

## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Livius Marian Trache**  
 Address(es) sector 1, Bucharest, Romania  
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 Nationality Romanian  
 Date of birth December 10<sup>th</sup>, 1952  
 Gender Male

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### Work experience

<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p> <p>Type of business or sector</p>	<p>From June 2012 until now in IFIN-HH, <b>Senior Scientist gr. I in DFN</b></p> <p>Head Department of Nuclear Physics (DFN), March 17 – July 2020</p> <ul style="list-style-type: none"> <li>- Coordinated and administered DFN activity</li> </ul> <p>Scientific Director (from June 2012 to Aug. 31, 2017)</p> <ul style="list-style-type: none"> <li>- Coordinated the scientific activities of IFIN-HH Bucharest</li> <li>- Represented IFIN-HH or Romania in large scientific collaborations</li> <li>- Research in nuclear physics, fundamental and applied, with his <b>Nuclear Astrophysics Group</b></li> </ul> <p>“Horia Hulubei” National Institute of Physics and Nuclear Engineering, 30 Reactorului str., Magurele, Ilfov county, Romania</p> <p>Research</p> <p>Research</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p>	<p>From Sept 1993 until 2013</p> <p>Research Scientist/Senior Scientist</p> <p>Research in nuclear physics, in particular nuclear astrophysics</p> <p>Texas A&amp;M University, Cyclotron Institute, College Station, TX 77843-3366, USA</p> <p>Research university</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p>	<p>From October 1978 till Oct. 1998</p> <p>Physicist and Research Scientist gr. III, then II</p> <p>Research in nuclear physics, fundamental and applied, with his own group:</p> <ul style="list-style-type: none"> <li>- Nuclear structure and nuclear reactions</li> <li>- Archeometry using atomic and nuclear methods</li> <li>- Nuclear theory</li> <li>- Detection and data acquisition systems</li> </ul> <p>National Institute of Physics and Nuclear Engineering, (later “Horia Hulubei” IFIN) 30 Reactorului str., Magurele, Ilfov county, Romania</p> <p>Research</p>
<p>Dates</p> <p>Occupation or position held</p>	<p>From Oct 1976 till Oct 1978</p> <p>physicist</p>



Other skills and competences | 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 (Juelich, 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, Padova, Catania, Oak Ridge, Notre Dame, RIKEN, HIMAC, etc..) resulted in joint experimental work and publications.

Leads his own Nuclear Astrophysics Group at DFN, with work at home in IFIN-HH or in international collaborations. Has publications in journals like Nature, Phys. Lett. B, NIM, Phys. Rev. C, etc.

**Over 220 papers published, 229 in ISI journals, over 3000 citations. Hirsch-index: 32 (cf. Webofknowledge.com on March 2020).**

### Additional information

Member of the American Physical Society (APS), of the American Associations for Advance of Science (AAAS), of 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 conferences and physics schools (in Romania, Italy, Austria, Japan, USA, etc.)  
Represented (2012-2017) Romania in FAIR IKRB and RRB committees.