PERSONAL INFORMATION

Anabella TUDORA



University of Bucharest,
Faculty of Physics, Atomistilor 405, Magurele, Ilfov, 077125, Romania

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Sex F | Date of birth | Nationality Romanian

WORK EXPERIENCE

from 1988 to present — **Professor**

University of Bucharest, Faculty of Physics (http://www.fizica.unibuc.ro)

Scientific research: nuclear fission, models of nuclear reactions, evaluation of nuclear data, development and outgoing research projects.
Teaching: courses in the field of nuclear physics
Habilitation as coordinator of doctorate (PhD) in the field of nuclear physics (since 2008)
Business or sector scientific research and University education

from 1983 to 1988 — **Scientific researcher**

Institute for Atomic Physics, Institute of Physics and Technology of Materials Bucharest-Magurele
Business or sector scientific research

from 2000 to 2018 (3 months / year) — **Scientific researcher**

European Commission, Joint Research Center (JRC), Institute for Reference Materials and Measurements (IRMM), Geel, Belgium
Business or sector scientific research

from 2000 to 2010 (2 or 3 months / year) — **Scientific researcher**

Commissariat a l'Energie Atomique (CEA), Departement d'Applications Militaires (DAM), Bruyeres-le-Chatel, France
Business or sector scientific research

2006, 2007, 2009, 2018 — **Scientific researcher**

Commissariat a l'Energie Atomique (CEA), Centre de Cadarache, St.Paul-lez-Durance, France
Business or sector scientific research

EDUCATION AND TRAINING

Replace with EQF (or other) level if relevant

(from 1985 to 1988) — **Doctor in Physics**

Institute of Nuclear Physics and Engineering (IFIN-HH)
Bucharest-Magurele

Fields: Nuclear Physics and Non destructive testing of materials

From 1976 to 1981 — **Diplomat engineer-physicist in nuclear physics**

University of Bucharest, Faculty of Physics
Specialization: Technological Physics: Nuclear data and nuclear reactors

PERSONAL

SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C2
	Replace with name of language certificate. Enter level if known.				
English	C1	C2	C1	C2	C2
	Replace with name of language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills Very good communication skills gained through my long experience as a teacher at the Faculty of Physics of the University of Bucharest, as PhD coordinator and as scientist working in international teams

Organizational / managerial skills leadership (currently responsible for research teams)

Job-related skills Initiative and capacity for analyze and decision

ADDITIONAL INFORMATION

Publications 80 scientific publications in ISI journals, 5 books

Patents patent regarding the ultrasonic transducers with transversal waves applied in the National Institute of Materials Physics – Bucharest-Magurele

Projects leader of many projects. E.g. the most recent ones: IAEA_contr.242008/2020-2025, ELI-Ro-14/2020, PN-III-P4-PCE-2016-0014, contract 7/2017, international projects CHANDA, EFNUDAT etc. in collaboration with European Commission -Joint Research Institute (JRC) - Geel, Belgium

Presentations Conferences many oral presentations in international conferences, during the last 15 years a great part of these presentations were invited lectures (in average one invited lecture per year)

Memberships Expert of the Nuclear Energy Agency (NEA) of OECD, liaison officer between the Computer Program Service of NEA-Data Bank and the University of Bucharest and the Polytechnic University of Bucharest

Citations more than 1000 citations, H=25

ANNEXES

List of scientific articles published in journals indexed ISI
of the main flux in the period 2000 - 2022:

1. A.Tudora
Influence of energy partition in fission and pre-neutron fragment distributions on post-neutron fragment yields, application for $^{235}U(n_{th},f)$
(2022) European Physical Journal A, 58, art. no.126

2. A.Tudora
Systematics of input parameters for the Los Alamos model with sequential emission
(2020) European Physical Journal A, 56 (9), art. no. 225

3. A.Tudora
Inclusion of sequential emission into the most probable fragmentation approach (Los Alamos model) and its validation
(2020) European Physical Journal A, 56 (6), art. no. 168

4. A.Tudora
Prompt γ -ray results of two deterministic modelings of prompt emission in fission
(2020) European Physical Journal A, 56 (5), art. no. 128

5. A.Tudora
Systematics of different quantities related to sequential prompt emission in fission
(2020) European Physical Journal A, 56 (3), art. no. 84

6. A.Tudora
Validation of two deterministic modelings of prompt emission in fission on the basis of recent experimental data
(2019) European Physical Journal A, 55 (6), art. no. 98

7. A.Tudora, A. Matei
Prompt emission calculations for 233U(nth,f)
(2019) Romanian Journal of Physics, 64 (1-2), art. no. 301

8. **A.Tudora, F.-J.Hambsch, V.Tobosaru**
Prediction of the Prompt Neutron Multiplicity Distribution v(A) for235U(n,f) and239Pu(n,f) in the Incident Energy Range of Multichance Fission
(2018) Nuclear Science and Engineering, 192 (1), pp. 52-69.

9. **A.Tudora, F.-J.Hambsch, V.Tobosaru**
Revisiting the residual temperature distribution in prompt neutron emission in fission
(2018) European Physical Journal A, 54 (5), art. no. 87, .

10. A.Tudora, F.-J.Hambsch
"Comprehensive overview of the Point-by-Point model of prompt emission in fission"
Eur.Phys.J. A 53 (2017) 159-179

11. A.Tudora, F.-J.Hambsch, V.Tobosaru
"Point-by-Point model calculations of the prompt neutron multiplicity distribution v(A) for 238U(n,F) at incident neutron energies ranging from 1 MeV to 80 MeV"
Phys.Rev.C 94 (2016) 044601

12. A.Tudora, F.-J.Hambsch, G.Giubega
"Particular aspects related to the even-odd effects in prompt emission"
Eur.Phys.J A 52 (2016) 182-192

13. A.Tudora, F.-J.Hambsch, G.Giubega
„Local even-odd effect based on the number of configurations of pre-formed and formed fragmentations in a fissioning nucleus"
Nucl.Phys.A 953 (2016) 96-116

14.R.Capote, Chen Y.J., F.-J. Hambsch, N. Kornilov, J.P. Lestone, O. Litaize, B. Morillon, D. Neudecker, S. Oberstedt, N. Otuka, V.G. Pronyaev, A. Saxena, O. Serot, O.A. Scherbakov, Shu N.C., D.L. Smith, P. Talou, A. Trkov, A.C. Tudora, R. Vogt and A.S. Vorobyev
„Prompt Fission Neutron Spectra of Actinides"
Nucl. Data Sheets 131 (2016) 1-106

15. A.Tudora, F.-J.Hambsch, I.Visan, G.Giubega
"Comparing different energy partitions at scission used in prompt emission model codes GEF and Point-by-Point"
Nucl.Phys.A 940 (2015) 242-263

16. A.Tudora, F.-J.Hambsch, S.Oberstedt, G.Giubega, I.Visan
"How sensitive is the prompt neutron multiplicity to the fragment characteristics"
Nucl.Sci.Eng. 181 (2015) 289-301

17. A.Tudora, F.-J.Hambsch, G.Giubega, I.Visan
"Even-odd effects in prompt emission of spontaneously fissioning even-even Pu isotopes"
Nucl.Phys.A 933 (2015) 165-188

18. A.Tudora, F.-J.Hambsch, G.Giubega, I.Visan
"Even-odd effects in prompt emission in fission"
Nucl.Phys.A 929 (2014) 260-292

19. A.Tudora, F.-J.Hambsch, S.Oberstedt
"Prompt fission neutron emission calculations and description of sub-barrier fission cross-section resonances for 234U(n,f)"
Nucl.Phys.A 917 (2013) 43-70

20. Anabella Tudora
« Prompt neutron and gamma-ray emission calculations for 232Th(n,f) »
Nucl.Phys.A 916 (2013) 79-101

21. Anabella Tudora
"Point-by-Point model description of experimental average prompt neutron multiplicity as a function of total kinetic energy of fission fragments"
Ann.Nucl.Energy, 53 (2013) 507-518

22. A.Tudora, F.-J.Hambsch, S.Oberstedt,
"Sub-barrier resonance fission and its effects on fission fragment properties"
Nucl.Phys.A 890-891 (2012) 77-101
http://dx.doi.org/10.1016/j.nuclphysa.2012.07.006

23. C.Morariu, A.Tudora, F.-J.Hambsch, S.Oberstedt, C.Manailescu
Modeling of the total excitation energy partition including fragment deformation and excitation energies at scission
J.Phys.G: Nucl. Part. Phys. 39 (2012) 055103

24. S.Oberstedt, A.Oberstedt, E.Birgersson, I.Fabri, F.-J.Hambsch, N.Kornilov, G.Lovestom, A.Tudora
"First results on the neutron induced fission cross-section of 231Pa for incident neutron energies En > 17 MeV"
Annals of Nuclear Energy 43 (1) (2012) 26-30

25. C.Manailescu, A.Tudora, F.-J.Hambsch, C.Morariu, S.Oberstedt
"Possible reference method of total excitation energy partition between complementary fission fragments"
Nucl.Phys.A 867 (2011) 12-40

26. F.-J.Hambsch, S.Oberstedt, A. Al-Adili, R.Borcea, A.Oberstedt, A.Tudora, S.Zeynalov
Investigation of the fission process at IRMM
Journal of the Korean Physical Society 59 (23) (2011) 1654-1659

27. A.Tudora, V.Manea
"Approach for the fission fragment total kinetic energy TKE(A) calculation. Application to prompt neutron emission models"
Annals of Nuclear Energy 38(1) (2011) 72-79

28. A.Tudora, F.-J.Hambsch
"Point by Point model calculation of the prompt neutron multiplicity distribution P(v) for spontaneous and neutron induced fission of actinides"
Annals of Nuclear Energy 37(6) (2010) 771-777

29. Anabella Tudora
"Point by Point" model calculation of prompt neutron emission data for 248Cm(SF) and 244Cm(SF)"
Annals of Nuclear Energy 37(4) (2010) 492-497

30. Anabella Tudora
"Prompt fission neutron data calculation using experimental fission fragment charge distributions in the frame of the Point by Point treatment"
Annals of Nuclear Energy 37(1) (2010) 43-51

31. Anabella Tudora
« Systematic behaviour of the average parameters required for the Los Alamos model of prompt neutron emission"
Annals of Nuclear Energy 36 (2009) 72-84

32. E.Rich, G.Noguère, C.De Saint Jean, A.Tudora
« Generalization of the SPRT method for the modelling of the neutron Cross Sections in the unresolved resonance range »
Nuclear Science and Engineering 162 (2009) 76-86

33. E.Rich, A.Tudora, G.Noguère, J.Tommasi, J.-F.Lebrat
« Modeling of the ^{242}Pu+n reaction for fast reactor applications"
Nuclear Science and Engineering 162 (2009) 171-191

34. Anabella Tudora
"Multi-parametric prompt neutron and fission fragment experimental data described by the "Point by Point" model"
Annals of Nuclear Energy 35 (1)(2008) 1-10

35. Anabella Tudora, G.Vladuca, F.-J.Hambsch, D.Filipescu, S.Oberstedt
"Prompt fission neutron multiplicity and spectrum calculations for thermal and fast neutron induced reactions on ^{231,233}Pa nuclei"
Annals of Nuclear Energy 35 (2008) 1131-1139

36. Anabella Tudora
"Experimental prompt fission neutron "sawtooth" data described by the "Point by Point" model"
Annals of Nuclear Energy 33 (2006) 1030-1038

37. G.Vladuca, Anabella Tudora, B.Morillon, D.Filipescu
"Inner barrier shape symmetries in ^{237}Np neutron data evaluation up to 40 MeV incident energy"
Nucl.Phys.A 767 (2006) 112-137

38. Anabella Tudora, B.Morillon, F.-J.Hambsch, G.Vladuca, S.Oberstedt
"A refined model for ^{235}U(n,f) prompt fission neutron multiplicity and spectrum calculation with validation in integral benchmarks"
Nucl.Phys.A 756 (2005) 176-191

39. F.-J.Hambsch, Anabella Tudora, G.Vladuca, S.Oberstedt
"Prompt fission neutron spectrum evaluation for ^{252}Cf(SF) in the frame of the multi-modal fission model"*)
Annals of Nuclear Energy 32 (2005) 1032-1046
*) in 2005 on position 17 of TOP25

40. F.-J.Hambsch, G.Vladuca, Anabella Tudora, S.Oberstedt, I.Ruskov
"Prediction of fission mass-yield distributions based on cross-section calculations"
Annals of Nuclear Energy 32 (2005) 1297-1304

41. Anabella Tudora, G.Vladuca and B.Morillon
"Prompt fission neutron multiplicity and spectrum model for 30 – 80 MeV neutron incident on ^{238}U"
Nucl.Phys.A 740 (2004) 33-58

42. G.Vladuca, F.-J.Hambsch, A.Tudora, S.Oberstedt, A.Oberstedt, F.Tovesson, D.Filipescu
"Calculation of the neutron induced fission cross-section of ^{233}Pa up to 20 MeV"
Nucl.Phys.A 740 (2004) 3-19

43. F.Tovesson, E.Birgersson, M.Fleneus, B.Fogelberg, V.Fritsch, C.Gustafsson, F.-J.Hambsch, A.Oberstedt, S.Oberstedt, E.Ramstrom, A.Tudora, G.Vladuca
"233Pa(n,f) cross-section up to En=8.5 MeV"
Nucl.Phys.A733 (2004) 3-19

44. G.Vladuca, F.-J.Hambsch, A.Tudora, S.Oberstedt, F.Tovesson, A.Oberstedt, D.Filipescu
"Calculation of the neutron induced fission cross-section of ^{233}Pa"
Phys.Rev.C 69 (2004) 021604(R) 1-4

45. F.-J.Hambsch, S.Oberstedt, Anabella Tudora, G.Vladuca, I.Ruskov
"Prompt fission neutron multiplicity and spectrum evaluation for ^{235}U(n,f) in the frame of the multi-modal fission model"
Nucl.Phys.A 726 (2003) 248-264

46. G.Vladuca, Anabella Tudora, F.-J.Hambsch, S.Oberstedt, I.Ruskov
"Evaluation of the fission cross-section within the multi-modal fission approach for ^{235}U(n,f)"
Nucl.Phys. A 720 (2003) 274-292

47. F.-J.Hambsch, S.Oberstedt, G.Vladuca, Anabella Tudora
"Prompt fission neutron multiplicity and spectra evaluations in the frame of the multi-modal fission model for ^{237}Np(n,f) and ^{238}U(n,f)"
Nuclear Physics A 709 (2002) 85-102

48. G.Vladuca, Anabella Tudora, F.-J.Hambsch, S.Oberstedt
"Fission cross section evaluation in the frame of the multi-modal fission model for ^{237}Np(n,f)"
Nuclear Physics A 707 (2002) 32-46

49. G.Vladuca and Anabella Tudora
"Prompt fission neutron multiplicity and spectrum evaluation for n+^{238}U reaction"
Annals of Nuclear Energy, 28 (2001) 1653-1665

50. G.Vladuca and Anabella Tudora
"Prompt fission neutron spectrum calculation for n+^{238}U reaction using the multi-modal model"
Annals of Nuclear Energy, 28 (2001) 1643-1652

51. G.Vladuca and Anabella Tudora
"Improved Los Alamos model applied to the neutron induced fission of ^{239}Pu and ^{240}Pu and to the spontaneous fission of Pu isotopes",
Annals of Nuclear Energy, 28 (2001) 689-700

52. G.Vladuca and Anabella Tudora
"Improved Los Alamos model applied to the neutron induced fission of ^{235}U and ^{237}Np",
Annals of Nuclear Energy, 28 (2001) 419-435

53. Anabella Tudora
"Neutron cross sections of ^{242}Pu in the energy range 5 – 20 MeV",
Annals of Nuclear Energy 27, 18 (2000), 1669-1681

53. G. Vladuca and Anabella Tudora
"High accuracy average prompt fission neutron multiplicity description in the improved Los Alamos model",
Annals of nuclear Energy, 27, no.13 (2000), 1187-1197

54. G.Vladuca and Anabella Tudora
"SPECTRUM – A computer code for prompt fission neutron spectrum and prompt neutron multiplicity calculation",
Computer Physics Communications 125 (1-3) (2000), 221-238, Prog. Library of Comp.Phys.Communic. ADLH (2000)