

ORLANDO R. BAIOCCHI

CURRICULUM VITAE

APRIL 2025

1. 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".

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

2. Academic experience:

Professor of Electrical Engineering, University of Washington Tacoma (UWT)

UWT Endowed Professor in Engineering Systems 2012-2019

Coordinator of all activities of the Wireless Sensor Networks (SENSE) research group, including cooperation with Brazilian and Portuguese (University of Azores) researchers.

Coordinator of the Computer Engineering Program in the Institute of Technology, AY 2012-13, AY 2013-14 and AY 2015-18.

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.

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

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.

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

3. Selected Other Activities:

Editor, "Communication and Signal Processing Series", Momentum Press

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 Brazilian Journal of Computational and Applied Mathematics.

Senior/Lifetime Member of the IEEE.

4. Teaching Experience:

Electrical Engineering: Circuit Analysis, Linear Systems, Introduction to Power Systems, Introduction to Communications. Electromagnetics, Transmission Lines, Antennas, Microwaves, Fourier Optics, Optical Signal Processing.

Mathematics and Physics: Theoretical Physics, Quantum Electronics, Special Relativity, General Physics, Applied Mathematics.

General: Impact of Technology on Society, History of Technology, Computers and Society. Ethics for Engineering and Computer Science.

5. Awards:

Best Presenter, 2024 IEEE 5th Annual World AI IoT Congress, Seattle, WA, United States, 2024

6. Patent:

Provisional patent titled "Systems and Methods for Monitoring Tree Crown Grown", Number 63/758,939 on 02/14/25

7. Publications:

G. G. Pessôa, M. M. Ferreira, M. P. M. G. Miguel, C. P. de Souza and O. Baiocchi, "A Comparative Study of Thermoelectric Waste Heat Recovery in a Commercial Vehicle: Real Case Versus Simulation Model," 2024 8th International Symposium on Instrumentation Systems, Circuits and Transducers (INSCIT), Joao Pessoa, Brazil, 2024, pp. 1-5, <https://doi.org/10.1109/INSCIT62583.2024.10693398>

M. P. M. G. Miguel, M. M. Ferreira, C. P. de Souza, O. Baiocchi, "An Experimental Evaluation of a Thermal Energy Harvesting System for IoNT". 2024 IEEE World AI IoT Congress (AllIoT), Seattle, WA, USA, 2024, pp. 0225-0230. <https://doi.org/10.1109/AllIoT61789.2024.10578995>

M. M. Ferreira, M. P. M. G. Miguel, C. P. de Souza, O. Baiocchi, "An Energy Efficiency Evaluation of the LTC3108 for Thermal Energy Harvesting". 2024 IEEE World AI IoT Congress (AllIoT), , Seattle, WA, USA, 2024, pp. 0219-0224. <https://doi.org/10.1109/AllIoT61789.2024.10579004>

M. P. M. G. Miguel, M. M. Ferreira, C. P. de Souza, B. A. S. G. de Lima and O. Baiocchi, "An Experimental Procedure for Measuring Thermal Parameters of Heat-Reservoir-based Energy Harvesters". 2024 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), Glasgow, United Kingdom, 2024, pp. 1-6. <https://doi.org/10.1109/I2MTC60896.2024.10560627>

Yajun An, Orlando Baiocchi, H. E. Dillon, Cleonilson Protasio de Souza, Yanqi Qiu. "Regression Model for Tree Trunk Temperature for Energy Harvesting", 2024 IEEE Conference on Technologies for Sustainability (SusTech), Portland, OR, USA, 2024, pp. 237-244. <https://doi.org/10.1109/SusTech60925.2024.10553484>

M. M. Ferreira, M. Paula Medeiros Gomes Miguel, C. P. de Souza, Y. An and O. Baiocchi, "A Thermoelectric Generator Model validated by Different Thermal

Patterns," 2023 7th International Symposium on Instrumentation Systems, Circuits and Transducers (INSCIT), Rio de Janeiro, Brazil, 2023, pp. 1-6.
<https://doi.org/10.1109/INSCIT59673.2023.10258496>

M. M. Ferreira, M. P. M. G. Miguel, Z. F. Da Silva Filho, C. P. De Souza, Y. An and O. Baiocchi, "Internet of Natural Things (IoNT): An Experimental Evaluation of Best Position to Harvest Thermal Energy from Trees," 2023 IEEE International Conference on Smart Internet of Things (SmartIoT), Xining, China, 2023, pp. 196-202. <https://doi.org/10.1109/SmartIoT58732.2023.00035>

Baiocchi, O.; Nailor, T.; Souza, C. P. "Can The Tree Save The Forest?." In: International Meet on Renewable and Sustainable Energy RENEWABLEMEET2023, 2023, Roma. Abstract Book of the RENEWABLEMEET2023, 2023. v. 1. p. 20-21.

M. P. M. G. Miguel, M. M. Ferreira, C. P. de Souza, B. A. S. G. de Lima and O. Baiocchi, "An Experimental Evaluation of a Quasicrystal-based Thermal-Conductive Absorber for Energy Harvesting," 2022 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), Ottawa, ON, Canada, 2022, pp. 1-6, <https://doi.org/10.1109/I2MTC48687.2022.9806527>

Ferreira, M. M.; Miguel, M. P. M. G.; de Souza, C. P. "Uma proposta de gerador de padrões térmicos para avaliação de geradores termoelétricos à semicondutor". In: Congresso Brasileiro de Automática, 2022, Fortaleza, Ceará. Anais do XXIV Congresso Brasileiro de Automática – CBA 2022, 2022.

ALENCAR, M., BAIOCCHI, F., BAIOCCHI, O.R. "History of Communications", River Publishers, Denmark, 2021, 350 pages estimated (In preparation).

HOWE, S.; LEW, K; TRINH, T.; BAI, Y.; BAIOCCHI, O. R.; DE SOUZA, C. P. "Developing a LoRa IoT Network and Blockchain Security for the Azores Archipelago", International Conference on Wireless Sensor Networks, Ubiquitous Computing and Applications (ICWSNUCA) British Columbia, Canada June 2021.

VILLARIM, M. R.; MEDEIROS, D. F. ; MEDEIROS, L. C. S. ; SOUZA, C. P. ; PONTIERI, M. H. ; SANTOS, N. A. ; BAIOCCHI, O. R. "A Calibrated Intelligent Sensor for Monitoring of Particulate Matter in Smart Cities", SENSORS & TRANSDUCERS, v. 250, p. 1-9, 2021.

OLIVEIRA, V. S.; CAMBOIM, M. M. ; SOUZA, C. P. ; BAIOCCHI, O. R. ; KIM, H-S. "A Thermoelectric Energy Harvester based on Micro-structured Quasicrystalline Solar Absorber", Micromachines, v. 12, p. 1-16, 2021.

BENATTI, R. ; SOUZA, C. P. ; BAIOCCHI, O. R. . An Optimization Method based on LoRa Parameters for Energy Consumption Reduction. In: the Proceedings of the International Symposium on Instrumentation Systems, Circuits and Transducers (INSCIT 2021), 2021, Campinas. v. 1. p. 1-6.

FERREIRA, M. M. ; MIGUEL, M. P. M. G. ; SOUZA, C. P. ; BAIOCCHI, O. R. . An Experimental Validation of a Thermoelectric Generator LTspice Model for Energy Harvesting. In: the Proceedings of 2021 IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2021, Vancouver. New york: IEEE, 2021. p. 1-6.

MEDEIROS, M. L. A. ; CAMBOIM, MARCELO MIRANDA ; SOUZA, C. P. ; BAIOCCHI, O. R. . A Study of the Efficiency of an LTC3108-Based Circuit for Thermal Energy Harvesting. In: the Proceedings of 2021 IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2021, Vancouver. New york: IEEE, 2021. p. 1-6.

J. Olmsted, Mwangi, S.; Pecha. K. Baiocchi, O.; Biondi, K., Teng S., and Baiocchi, F. "Hybrid Environment IoT-Mapping of Over-Tourism and Air Pollution in the Azores Archipelago," 2020 IEEE Conference on Technologies for Sustainability (SusTech), 2020, pp. 1-7, doi: 10.1109/SusTech47890.2020.9150508.

CAMBOIM, M. M. ; OLIVEIRA, V. S. ; VILLARIM, M. R. ; VILLARIM, A. R. ; CATUNDA, S.; CAVALCANTI, Y. ; BAIOCCHI, O. R. ; DE SOUZA, C.P. An "Online Remote Verification System of Thermal Sources for Energy Harvesting Application", IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, v. 69, p. 7962-7973, 2020.

MCMILLIN, D.; BAIOCCHI, O.R. "Co-designing Innovations in a Time of Crisis: Centering Student Voices in Remote Learning", Proceedings of the 13th Annual International Conference of Education, Research and Innovation, Seville, November 2020.

OLIVEIRA, V. S. ; CAMBOIM, M. M. ; DE LIMA, S.V.; ALESSANDRO , B.; DE SOUZA, C. P.; BAIOCCHI, O. R. "A Solar-Radiation-Powered Thermoelectric Energy Harvester based on Quasicrystal". In: 2020 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), 2020, Dubrovnik. p. 1-6.

OLIVEIRA, V. S. ; CAMBOIM, M. M. ; SOUZA, C. P. ; LIMA, B. A. S. G. ; BAIOCCHI, O.R. "Absorvedor solar baseado em liga quasicristalina aplicado em geração de energia elétrica". In: Congresso Brasileiro de Energia Solar (VIII CBENS 2020), 2020, Fortaleza. Anais CBENS 2020. Fortaleza: Associação Brasileira de Energia Solar, 2020. v. 1. p. 1-11. (In Portuguese)

AN, Y.; BAIOCCHI, O. R.; HOCKMAN, M. D.; TENG, S. "Computational Model for Temperature in Tree Trunk for Energy Harvesting", Proceedings of the IEMTRONICS International Conference, University of British Columbia, Canada, September 2020.

VILLARIM, M. R. ; MEDEIROS, D. F. ; SOUZA, C. P. ; MEDEIROS, L. C. S. ; PONTIERI, M. H. ; SANTOS, N. A. ; BAIOCCHI, O. R. "Calibration of a Low-Cost Sensor for PM2.5 using a Reference PM Monitoring Station". In: 6th International Conference on Sensors Engineering and Electronics Instrumentation Advances (SEIA' 2020), 2020, Porto.

OLIVEIRA, V. S. ; SOUZA, C. P. ; CAMBOIM, M. M. ; LIMA, B. A. S. G. ; BAIOCCHI, O. R. "Avaliação experimental de revestimento quasicristalino em absorvedores térmicos aplicados em geração de energia elétrica". In: I CERES - Congresso Nacional de Energias Renováveis, Energia e Sustentabilidade 2020, 2020, Natal: UFRN, 2020. p. 1-11. (In Portuguese).

Baiocchi, O. R.; Martins, F. C. C.; Souza, C. P. "User-Generated Data Collected from a Wireless Sensor Network: Monitoring Air Pollution Levels in the Azores." In: XI International Conference on Engineering and Computer Education - ICECE2019, 2019, Guimarães. Anais do XI International Conference on Engineering and Computer Education - ICECE2019, 2019. p. 1-2.

"An Energy Adder Circuit for Hybrid Energy Harvesting System" with Souza, C.P., Vilarim, A.W.R, Villarim M.R, and Medeiros, D.F., 2019 IEEE Pulse Power and Plasma Scalene Conference, Orlando, FL, June 2019.

M. R. Villarim, Luna, J.V. H.; Medeiros, D. F.; Orlando. B, and Cunha Martins, F. C. "An Evaluation of LoRa Communication Range in Urban and Forest Areas: A Case Study in Brazil and Portugal," 2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2019, pp. 0827-0832, doi: 10.1109/IEMCON.2019.8936194.

D. B. C. Lima, R. M. B. da Silva Lima, D. de Farias Medeiros, R. I. S. Pereira, C. P. de Souza and O. Baiocchi, "A Performance Evaluation of Raspberry Pi Zero W Based Gateway Running MQTT Broker for IoT," 2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2019, pp. 0076-0081, doi: 10.1109/IEMCON.2019.8936206.

N. T. Purcell, J. D. Stevens, E. Carlson, G. Boyer and O. R. Baiocchi, "Harvesting Energy from Tree Trunks," 2019 International Energy and Sustainability Conference

(IESC), 2019, pp. 1-12, doi: 10.1109/IESC47067.2019.8976597.

K. Biondi, Al-Masri, E. Baiocchi, O., Jeyaraman, S. Pospisil, E. Boyer, G. and Souza, C. P. "Air Pollution Detection System using Edge Computing," 2019 International Conference in Engineering Applications (ICEA), 2019, pp. 1-6, doi: 10.1109/CEAP.2019.8883458.

"An Automatic Emulation System for Thermal Energy Harvesting", with Souza, C.P., Vilarim, A.W.R, and Camboim, M.M., 2019 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), New Zealand, May 2019.

PEREIRA, R. I. S.; CAMBOIM, M. M.; VILLARIM, A. W. R.; SOUZA, C. P.; JUCA, S. C. S.; CARVALHO, P. C. M. "On Harvesting Residual Thermal Energy from Photovoltaic Module Back Surface." (AEU-International Journal of Electronics and Communications, 2019, v. 111, p. 152878).
<https://doi.org/10.1016/j.aeue.2019.152878>

"A 20 mV Rectifier for Boosting the Internet of Natural Things", with Souza, C.P., and Vilarim, A.W.R., Proceedings of the IEMCON 2018, p. 401-405. November 2018, Vancouver, Canada, also published in the IEEE Xplore.

"Análise de Confiabilidade de uma Rede de Sensores Sem Fio em Linha usando OMNet++/Castalia", with Aguiar, L. ; Souza, C. P., and Carvalho, F. B. S., In Portuguese, Anais da 8ª Conferência Nacional em Comunicação, Redes e Criptografia (ENCOM 2018), pp. 1-3., Salvador, Brazil, October 2018.

"A Low-Cost IoT System for State Monitoring of Equipment in Industrial Plants", with Souza, C.P. and Vilarim, A.W.R. Proceedings of International Conference on Industrial Internet of Things and Smart Manufacturing, pp. 1-3, London, September 2018.

"IoT Pollution Detection Using a Raspberry Pi System and Edge Computing and Microsoft Azure Framework", with Biondi, K., Al-Masri, E., Souza, C.P., Jeyaraman, S., Pospisil, E. and Boyer, G., Invited Paper, Third International Conference in Engineering Applications – ICEA19, Azores Island, July 2019.

"On Harvesting Energy from Tree Trunks for Environmental Monitoring", with Souza, C.P., Vilarim, A.W.R, Carvalho F.B.S., Silva, F.A.N., Andrade, H.A., and Silva, N.V., International Journal of Distributed Sensor Networks (Online), v. 2016, p. 1-9, 2016.

"Energy Resources in Agriculture and Forestry: how to be prepared for the Internet of Things (IoT) Revolution", with Souza, C.P., Book Chapter in *Energy Resources in*

Agriculture and Forestry, InTechOpen, 2018, v. 1, p. 1-15, London, UK.

“Emulating thermal source for powering Internet of Natural Things (IoNT)”, with Souza, C.P., The IDTechEx Show! Internet of Things Applications USA 2017 Conference and Exhibition, Poster Presentation.

“The Influence of Sustainable Material-based Walls on Radio Frequency Signals”, with Shariatzadeh, F., and Souza, C. P., The 8th International Conference on the Constructed Environment, Wayne State University, Detroit, USA 24–25 May 2018.

“A Smart City Solution for Pollution Monitoring In Heavy Traffic Streets”, with Souza, C.P., and Vilarim, A.W.R., Student Poster Contest at The Annual IEEE Conference on Technologies for Sustainability (SusTech 2017).

“Using a Sensor Network to Create a 3D Model of Indoor Environmental Conditions over Time to Research and Address Sick Building Syndrome”. Student Poster Contest at The Annual IEEE Conference on Technologies for Sustainability (SusTech 2017).

“A Smart Tree Powered by Harvesting Energy from its Trunk, with Souza, C.P., Energy Harvesting Conference, Bristol, United Kingdom, May 2018, Poster Presentation.

“The History of Technology: An Interesting Course for Engineers”, with Rogers, D.A. and Maassel, M., Proceedings of the ASEE North Midwest Conference, Minneapolis, MN September 2017, Volume C, Paper #4.

“A Study of the Influence of Sustainable Material Based Walls on Wireless Communication inside Buildings”, with Shariatzadeh, F., and Souza, C.P., The International Journal of the Constructed Environment, May 2018.

“Geomedia, Tourism, and Civic Engagement”, with McMillin, D., submitted to the Fifteenth International Conference on Technology, Knowledge & Society, Barcelona, March 2019.

“Identifying Parking Spaces and Detecting Occupancy Using Visio-based IoT Devices”, with M.E.Tolentino, X .Ling, J. Sheng and X. Liu, *IEEE 1st Global IoT Summit*, Geneva, Switzerland, June 2017.

Engineering Ethics Education through More Than a Quarter Century.” with D. A. Rogers, T. Bon, F. Peloubet, and M. Maassel. *Culture of Ethics Conference:*

Engineering for Human Dignity and the Common Good, University of St. Thomas, St. Paul, Minnesota, October 2016.

“Moving from Sensors to Smart Objects” (invited plenary talk), with X. Liu, ENCOM 2016, Fortaleza, Brazil, October 2016.

“A Comparison of the Definitions for Smart Sensors, Smart Objects and Things in IoT”, with X. Liu, *The 7th IEEE Annual Information Technology, Electronics and Mobile Communication Conference*, Vancouver, Canada, pp.605-608, 13 - 15 October 2016.

“An IoT Course for A Computer Science Graduate Program”, with X. Liu, *International Conference on Communication, Management and Information Technology (ICCMIT 2016)*, Cosenza, Italy, April 2016.

“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. Barrett, R. Landowski and F. B. S. de Carvalho, *ENCOM*, Campina Grande, Brazil. October 2015.

“Collaboration Research at the University of Washington Tacoma: Challenges and Opportunities, Keynote/Invited *ENCOM*, Campina Grande, Brazil. October 2015.

“Drone-based Wireless Network Sensors for Forest Fire Detection” with C.M. Barrett, R. Landowski, and J. Sheng, *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 P.C. Pereira, and M.S. Alencar, *Safety, Health and Environmental World Congress*, Porto, Portugal, July 2015.

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

“Electromagnetics Challenges in a Telecommunications Engineering Curriculum” with S. Henry. Invited Paper, *Brazilian Journal of Telecommunications*, October 2013.

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

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

“THz Non-destructive Evaluation Using Correlation Processing” with S. Henry and L. Zurk, *2013 Infrared, Millimetric Wave, Terahertz Conference*, Mainz, Germany, September 2013.

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

“Multi-innovation Least Squares Parameter Estimation for Multi-rate SDR Receiver Systems, with J. Sheng, D. Wang, and L. Wear, *Proceedings of the 11th International Conference on Signal Processing*, Beijing, China, 2012.

“Propagation of Electromagnetic Pulses”, Invited Paper, *Revista de Tecnologia da Informação e Comunicação*, vol.1, no.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, 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, Olin College, MA, April 2009.

"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.

"*Intelligent Multimedia, Computers and Communications*" with M.R. Syed, International Conference on Intelligent Multimedia and Distance Education, Wiley, 2001.

"*Advances in Intelligent Computing and Multimedia Systems*", with M. Syed and G. Laskar, 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 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, no. 1, pp. 2-4, January 1991.

"Pulse Propagation in Conventional and Superconductive Microstrip Lines", *Proceedings 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, *Proceedings of the 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 Conference*, 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, *Proceedings 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", *Proceedings 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, *Proceedings 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.

"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 of 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.

"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.

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