

Anca Melintescu

CONTACT

Department of Life and Environmental Physics
Horia Hulubei National Institute for Physics and Nuclear Engineering
30 Reactorului St., POB MG-6, RO-077125, Bucharest-Magurele,
ROMANIA
0040 21 4042359 (phone), 0040 724559756 (mobile)
ancameli@nipne.ro, melianca@yahoo.com
<http://www.nipne.ro/research/publications/247-publications.html>,
https://www.researchgate.net/profile/Anca_Melintescu/research

EDUCATION

- 10/1998 – 10/2003 PhD Nuclear Physics, University of Bucharest, Faculty of Physics, Thesis: *Interface Processes in Radionuclides Transfer in Environment (Magna cum laudae)*, Supervisor Prof. Dr. Alexandru Berinde)
- 1995 - 1996 MSc Applied Nuclear Physics, University of Bucharest, Faculty of Physics
- 1990 – 1995 BSc Physics, University of Bucharest, Faculty of Physics

PROFESSIONAL EXPERIENCE

- 08/2011 – Senior Researcher II, Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest, Romania
- 05/2005 – 08/2011 Senior Researcher III, Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest, Romania
- 06/1999 – 05/2005 Scientific Researcher, Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest, Romania
- 06/1998 – 06/1999 Junior Scientific Researcher, Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest, Romania
- 11/1996 – 06/1998 Junior Scientific Researcher, Department of Applied Nuclear Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest, Romania

FELLOWSHIPS

- 1998 EC Fellowship within the RODOS (Real time On line DecisiOn Support Systems for Nuclear Emergencies across Europe) Project at GSF-ISAR Munich, Germany.
- 1999 EC Fellowship within the RODOS (Real time On line DecisiOn Support Systems for Nuclear Emergencies across Europe) Project at GSF-ISAR Munich and FZK Karlsruhe, Germany.
- 2000 University of Mito, Japan and National Institute for Radiological Sciences, Chiba, Japan
- 2000 – 2002 Royal Society Grant within the project *The metabolism of tritium, carbon-14 and sulphur-35 in mammals: the investigation and development of holistic modeling approaches*, University of Nottingham, UK and Centre for Ecology and Hydrology Merlewood, Cumbria, UK

2002 – 2003	Marie Curie Fellowship in FP5 within the project <i>Transport of Materials in the Water, Air and Soil Environments</i> , University of Nottingham, UK
2006	Invited Researcher, Centre for Ecology and Hydrology, Lancaster, UK
2007	Invited Researcher, National Institute for Radiological Sciences, Chiba, Japan and Institute of Environmental, Sciences Rokkasho, Aomori, Japan
2010	Invited Researcher, National Institute for Radiological Sciences Chiba, Japan

AWARDS, GRANTS, TRAININGS

9/12/2019	Horia Hulubei Award of Romanian Academy for Studies regarding the Assessment of Organically Bound Tritium
22/12/2005	Serban Titeica Award of Horia Hulubei National Institute for Physics and Nuclear Engineering for Remarkable Scientific Contributions of Young Researchers
2002	Horia Hulubei Grant within the project <i>Dynamic Modeling of Tritium in Animal Products</i> , Horia Hulubei National Institute for Physics and Nuclear Engineering, Bucharest-Magurele, Romania
19 - 23/10/1998	International Training Course <i>Off-Site Emergency Planning and Response to Nuclear Accidents</i> within the project <i>European Radiation Protection and Training (ERPET)</i> , Pitesti, Romania; Certificate: Diploma of graduation.

SCIENTIFIC EXPERTISE

- Mathematical modelling for transfer processes of radionuclides in different ecosystems and associated data base;
- Dry and wet deposition of radionuclides;
- Development of advanced dynamic models based on process level analysis for transfer of tritium (^3H) and radiocarbon (^{14}C) in atmosphere, soil, plants, farm animals and birds, wild biota and birds, aquatic food chain, and human dosimetry; the models are based on agro-meteorology, plants physiology, animals metabolism and nutrition, fish bioenergetics;
- Tritium wash-out;
- Atmosphere – land interaction
- Nuclear risk assessment in environment;
- Radioecology;
- Nuclear meteorology

INTERNATIONAL CO-ORDINATED RESEARCH PROGRAMMES

11/2005 -	Consultant, International Atomic Energy Agency (IAEA), Vienna, Austria
2021 – 2025	IAEA – MEREIA (MEthods for Radiological & Environmental Impact Assessment) Programme (https://gnsn.iaea.org/main/MEREIA/Pages/default.aspx) , Working Group 1 - Low Level Waste Repository.
2016 - 2019	IAEA – MODARIA II (MOdelling and DAta for Radiological Impact Assessment) Programme, Working Group 3 - Assessments and control of exposures to public and biota for planned releases to the environment

	http://www-ns.iaea.org/projects/modaria/default.asp?l=116);	Working
	Group 5 - Exposure and Effects to Biota	
2012 – 2015	IAEA – MODARIA I (MOdelling and DAta for Radiological Impact Assessment) Programme http://www-ns.iaea.org/projects/modaria/default.asp?l=116) within the following working groups: Working Group 5 - Uncertainty and variability analysis for assessments of radiological impacts arising from routine discharges of radionuclides; Working Group 7 – Harmonization and intercomparison of models for accidental tritium releases; Working Group 8 - Biota modelling: Further development of transfer and exposure models and application to scenarios	
2009 – 2011	IAEA EMRAS II (Environmental Modelling for Radiation Safety) Programme, Working Group 7 – Tritium Accidents (http://www-ns.iaea.org/projects/emras/emras2/working-groups/working-group-seven.asp?s=8)	
2003 – 2007	IAEA – EMRAS I (Environmental Modelling for Radiation Safety) Programme, Theme 1- Radioactive Release Assessment: Working Group 2 - Modeling of tritium and carbon-14 transfer to biota and man working group (http://www-ns.iaea.org/projects/emras/emras-tritium-wg.asp?s=8); Working Group 1 - Revision of IAEA Technical Report Series No. 364 “Handbook of parameter values for the prediction of radionuclide transfer in temperate environments” and Theme 3 – Protection of the Environment: Working Group 1 - Model validation for biota dose assessment	

PROFESSIONAL

- **Associate Editor** at Journal of Environmental Radioactivity (Elsevier) (2020 – on going)
- **Reviewer:** Journal of Environmental Radioactivity (Elsevier), Applied Radiation and Isotopes (Elsevier), Environmental and Experimental Botany (Elsevier), Science of the Total Environment (Elsevier), Environmental Pollution (Elsevier), Fusion Engineering and Design (Elsevier), Journal of Radiological Protection (IOP Publishing), Scientific Reports (Nature), Radiation Research (Allen Press), Geostandards and Geoanalytical Research (Wiley – Blackwell), Radioprotection (Cambridge Journals), Fusion Science and Technology (American Nuclear Society), Radiation Dosimetry (Oxford Academic), International Journal of Radiation Biology (Informa Healthcare), Environmental Science and Pollution Research (Springer), Frontiers in Energy Research / Nuclear Energy (Frontiers), Journal of Plant Breeding and Crop Science, (Academic Journals Inc.), International Journal of Environmental Research and Public Health (MDPI AG), International Journal of Environmental Science and Toxicology Research (Glare International Invention Publishing House).
- **Member of the Scientific Committee** of the Organically Bound Tritium Workshop (2017 – on going)
- **Scientific and Technical Consultant** for:
 - IAEA TECDOC “Harmonization and intercomparison of models for accidental tritium releases”, Report of Working Group 7 of the IAEA’s programme on Modelling and Data for Radiological Impact Assessment (MODARIA) Programme, IAEA-TECDOC-1991, International Atomic Energy Agency Vienna, ISBN 978-92-0- 144221-5, ISSN 1011-4289, 2022 (<https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1991web.pdf>);

- IAEA TECDOC “Transfer of tritium in the environment after accidental releases from nuclear facilities”, Report of Working Group 7 of the IAEA’s Environmental Modelling for Radiation Safety (EMRAS II) Programme, IAEA-TECDOC-1738, International Atomic Energy Agency Vienna, ISBN 978–92–0–102814–3, ISSN 1011–4289, 2014 (http://www-pub.iaea.org/MTCD/Publications/PDF/TE-1738_web.pdf)
- **Technical secretariat** for preparing the Minutes, Meeting Notes and the final TECDOC (TRANSFER OF TRITIUM IN THE ENVIRONMENT AFTER ACCIDENTAL RELEASES FROM NUCLEAR FACILITIES, Report of Working Group 7 of the IAEA’s Environmental Modelling for Radiation Safety (EMRAS II) Programme, IAEA-TECDOC-1738, International Atomic Energy Agency Vienna, 2014) of the Working Group 7 - “Tritium” Accidents in the frame of EMRAS II programme coordinated by IAEA (2009 – 2012)
- **Co-organiser** of Sixth Meeting of the EMRAS II Working Group 7, “Tritium” Accidents, Bucharest, Romania, 12 – 15 September 2011 (<https://www.nipne.ro/events.php>)
- **Co-organiser** of Eighth Meeting of EMRAS I Tritium & C-14 Working Group, Bucharest, Romania, 30 May – 1 June 2007 (<https://www.nipne.ro/events.php>)
- **Publications:** 40 peer-review journal articles (ISI quoted), 8 peer-review journal articles (non-ISI quoted), co-author of 6 books (international publishers), co-author of 3 book chapters (international publishers), 8 invited lectures and seminars abroad, 341 citations excluding self-citations (<https://www.webofscience.com/wos/woscc/citation-report/a6d465cb-e5bc-445c-81ea-1a5c35f35299-a98ae69d>); H-index: 12
- **Participation in scientific research projects as team member/investigator:** 7 international projects – 1 EURATOM project as principal investigator, 12 national projects – 1 project as the principal investigator, 1 grant as the principal investigator
- **Computing:** FORTRAN (Intel, Visual, Simply), Mathematica, Model Maker, WOFOST
- **Languages:** English (fluent / bilingual), French (fluent), German (basic), Romanian (native)