

- CURRICULUM VITAE -

Nicolae Mihail MOCANU, Ph.D.

1. PERSONAL DATA

Family name: MOCANU
First names: Nicolae Mihail
Titles: Ph.D. in Physics (Radiation Dosimetry) from 1981 and IAEA Expert (Radiation protection, personal dosimetry) 1994-2006
Birth date: 1943, January 29
Place of birth: Calarasi, ROMANIA
Gender: Male
Nationality: Romanian

2. SUMMARY OF WORK EXPERIENCE

2.1. Main topics:

- Radiation protection and dosimetry;
- Medical informatics;
- Projects managing as interface between software specialists and other specialists;
- Qualitative and quantitative whole body counting (WBC) for human contaminations;
- Radiotherapy and computerized dose distributions in Co-60 therapy;
- Human contaminations after Chernobyl accident;
- Low level and low energy spectra analysis;
- Statistical and data processing;
- Experimental radiobiology;
- Elaboration of models, algorithms and computing programs;
- Methods for NaI(Tl) detectors gamma spectrometry;
- Doses assessment in some (mock) human contaminations;
- Gammadefectoscopy;
- Neutron physics.

2.2. Coordination of activities:

- Coordination of the MESIW ("Code of practice in the use of synthetic vitreous fibre insulation wools" in English, French and Spanish) software, made for International Labour Office – Geneva;
- Coordination of the ORPGUIDE (Occupational Radiation Protection Guide on CD) software, Windows program to access text and data from IAEA Safety Standards Series SS120, SS115, RS-G-1.1, RS-G-1.2 and RS-G-1.3, © IAEA Vienna, 2000;
- Coordination of 2 grants with the Romanian Academy and the National Agency for Science, Technology and Innovation and collaboration in grants with the Romanian Medical Academy;
- Coordination of the "The Basic Safety Standards on Diskette" software, Windows program to access text and data from Safety Series 115 (International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources), version 3.1, © IAEA Vienna, 1997;
- Coordination, assistance, advice and execution of the collaboration contracts with other institutes (Fundeni Hospital, Institute for Computing Techniques, Institute for Electronic Research, Institute for Nuclear Physics, Private Firms, etc.);
- Coordination or collaboration in large teams to make few dosimetry and radiotherapy software, a program command device, a Whole Body Counter software, a data base for an Oncological Section with interrogation in natural language, a statistical program, etc.;
- Participation in international intercomparisons (IAEA, 1997-98 and EURADOSE 1998-99);
- Participation in the establishment of the research tasks and their accomplishment;
- Coordination of complex works with radionuclides and irradiations with neutrons;
- Co-organizer and participant at a NATO workshop (scientific committee) in 1998;

3. EDUCATION

3.1. Trainings

- Training in "*Emergency Planning and Response*", November 1998, IAEA and local organizers, Bucharest;
- Training in "*Quality Assurance in Radiological Diagnostic*", Oct.1994, IAEA & Hygiene Inst., Bucharest;
- Training on "*Dosimetry and Dose Reduction Techniques*", 16-25 march 1994, ITCP, Trieste, Italy;
- Training in *Radiation Protection* at the *Lawrence Livermore National Laboratory*, Special Projects Division, Hazards Control Department, Livermore, California, U.S.A., from March 1 to Aug. 31, 1993 (IAEA fellowship);
- Training stages in "*News in Computer's Use*" at the *Institute for Computer Technique*, Bucharest, 1987;
- Ph.D. in Physics (*Radiation Dosimetry*) at the *Institute for Nuclear Physics and Engineering*, Bucharest, 1981;
- Training stages in "*Computer use*" at the *Institute for Computer Technique*, Bucharest, 1975;
- Training course in "*Use of Electronic Computers*"; *Polytechnic Institute*, Bucharest, 1971;
- Training stages in "*Dosimetry in Radiotherapy*" at the *Oncology Institute*, Bucharest, 1968;
- Faculty of Physics (*Nuclear Physics* section), *Bucharest University*, 1960 - 1965;
- "Nicolae Balcescu" School, Calarasi, 1949 - 1960.

3.2. Teachings

- 1992 - 2000: Associated Professor for Medical Informatics, Medicine Faculty, Transilvania University, Brasov;
- 1980 - 1987: Associated Lecturer for Physics parts - Radiobiology and Radioprotection Post-University Courses for Physicians;

4. PROFESSIONAL WORK HISTORY

- 23.12.71-01.05.2000: Military Medical Scientific Research Center, Bucharest;
Title/function: Ph.D., Principal researcher of first degree (the highest degree as senior scientist) in the Radiobiology Section, Nuclear Unit;
Fields of work: according to 2.1.;
Major accomplishments: Coordination of some contracts with other Romanian Scientific Institutes and Romanian Academy; Contributions for the Whole Body Counting Software, designed for Cernavodă Nuclear Power Plant and Institute for Nuclear Physics; Making of some computer programs for Dosimetry and Radiotherapy; Co-author for a "Programmable Commands Device Innovation"; Performing of more than 8000 measurements with the most sensible Whole Body Counting Device and a mobile unit in our country; Author of a published book on "Medical Informatics" and a CD with more than 700 Power-Point slides for teaching it; Included in "Who's Who in Romanian Science and Technology" - Bucharest, 1996 and 2000.
- 01.12.68 - 23.12.71: "Stefan S. Nicolau" Institute for Virology, Sos. Mihai Bravu, Nr. 285, Bucharest,
Title/function: Physicist in Nuclear Unit, Responsible with Radioprotection;
Fields of work: Using of the radionuclides in labeling; Statistics of experimental data;
Major accomplishments: Co-author at 2 scientific contracts with I.A.E.A.-Vienna;
- 01.05.68 - 01.12.68: Radiobiology and Molecular Biology Center, Bucharest;
Title/function: Physicist in the Nuclear Unit. Training in Radiotherapy and Nuclear Medicine; This Institution was transformed in the Military-Medical

Scientific Research Center;
 13.01.66 - 01.05.68: Central Laboratory, Industrial Constructions Ministry,
Title/function: physicist in the Nuclear Unit, Responsible with Radioprotection;
Fields of work: Gammadefectoscopy with sources of Ir¹⁹², Cs¹³⁷ and X-rays,
 and control of other Gammadefectoscopy Nuclear Units;

5. LANGUAGE PROFICIENCY

<i>Language</i>	<i>Spoken</i>	<i>Written</i>	<i>Reading</i>
<i>English</i>	Fluent	Fluent	Fluent
<i>French</i>	Fair	Fair	Fluent

6. PAPERS

- The total number of papers communicated or published (inclusively as abstracts) is 301, from which I am the first author in 121 papers.
- The list did not contain about 70 papers (over 2 papers per year), as results of the researches carried in the Military Medical Scientific Research Center between Dec.1971 and May 2000. At least for a half of them I was coordinator of the researches.
- The list can be provided at request. You can see below a selecton of my papers:
 - 2. Mocanu N. - *Transport theory methods used for the computation of the thermal factor for a nuclear reactor* - Diploma thesis - Bucharest University, Physics Faculty, June 1965;
 - 6. Tomas E., Cristea A., Mocanu N. - *Report for the contract 643/RB* - I.A.E.A. - Vienna, 1969;
 - 9. Tomas E., Cristea A., Mocanu N. - *Final report for the contract 643/RB/RI* - I.A.E.A. - Vienna,1970;
 - 13. Tomas E., Cristea A., Mocanu N. - *Changes in serum coeruloplasmin activity in subjects chronically exposed to radiations.* - Atomkernenergie 20 (1972), 2, 157;
 - 19. Mocanu N., Păun C., Muntiu M. - *A methodology for computer uses in graphical representation of the body sections and the isodoses for each fields, in radiotherapy.* Radiobiology Commission Session of the Romanian Academy, March 1973;
 - 31. Mocanu N., Nicolae Marieta., Păun C., Moian I., Muntiu M., Negrila C., Marinescu M. - *Computing of absorbed dose distributions in therapeutical irradiations with multiple external fields* - The II-nd National Congress of Oncology, Bucharest, May1975, published in proceedings, pag.163;
 - 38. Mocanu N., Marinescu M., Păun C., Muntiu M. - *Computing of the absorbed dose distributions in therapeutical irradiations with needles and pearls sources of Cs¹³⁷ and Co⁶⁰.* - The II-nd National Congress of Biophysics, Bucharest, 10 Sept.1976, published in proceedings, pag.116;
 - 61. Mocanu N., Năstase M., Păun C. - *Dose equivalents assessments in internal human contaminations with gammaemitters* - Radiologia, vol. 18, no.1 (1979) pages 65-74;
 - 65. Mocanu N. - *Contributions in the evaluation of the human internal radioactive contamination* - Ph.D. thesis, Institute of Nuclear Physics and Engineering, National Committee for Nuclear Energy, Bucharest, 1980;
 - 93. Moțoiu Ioana, Dumitrescu Adriana, Costescu Mihaela, Mocanu N., Berceanu St. - *Changes of the Cellular Immunity Tests during the Evolution of Hodkin's Disease.* - Revue Roumaine de Medecine, Medecine Interne, 1983, 21, 3, 203- 215;
 - 164. Țepelea V., Dragan F., Stratica N., Mocanu N. - *NMA - Computing program for the treatment planning in radiotherapy* - The X-th National Symposium of Medical Informatics, Tg.Mures, 9-10 Oct.1987, published in proceedings, pag. 65;
 - 193. Stratica N., Dragan F., Mocanu N. - Utilization of tomographic sections in the computing of dose distributions in radiotherapy. The workshop "Computer uses in Radiotherapy", Iassy, 25 Nov. 1988, published in the volume "Computer Aided Radiotherapy", pag. 129;
 - 202. Stratica N., Mocanu N. - *Errors control for the dose computing in Radiotherapy-* The XII-th National Symposium of Medical Informatics, Constanța, 21-22 Sept. 1989, published in proceedings, pag. 66;
 - 222. Mocanu N., Năstase M., Voicu V., Jiquidu Luminita, Țepelea V., Stanescu Daniela, Lazarim S. - *Whole Body Counters - Description and Specific Software.* - The X-th Symposium of the International Association for Social Security, 21-23 Nov. 1990, Vienna, Austria. published in proceedings, pag. 39;

- 247. Hickman D.P., Mocanu N., *Intake Projections and Internal Dose Assessments Using U.S. Internal Dosimetry Codes and European Intercomparison Data*; Printed as UCRL-JC-115004, Lawrence Livermore National Laboratory, U.S.A., Aug. 1993;
- 271. Mocanu N., Nastase M., Dumitru C. Direct Evaluations of the Internal Contaminations; Subchapters of the book: *Artificial Radioactivity in Romania*; Edited by Romanian Society for Radiological Protection, 1995;
- 278. Mocanu N., Hickman D.P., Voicu V., Enache A., Johnson J.S., *"Windows" Code for the Interpretation of the Radioactive Bioassay Measurements based on U.S. Nuclear Regulatory Commission Data and the Initial Intake/Dose Assessments using U.S. Internal Dosimetry Codes on European Intercomparison Data*; IRPA 9 Congress, Vienna, Austria, 14-19 April, 1996;
- 279. Mocanu N., *Medical Informatics*, Edited by Transilvania Univ., Brasov, 1996, 267 pages;
- 281. Mocanu N., Griffith R., Enache A., *"Windows" Computer Code (Basic Safety Standards on Diskette, version 3.11) to Access and Review Integral Data from I.A.E.A. Safety Series 115: "International Basic Safety Standards for Protection against Ionizing Radiations and for the Safety of Radiation Sources"*; © IAEA, Vienna, 1997;
- 290. Mocanu N., Voicu, V.A., Mircioiu C., Popescu G., Hickman, D., Enache A., Gligor R., *Direct Methods in the Evaluation of the Internal Human Contamination with Radionuclides*; NATO Advanced Research Workshop, Bucharest, 20-22 April, 1998, published in *NBC Risks - Current Capabilities and Future Perspectives for Protection*, NATO Science Series 1/25, 1999, Editors: Sohns T. and Voicu V., pages 493 - 511;
- 301. Mocanu N., Griffith R.V., Gustafsson Monica, Webb G.A.M., Enache A., *Software for the IAEA Occupational Radiation Protection Standards*; The X-th International Congress of the International Radiation Protection Association, May 14-19, 2000 Hiroshima, Japan.
- Mocanu N., Gustafsson Monica, Enache A., *ORPGUIDE (Occupational Radiation Protection Guide on CD), "Windows" program to access text and data from IAEA Safety Standards Series SS120, SS115, RS-G-1.1, RS-G-1.2 and RS-G-1.3*, © IAEA Vienna, 2000;

7. MEMBERSHIP IN PROFESSIONAL OR CIVIC SOCIETIES

- Member in the Board of the Romanian Society for Radiological Protection (1994-2019);
- Founding member and *vice-president* (2 years) of the Romanian Society for Medical Informatics;
- Member in good standing in the International Radiation Protection Association (affiliated);

8. MISCELANEOUS

- At the National Conferences with International participation of the Romanian Society for Medical Informatics I received the National Prize for Medical Informatics, MEDINF, in 1994 (Iassy), 1996 (Cluj) and 1997 (Satu-Mare) and "Edmond Nicolau" prize for Informatics in 1998 (Arad).
- Included in *Who's Who in Romanian Science and Technology*, Bucharest, 1996 and 2000.

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