

Cristian M. RADUȚĂ

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RELEVANT EMPLOYMENT AND EXPERIENCE:

Institute of Physics and Nuclear Engineering, **Bucharest, Romania**
Theoretical Physics Department ,
Researcher *Sept 1996- April 2005*
Principal Researcher 3 *April 2005- Present*

- theoretical nuclear physics research (see the attached list of publications)

The Ohio State University **Columbus, Ohio, US**
Graduate Teaching Assistant *Sept 1998-April 2003*

- Teach several Physics lab classes
- Provide tutoring and develop individual tutoring programs
- Interviewed students to detect misconceptions on Mechanics, E&M and Quantum Mechanics

The City University of New York (CUNY) **New York, NY, US**
Graduate Teaching Assistant *Sept 1997- June 1998*

- Teach several Physics lab classes
- Provide tutoring and develop individual tutoring programs

EDUCATION:

Inst. of Physics and Nuclear Engineering **Bucharest, Romania**
Ph.D. in Physics *December 2005*

The Ohio State University **Columbus, Ohio, US**
MBA, (Finance Major) *June 2002*

The Ohio State University **Columbus, Ohio, US**
MS (Master of Science) *April 2002*

Bucharest University **Bucharest, Romania**
Master in Physics *June 1997*

Bucharest University **Bucharest, Romania**
BS (Bachelor in Science/Physics Major) (GPA: 9.92/10) *June 1996*

ACHIEVEMENTS AND ACTIVITIES:

- **Author** of several papers of Physics published in prestigious reviews - see attached publication list
- **Author** of three books.
- **Highest Score** on the The Ohio State University's Ph.D Level Qualifying Exam
- **Salutatorian** of the Bucharest University, Physics major department (2-nd ranked out of 360 students)
- Member of Romania's National Olympic Physics Team - Selected for six consecutive years and consistently placed in top positions, 1985-1991

LANGUAGE SKILLS:

Mother tongue: Romanian

Other Languages: English –Fluent
French – Good
Italian – Satisfactory

COMPUTER SKILLS:

Excellent Internet research and communication skills
Excellent Microsoft Office Package, Pascal, Fortran, Eudora Pro, Corel, Macromedia

OTHER INTERESTS:

Tennis, table-tennis, ski, pool and swimming, traveling, writing

MEDIA COMMUNICATIONS:

Conducted *two live interviews* on the Romanian National Television channel about my book “2 years in the USA.”

Personal life story and accomplishments featured in the “**Daily Herald,**” **Paddock Publications**, No 245, June 16, 1999

Book signing, Bookstore of the National Theater, Bucharest, august 2005

OTHER COURSES:

Certificate of Completion, Advanced negotiations skills (in Rompetrol).

Certificate of Completion, Landmark Forum Education – a course of personal development

PUBLICATIONS & RESEARCH

- 1) Two possible improvements for pnQRPA: Application to the 2nbb decay, A.A.Raduta, **C.M.Raduta**, *Czechoslovak Journal of Physics*, Vol. 48, (1998), No 2.
- 2) Description of the 2nbb decay within a fully renormalized RPA approach, A.A.Raduta, **C.M.Raduta**, Amand Faessler, W.A.Kaminski, *Nuclear Physics A* 634, 497 (1998). This paper has been already cited in 25 papers.
- 3) Toward a fully renormalized pnQRPA description of the 2nbb decay, A. A. Raduta, **C.M.Raduta** and I.I.Ursu, *Romanian Journal of Physics* 43, 1-2 (1998) 507
- 4) Toward a new collective mode for proton-neutron interacting system, A.A. Raduta, **C.M.Raduta**, B.Codirla, *Nuclear Physics A*, 678 (2000), 382.
- 5) New results for the two neutrino double beta decay in deformed nuclei with angular momentum projected basis, A. A. Raduta, **C. M. Raduta** and A. Escuderos, Phys. Rev. C 71 (2005) 034317.
- 6) New results for the fully renormalized pnQRPA formalism, **C. M. Raduta** and A. A. Raduta, Nucl. Phys. A 756 (2005) 153-175.
- 7) Positive and negative parity dipole bands in octupole deformed nuclei, A. A. Raduta, **C.M. Raduta** and Amand Faessler, Phys. Lett. B, 635 (2006) 80-84.
- 8) Positive and negative parity bands in 226Ra, A. A. Raduta and **C. M. Raduta**, Nucl. Phys. A 768 (2006) 170.
- [8] Simultaneous description of four positive and four negative parity bands, A. A. Raduta, Al. H. Raduta and **C. M. Raduta**, Phys. Rev. C74 (2006) 044312.
- 9) Double beta decay to the first 2^+ state within a boson expansion formalism with a projected spherical single particle basis, A. A. Raduta, **C. M. Raduta**, nucl-th/0612031, Phys. Lett. B (2007),doi: 10.1016/j.physlettb.2007.02.007.
- 10) Description of four positive and four negative parity bands, A. A. Raduta, **C. M. Raduta**, Lecture delivered at the International Summer School, Collective Motion and Phase Transitions in Nuclear Systems, Predeal 2006, World Scientific, Singapore, eds. A. A. Raduta, V. Baran and I. I. Ursu.
- 11) Unified description of the double beta decay to the first excited quadrupole phonon state in spherical and deformed nuclei, **C. M. Raduta**, A.A.Raduta, Romanian Progress in Physics, in press.
- 12) New results for the 2nbb decay in deformed nuclei with angular momentum projected basis by A.A. Raduta, **C.M. Raduta**, and A. Escuderos, *Phys. Rev. C* 71 (2005) 024307.
Aceasta lucrare poate fi gasita in Nucl-Th arXive:
Description of the two neutrino double beta decay in deformed nuclei with projected spherical single particle states, A.A. Raduta, **C. M. Raduta** and A. Escuderos, **Nucl-th/0412104**.

- 13) New results for the fully renormalized proton-neutron quasiparticle random phase approximation, **C.M. Raduta** and A. A. Raduta, **accepted for publication in *Nucl. Physics. A.***
Poate fi consultata pe internet la **LANL arXiv: nucl-th/0501003**
- 14) "A general overview of the BCS formalism", **C.M. Raduta**, Thesis for the MS degree, The Ohio State University (OSU), Columbus, 2000 (preprint).
- 15) "General misconceptions related to Electricity and Magnetism", C. M. Raduta, OSU, April 2001 (preprint)
- 16) "Student understanding of forces on charges in magnetic fields", Gordon J. Aubrecht II, **C. M. Raduta**, **AAPT** summer, 2003
- 17) "Students' misconceptions related to Electricity and Magnetism", **C. M. Raduta**, OSU seminar, June 4, 2001 (talk)
- 18) American and Romanian student approaches to solving simple electric and magnetic problems, Gordon J. Aubrecht and **C. M. Raduta**, *AURCO J. 11, Spring 2005, p. 51-66.*
- 19) "Contrasts in student understanding of simple E&M questions in two countries", **C. M. Raduta**, Gordon J. Aubrecht II, "Physics Education Research Conference" "*Transfer of learning*", California State University, Sacramento, August 4-5, 2004 (invited talk)
- 20) Differences between American and Romanian student approaches to solving problems, Gordon J. Aubrecht, **C. M. Raduta**, 9-th Annual AURCO Conference, "*Theories of intellect as an introductory Framework for Psychology*", 28 oct. 2004, Clermont College, Univ. of Cincinnati (invited talk)
- 21) "US and Romanian students: the rest of the story, Gauss' Law", Aubrecht Gordon, **C. M. Raduta**, **American Physical Society, Fall Meeting of the Ohio Section**, Case Western Reserve Univ., October 17-18, 2003
- 22) A comparison between the styles Romanian and American students use to approach an E&M physics problem, Gordon Aubrecht and **Cristian Raduta**, in E. Moltó, ed., ***Teaching Physics for the Future, Proceedings of the VIII IACPE (Havana, 2003)***, p. 527-532.
- 23) "Student understanding of Gauss's Law and charged-particle trajectories in regions of magnetic field", Gordon J. Aubrecht, II, **C. M. Raduta**, Physics Education Research Conference (PERC) "The Practice of Analysis as a Window on Theory", August 6-7, 2003 (**poster**)

Conferences:

- 1) "Student choices of models of the atom", Gordon J. Aubrecht, **C. M. Raduta**, Philip Walker, **AAPT** winter, **2002** (talk)
- 2) A comparison between the styles Romanian and American students use to approach an E&M physics problem, Gordon Aubrecht and **Cristian Raduta**, in E. Moltó, ed., ***Teaching Physics for the Future, Proceedings of the VIII IACPE (Havana, 2003)***,
- 3) "US and Romanian students: the rest of the story, Gauss' Law", Aubrecht Gordon, **C. M. Raduta**, **American Physical Society, Fall Meeting of the Ohio Section**, Case Western Reserve Univ., October 17-18, **2003**
- 4) "Contrast between American and Romanian student approaches to solving magnetic force problems and trajectories", Gordon J. Aubrecht, **C. M. Raduta**, AURCO Sessions, **2004 (talk)**
- 5) Differences between American and Romanian student approaches to solving problems, Gordon J. Aubrecht, **C. M. Raduta**, 9-th Annual AURCO Conference, "*Theories of intellect as an introductory Framework for Psychology*", 28 oct. **2004**, Clermont College, Univ. of Cincinnati (invited talk)

- 6) 9th International spring seminar on nuclear physics: Changing facets of nuclear structure, Italy, Vico Equense, May 20-24, 2007, **Prof. Dr. A. A. Raduta, Dr. C. M. Raduta**

BOOKS

- 1) "*2 ani in America*", **C.M.Raduta**, Editura Driada, november 1999
- 2) "*Marketingul sau marea pacaleala*," **C.M.Raduta**, Editura Miracol, november 2003
- 3) "*Vin maimutele/Low cost & high margin*", **C.M. Raduta**, Editura Minerva, 2007
- 4) "*Zodia mea, perechea mea*", **C. M. Raduta**, in progres