CURRICULUM VITAE

ORLANDO R. BAIOCCHI

April 2016

1. Personal data:

UWT Endowed Professor in Engineering Systems
Institute of Technology
University of Washington, Tacoma
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2. Education:

- Doctor of Philosophy in Electrical Engineering, University College London, UK. Dissertation: "Anisotropic Diffraction Phenomena in Space and in Time".

- Master of Science in Electrical Engineering, University of Rio de Janeiro, Brazil. Dissertation: "Interaction of Electromagnetic Fields with Two-level Atom Media" (In Portuguese).

- B.Sc. in Electrical Engineering (Power Systems) and in Civil Engineering (Structures), Federal University of Rio Grande do Sul, Brazil.

- Languages: Fluent in English and Portuguese, Basics of Spanish, French and Italian.

3. Academic experience (chronological order):

- UWT Endowed Professor in Engineering Systems since 2012.

- Coordinator of all activities of the Wireless Sensor Networks (SENSE) research group, including the supervision of Brazilian and local undergraduate students.

- Coordinator of the Computer Engineering Program in the Institute of Technology, AY 2012-13, AY 2013-14 and AY 2015-16.

- Member/Chair of several hiring and promotion and tenure committees at UWT

- Editor of the “Communication and Signal Processing” book series, Momentum Press, Boston, MA.

- Member of the Sub-Committee on Global Perspectives on Ethics Education, IEEE Education Society.

 Coordinator of Cooperation Agreements with the Brazilian Federal Universities of Campina Grande (UFCG), Paraiba (UFPB), Reconcavo da Bahia (FURB), Vale do Sao Francisco (UNIVASF) and the Mackenzie Presbyterian University.

 Co-Director of the UW Center for Brazilian Studies, since 2013.

 Member of the Executive Council of the Global Honors Program/Institute for Global Engagement, since 2012.

 Member to the UWT Faculty Assembly Executive Council, AY 2012-13, AY 2013-14 and AY 2014-15.

 Director (2005-2011) and Professor, Institute of Technology, University of Washington, Tacoma (UWT), July 2005 to 2011.

 Special Assistant to the UWT Chancellor (replacing the Vice-Chancellor for Academic Affairs, Personnel Issues) from November 2005 to February 2006.

 Member of the SUNYIT Academic Leadership, represented Engineering, Engineering Technology and Telecommunications, reported to the VPAA, January to August 2004.

 Dean, School of Information Systems and Engineering Technology, 2000-03, and Professor (2000-05), SUNYIT, August 2000 to September 2003.

 Chair and Professor, Department of Electrical and Computer Engineering, North Dakota State University, Fargo ND, 1997-2000.

 Tenured Professor and Chair (for three years), Department of Electrical and Computer Engineering, California State University, Chico, CA, 1986-1997.

 Visiting Associate Professor, Department of Electrical Engineering, University of Missouri-Rolla, Rolla, MO, 1984-1986.

 Visiting Senior Scientist, Department of Electrical and Computer Engineering, University of California, Los Angeles, 1991.

 Visiting Senior Scientist, Department of Electrical and Computer Engineering, University of Texas, Austin, TX, 1990.

 A number of teaching, research and academic administration positions in Brazil, before 1984, including the Chair of the Department of Electrical Engineering at the University of Brasilia,

4. Other selected professional activities:

 Reviewer for the Department of Energy, Smart-Grid Initiative

- Program Evaluator for ABET- EAC, representing the IEEE
- Panelist for the IGERT Program - National Science Foundation
- Reviewer for the IEEE Transactions on Education.
- Reviewer for IEEE Transactions on Antennas and Propagation.
- Reviewer for the National Science Foundation, Division of Electrical and Communications Systems.
- Reviewer for IEEE-MTT Microwave and Guided Wave Letters.
- Reviewer for several national and international conferences
- Referee of the Journal of Computational and Applied Mathematics, Brazil.
- Senior/Lifetime Member of the IEEE.

5. Teaching experience in the following areas:

- Circuit Analysis and Synthesis, Linear Systems, Introduction to Power Systems, Introduction to Communications.
- Electromagnetics, Transmission Lines, Antennas, Microwaves, Fourier Optics, Optical Signal Processing, Lightwave Transmission.
- Impact of Technology on Society, History of Technology, Computers and Society. Ethics for Engineering and Computer Science.
- Theoretical Physics, Special Relativity, Physical and Quantum Electronics.

NOTE: At UW Tacoma has taught in the Computer Engineering and Computer Science programs, Global Honors and Undergraduate Core.

6. Grants (funded or pending):

- "Harvesting energy from tree trunks for monitoring forest environments", as Project Leader, with Ka Yee Yeung-Rhee and Cleonilson Protasio, ready to be submitted, Amazon Catalyst Program, $100,000, April 2016.
- "Collection and analysis of power outages in developing countries with primary initial focus on The Republic of Ghana", with Menaka Abraham (PI) and Francisco Baiocchi, submitted to Microsoft Azure, April 2016 (resources only).
- UWT Endowed Professorship in Engineering Systems", 2012-18, to develop research in the area of Wireless Sensor Networks with Application to the Environment", total funding approximately $ 87,000.

 “Science without Borders” Program”: Brazilian students who worked in the SENSE research, brought to the university approximately $ 250,000 in tuition and fees. Another 14 students were admitted (a potential of $420,000 in tuition and fees), but were unable to attend UWT due to administrative difficulties.

 “Propagation of Electromagnetic Pulses”, with Randy Butts, Chancellor's Undergraduate Research Scholar Award, US $2,500.

 “Dispersion and Attenuation of Acoustic Waves”, with Shruti Santosh More, Chancellor's Undergraduate Research Scholar Award, US $ 2,500
.
 “Redes de Sensores Sem Fio para Aplicações Ambientais (Wireless Sensor Networks for Environmental; Applications)”, 2013-16, submitted by Dr. Marcelo Alencar funded by the Brazilian National Research Council, amount equivalent of US $96,000 at the time of approval.

 "Redes de Sensores Sem-fio Ambientais: Energia e Robustez" (Wireless Sensor Networks: Energy and Robustness) submitted by the Federal University of Paraiba (activities include the Institute of Technology, UWT) to the "Programa Geral de Cooperação Internacional- PGCI, CAPES”, Brazil, Feb. 2015, funded amount currently equivalent to US $ 110,000

 From the Pierce County and Greater Tacoma Economic Development Board, $25,000 to contract consulting services for the Institute of Technology.

 From Niagara Mohawk and NY State funds, as part of the SUNY Center for Brownfields project, about $18,000.

 “SUNY Bachelor of Engineering in Electrical Engineering Online“, as part of the Leader Team, The Sloan Foundation, initial funding of $15,000, followed by additional funding that maintained the program afterwards.

 From NSF and matching funds from NDSU, "Optics for Scientists and Engineers Laboratory Course", $74,000, as Advisor (PIs: Orven Swenson, David A. Rogers, and Andres D. Campiglia).

 From NSF, “North Dakota Science and Technology Partnerships: A Proposal to the EPSCoR ESG Program", $498,321, as Co-Principal Investigator (PI: Dr. Greg D. Gillispie, Department of Chemistry).

 "NDSU Technology Park Internships", with V. Tareski, K. Nygaard, and L.Vijayasarathy, US Federal Government, $175,000.

 "Electronic Commerce Educational Programs", with V. Tareski, K. Nygaard, and L. Vijayasarathy, US Federal Government, $250,000.

 From FIPSE/US Department of Education, Program for North American Mobility, "Alliance for North American Mobility in Engineering", in partnership with five other universities in the US, Canada and Mexico, $ 209,985 in 1999. Canadian and Mexican agencies funded their partners with additional $150,000 approximately.

 From *e-college.com*, to develop web-based courses, in cooperation with the Office of Continuing Education and two other departments at NDSU, $ 67,000.

 From Hewlett-Packard, for implementation of the Center for Telecommunications, CSU Chico, $1,665,575 in Microwave, RF and Communications software.

 From Hewlett-Packard, to implement new courses and research activities on Microwaves, $606,000 in software.

 From the National Science Foundation (Research Opportunities Award), summer 1990, for research work at the University of Texas, Austin, $17,080.

 From California State University, Chancellor's Office, mini-grant: $ 4,950.

 From California State University, Chancellor's Office, full-time release, approximately $20,000.

 From CSU, Chico other grants from 1986 to 1989, approximately $15,000.

 From University of Missouri-Rolla, 1984 -1986, for undergraduate research work, conference participation, etc., approximately $4,000.

 From Brazilian research institutions, to develop research programs, seminars, etc., approximately $20,000.

 From Brazilian, French and British funding agencies, for international research programs, approximately $30,000.

 From Brazilian and International agencies, to develop undergraduate and graduate research facilities, approximately $600,000.

7. Publications and Presentations:
(underline indicates undergraduate students)

 "Insights on the Capabilities and Limitations considering RF Propagation in Sustainable Building", with F. A. N. Silva, H. A. Andrade, F. B. S. Carvalho and C. S. Protásio, (2016), under review.

 "Overview and Evaluation of An IoT Product for Application Development, with Xing Liu, Fifth International Conference on Advances in Computer Science and Application, July 2016, Kolkata, India **(**submitted**).**

 "An IoT Course for A Computer Science Graduate Program", International Conference on Communication, Management and Information Technology (ICCMIT 2016), Cosenza, Italy, April 2016 (accepted)

 "On Harvesting Energy from Tree Trunks for Environmental Monitoring" by C.S. Protasio, F. Carvalho, F. Silva, N. Silva, H. Andrade, and I. Muller, International

Journal of Distributed Sensor Networks (accepted), March 2016.

- "Collaboration Research at the University of Washington Tacoma: Challenges and Opportunities, Keynote/Invited Presentation at the ENCOM Conference, Campina Grande, Brazil. October 2015

- "Development of a Wireless Sensor Network for Indoor Environment Using Wireless", with M. V. Braga, P. H. D. M. Lampa, F. A. N. Silva, S. M. G. Silva, K. Y. Yeung, C. M. Barret, R. Landowski and F. B. S. de Carvalho, to be presented at the ENCOM Conference, Campina Grande, Brazil. October 2015

- "Drone-based Wireless Network Sensors for Forest Fire Detection" with Barrett, C. M., Landowski, R. and Sheng J., Proceedings of the Safety, Health and Environmental World Congress, Porto, Portugal, July 2015.

- "Application of Wireless Sensor Networks in the Monitoring of Environmental Variables: Temperature and Relative Humidity", with Pereira, P.H.C. and Alencar, M.S., Proceedings of the Safety, Health and Environmental World Congress, Porto, Portugal, July 2015.

- **"**Engineering Ethics in Technology and Society Courses", with Rogers, D.A. and Ribeiro, P. F., Proceedings of the ASEE Conference, Seattle, WA, June 2015.

- "Magnetic-Induction Energy Harvesting for Wireless Sensor Network based Air Pollution Monitoring System", with Protásio, C.S., Carvalho, F. S., Nascimento, F. and Oliveria, J.H.S., IEEE Sensors, Valencia, Spain 2014.

- "Wireless Sensor Networks Research Cooperation Between University of Washington Tacoma and Brazilian Universities", with Carvalho, F.B.S., Souza, C. P., Soares, S. A. F., Bacurau, R. M., Leal. B. G. and Duarte, L. in Proceedings of the XIII International Conference on Engineering and Technology Education, Guimaraes, Portugal, 2014.

- "A Global Vision for the 2020 Technology and Society Course', with David Rogers, in Proceedings of the XIII International Conference on Engineering and Technology Education, Guimaraes, Portugal, 2014

- "Electromagnetics Challenges in a Telecommunications Engineering Curriculum" with Sam Henry. Invited Paper, Brazilian Journal of Telecommunications, October 2013.

- "THz Non-destructive Evaluation Using Correlation Processing" with Sam Henry and Lisa Zurk, presented the 2013 Infrared, Milimetric Wave, Terahertz Conference, Mainz, Germany, September 2013.

- "Academic and Research Cooperation between University of Washington Tacoma and Brazilian Universities". With F.B.S. Carvalho and R. Friedman, Proceedings of the 2013American Society for Engineering Education - Pacific Southwest Section Conference, 2013.p. 190-194.

- “Development of a Smart Building Wireless Sensors Network: Cooperation between University of Washington Tacoma and Brazilian Universities”, with F.B.S. Carvalho, S.A.F. Soares, R. Bacurau and G. Mobus, presented to the 2013 Frontiers of Education Conference. Oklahoma City, October 2013.

- “Aplicações Ambientais de Redes de Sensores Sem Fio” with F.B.S. Carvalho and others, Revista de Tecnologia da Informação e Comunicação, v. 2, p. 14-19, 2012. (In Portuguese).

- “Propagation of Electromagnetic Pulses”, Invited Paper, Revista de Tecnologia da Informação e Comunicação, 1, October 2011, Campina Grande, Brazil.

- “Electrical and Computer Engineering Education in Two Countries; a Paradigm for Cooperation”, with D. Rogers and M. Costa, ASEE 2011 Annual Conference, Vancouver, BC, June 2011.

- “Computer Engineering Capstone Design Course at UW Tacoma”, with J. Sheng and L. L. Wear, to be presented/published, 2010 Capstone Design Conference, June 7-9, 2010, Boulder, Colorado.

- “Math + Science + Leadership (MSL) “ with A. Ione, K. Davenport and L. L Wear, to be published in the Proceedings of the Synergy in STEM: Bringing Mathematics, Physics and Engineering Together Conference, New York City College of Technology, October 2009

- “Project-Oriented Courses for Freshmen Engineers” with L. L. Wear and J. Sheng, accepted for publication, First Ibero-American Symposium on Project Approaches in Engineering Education, University of Minho, Portugal, July 2009.

- “Attracting & Retaining Engineering Students - A New Approach” with L. L. Wear, Engineer of the Future Gathering**,** Ollin College, MA, April 2009.

- “Embedded Assessment for Engineering Programs”, with L. L. Wear, International Conference on Engineering and Computer Science, 2007 (ICECE), Monguaguá, Brazil, March 2007.

- “Designing an Assessment-Based Engineering Program, with L. L. Wear, International Conference on Engineering and Computer Science, 2007 (ICECE), Monguaguá, Brazil, March 2007.

- "Integrating Computation Theory and Practice into the General Education Core", with George Mobus, WCCSETE’2006 – World Congress on Computer Science, Engineering and Technology Education, Santos, Brazil, March, 2006.

- “Extracting 3rd Order Chromatic Dispersion from Conventional Measurement Techniques”, with K. R. Lefebvre and M. Sandav, 11th International Conference on Telecommunications, Fortaleza – Ceará, Brazil, August 2004.

- “Security Framework of Optical Networks”, with K. R. Lefebvre, M. Pramanik, and B. Paranjape, 11th International Conference on Telecommunications - Fortaleza – Ceará, Brazil, August 2004.

- “Overview of Cyber Security Research at SUNY Institute of Technology”, with H. Dussault, NY State Cybersecurity Symp, Griffiss Institute, Utica, NY, Feb. 2004.

- "Proposal of a BS/BT Degree: Major in Industrial Engineering Technology, with New York State Teacher's Certificate for Teaching Vocational/Technology Education in a Secondary School", with Atlas Hsie, Proceedings of the 2001 ASEE Annual Conference, Albuquerque, NM.

- "*Intelligent Multimedia, Computers and Communications*" with M.R. Syed (editors), International Conference on Intelligent Multimedia and Distance Education, John Wiley, August 2001.

- “*Advances in Intelligent Computing and Multimedia Systems*", with M. Syed and G. Laskar (editors), International Institute for Advanced Studies in Systems Research and Cybernetics, Windsor, Canada, August 1999.

- "*Advances in Multimedia and Continuing Education*", with M. Syed and G. Laskar (editors), International Institute for Advanced Studies in Systems Research and Cybernetics, Windsor, Canada, August 1999.

- "Evolution of an E-Course: A Case Study", with J. Landrum III, J. Olson, and N. Olson, Proceedings of the International Symposium on Intelligent Multimedia and Distance Education, Baden-Baden, Germany, August 1999.

- "Walking On Two Legs (A new teaching approach for "Impact of Technology on Society")", with J. Landrum III, Proceedings of the 60th Annual ASEE Midwest Section Meeting, Winona, MN, October 1998.

- "A Novel Spatial Modulation Spread-Spectrum Technique", with, S. A. Pradels, N. Marshall and N. Aery, Proceedings of the 13th Annual Review of Progress, Applied Computational Electromagnetic Society, March 1997.

- "Visualization of Pulse Propagation Phenomena with Wavefront Software", with W.J. Bishop and S. A. Pradels, Proceedings of the 1996 Frontiers of Education Conference, Salt Lake City, Utah, November 1996.

- "Pulse Propagation: Modeling and Simulation with MATLAB", with S. A. Pradels, Proc. of the 1996 Summer Computer Simulation Conference, Portland, Oregon, pp. 530-534, June 1996.

- "Study of Eigenmode Propagation and Simulation of Microstrip Transmission Line Crosstalk", with M. Shimoji, Proc. of the 26th IEEE Southeastern Symposium on System Theory, Athens, Ohio, March 1994.

- "A State-Space Approach to a Circuit Analysis Laboratory", with M. Shimoji, Proc. of the 1993 International Simulation Technology Multiconference, San Francisco CA, pp. 85-89, August 1993.

- "Pulse Propagation in High-Temperature Superconducting Planar Transmission Line Structures", with T. Itoh, invited paper, National Symposium on Advances in Microwave", New Delhi, March 1993.

- "Ultrafast Pulses in Optics and Microwaves", invited paper, SACNAS Conference, Albuquerque, New Mexico, January 1993.

- "Pulse Propagation/Transmission Line Simulator", with R. J. Johnston, Proc. of the 1992 Summer Comp. Simulation Conf., Reno, Nevada, pp. 481-483, July 1992.

- "Pulse Propagation in Coplanar Superconducting Striplines", with K. -S. Kong and T. Itoh, IEEE MTT Transactions, Vol. 40, No. 3, pp. 509-514, March 1992.

- "Effects of Superconducting Losses on Pulse Propagation in Microstrip Lines", with K. - S. Kong, H. Ling and T. Itoh, IEEE Microwave and Guided Wave Letters, Vol. 1, 1, pp. 2-4, January 1991.

- "Pulse Propagation in Conventional and Superconductive Microstrip Lines", invited paper, Proc. of the 4th Brazilian Microwave Symposium, San Carlos, Brazil, pp. 13-18, July 1990.

- "Modeling and Simulation of Ultrafast Pulse Propagation in Microstrip Lines", with M. K, Webb and P. O. Kwok, 7th International Conference on Mathematical and Computer Modeling, pp. 378-382, Pergamon Press, New York, 1990.

- "Pulse Dispersion in Microstrip Lines: An Extended Taylor Series Approach", with P. O. Kwok and M. K. Webb, 32nd Midwest Symposium on Circuits and Systems, University of Illinois, August 1989.

- "Simulation of Ultrafast Pulses in Superconductive Transmission Lines", with P. Kwok, M. Webb and K. Khojasteh, 1989 European Simulation Congress, pp. 641-644, Edinburgh, Scotland, September 1989.

- "Microwave Engineering Education in Developing Countries: A Pilot Project from U. S. Industry and Academia", with N. Marshall and I. S. Baiocchi, Proceedings of the 1989 ASEE Conf., pp. 926-928, Lincoln, NE, June 1989.

- "Simulation of Ultra-Short Pulse Propagation in Co-Planar Microstrip Transmission Lines", with M. Webb and P. Kwok, Proc. of the 1989 Summer Computer Simulation Conference, pp. 227-231, Austin, TX, July 1989.

- "Education Towards self-sufficiency in Telecommunications. An Educational/ Industrial Partnership", with N. Marshall and L. Gruner, Proceedings of the World Conference on Engineering Education for Advanced Technology, pp. 117-120, Sidney, Australia, February 1989.

- "Modeling of Dispersion Effects in Optical Systems", Proc. of the 1st Woodward Conf. on Wave Propagation, pp. 268-275, Springer-Verlag, New York-Berlin, 1989.

 "Simulation of diffraction and dispersion effects in digital acousto-optic converter", with D. A. Burton, Proc. of the 1988 Summer Computer Simulation Conference, pp. 37-41, Seattle, July 1988.

 "Ultrafast Pulse Propagation: Review and Computer Simulation", with D. A. Burton, Proceedings of the 80th Midwest Symposium on Circuits and Systems, pp. 812-815, North Holland, 1988.

 "A Theoretical Experimental Course in Electromagnetic Optics", with I. S. Baiocchi, Proceedings of the 1987 ASEE Conference, pp. 90-93, Reno, Nevada, 1987. (Referred in the Electronic Abstracts, August 1988).

 "Dispersion Approximations Using Higher-Order Taylor Series Terms", with J. Marfice, Applied Optics, Vol. 26, No. 19, pp. 4043-4045, October 1987.

 "Numerical and Analytical Solutions for Pulse Distortion in Monomode Fibers: A Critical Review", with I. S. Baiocchi, R. D. Burks and C. T. Robinson, Proc. 29th Midwest Symposium on Circuits and Systems, pp. 55-59, North Holland, 1987.

 "System Approach to the Analysis of the Femtosecond Dispersion-Diffraction Problem", with I. A. Barduniottis and V. J. Sisto, Proceedings of the 29th Midwest Symposium on Circuits and Systems, pp. 48-51, North Holland, 1987.

 "Hermite-Gauss Formulation or Optical Fiber Dispersion Problems" with V. J. Sisto and S. Johnston, Proceedings of the 29th Midwest Symposium on Circuits and Systems, pp. 44-47, North Holland, 1987.

 "Electrical Engineering: Undergraduate Education and Opportunities in Brazil", IEEE Potentials, pp. 22-24, February 1986.

 "Pulse Distortion in Optical Fibers: A Comparative Study", with I. S. Baiocchi, MAECON/85, Kansas City, November 1985.

 "A Generalized Form for the Non-Linear Transmission Line Equations", with M. A. Raupp, Proceedings of the 28th Midwest Symposium on Circuits and Systems, pp. 382-385, Louisville, Kentucky, August 1985.

 "Electrical Engineering Education in Brazil", ASEE Annual Conference Proceedings, Vol., III, pp. 1456-1458, Atlanta, GA, June 1985.

 "Electromagnetic Interference in Cables: Lumped Modeling", with D. Fernandes, et all, Proceedings of the First Latin-American Conference on Automatic Control, pp. 807-811, Campina Grande, Brazil, 1984.

 “Nuclear Electromagnetic Pulses”, with I.S. Baiocchi, Instituto Tecnologico de Aeronautica, Brazil, August 1984 (*In Portuguese*).

 "Higher-order Dispersion Effects on Optical Fibers", with I. S. Baiocchi, Proc. of the IEEE International Conference, LATINCON-84, Mexico City, Aug. 1984.

- "Transmission Line Transient due to Corona and Dielectric Breakdown", with M. V. Kritz and M. A. Raupp, Proceedings. of the 1983 URSI International Symposium on E. M. Theory, pp. 622-624, Santiago de Compostela, Spain, 1983.

- "Simulation of the Corona Effect in Transmission Lines", with M. A. Raupp, Proceedings of the V Congress on Applied and Computational Mathematics, pp. 102-104, Joao Pessoa, Brazil, 1982.

- "On the Corona Effect: A Lumped Circuit Model", with M. A. Raupp, Computation and Applied Mathematics, Vol. 1, No. 3, pp. 239-268, Rio de Janeiro, 1982.

- "Ferroresonance Effect in a RLC Circuit", with M. A. Raupp, Research and Develop. Reviews, 008/81, Lab. of Scientific Computation, Rio de Janeiro, 1981.

- "Non-linear Transients in Lumped and Distributed Circuits", with M. A. Raupp, V Congress on Computation Systems, INTERSISCO 81, Buenos Aires, 1981.

- "Analysis of a Non-linear RLC-series Circuit", with M. A. Raupp, Rev. Bras. Physics, Vol. 11, No. 1, pp. 211-230, Rio de Janeiro, 1981.

- "Dispersion of Electromagnetic Waves in Plasmas", with F. Osorio Ramos, IV National Symposium on Applied and Computational Mathematics, Rio de Janeiro, 1981 *(in Portuguese*).

- "Transmission Line with a Parametric Load: a Computational Analysis", with M. A. Raupp, IV National Symposium on Applied and Computational Mathematics, Rio de Janeiro, 1981 *(in Portuguese*).

- "Numerical Solution of the Ferroresonance Problem", with M. A. Raupp, IV National Symposium on Applied and Computational Mathematics, Rio de Janeiro, 1981 *(in Portuguese*).

- "Lumped Model for the Corona Effect", with M. A. Raupp, 33rd Annual Meeting of the Brazilian Society for the Advancement of Science, Salvador, Bahia, 1981 *(In Portuguese)*.

- "Dispersion of EM Waves in Plasmas", with F. Osorio Ramos, 33rd Annual Meeting of the Brazilian Society for the Advancement of Science, Salvador, Bahia, 1981 *(In Portuguese)*.

- "Analysis of a RLC Circuit in the Dielectric Breakdown", with M. A. Raupp, Bulletin of the Brazilian Mathematical Society, Vol. 11, No. 2, pp. 241- 252, Rio de Janeiro, 1980.

- "Application of Convex Analysis to Nonlinear Electric Circuits", with M. A. Raupp, in *Ciencia e Cultura*, vol. 32, No. 7, July 1980 *(In Portuguese).*

- "Non-linear Circuit Transients", with M. A. Raupp, Proceedings of the First Seminar on Numerical Analysis and its Applications to Continuum Physics, pp. 179-190, Rio de Janeiro, 1980.

 "A New Method for the Solution of Nonlinear Circuit Problems", with M. A. Raupp, Proc. of the 3rd Brazilian Symposium on Automatics, Rio de Janeiro, 1980, pp. 249-254 *(In Portuguese)*.

 "Approximated Evaluation of Dispersion in Discontinuous Signals", Summary of the 2nd Symposium on Numerical Analysis, Sao Carlos, SP, 1979 *(In Portuguese).*

 "Fundamentals of Electromagnetics", lecture notes, Extension Course on Microwave Communication Systems, University of Brasilia, 1979 *(In Portuguese).*

 "Frequency Coherence Function for Dispersive Propagation", Proceedings of the International Symposium on Signal Processing, pp. 219-225, Rio de Janeiro, 1978.

 "Unified Treatment of Dispersion and Diffraction Problems with Higher than Second Order Approximation", IEEE Technical Publications, Ref. TD-I-06, Salvador, Bahia, 1978 *(In Portuguese).*

 "Energy Balance in the Acoustic Convolver and its Influence on the Shape of the Output Signal", in Ciencia e Cultura, vol. 29, No. 7, July 1977 *(In Portuguese).*

 "The Influence of Diffraction and Dispersion on the Fidelity of Degenerate Convolution", with I. M. Mason, IEEE Transaction on Sonics and Ultrasonics, SU-22, pp. 345- 358, September 1975 (included in the References of Contemporary Papers, Journal of the Acoustic Soc. of America, Summer, 1976).

 "Effects of Dispersion and Diffraction on some Signal Processing Systems", University College, London (internal), 1975.

 "Long Delay and Special Devices", with I. M. Mason, et al., 13th SAW Liaison Meeting, Ministry of Defense/University College, London, 1974.

 "Solid State Phenomena" (translation into Portuguese of Richard Feynman class notes, taken as a student), Centro Brasileiro de Pesquisas Fisicas, Rio de Janeiro, Brazil, 1963.

8. Publications as Editor

- *"Information Theory",* by Marcelo S. Alencar, Momentum Press, 2014, ISBN-13: 978-1-60650-528-1, Edit*or*
- "*Elements of Algebraic Coding Systems*", by Valdemar C. da Rocha Jr., Momentum Press, 2014, ISBN-13: 978-1-60650-574-8, Editor
- *"Probability Theory",* by Marcelo S. Alencar and Rafael T. Alencar, Momentum Press, 2016, ISBN-13: 978-1-60650-747-6, Editor.
- *"An Introduction to Quantum Communication*", by Vinod K. Mishra, Moment Press (2016), in press.

9. Recent Participation in PhD and MSc dissertations

- Fabricio B. S. Carvalho – PhD D Thesis, UFCG, Brazil 2015
- Ruan Delgado Gomes – PhD Qualification, UFCG, Brazil 2015
- Fausi Dias – PhD Qualification, UFCG, Brazil 2014
- Rodrigo Bacurau – MSc Dissertation, Unicamp, Brazil 2013
- Fabricio B. S. Carvallho – PhD Qualification, UFCG, Brazil 2013.