Europass Curriculum Vitae

Personal information



First name(s) / Surname(s)	**Marin CONSTANTIN**
[redacted]	[redacted]
[redacted]	[redacted]
E-mail	marin.constantin@nuclear.ro
Nationality	Romanian
Date of birth	[redacted]
Gender	Male

Work experience

Dates	2017-present
Occupation or position held	Senior Researcher, ALFRED Management Group
Main activities and responsibilities	• Member of the Expert Group of EAGLES international consortium • Representative of Romania in SET Plan • Member of IAEA Small Modular Reactor Working Group • Expert within the ARFEM working group of the NEA/OECD • Coordination of research activities regarding SMRs • Specific activities for the implementation of the ALFRED demonstrator in Romania (nuclear safety analyses and support studies and analysis for licensing, dialogue with the local community, etc.) • Research activities regarding the formation and calculation of the source term in CANDU and LFR power plants • Editor-in-Chief of the "Journal for Nuclear Research and Development" (2011-present)
Name and address of employer	RATEN ICN (Institute for Nuclear Research), Str. Campului nr.1, Mioveni, Jud. Arges, Cod 115400, Romania
Type of business or sector	Research

Dates	2007-2017
Occupation or position held	Senior Researcher, Reactor Physics, Nuclear Safety and Fuel Performances Department

Main activities and responsibilities	• Coordination of activities of the research group "Numerical and computational methods in reactor physics" • Research activities for the development of Generation IV systems, especially for lead-cooled fast reactor technology - LFR (nuclear safety aspects, licensing support studies, initiation of dialogue with local community) • Research activities for deterministic analyses of nuclear safety: the source term formation in time of severe accidents at CANDU-type nuclear power plants • Realization of computing algorithms and numerical schemes for the integral transport equation and for the phenomenology of severe accident • Development of computing programs in the field of neutron transport, using the approximation of the first collision probabilities • Modeling and analysis of sustainable development scenarios of the Romanian nuclear energy system • Research activities regarding the construction of dialogue with local communities in the field of radioactive waste storage, • Socio-economic research regarding the implementation of advanced systems
Name and address of employer	RATEN ICN (Institute for Nuclear Research), Str. Campului nr.1, Mioveni, Jud. Arges, Cod 115400, Romania
Type of business or sector	Research
Dates	1991-2007
Occupation or position held	Researcher, Reactor Physics and Nuclear Safety Department
Main activities and responsibilities	• Neutron calculations for the CANDU plant • Development and testing of computing programs for reactor physics • Nuclear safety analyzes for CANDU type systems • Knowledge transfer and preservation activities in the nuclear field • Socio-economic studies for the foundation of the national nuclear program • Analyzes regarding severe accident phenomenology
Name and address of employer	RATEN ICN (Institute for Nuclear Research), Str. Campului nr.1, Mioveni, Jud. Arges, Cod 115400, Romania
Type of business or sector	Research
Dates	1986-1991
Occupation or position held	Physicist Engineer, Reactor Physics and Nuclear Safety Department
Main activities and responsibilities	• Calculations and analyzes of the physics of fast reactors • Development of computing methodology for fast reactors (generation of multigroup neutron data, calculations of coefficients of reactivity, application of the perturbation method)
Name and address of employer	Institute for Nuclear Research, Str. Campului nr.1, Mioveni, Jud. Arges, Cod 115400, Romania
Type of business or sector	Research

Education and training

Dates	April 1994 – July1998
Title of qualification awarded	PhD
Principal subjects/occupational skills covered	Physics
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics
Level in national or international classification	Higher Education
Dates	September 1981 – June 1986
Title of qualification awarded	Physicist Engineer
Principal subjects/occupational skills covered	Physics

Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics
Level in national or international classification	Higher Education

Personal skills and competences

Mother tongue(s) **ROMANIAN**

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
French	B1	Independent user	B1	Independent user	A1	Basic user	A1	Basic user	B1	Independent user

(*) Common European Framework of Reference for Languages

Organisational skills and competences

Competencies regarding the coordination of research activities (coordination of research groups, work tasks, coordination of work packages within international projects, coordination of work groups within the FALCON consortium), coordinating the editorial activity of the Journal for Nuclear Research and Development, organization and coordination of scientific events (Annual International Conference on Sustainable Development through Nuclear Research and Education, FISA 2020 Conference, working meetings, public debates of the ALFRED Local Dialogue Group), coordination of the strategy group's activity in the ICN Scientific Council, coordination of SMR-related investigations, coordination of research activities within European projects (ELSY, LEADER, PLATENSO, IPPA, EAGLE, FASTNET, ARCADIA, NEWLANCER, SARNET, SARNET2, ASCOM, SASPAM SA, ANSELMUS, ECOSENS, HARMONISE, CATAPULT, MARISSA).and IAEA TC Cooperation (RER/2014, RER/2017, RER/2019, ASENES SMR, FRAMES), computer code development (integral neutron transport PIJXYZ, CP_2D), testing and validation of computer codes (ASTEC, FRAMES).

Some publications

M.Constantin, M.Apostol, “Accidente severe - formarea termenului sursă şi incertitudini asociate”, Editura UPIT, Pitesti, 2016, ISBN-978-606-560-465-0

V.Hristea, D.Dobrea, M.Constantin, Cs.Roth, V.Balaceanu, L.Aioanei, “Medode experimentale si numerice in Fizica reactorilor”, ISBN 978-973-0-05050-9, ICN Pitesti 2007

Constantin, M., Apostol, M., Constantin, A, Source term investigation for a prolonged loss of cooling accident, for a typical CANDU spent fuel pool, during the refurbishment process, 2021, Progress in Nuclear Energy, 141

Constantin, M., Apostol, M., Constantin, A, Analysis of the releases produced by CANDU type irradiated fuel bundles accidentally remained in the air, 2018, Progress in Nuclear Energy, 108, pp. 351-357

Tommaso Del Moro, Fabio Giannetti, Mariano Tarantino, Pierdomenico Lorusso, Marco Caramello, Damiano Vitale Di Maio & Marin Constantin (2023): Thermal- Hydraulic Characterization and Numerical Modeling with RELAP5 Code of ATHENA Secondary Loop, Nuclear Technology

Chatelard, P., Reinke, N., Ezzidi, A., Lombard, V., Barnak, M., Lajtha, G., Slaby, J., Constantin, M., Majumdar, P.Synthesis of the ASTEC integral code activities in SARNET - Focus on ASTEC V2 plant applications,2014, Annals of Nuclear Energy, 74(C)

Tommaso Del Moro, Pierdomenico Lorusso, Fabio Giannetti, Mariano Tarantino, Marco Caramello, Danielle Mazzi & Marin Constantin (2023): ATHENA Main Heat Exchanger Conceptual Design and Thermal-Hydraulic Assessment, Journal of Nuclear Engineering and Radiation Science, OCctober 2023, Vol. 9 / 041301-1, DOI: 10.1115/1.4056973

Constantin, M., Constantin, A., Apostol, M., Analysis of the source term formation in a severe accident initiated by end fitting failure in CANDU type reactors, 2014, Kerntechnik, 79(2), pp. 138-144

Constantin, A., Constantin, M., Chemistry aspects of the source term formation for a severe accident in a CANDU type reactor, 2013, Kerntechnik, 78(3), pp. 158-166

Apostol, M., Constantin, M., Leca, A., Uncertainty analysis for fission products transport in CANDU primary heat transport during a severe accident. 2010, Kerntechnik, 75(4), pp. 170-177

M.Constantin, Phenomenology, Simulation and Modelling of Accidents in Spent Fuel Pools, Proceedings of a Technical Meeting, IAEA-TECDOC-1949, April 19, 2021, Phenomenology, Simulation and Modelling of Accidents in Spent Fuel Pools: Proceedings of a Technical Meeting