# Curriculum vitae Europass



## PERSONAL INFORMATION


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| Name | **TIBERIU FRENTIU** |
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| Nationality | ROMANIAN |
| Date of birth | 6 JULY 1960 |


## WORK EXPERIENCE

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| • Dates (from – to) | **15 September 1990 - Present** |
| • Occupation or position held | September 1990 – September 1996 – Assistant Professor<br>October 1996 – September 2000 – Lecturer<br>October 2000 – February 2016 – Associated Professor<br>March 2016 – September 2025 – Full Professor |
| • Main activities and responsibilities | Teaching and research activity in the field of analytical chemistry and instrumental analysis; Courses of Analytical chemistry, Instrumental analysis, Environmental monitoring, Food quality control, Analytical techniques for speciation and element imaging<br>Laboratory classes with students<br>Research projects (Analytical spectrometry using inductively and capacitively coupled plasmas; miniaturized spectral instrumentation using plasma sources; chemical speciation of toxic metals in environmental samples by selective extraction) |
| • Name and address of employer | "Babes-Bolyai" University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania |
| • Type of business or sector | Higher education and research |
| • Dates (from – to) | **1993-2009; 2018 - 2022** |
| • Occupation or position held | Senior researcher |
| • Main activities and responsibilities | Research. Design, construction, study of characteristics and development of analytical applications of the medium or low power capacitively coupled plasma as atomization/excitation source in atomic fluorescence/emission spectrometry.<br>Research in the field of inductively coupled plasma mass spectrometry. Accreditation of a laboratory for environmental analysis. |
| • Name and address of employer | National Institute for Research and Development of Optoelectronics Bucharest – Research Institute of Analytical Instrumentation, Donath 67, 400293, Cluj-Napoca Romania |
| • Type of business or sector | Research. Field of atomic spectrometry. |

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| • Dates (from – to) | **January 1989 – September 1990** |
| • Occupation or position held | Chemical Engineer |
| • Main activities and responsibilities | Research. Study of inductively coupled plasma as source in atomic emission |
| • Name and address of employer | Enterprise for Analytical Instrumentation Apparatus and Research Equipment Bucharest, Branch Cluj-Napoca, Romania |
| • Type of business or sector | Research. Field of atomic spectrometry |
| • Dates (from – to) | **October 1987 – December 1988** |
| • Occupation or position held | Designer Engineer |
| • Main activities and responsibilities | Preparation of technical book of facilities to obtain titanium tetrachloride, zirconium tetrachloride; chemical purification of titanium and zirconium tetrachloride using aluminum powder and distillation; scrubbing; processing of titanium and zirconium sponge at the Chemical Plant Giurgiu. Technical inspections and verification of the progress in the construction of the facility to obtain titanium and zirconium at the Chemical Plant Giurgiu. |
| • Name and address of employer | Institute for Technological Engineering, Research, Design and Production for Inorganic Chemical Industry and Non-ferrous Metals, Bucharest, (IAMN Bucharest), Romania |
| • Type of business or sector | Design of facilities and equipment for the chemical industry of titanium and zirconium |
| • Dates (from – to) | **September 1985 – September 1987** |
| • Occupation or position held | Chemical Engineer |
| • Main activities and responsibilities | Operation of the cold storage facility and compressors of ammonia and carbon dioxide, facilities for waste gases |
| • Name and address of employer | Plant for Chemical Fertilizers Arad (Vladimirescu), Romania |
| • Type of business or sector | Industry, production of NPK fertilizers |

**EDUCATION AND TRAINING**

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| • Dates (from – to) | **June 2015** |
| • Title of qualification awarded | Dr. habil., doctoral advisor |
| • Principal subjects/occupational skills covered | Doctoral advisor in Chemistry |
| • Name and type of organization providing education and training | "Babes-Bolyai" University, Cluj-Napoca, Romania |
| • Dates (from – to) | **September 1992 – November 1996** |
| • Title of qualification awarded | PhD in Chemistry |
| • Principal subjects/occupational skills covered | Analytical Chemistry/ expertise in atomic spectrometry using capacitively coupled plasma sources of medium and low power |
| • Name and type of organization providing education and training | "Babes-Bolyai" University, Faculty of Chemical Technology, Cluj-Napoca, Romania |
| • Dates (from – to) | **September 1980 – June 1985** |
| • Title of qualification awarded | Chemical Engineering, Graduate |
| • Principal subjects/occupational skills covered | Chemistry, chemical technology and engineering/ Inorganic technology Chemistry |
| • Name and type of organization providing education and training | "Babes-Bolyai" University, Faculty of Chemical Technology, Cluj-Napoca, Romania |
| • Dates (from – to) | **September 1974 – July 1979** |
| • Title of qualification awarded | Chemical operator/High school diploma |
| • Principal subjects/occupational skills covered | Chemistry, technology and chemistry engineering/Operator in industry of inorganic compounds |
| • Name and type of organisation providing education and training | Industrial chemistry High School, Ocna –Mures, Romania |
| MOTHER TONGUE | **Romanian** |

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| OTHER LANGUAGES | |
| | **English** |
| • Reading skills | Good |
| • Writing skills | Good |
| • Verbal skills | Good |
| | **French** |
| • Reading skills | Good |
| • Writing skills | Basic |
| • Verbal skills | Basic |
| SOCIAL SKILLS AND COMPETENCES | Good capacity to integrate in work teams, good communication |
| ORGANISATIONAL SKILLS AND COMPETENCES | Head of Analytical Chemistry Department 2007-2012; Head of the Department for Distance Learning in the Faculty of Chemistry and Chemical Engineering 2010-2011; Head of Doctoral School of Chemistry 2023-2025; Member of the Faculty Council 2007-2012 and 2016 – 2023;<br>Director of the Doctoral School of Chemistry 2023 - 2023<br>Participation in the establishment of an Accredited Environmental Analysis Laboratory (LAM) within ICIA Cluj-Napoca<br>Participation in the establishment of a Laboratory for complex spectral analysis in a Research Base with Multiple Users (BCUM) of Babes-Bolyai University Cluj-Napoca<br>Organizer of scientific events: (*Optical Techniques for Environmental Monitoring and Risk Assessment, Summer School, Otem 2006* July 31, August 9, 2006, Baia Mare, Romania)<br>Director and responsible for projects won in national competitions (Horizon 2000, Nucleus, CNCSIS, CEEX module I and IV, INFRAS, PNCDI).<br>Organizational competences acquired by attending a course on Academic Management (Cluj-Napoca, May 2008). |
| TECHNICAL SKILLS AND COMPETENCES | • Project manager (12)<br>• Member in research team (13 projects, of which 2 in international team)<br>• 6 books (atomic and molecular spectrometry, bases of speciation analysis, chemical imaging)<br>• 1 guide book for laboratory experiments in instrumental analysis<br>• Papers published abroad: 143 of which 117 in ISI journals and 26 in proceedings<br>• Papers published in Romania: 38 (34 journals with peer-review and 4 in proceedings)<br>• Scientific communications in Romania: 44<br>• Scientific communications abroad: 91<br>• 3 diplomas of excellence and 3 gold medals at international invention salons<br>• 2 national (OSIM) patents<br>• Gheorghe Spacu Award – Romanian Academy 2019<br>• Member in Society of Chemistry in Romania<br>• Referee for journals: **Analyst; Analytical Chemistry; Analytical Letters; Analytical Science; Talanta; Chemical Papers; Sciencia Agricola; Journal of Hazardous Materials; Spectrochimica Acta Part B; Food Control; Chemosphere; Journal of Analytical Atomic Spectrometry; Analytical Methods; Internationl Journal of Environment and Analytical Chemistry; Ecotoxicology and Environment; Analytical and Bioanalytical Chemistry; Spectroscopy Letters; Material Science in Semiconductor Processing; Revue Roumaine de Chimie** |
| TECHNICAL SKILLS With computers | Windows, Power Point |
| ARTISTIC SKILLS AND COMPETENCES | Popular dances |
| DRIVING LICENCE(S) | No |

I hereby certify that the above statements are true.

Cluj-Napoca
21.01.2025

Prof. Tiberiu Frenţiu PhD