

## **Cristian M. RADUȚĂ**

**Nascut: 26 iulie, 1972, Bucuresti, Romania**

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### **EXPERIENTA:**

**Institutul de Fizica si Inginerie Nucleara,**  
*Departamentul de Fizica Teoretica*  
*Cercetator*  
*Cercetator Principal 3 (CP3)*

**Bucuresti, Romania**

*sept. 1996 - aprilie 2005*  
*aprilie 2005 - Prezent*

- cercetare in fizica nucleara teoretica (a se vedea lista de publicatii atasata)

**The Ohio State University**  
*Graduate Teaching Assistant*

**Columbus, Ohio, US**  
*sept 1998 - aprilie 2003*

- predat mai multe laboratoare si seminarii de fizica
- interviuri cu studentii pentru a detecta misconceptiile in Mecanica, E&M si Mecanica Cuantica

**The City University of New York (CUNY)**  
*Graduate Teaching Assistant*

**New York, NY, US**  
*sept 1997- iunie 1998*

- predat mai multe laboratoare de fizica

### **EDUCATIE:**

**Universitatea Bucuresti**  
*Doctor in Fizica (Summa Cum Laudae)*

**Bucuresti, Romania**  
*decembrie 2005*

**The Ohio State University**  
*MBA (specializare in Finante)*

**Columbus, Ohio, US**  
*iunie 2002*

**The Ohio State University**  
*MS (Master of Science)*

**Columbus, Ohio, US**  
*aprilie 2000*

**Universitatea Bucuresti**  
*Master in Fizica*

**Bucuresti, Romania**  
*iunie 1997*

**Universitatea Bucuresti**  
*Licentiat in Fizica (media generala: 9.92/10)*

**Bucuresti, Romania**  
*iunie 1996*

### **ACTIVITATI SI REALIZARI IMPORTANTE:**

- **Autor** a mai multe lucrari de fizica publicate in reviste prestigioase – a se vedea lista de publicatii
- **Autor** a mai multe carti
- **1-ul clasat** la primul examen de doctorat (*The Qualifying Exam* – The Ohio State University)
- Absolvit facultatea de fizica pe **locul al 2-lea** din 360 studenti.
- **Calificat de 6 ori consecutiv la faza nationala a Olimpiadei de Fizica** unde am obtinut constant pozitii fruntase (de ex.: Premiul 2 pe tara in clasa a 8-a) – singurul din Bucuresti care a reusit aceasta performanta (1985-1991)
- Biografia acceptata pentru publicarea in **a 10-a editie aniversara (2008-2009)** a prestigioasei publicatii americane *Who's Who in Science and Engineering (Marquis Who's Who)*

### **LIMBI STRAINE:**

*Limba materna:* romana  
*Alte limbi:* engleza – fluent  
franceza – mediu  
italiana – satisfactor

### **COMPUTER:**

Internet, Microsoft Office, Pascal, Fortran, Eudora Pro, Corel, Photoshop, Macromedia

### **ALTE INTERESE:**

Tenis, ping-pong, ski, billiard, inot; calatorii; economie/business;

### **COMUNICARI MEDIA:**

- 2 interviuri *live* la TVR 2 despre cartea mea "2 ani in America" dar si despre experienta mea ca student graduat in SUA.
- Personal life story and accomplishments featured in the "**Daily Herald,**" **Paddock Publications**, No 245, June 16, 1999
- *Lansare carte* "Vin Maimutele/low cost& high margin", Libraria Teatrului National, Bucuresti, august 2005

### **ALTE CURSURI:**

**Diploma de Absolvire**, Abilitati avansate de negociere (in Rompetrol).

**Diploma de Absolvire**, Landmark Forum Education – curs de dezvoltare personala

### **PUBLICATII & CERCETARE**

1) "Two possible improvements for pnQRPA: Application to the  $2\nu\beta\beta$  decay", A.A.Raduta, **C.M.Raduta**, *Czechoslovak Journal of Physics*, Vol. 48, (1998), No 2.

2) "Description of the  $2\nu\beta\beta$  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  $2\nu\beta\beta$  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** and B.Codirla, *Nuclear Physics A*, 678 (2000), 382.  
*Lucrarea poate fi consultata de asememea in LANL arXive la adresa nucl-th/0503041.*

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.  
*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*.

6) "New results for the fully renormalized proton-neutron quasiparticle random phase approximation", **C.M. Raduta** and A. A. Raduta, *Nucl. Phys. A* 756 (2005) 153-175.  
*Poate fi consultata pe internet la LANL arXive: nucl-th/0501003*

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  $^{226}\text{Ra}$ ", A. A. Raduta and **C. M. Raduta**, *Nucl. Phys. A* 768 (2006) 170-178.

9) "Simultaneous description of four positive and four negative parity bands", A. A. Raduta, Al. H. Raduta and **C. M. Raduta**, *Phys. Rev. C* 74 (2006) 044312.

10) "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*, 647, (2007), pg 265-270.

11) "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, (pg 21-44).*

- 12) "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, Volumul 59, Nr. 2, 2007, pg 577-587.**
- 13) "A general overview of the BCS formalism", **C.M. Raduta**, Thesis for the MS degree, The Ohio State University (OSU), Columbus, 2000 (preprint).
- 14) "General misconceptions related to Electricity and Magnetism", **C. M. Raduta**, OSU, April 2001 (preprint).
- 15) "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.**
- 16) "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.**
- 17) "Cultural differences in answering physics questions: Could they arise from the difference between reasoning expected in answering exam questions in those cultures?", **C.M.Raduta** and G. Aubrecht, submitted to **Am. J. of Phys.**  
*Aceasta lucrare se gaseste in LANL arXiv : physics/0503124*
- 18) "A comparison between the styles Romanian and American students use to approach an E&M physics problem", **Cristian Raduta** and Gordon Aubrecht.  
*Aceasta lucrare se gaseste in LANL arXiv: physics/0503123*
- 19) "Contrasts in Student Understanding of Simple E&M Questions in Two Countries", Gordon J. Aubrecht II, **C. M. Raduta**, **AIP (American Institute of Physics) Conference Proceedings -- September 16, 2005 -- Volume 790, pp. 85-88**
- 20) "Double beta decay to the first  $2^+$  state", *9th International spring seminar on nuclear physics: Changing facets of nuclear structure*, Italy, Vico Equense, May 20-24, 2007, A. A. Raduta, **C. M. Raduta**, to appear in **Conference Proceedings** in 2007
- 21) "Unified description of the double beta decay to the first quadrupole phonon state in spherical and deformed nuclei", **C. M. Raduta**, A. A. Raduta, **accepted for publication at Phys. Rev. C**
- 22) "Renormarea completa a ecuatiilor pnQRPA. Descrierea unificata a dezintegrării  $2\nu\beta\beta$  a nucleelor sferice si deformate", **C. M. Raduta**, **teza de doctorat**, decembrie 2005
- 23) iunie 1997, **teza de masterat**, Universtatea Bucuresti,
- 24) "*Elements of Special Relativity*", A. A. Raduta, **C. M. Raduta**, Editura Universitatii Bucuresti, august 2007 (185 pag)
- 25) "*Fundamente de teoria nucleului*", A. A. Raduta, **C. M. Raduta**, Editura Universitatii Bucuresti, august 2007 (550 pag)
- 26) "*New results for semiclassical description of the wobbling motion of a triaxial rotor with constraints*", A. A. Raduta, R. Budaca, **C. M. Raduta**, submitted to **Phys Rev C**.

### **Conferinte:**

- 1) "Students' misconceptions related to Electricity and Magnetism", **C. M. Raduta**, OSU seminar, June 4, 2001 (talk)
- 2) "Student choices of models of the atom", Gordon J. Aubrecht, **C. M. Raduta**, Philip Walker, **AAPT** winter, OSU, 2002 (talk)
- 3) "A comparison between the styles Romanian and American students use to approach an E&M physics problem", Gordon Aubrecht and **C. M. Raduta**, in E. Moltó, ed., **Teaching Physics for the Future, Proceedings of the VIII IACPE (Havana, 2003)**

- 4) "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**
- 5) "Student understanding of forces on charges in magnetic fields", Gordon J. Aubrecht II, **C. M. Raduta**, **AAPT** summer, 2003
- 6) "Contrast between American and Romanian student approaches to solving magnetic force problems and trajectories", Gordon J. Aubrecht, **C. M. Raduta**, AURCO Sessions, **2004 (talk)**
- 7) "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)
- 8) "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**)
- 9) "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)
- 10) "Double beta decay to the first  $2^+$  state", *9th International spring seminar on nuclear physics: Changing facets of nuclear structure*, Italy, Vico Equense, May 20-24, **2007**, A. A. Raduta, **C. M. Raduta**
- 11) "Contrasts in Student Understanding of Simple E&M Questions in Two Countries", Gordon J. Aubrecht II, **C. M. Raduta**, AIP (American Institute of Physics) Conference Proceedings -- September 16, 2005 -- Volume 790, pp. 85-88; 2004 PHYSICS EDUCATION RESEARCH CONFERENCE
- 12) "How Romanian and American students approach trajectories in a region of magnetic field", Gordon J. Aubrecht, **C. M. Raduta**, *CIAEF 2006 – IACPE University of Costa Rica, Department of General Studies, Department of Physics, San Jose, Costa Rica, IX Conference, 3-5 July 2006*

### **CARTI**

- 1) "*2 ani in America*", **C.M.Raduta**, Editura Driada, noiembrie 1999
- 2) "*Marketingul sau marea pacaleala*," **C.M.Raduta**, Editura Miracol, noiembrie 2003
- 3) "*Vin maimutele/Low cost & high margin*", **C.M. Raduta**, Editura Minerva, septembrie 2007
- 4) "*Zodia mea, perechea mea*", **C. M. Raduta**, in progres
- 5) "*Elements of Special Relativity*", A. A. Raduta, **C. M. Raduta**, Editura Universitatii Bucuresti, august 2007 (185 pag)
- 6) "*Fundamente de teoria nucleului*", A. A. Raduta, **C. M. Raduta**, Editura Universitatii Bucuresti, septembrie 2007 (500 pag)

### **PROIECTE/ GRANTURI**

- 1) "*Stiinta si societate. Oferte si astreptari*". Director de Proiect – Ioan Ursu
- 2) .....