

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) Valer Tosa
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Nationality Romania
Date of birth Aug 30, 1955
Gender M

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>1979-1982</p> <p>Head of Mechanical Testing Laboratory</p> <p>Coordinate technical and logistic activities in Mechanical Testing Laboratory, develop a model for prediction of long term relaxation behavior of precompressed concrete wires</p> <p>Metalurgical Plant Campia Turzii</p> <p>Industry</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>1982-2018 (except periods listed further on)</p> <p>Researcher, senior researcher 3, senior researcher 2, senior researcher 1</p> <p><i>experimental</i></p> <ul style="list-style-type: none"> ❖ laser infrared multiphoton decomposition of CF₂HCl, CF₂DCI, AND Si₂F₆ ❖ laser isotope separation of C isotopes <p><i>theoretical and computer modeling</i></p> <ul style="list-style-type: none"> ❖ theoretical calculation of the fine rotational structure of spherical tops ❖ modelling ir multiphoton absorption of spherical top and symmetric top polyatomic molecules ❖ calculation of vibrational relaxation times of polyatomic molecules in ground electronic state ❖ computer programs for impurities migration in multilayer polymer structures; ❖ application in migration estimation in food packaging ❖ computer program for high order harmonics generation in high intensity laser fields ❖ harmonics propagation in ionized media ❖ single attosecond pulse generation
<p>Name and address of employer</p> <p>Type of business or sector</p>	<p>National Institute of R&D Isotopic and Molecular Technologies, Cluj-Napoca, Romania</p> <p>Research</p>
<p>Dates</p> <p>Occupation or position held</p>	<p>Aug 1993 – sept 1995</p> <p>Guest Researcher</p>

Main activities and responsibilities	<ul style="list-style-type: none"> ❖ multiple photon excitation and dissociation of polyatomic molecules ❖ laser isotope separation of Si isotopes ❖ measurement of vibrational (raman and infrared) spectroscopy of small polyatomic molecules ❖ measurement of high resolution vibrational-rotational spectra of polyatomic molecules ❖ laser diode spectroscopy in supersonic free jet
Name and address of employer	Laser Isotope Separation Laboratory, RIKEN, The Institute of Physical and Chemical Research, Japan
Dates	Nov. 2001 – jan 2003
Occupation or position held	Guest Scientist
Main activities and responsibilities	Modeling macroscopic high order harmonics generation
Name and address of employer	Laser Technology Laboratory, RIKEN, The Institute of Physical and Chemical Research, Japan
Dates	oct – dec 2003, oct – dec 2005, apr-jun 2007, may-nov 2004
Occupation or position held	Guest Scientist, Brain Pool Fellow
Main activities and responsibilities	<ul style="list-style-type: none"> ❖ High order harmonics generation, ❖ single attosecond pulse generation ❖ attosecond pulse train characterisation
Name of the employer	KAIST, Korean Advanced Institute for Science and Technology, South Korea,
Dates	, jan-apr 2008, mar-jun 2013, oct-dec2016
Occupation or position held	Invited scientist
Main activities and responsibilities	High order harmonics generation, single attosecond pulse formation attosecond pulse train generation
Name and address of employer	Gwangju Institute of Science and Technology, South Korea
Dates	mar-jun 1992, feb-apr 1993, oct.-dec. 1991, apr 2000 - apr 2001
Occupation or position held	Guest Scientist, NATO Outreach Fellow
Main activities and responsibilities	<ul style="list-style-type: none"> ❖ gas-phase vibrational relaxation times of polyatomic molecules by an interferometric method ❖ experimental studies on nonresonant laser multiphoton ionisation of rare gas atoms ❖ develop computer program for high order harmonics generation in high intensity laser pulses
Name and address of employer	Department of Physics, Naples University, Italy

Education and training

Dates	1970-1974
Principal subjects/occupational skills covered	Intensive Physics class
Name and type of organisation providing education and training	Emil Racovita High School, Cluj-Napoca
Dates	1975-1979
Principal subjects/occupational skills covered	MS Physics Course
Name and type of organisation providing education and training	Physics Faculty, Babes-Bolyai University
Dates	1990-1992
Principal subjects/occupational skills covered	PhD Physics course
Name and type of organisation providing education and training	Physics Faculty, Babes-Bolyai University

Dates March-april 1987
Principal subjects/occupational skills covered Winter College on Atomic and Molecular Physics
Name and type of organisation providing education and training ICTP Trieste, training

Dates may 1988-may 1989
Principal subjects/occupational skills covered "Programme for Training and Research in Italian Laboratories", stage at Naples University
Name and type of organisation providing education and training ICTP Trieste, training

Dates Sept 2011
Principal subjects/occupational skills covered International summer school of quantum electronics: Atoms and Plasmas in Super-intense Laser Fields; Erice-Sicily, Italy

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s) **English, French, Italian**

Self-assessment
European level ()*

English

French

Italian

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
Advanced	Advanced	Advanced	Advanced	Advanced
Average	Average	Average	Average	Average
Advanced	Advanced	Advanced	Advanced	Advanced

Organisational skills and competences
Project director for 9 national projects and 1 CNCSIS grant
Partner coordinator for 2 FP7 projects
Participating in 5 national projects
Partner coordinator for FET Open project H2020

Technical skills and competences
Building physical models for various physical and chemical phenomena
Developing computer codes based on models
Referee for Physical Review A, Physical Review Letters, Optics Letters, Optics Express

Computer skills and competences
Operating systems Windows and Linux;
programs: Mathematica, Origin, Microsoft Office;
programming languages: Fortran, QuickBasic, C

Other skills and competences
Teaching: Numerical Analysis Physics Faculty, Babes-Bolyai University, 2001
Journal Editor for PIM Conference Proceedings 2009

Additional information

ISI papers: 148; Citations in ISI journals: > 1570 excluding self-citations, Hirsch index: 23
Invited/oral talks: 14;
Other conference contributions: more than 100
<http://www.researcherid.com/rid/B-5577-2011>

Date 7.01.2022

Signature



