

CURRICULUM VITAE

Personal Details:

Surname, First name TRONEA MADALINA
Address Blvd. Magheru 18, Bucharest, Romania
Date of Birth December 20, 1979
Nationality Romanian (EU citizen)
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Languages:

English Level 2 Certificate in English (ESOL) - CAMBRIDGE Certificate in Advanced English, grade A
French Certificate in Advanced French - DALF (Diplôme Approfondi de Langue Française)
Other languages Romanian (mother tongue)

Work Experience:

2004 – 2009: Safety assessor in the Nuclear Safety Division of the National Commission for Nuclear Activities Control (CNCAN), the nuclear regulatory authority of Romania.
2009 – present: Head of the Nuclear Regulations and Standards Unit of CNCAN.

My main areas of work are the review and assessment of safety documentation for the licensing of nuclear installations and the development of nuclear safety regulations. Examples of my activities are provided below:

- Development of national regulations on the design of safety systems for nuclear power plants, periodic safety review and probabilistic safety assessment; development of national regulations on siting, design, construction and commissioning of new power reactors;
- Review and assessment of licensing submissions (including safety analysis reports) for Cernavoda NPP units in operation (Units 1&2 – CANDU 6 design) and of the design documentation submitted in the pre-licensing phase for Cernavoda NPP Units 3 & 4 (deferred projects, currently preparing for resuming construction);
- Review and assessment of periodic safety submissions covering operating policies and principles for the plant (including nuclear safety policy, operational limits and conditions, management of the configuration of the plant systems important to safety, etc.), integrated management manual, procedures referring to the control of documents, procedures referring to shift operation, studies and information reports supporting the proposed changes to the management system, organisational structure and programmes, procedures developed for the Periodic Safety Review programme (scope and programme of the PSR, Nuclear Safety Assessment Principles for the PSR, evaluation guides, etc).

- Participation in periodic licensing meetings and in the integrated inspections held for major licensing milestones during the commissioning and operation of Cernavoda NPP units;
- Participation in the examination board for the licensing of control room operators and shift supervisors for Cernavoda NPP;
- Development of guidelines and training materials to support the regulatory assessment of safety culture in licensees' organisations.

My involvement in international activities is summarised as follows:

- I am a member of the Reactor Harmonisation Working Group (RHWG) of WENRA (Western European Nuclear Regulators' Association) since 2005 and responsible for benchmarking the Romanian regulations against the WENRA Safety Reference Levels, as well as for the subsequent development and implementation of the national action plan for harmonisation. In 2007 and 2008 I provided the technical secretariat for the RHWG;
- I have been in charge of the coordination and elaboration of the 4th and 5th Romanian Reports under the Convention on Nuclear Safety (in 2007 and 2010);
- In 2008 and 2009 I participated in the meetings of the AQG / WPAQ (Atomic Questions Group/Working Party on Atomic Questions), of the Council of the European Union, where I provided comments and suggestions for the revision of the proposal for a European Directive on a "Community framework for the nuclear safety of nuclear installations" (formally issued as Council Directive 2009/71/EURATOM of 25 June 2009);
- I have contributed to the drafting and review of several IAEA safety guides (Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants; Safety Classification of Structures, Systems and Components in Nuclear Power Plants, Draft Safety Guide DS367; the revision of NS-R-1 / Requirements on Design and the revision of NS-G-2.10 / Safety Guide on PSR). I also provided consultancy to the IAEA for the development of the IAEA self-assessment tool used in the preparation for IRRS (Integrated Regulatory Review Service) missions, based on the revised IAEA standard for regulatory organisations (GS-R-1) and on the IAEA standard for management systems (GS-R-3), including the development of topical question sets in the area of licensing of nuclear installations.

Education and Qualifications:

- 2006 – 2010 University of Bucharest, Faculty of Physics
Doctoral Studies in Nuclear Physics and Application of Nuclear Technology
(the subject of the thesis was the technology-neutral approach to the regulation of power reactors, with focus on design requirements for new reactors)
Degree: Doctor /Ph.D
- 2004 - 2010 Participation to several training courses and workshops organised in the framework of the IAEA technical cooperation projects (on various subjects related to regulatory review and assessment activities – examples below)

- 2003 – 2005 University of Bucharest, Faculty of Physics
Master of Science Courses in Environmental Physics
Degree: M.Sc; Subject of thesis: "Safety Features of CANDU NPPs"
- 1998 – 2003 University of Bucharest, Faculty of Physics
Degree: Engineering Physicist

Papers published in international journals:

M. Tronea, "European Quest for Standardisation of Nuclear Power Reactors", published in "Progress in Nuclear Energy", Volume 52, Issue 2, March 2010, Pages 159-163, ([doi:10.1016/j.pnucene.2009.06.015](https://doi.org/10.1016/j.pnucene.2009.06.015)).

M. Tronea, "Development of technology-neutral safety requirements for the regulation of future nuclear power reactors: Back to basics", published in "Nuclear Engineering and Design", Volume 241, Issue 3, March 2011, Pages 957-960, ([doi:10.1016/j.nucengdes.2011.01.011](https://doi.org/10.1016/j.nucengdes.2011.01.011)).