

Ayrton A. Bernussi

Education

- May, 1990 Doctorate degree in Physics, State University of Campinas, Brazil
- July, 1984 Master degree in Physics, State University of Campinas, Brazil
- Dec., 1981 Bachelor degree in Physics, State University of Campinas, Brazil

Academic experience

- 2017-present Professor, Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, TX (full time)
- 2010-2017 Associate Professor, Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, TX (full time)
- 2004-2010 Assistant Professor, Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, TX (full time)
- 2001-2004 Senior Research Associate, Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, TX (full time)
- 1994-1995 Senior Research Associate, Department of Electrical Engineering, Colorado State University, Fort Collins, CO (full time)

Non-academic experience

- 2000-2001 Researcher: National Synchrotron Light Laboratory (LNLS), Campinas, SP, Brazil (full time)
- 1988-2000 Researcher in Telecommunications: Brazilian Telecommunication Company (Telebras), Campinas, SP, Brazil (full time)

Certifications or professional registrations

None.

Current membership in professional organizations

IEEE: Senior Member
OSA: Member

Honors and awards

- 2015 Elected Member of the TTU Teaching Academy
- 010 Edward E. Whitacre Jr. College of Engineering, TTU, *Lockheed-Martin Teaching Award*
- 2009 Edward E. Whitacre Jr. College of Engineering, TTU, *Dr. Charles Burford Teaching Award*
- 2008 Edward E. Whitacre Jr. College of Engineering, TTU, *Whitacre Excellence in Research Award (Growth in Research)*

2015-2016, 2021-2022	Member of the College of Engineering Promotion and Tenure committee
2014-present	Co-Director of the Nano Tech Center
2004-present	Member of several departmental committees
2008-2009	Freshman advisor
2009-2014	Associate Editor of the IEEE Photonics Journal
2004-present	Committee chair and committee member of several M.S. thesis and Ph.D. dissertations
2004-present	Reviewer for several IEEE, OSA, and APS archival journals
2006, 2015	NSF Grant Proposal Panelist
2010	DoE Grant Proposal Reviewer
2010	Book Reviewer - Cambridge University Press

Recent publications

- a. Z. Xu, A.A. Bernussi, and Z. Fan, "Voltage pulse driven VO₂ volatile resistive transition devices as leaky integrate-and-fire artificial neurons", *Electronics* **11**, 516 (2022).
- b. A.K. Jafari, M. Gaddy, Y.C. Ho, C. Uzun, V. Kuryatkov, S.A. Nikishin, M.H. Kim, L. Grave de Peralta, and A.A. Bernussi, "Tunable near-infrared Gires-Tournois resonators based on vanadium dioxide on gold film", *Optics Letters* **47**, 645 (2022).
- c. C. Uzun, C.S. Meduri, S. Jagdale, G. Kumar, and A.A. Bernussi, "Ellipsometric analysis of isothermally devitrified metallic glasses", *Optical Materials:X* **12**, 100095 (2021).
- d. R.M. Peres, J.M.L. Sousa, M.O. de Oliveira, M.V. Rossi, R.R. de Oliveira, N.B. de Lima, A. Bernussi, J. Warzywoda, B. Sarmiento, and A.H. Munhoz Junior, "Pseudoboehmite as a drug delivery system for acyclovir", *Scientific Reports* **11**, 15448 (2021).
- e. W. Li, S. Wang, Z. Fan, S. Li, A. Bernussi, and N. Newman, "Functionalized bacterial cellulose as a separator to address polysulfides shuttling in lithium-sulfur batteries", *Materials Today Energy* **21**, 100813 (2021).
- f. Z. Xu, G. Qin, A.A. Bernussi, and Z. Fan, "Electrothermally control of dynamic infrared switching of VO₂ thin film on FTO glass", *Journal of Alloys and Compounds* **25**, 157640 (2021).
- g. S. Siddique, A.A. Bernussi, S.W. Husain, and M. Yasir, "Enhancing structural integrity, corrosion resistance and wear properties of Mg alloy by heat treated cold sprayed Al coating", *Surface and Coatings Technology* **394**, 125882 (2020).
- h. H. Alghasham, H. Farooq, C. Uzun, A.A. Bernussi, and L. Grave de Peralta, "Study of thermal radiation Moiré patterns using coherent illumination-direction-multiplexing Fourier Ptychographic imaging", *Journal of Modern Optics* **67**, 1340-1347 (2020).

Professional development

- ABET Program Assessment workshop (FPAW), Hollywood, FL, 04-16-2016.
- National Effective Teaching Institute Workshop, Portland, OR, 2005.

Patent

H. Temkin, L. Grave de Peralta, A.A. Bernussi, and V. Gorbounov, "Temperature compensated optical multiplexer", US Patent 7,280,722, issued on 10/09/2007.