

CURRICULUM VITAE

SURNAME: Raduta
FIRST NAME(S): Alexandru Horia

Date of birth: 9 June 1970
Place of birth: Fagaras, Romania
Nationality: Romanian

Affiliation: National Institute of Physics and Nuclear Engineering, Bucharest, POB-MG 6, Romania

e-mail address: raduta@lns.infn.it

Education (dates, universities, degrees)

September 1989 – June 1994:
Faculty of Physics, University of Bucharest, *Licentiate in Physics*
Specialization: *Optics and lasers*

September 1994 – June 1995:
Faculty of Physics, University of Bucharest, *Master of Science*
Specialization: *Nuclear Physics*

September 1997 – August 1999:
Institute of Atomic Physics, Bucharest, *Ph.D. in Physics*
Specialization: *Nuclear Physics*

Professional experience

1994 - 1996: *Research Assistant*, Heavy Ion Department, National Institute of Physics and Nuclear Engineering, Bucharest

1996 - 1999: *Scientific Researcher*, Heavy Ion Department, National Institute of Physics and Nuclear Engineering, Bucharest

1999 – 2005: *Senior Researcher 3rd degree*, Department of Nuclear Physics, National Institute of Physics and Nuclear Engineering, Bucharest

2005: *Senior Researcher 2nd degree*, Department of Nuclear Physics, National Institute of Physics and Nuclear Engineering, Bucharest

Fellowships and Research stages abroad

October 2000 - December 2000:

Grand Accelérateur National d'Ions Lourds (GANIL), Caen, France

January 2001 - April 2001:

Laboratoire de Physique Corpusculaire (LPC), Caen, France

May 2001 - July 2002:

Gesellschaft fuer Schwerionenforschung (GSI), Darmstadt, Germany, fellowship of the *Alexander von Humboldt Foundation*

August 2004 - Oct 2004:

LNS – INFN, Catania, Italy, research stage

Nov 2004 - Dec 2004:

IPN, Orsay, Paris, France, research stage

Dec 2004:

Institut fuer Theoretische Physik, Tuebingen, Germany, research stage

Jan 2006 - 2007

LNS-INFN, Catania, Italy, Marie Curie Fellowship

Specialization fields:

Theoretical Physics, Statistical Physics, Nuclear Physics, Computational Physics

Scientific referencing:

since 1999 referee of the *Physical Review C* (American Physical Society),

since 2001 referee of the *Nuclear Physics A* (Elsevier Science)

since 2002 referee of the *Physical Review Letters* (American Physical Society)

Computing skills:

Operating systems: Windows, UNIX, Linux

Programming: C/C++; Windows programming in C

Language skills:

Romanian (mother tongue), English (fluent), French (fluent), Italian

Publications

A. Articles in journals

1. Al. H. Raduta and A. A. Raduta.
Towards a new phenomenological description of the octupolar deformed nuclei.
Romanian Journal of Physics 40, 807 - 831, 1995.
2. Al. H. Raduta and Ad. R. Raduta.
Simulation of statistical ensembles suitable for the description of nuclear multifragmentation.
Physical Review C 55, 1344 - 1352, 1997.
3. Al. H. Raduta and Ad. R. Raduta.
Statistical view on nuclear multifragmentation: Primary decays.
Physical Review C 56, 2059 - 2066, 1997.
4. Al. H. Raduta, A. Calboreanu and Ad. R. Raduta.
Modelling mass and charge distribution in nuclear multifragmentation.
Romanian Journal of Physics 42, 39 - 48, 1997.
5. A. A. Raduta, Al. H. Raduta and Amand Faessler.
Phenomenological description of rotational bands in pear shape nuclei.
Physical Review C 55, 1747 - 1761, 1997.
6. A. A. Raduta, Al. H. Raduta and Amand Faessler.
Positive and negative parity bands in pear shape nuclei.
Journal of Physics G 23, L49 - L55, 1997.
7. Al. H. Raduta and Ad. R. Raduta.
Microcanonical investigation of the primary decay nuclear caloric curve.
Physical Review C 59, 323--327, 1999.
8. Al. H. Raduta and Ad. R. Raduta.
Interplay between various degrees of freedom in determining the aspect of the caloric curve.
Nuclear Physics A 647, 12 - 20, 1999.
9. Al. H. Raduta and Ad. R. Raduta.
Microcanonical calibration of isotopic thermometers.
Physical Review C 59, R1855 - R1859, 1999.
10. A. A. Raduta, Ad. R. Raduta and Al. H. Raduta.
Description of deformed atomic clusters within a projected spherical basis.
Physical Review B 59, 8209 - 8217, 1999.
11. Al. H. Raduta and Ad. R. Raduta.
Microcanonical studies concerning the recent experimental evaluations of the nuclear caloric curve.
Physical Review C 61, 034611-1 - 034611-5, 2000.
12. Al. H. Raduta and Ad. R. Raduta.
Effects of the secondary decays on the isotopic thermometers.

- Nuclear Physics A* 671, 609-616, 2000.
13. Al. H. Raduta
On the free volume in nuclear multifragmentation,
Nuclear Physics A 683, 618-634, 2001.
 14. Al. H. Raduta and Ad. R. Raduta.
Investigating the phase diagram of finite extensive and nonextensive systems.
Physical Review Letters, 87, 202701, 2001.
 15. Al. H. Raduta, Ad. R. Raduta, Ph. Chomaz and F. Gulminelli.
Critical behavior in a microcanonical multifragmentation model,
Physical Review C 65, 034606, 2002.
 16. Al. H. Raduta and Ad. R. Raduta.
Echoes of the liquid-gas phase transition in multifragmentation,
Nuclear Physics A 703, 876, 2002.
 17. Al. H. Raduta and Ad. R. Raduta.
Searching for the statistically equilibrated systems formed in heavy ion collisions,
Physical Review C, 65, 054610, 2002.
 18. Al. H. Raduta and Ad. R. Raduta,
Reply to Comment on " Investigating the phase diagram of finite extensive and nonextensive systems ",
Physical Review Letters, 90, 179202, 2003.
 19. Al. H. Raduta and Ad. R. Raduta
Homogeneity and size effects on the liquid-gas coexistence curve,
Nuclear Physics A 724, 233, 2003.
 20. F. Gulminelli, Ph. Chomaz, Al. H. Raduta, and Ad. R. Raduta
Coulomb energy as an order parameter in the nuclear liquid-gas phase transition,
Physical Review Letters. 91, 202701, 2003.
 21. Al. H. Raduta, M. Colonna, V. Baran, M. Di Toro
Statistical analysis of a dynamical multifragmentation path
Physical Review C 74, 034604, 2006
 22. M. B. Tsang *et al.*
Comparisons of statistical multifragmentation and evaporation models for heavy-ion collisions
European Physical Journal A, 39 129-139, 2006
 23. A. A. Raduta, Al. H. Raduta and C.M. Raduta
Simultaneous description of four positive parity bands and four negative parity bands
Phys. Rev. C 74, 044312 (2006)
 24. Al. H. Raduta, M. Colonna, M. Di Toro
Searching for statistical equilibrium in a dynamical multifragmentation path
Submitted to *Physical Review C*.

B. Published contributions to academic conferences

1. Ad. R. Raduta, Al. H. Raduta and A. Calboreanu.
The residual interaction effect on the nuclear level densities for ^{40}Ca .
In A. A. Raduta and D. Bucurescu, editors, Proc. International Summer School on Collective Motion and Nuclear Dynamics, Predeal, Romania, 1995. Romanian Journal of Physics 41, 69 - 76, 1996.
2. Al. H. Raduta and Ad. R. Raduta.
Microcanonical approach for investigating the disassembly of excited nuclei.

- In D. Pelte, M. Petrovici, J. Randrup, A. Sandulescu and H. Stoecker editors, Heavy Ion Physics at Low, Intermediate and Relativistic Energies using 4 pi Detectors, Proceedings of International Research Workshop, 1996, Poiana Brasov, Romania, pages 54 - 57 World Scientific, Singapore, 1997.
3. Al. H. Raduta and Ad. R. Raduta.
Microcanonical approach for primary decay nuclear multifragmentation. Caloric curve investigations.
In A. A. Raduta, S. Stoica and I. I. Ursu, editors, Proc. International Summer School on Stability of Nuclear and Nucleonic Systems, Predeal, Romania, 1998. Romanian Journal of Physics, 44, 225 - 230, 1999.
 4. Al. H. Raduta and Ad. R. Raduta.
Nuclear caloric curve: Interplay between various degrees of freedom in shape determination.
In H. Feldmeier, W. Noerenberg, J. Knoll and J. Wambach editors, Multifragmentation, Proceedings of International Research Workshop XXVII on Gross Properties of Nuclei and Nuclear Excitations, 1999, Hirschegg, Austria, pages 231 - 236. GSI, Germany, 1999.
 5. Al. H. Raduta and Ad. R. Raduta.
Various aspects concerning the nuclear caloric curve.
In Proc. International Symposium Advances in Nuclear Physics, Bucharest, Romania, 1999. Romanian Journal of Physics, in press.
 6. Al. H. Raduta and Ad. R. Raduta.
Studies of the nuclear caloric curve.
In Proc. International Conference Catania Relativistic Ion Studies, Acicastello, Italy, 2000, Nuclear Physics A 681, 394 - 397 (2001).
 7. Al. H. Raduta and Ad. R. Raduta.
Nuclear caloric curve: Influence of the secondary decays on the isotopic thermometers.
In G. C. Bonsignori, M. Bruno, A. Ventura and D. Vretenar editors, International Conference Bologna 2000 - Structure of the nucleus at the dawn of the century, Bologna, Italy, 2000, pages 227 - 230, World Scientific 2001.
 8. Al. H. Raduta and Ad. R. Raduta.
Microcanonical investigation of the recent nuclear caloric curve experimental evaluations.
In G. C. Bonsignori, M. Bruno, A. Ventura and D. Vretenar editors, Proc. International Conference Bologna 2000 – Structure of the nucleus at the dawn of the century, Bologna, Italy, 2000, pages 269 - 272. World Scientific, 2001.
 9. Al. H. Raduta and Ad. R. Raduta.
Thermodynamical properties of finite extensive and nonextensive systems.
In Proc. of International Workshop on Multifragmentation and related topics, Catania, Italy, 2001, in press.
 10. Al. H. Raduta and Ad. R. Raduta.
Critical-like behaviour in finite nuclear systems.
In Proc. of International Workshop on Multifragmentation and related topics, Catania, Italy, 2001, in press.
 11. Al. H. Raduta
Signatures of liquid-gas phase transition in nuclei, WCI 2004 – Catania, Italy
 12. Al. H. Raduta
Multifragmentation, Engelberg Forum, Switzerland
 13. Al. H. Raduta
Talk on Multifragmentation at ECT* Trento, Italy, April 10-15, 2006
 14. Al. H. Raduta

Statistical equilibrium in a dynamical multifragmentation path
In Proc. of “Predeal International Summer School in Nuclear Physics – Collective
Motion and Phase Transitions in Nuclear Systems”, 28 August – 9 September, Predeal,
Romania