

Biographical Data

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Current Faculty Positions:

- Professor, Dept. of Physics & Astronomy, Texas A&M University-Commerce, Commerce, USA.
- Distinguished Affiliated Professor, Department of Physics, University of North Texas, 2007 -
- Adjunct Professor, Dept. of Physics & Astronomy, Texas A&M University College Station, 2015 -

Previous Faculty Positions:

- Professor, Physics Dept., Federal U. of Rio de Janeiro, Brazil, 1988-2000 (on leave 1991-1994).
- Assistant Professor, Physics Dept., Federal University of Rio de Janeiro, Brazil, 1980-1983.

Visiting Faculty Positions:

- Research Professor, Dept. of Physics, University of Tennessee, Knoxville, USA, 2006-2007.
- Senior Scientist, Physics Division, Oak Ridge National Laboratory, Oak Ridge, USA, 2006-2007.
- Visiting Professor, Department of Physics, University of Arizona, USA, 2004 -2006.
- Visiting Professor, N. S. Cyclotron Laboratory, Michigan State University, USA, 2002 -2004.
- Guggenheim Fellow & Senior Scientist, Brookhaven National Laboratory, NY, USA, 2000-2001.
- Visiting Professor, Gesellschaft für Schwerionenforschung, Darmstadt, Germany, 1994.
- Visiting Professor, University of Wisconsin, Madison, USA, 1993.
- Visiting Professor, National Superconducting Cyclotron Lab., Mich. St. Univ., USA, 1991 -1992.

Degrees:

- Ph.D. (Nuclear Physics), University of Bonn, Germany, June 1987 - Thesis *Summa Cum Laude*.
- M.S. (Nuclear Physics), Federal University of Rio de Janeiro, Brazil, 1983.
- B.S. (Physics), Federal University of Rio de Janeiro, Brazil, 1980.

Grants, Awards, Fellowships and Honors:

- National Science Foundation (Grant No. 1415656), 2014-2019.
- Department of Energy (DE-FG02-08ER41533), PI, 2014-2021.
- National Science Foundation – Research Experience for Undergraduates, Co-PI, 2011-2013.
- Department of Energy (DE-FG02-08ER41533), PI, 2011-2013.
- Department of Energy (DOE FOA 08-10), co-PI, collaborative, 2010-2014.
- Department of Energy (DE-FG02-08ER41533), PI, single investigator, 2008-2010.
- Department of Energy (DE-FC02-07ER41457), PI, single investigator, 2007-2011.
- Cotrell Corporation (ID: 10497), PI, single investigator, 2010-2011.
- National Science Foundation (ID: OISE-0921447), PI, Pan-American Advanced Institute 2010.
- Department of Energy (DE-FC02- ER41588), PI, single investigator, 2007.
- Department of Energy (DE-FC02-07ER41457), Oak Ridge National Lab, 2006.
- Department of Energy, Co-PI, (with Bira van Kolck), 2005.
- Research Award: Program for Excellence in Research (PRONEX), Brazil, 1996-2000, Co-PI.

- Research Award: CNPq and CAPES, Brazil, 1997-2000. To fund 60-70 PhD students in the graduate program of the Physics Department at the UFRJ (Federal University of Rio de Janeiro).
- Granted 3 times (as PI) an International US(NSF)-Brazil(CNPq) collaboration. Two with the University of Wisconsin, Madison, (American co-PI's: Kirk McVoy and A. Baha Balantekin) and one with Michigan State University (American co-PI's: Vladimir Zelevinsky and P. Gregers Hansen).

Honors:

- *J. William Fulbright Scholar*, 2015-2016.
- *American Physical Society Fellow, USA*, since 2012.
- *John Simon Guggenheim Fellow, USA*, 2000-2001.
- *Fellow of the CNPq, Brazil*. Highest rank, 1988-1999.
- *Humboldt Fellow, KFA-Juelich, Germany*, 1987.
- Fellow of the *Deutscher Akademische Austauschdienst*, Germany, 1984-1987.

Scientific Publications:

- Scientific Journals: 270+ *articles* published in refereed international scientific journals
30+ *papers* in conference proceedings.
- Author of 6 *textbooks* for graduate and undergraduate students published with *Princeton Press*, *IOP* and *Nova Science* and *World Scientific*.
- Edited 5 *Proceedings* of International Conferences with World Scientific and North Holland.

Textbooks:

- "*Nuclear Physics in a Nutshell*", Princeton Press, 2007, ISBN13: 978-0-691-12505-3, 473 pages.
Provides a clear, concise, and up-to-date overview of the atomic nucleus and the theories that seek to explain it. For graduate students.
- "*Introduction to Nuclear Reactions*", with P. Danielewicz, IOP Publishing, Bristol, May 2004, ISBN: 0-75030-932-6, 536 pages.
Providing a concise overview of nuclear reactions, this reference discusses the main formalisms, ranging from basic laws to the final formulae used to calculate measurable quantities. For graduate students.
- "*Introduction to Nuclear Physics*", with H. Schechter, Nova Publishers, Hauppauge, NY, 2002, ISBN: 1-59033-358-6, 313 pages.
A concise overview of nucleus physics. For undergraduate students.
- "*Physics of Radioactive Beams*", with M. Hussein and G. Muenzenberg, Nova Publishers, Hauppauge, NY, 2002, ISBN: 1-59033-141-9, 437 pages.
To my knowledge, the first textbook on the physics of rare nuclear isotopes, the reaction theory developed for reactions and structure theory of unstable nuclei. For graduate students.
- "*Introdução a Física Nuclear*" (in Portuguese) with Helio Schechter, Editora da UFRJ, 2006, ISBN: 978-85-7108-288-5, 412 pages.

Books edited:

- "*Neutron Star Crust*", Eds. C.A. Bertulani and J. Piekarewicz, Nova Science Publishers, Hauppauge, New York, 2012.

- *“International Nucleus-Nucleus Conference”*, Rio de Janeiro, Brazil, Eds. C.A. Bertulani, M.S. Hussein and A. Szanto de Toledo and P.R.S. Gomes. Special volume of Nuclear Physics A, North-Holland, Amsterdam, 2007.
- *“Collective Excitations in Fermi and Bose Systems: Proceeding of the International Workshop”*, Serra Negra, Sao Paulo, Brazil, Eds. Carlos Bertulani, L. Felipe Canto and Mahir Hussein, World Scientific, Singapore, 1999.
- *“Physics of Unstable Nuclear Beams: Proceedings of the International Workshop”*, Serra Negra, Brazil, Eds. Carlos A. Bertulani, L. Felipe Canto and M. S. Hussein, World Scientific, Singapore, 1997.
- *“Nuclear Physics: Proceedings of the VIII Jorge André Swieca Summer School by Brazil) Jorge Andre Swieca Summer School”*, Campos Do Jordão, Brazil, eds. Carlos A. Bertulani, M. E. Bracco and B. V. Carlson, World Scientific, Singapore, 1997.
- *“Nuclear Physics: Proceedings of the V J.A. Swieca Summer School”*, Campos do Jordão, Brazil, Ed. C.A. Bertulani (CNEN Publishing), Rio de Janeiro, 1992.

Committees/Administrative Positions:

- *Secretary/Treasurer*, Forum of International Physics, American Physical Society, 2019 – 2022.
- *Chair* of Texas Section of the American Physical Society, 2018 – 2019.
- *Chair* of the American Physical Society *Committee on Education*, 2015 - 2016.
- *Member* of the American Physical Society Committee on Education, 2013 – 2014.
- *Member* of executive committee, Texas Section of the *American Physical Society*, 2010 – 2013.
- *Chair* Graduate Research Fellowship of the NSF, 2012. Member in 2009-2011.
- *Chair* of the physics graduate program - Federal University of Rio de Janeiro, Brazil, 1997-1999. A program with 60 - 70 PhD students.
- *Member* of Committees for Science funding (Group Grants, Postdoc Positions, PhD Fellowships) at the CNPq/Brazil, CAPES/Brazil, DAAD/Germany, FAPESP/Brazil, and Conycet/PICT/Argentina.
- *Member* of Department Committees (Strategic Plan, NSF and DOE Panels, Undergraduate Curriculum, Graduate Curriculum, Graduate Admissions, Recruitment & Prizes, Refereeing MS and PhD thesis).

Teaching Experience:

- *82 undergraduate and graduate courses taught in the past.*
- *Thesis supervisor of 5 Ph.D. students and 15 MS students. (completed).*
- *12 past postdoctoral fellows.*

Courses Taught as Assistant, Associate, or Full Professor:

Semester	Course	Title
Spring 1980	Introductory Physics I	Physics for Engineers -- Mechanics -- UFRJ*
Fall 1980	Introductory Physics I	Physics for Engineers -- Mechanics -- UFRJ
Spring 1981	Introductory Physics III	Physics for Engineers -- Electricity, Magnetism & Optics -- UFRJ
Fall 1981	Introductory Physics III	Physics for Engineers -- Electricity, Magnetism & Optics -- UFRJ
Spring 1982	Introductory Physics II	Physics for Engineers -- Fluids & Thermodynamics -- UFRJ
Fall 1982	Introductory Physics II	Physics for Engineers -- Fluids & Thermodynamics -- UFRJ
Spring 1983	Introductory Physics IV	Physics for Engineers -- E&M, Optics & Modern Physics -- UFRJ
Fall 1987	Quantum Mechanics I	Quantum Mechanics for Physics students -- UFRJ
Spring 1988	Nuclear Physics I	Introduction to Nuclear Physics (for graduate students) -- UFRJ
Fall 1988	Nuclear Physics I	Introduction to Nuclear Physics (for graduate students) -- UFRJ
Spring 1989	Classical Electrodynamics I	Classical Electrodynamics (for graduate students) -- UFRJ

Fall 1989	Classical Electrodynamics I	Classical Electrodynamics (for graduate students) -- UFRJ
Spring 1990	Nuclear Reactions	Nuclear Reactions (for graduate students) -- UFRJ
Fall 1990	Nuclear Reactions	Nuclear Reactions (for graduate students) -- UFRJ
Spring 1991	Computational Physics I	Introduction to Computational Physics - Graduate -- UFRJ
Spring 1993	PHY208	Physics for Biology Students - Electricity/Magnetism/Optics - University Wisconsin, Madison
Summer	Radioactive Beams	Graduate -- GSI/Darmstadt**, 1994
Fall 1994	Quantum Mechanics	Modern Physics -- UFRJ
Spring 1995	Quantum Mechanics	Modern Physics -- UFRJ
Fall 1995	Classical Mechanics III	Classical Mechanics -- UFRJ
Spring 1996	Classical Mechanics III	Classical Mechanics -- UFRJ
Fall 1996	Physics for Biology I	Physics for Biology -- Mechanics & Thermodynamics -- UFRJ
Spring 1997	Physics for Biology I	Physics for Biology -- Mechanics & Thermodynamics -- UFRJ
Fall 1997	Quantum Mechanics II	Quantum Mechanics - Graduate -- UFRJ
Spring 1998	Quantum Mechanics II	Quantum Mechanics - Graduate -- UFRJ
Fall 1998	Topics in Hadron Physics	Topics in Hadron Physics - Graduate -- UFRJ
Spring 1999	Topics in Hadron Physics	Topics in Hadron Physics - Graduate -- UFRJ
Spring 2002	PHY982	Nuclear Reactions - Graduate – Michigan State University
Fall 2002	PHY232	Physics for Biology Students - Electricity/Magnetism/Optics – Michigan State Univ.
Spring 2003	PHY184	Physics for Engineers -- Mechanics -- Michigan State University
Fall 2003	PHY184	Physics for Engineers -- Mechanics -- Michigan State University
Spring 2004	PHY982	Nuclear Reactions – Graduate - Michigan State University
Fall 2004	PHYS 102	Introductory Physics I (Non-calculus) – Mechanics – Univ. of Arizona
Fall 2005	PHYS 241	Physics for Scientists and Engineers – Electricity/Magnetism – Univ. of Arizona
Spring 2006	PHYS 142	Physics for Scientists and Engineers – Thermodynamics/Optics – Univ. of Arizona
Fall 2007	PHYS 111	College Physics - Mechanics/Thermodynamics/Waves – TAMU-Commerce
Fall 2007	PHYS 497	Nuclear Astrophysics - TAMU-Commerce
Fall 2007	PHYS 597	Nuclear Astrophysics - Graduate - TAMU-Commerce
Spring 2008	PHYS 512	Classical Electromagnetism - Graduate - TAMU-Commerce
Spring 2008	PHYS 112	College Physics II - Thermodynamics/Waves/Optics - TAMU-Commerce
Fall 2008	PHYS 411	Classical Mechanics - Graduate - TAMU-Commerce
Fall 2008	PHYS 517	Mathematical Methods of Physics - Graduate - TAMU-Commerce
Spring 2009	PHYS 211	Introductory Physics I - Mechanics - TAMU-Commerce
Spring 2009	PHYS 526	Modern Physics II - Graduate - TAMU-Commerce
Fall 2009	PHYS 497/590	Nuclear Astrophysics - Graduate - TAMU-Commerce
Fall 2009	PHYS 520	Quantum Mechanics - Graduate - TAMU-Commerce
Spring 2010	PHYS 512	Classical Electromagnetism - Graduate - TAMU-Commerce
Spring 2010	PHYS 514	Statistical Physics - Graduate - TAMU-Commerce
Fall 2010	PHYS 517	Principles of Mathematical Physics, Graduate - TAMU-Commerce
Fall 2010	PHYS 526	Modern Physics, Graduate - TAMU-Commerce
Spring 2011	PHYS 2046	Musical Acoustics – TAMU-Commerce
Spring 2011	PHYS141	Introductory Physics – TAMU-Commerce
Fall 2011	PHYS/497597	Nuclear Astrophysics, Grad. – TAMU-Commerce
Fall 2011	PHYS520	Quantum Mechanics, Grad. – TAMU-Commerce
Spring 2012	PHYS141	Musical Acoustics – TAMU-Commerce
Spring 2012	PHYS512	Classical Electromagnetism - Graduate - TAMU-Commerce
Fall 2012	PHYS2426	College Physics II - Electromagnetism – TAMU-Commerce
Fall 2012	PHYS523	Atomic Physics, Grad. – TAMU-Commerce
Spring 2013	PHYS 141	Musical Acoustics – TAMU-Commerce

Spring 2013	PHYS 520	Quantum Mechanics, Grad. – TAMU-Commerce
Fall 2013	PHYS 450	Astrophysics, Grad. – Texas Physics Coalition
Fall 2013	PHYS 550	Nuclear Astrophysics, Grad. – TAMU-Commerce
Fall 2013	PHYS 411	Classical Mechanics – TAMU-Commerce
Spring 2014	PHYS 512	Classical Electromagnetism, Grad. - TAMU-Commerce
Spring 2014	PHYS 211	Introductory Physics I – TAMU-Commerce
Fall 2014	PHYS 317	Mathematical Methods of Physics - TAMU-Commerce
Fall 2014	PHYS512	Classical Electromagnetism, Grad. - TAMU-Commerce
Spring 2015	PHYS141	Musical Acoustics - TAMU-Commerce
Spring 2015	PHYS514	Statistical Physics, Grad. - TAMU-Commerce
Fall 2015	PHYS420	Quantum Mechanics – TAMU-Commerce
Fall 2015	PHYS511	Classical Mechanics, Grad. – TAMU-Commerce
Spring 2016	PHYS512	Classical Electromagnetism, Grad. - TAMU-Commerce
Spring 2016	PHYS141	Musical Acoustics – TAMU-Commerce
Fall 2107	PHYS411	Advanced Mechanics - TAMU-Commerce
Fall 2017	PHYS511	Classical Mechanics - TAMU-Commerce
Spring 2018	PHYS414	Thermodynamics & Statistics - TAMU-Commerce
Spring 2018	PHYS512	Classical Electrodynamics - TAMU-Commerce
Fall 2018	PHYS411	Classical Mechanics - TAMU-Commerce
Fall 2018	PHYS520	Quantum Mechanics - TAMU-Commerce

* UFRJ = Federal University of Rio de Janeiro, Brazil

** GSI/Darmstadt = Gesellschaft für Schwerionenforschung, Darmstadt, Germany

Organization of Meetings:

- Int. Workshop “*Indirect Methods in Nuclear Astrophysics*”, Trento, Italy, November 5-9, 2018.
- “*Probing QCD in Photon-Nucleus Interactions at RHIC and LHC: the Path to EIC*” - INT, University of Washington, Seattle, February 13-17, 2017.
- “*3rd International Workshop on Quasi-Free Scattering with Radioactive-Ion Beams*”, University of York, UK. July 24-26, 2017.
- Int. Workshop “*Towards consistent approaches for nuclear structure and reactions*”, Trento, Italy, June 6-10, 2016.
- Int. Workshop “*Weakly Bound Nuclei*”, Natal, Brazil, May 24-30, 2015. Co-Chair.
- Int. Workshop “*Reactions and Spectroscopy of Unstable Nuclei*”, Beijing, August 10-14, 2014. Chair.
- 6 Sessions on “*Nuclear Astrophysics and Equation of State of Compact Stars*”, co-chaired with Bao-An Li, 27th Texas Symposium on Relativistic Astrophysics - Dallas, TX - Dec 8-13, 2013
- 4th International Workshop on Compound-Nuclear Reactions and Related Topics, Maresias, Sao Paulo, Brazil, October 6 – 11, 2013. Co-Chair.
- “*2nd Int. Workshop on Quasi-Free Scattering with Radioactive-Ion Beams*” - 16-20 September 2013, Ilha Terceira, Azores, Portugal. Organizing Committee.
- “*4th International Workshop on Compound Nuclear Reactions (CNR*13)*” – Sao Paulo, Brazil, October 7 – 11, 2013. Organizing Committee.
- “*NN2012 – 11th International Conference on Nucleus-Nucleus Collisions*”, San Antonio, Texas, May 27 – June 1, 2012. Local Organizing Committee.
- “*Texas Section APS meeting of the American Physical Society*”, Texas A&M-Commerce, October 6-8, 2011. Chair.
- “*YIPQS Long-term workshop Dynamics and Correlations in Exotic Nuclei (DCEN2011)*”, 20th September - 28th October, 2011, Kyoto, Japan.

- “*International Workshop on The Limits of Existence of Light Nuclei*”, ECT/European Center for Nuclear Studies and Related Areas, Trento, Italy, October 25-30, 2010. *Chair*.
- “*Pan-American Advanced Studies Institute on Rare Nuclear Isotopes*”, Paraiba, Brazil, August 1 - 13, 2010. *Chair*.
- “*International Joint LACAM-JUSTIPEN workshop*”, Oak Ridge National Laboratory, March 5-8, 2007. *Chair*.
- “*9th International Nucleus-Nucleus Conference*”, Rio de Janeiro, Brazil, August 28-September 1, 2006. *Co-Chair*.
- “*International Workshop on Collective Phenomena in Bose and Fermi Systems*”, Serra Negra, Brazil, August 1998. *Chair*.
- “*International Summer School on Nuclear Physics*”, Campos do Jordão, Brazil, January 1997. *Chair*.
- “*International Workshop on Physics of Unstable Nuclear Beams*”, Serra Negra, 1996, Brazil. *Chair*.
- “*Annual Meeting of the Brazilian Physics Society*”, Aguas de Lindóia, Brazil, September 1995. *Chair*.
- “*Workshop on Indirect Methods in Nuclear Astrophysics*”, Gesellschaft für Schwerionenforschung, Darmstadt, Germany, June, 1994. *Chair*.
- “*International Summer School on Nuclear Physics*”, Campos do Jordão, Brazil, January 1991. *Chair*.
- Local Organizing Committee of the “*International Conference of Nuclear Physics - IUPAP*”, São Paulo, Brazil, August 1989.
- “*Workshop on Theoretical Physics*”, Physics Department, Federal University of Rio de Janeiro, Brazil, January 1988. *Chair*.

Other Activities:

- *Panelist & Reviewer* of the National Science Foundation on several occasions. Also as *Chair*.
- *Panelist & Reviewer* of the Department of Energy on several occasions.
- *Consultant* for foreign funding agencies in Japan, Europe, South-Africa, Canada, and USA.
- *Member* of the Advisory Committees of several International Workshops and Conferences.
- *Member* of the American Physical Society and of the Brazilian Physical Society.
- *Referee* for several international scientific journals (~ 15 - 20 times/year), including “The Physical Review” and “Elsevier” journals. European Journal of Physics “*Outstanding Referee*”, 2013, 2014. Annals of Physics “*Outstanding Referee*” in 2014.
- *Organizer (chair or co-chair)* of 16 international conferences and 4 international schools for graduate students.
- *Software developer*: wrote numerous computer codes distributed worldwide, and published in scientific Journals, e.g., by Computer Physics Communications, and CPC Library (UK).

Invited Talks:

- 320+ *invited talks* presented at several universities and laboratories in USA, Europe, Asia and South America.