Dame, MSU, RIKEN, HIMAC, etc..) resulted in joint experimental work and publications.

Driving licence AM, B1, B

ADDITIONAL INFORMATION

- Publications** Over 230 papers published in ISI journals, over 3200 citations. Hirsch-index: 34 (as on March 2021).
- Memberships** Member of the American Physical Society (APS), of the American Associations for Advance of Science (AAAS), the European Physics Society
Referee of the main journals of APS, IOP and EPS
Evaluator for Romanian, American and British scientific funding agencies
Member of International Advisory Committees of physics schools and conferences (in Romania, Italy, USA, Japan, Austria etc.)