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EDUCATION:

Doctor of Philosophy, Case Western Reserve University, Cleveland, Ohio (1991)
Thesis Title: Microwave Response of High Transition Temperature Superconducting Thin Films.
Major: Physics

Master of Science, Rensselaer Polytechnic Institute, Troy, New York (1986)
Thesis Title: Evaluation of Two Signal Processing Algorithms for Noisy K-Alpha One X-Ray Diffraction Profiles.
Major: Physics

Bachelor of Science, University of Puerto Rico, Río Piedras, Puerto Rico (1983)
Major: Physics

AREAS OF EXPERTISE:

- Antenna Technology for Space and Ground Based Communications
- Electromagnetic Theory
- Microwave Integrated Circuits/Devices/Instrumentation
- Ferroelectric Tunable Microwave Components and Devices
- Miniaturized antennas for Bio-Medical Applications
- High Temperature Superconducting Microwave Devices and Circuits
- Project Planning/Management
- Design/Fabrication/Testing
- Data Analysis
- Mentorship
- Cryogenic Instrumentation
- Problem Solving
- Team Building/Leadership Skills

WORK EXPERIENCE:

Mar 2000-To Date

Chief, Antenna and Optical Systems Branch, NASA Glenn Research Center
Manage the workforce, plan and directs the antenna research and technology development efforts of the NASA Glenn Research Center's Communications, Instrumentation, and Controls Division. Responsible for the planning and implementation of research and technology programs in the areas of design and testing of antenna technology and RF subsystems for space and ground based communications applications. Primary areas of emphasis are Advanced Antenna Technology, RF & Optical Propagation, RF/Optical Hybrid Antenna Apertures, Cryoelectronics, Nanoelectronics, and RF Telemetry for Bio-MEMS Sensors and Actuators in support of NASA mission.

June 1999-Mar 2000

Electronics Engineer, Electron Beam Technology Branch, NASA Glenn Research Center
Lead of research team responsible for the development of ferroelectric thin film-based tunable microwave components such as filters, resonators, phase shifters, oscillators, etc. intended for integration into advanced communication systems for satellite and ground-based applications.

Aug 1998-June 1999

NASA Administrator's Fellow &Visiting Professor, Department of Physics and Electronics, University of Puerto Rico-Humacao Campus (UPRH)
Responsible for planning, developing, coordinating, advocating, and implementing initiatives to foster collaborations between NASA, UPRH, and the University of Puerto Rico System.

Mar 1991- Aug 1998

Electronics Engineer, Solid State Technology Branch and Electron Beam Technology Branch, NASA Lewis Research Center
Responsible for the investigation and analysis of the millimeter and microwave properties of High-Transition-Temperature–Superconductor (HTS) thin films and their potential use in advanced microwave communications components for space systems applications. Responsible for the development of cryogenic characterization techniques to investigate the low temperature properties of the following microwave

components: HTS-based passive microwave components, semiconductor active components, superconductor/semiconductor, and superconductor/ferroelectric components, aiming at optimizing the performance of discrete components, subsystems and systems. Established testing facility for the microwave characterization of HTS thin films, which resulted in faster, less expensive, and more complete characterization process than those in place at the time of the innovation. Developed cryogenic calibration standard/test fixture for the fast and accurate "in-situ" characterization of planar microwave components. Developed proposal, obtained approval, and managed a Non-Reimbursable Space Act Agreement (SAA) with Superconducting Core Technologies, Golden, CO., for the development of tunable superconductor/ferroelectric microwave devices. Developed proposal, obtained approval, and managed a Nonreimbursable SAA with Space Systems/Loral, Palo Alto, CA., to develop (HTS,Metal)/Dielectric miniaturized multilayer filters for satellite communications. Recipient of NASA Lewis Research Center Team Achievement Award for critical contributions to the development of a Bioengineering Initiative at NASA-LeRC. Served as Contracting Officer Technical Representative (COTR) for several Small Business Innovative Research's (SBIR) phase I and II contracts. Inventor or co-inventor of three invention disclosures in the areas of tunable microwave components and cryogenic characterization of microwave circuits. Mentor/research supervisor of college level engineering student summer interns, visiting faculty fellows, and junior colleagues. Recipient of NASA Special Act Award for critical contributions to the design, fabrication, test, and on-time delivery of components for the prototype of a superconductor receiver/downconverter for the Naval Research laboratory's HTSSE-II program.

Jan 1987-Mar 1991 **Research Assistant, Case Western Reserve University, Cleveland, Ohio**

Implemented an experimental technique for measuring the dielectric permittivity of novel dielectric substrates at microwave frequencies and cryogenic temperatures. Designed, fabricated, and tested V-Band (60 GHz) resonant cavities for measuring the surface resistance (R_s) of High temperature Superconducting (HTS) thin films. *Performed the first R_s reported measurement of YBCO HTS thin films at 60 GHz.* Developed innovative, noninvasive experimental techniques for the analysis of HTS thin films in terms of their surface resistance, magnetic penetration depth and complex conductivity. *Performed the first reported measurement of the intrinsic penetration depth of the YBCO HTS superconductor.* Performed data analysis and interpretation aimed at evaluating the potential of recently discovered HTS thin films for practical microwave applications. This work was done in fulfillment of the Ph.D. candidacy requirements.

Aug 1984-May 1986 **Research Assistant, Rensselaer Polytechnic Institute, Troy, New York**

Developed two signal processing algorithms for the deconvolution of noisy, K-α_1 X-ray diffraction profiles. This work was done for fulfillment of M.S. candidacy requirements.

Jan 1984-May 1984 **Lecturer of Physics, Puerto Rico Junior College, Rio Piedras, Puerto Rico**

Taught Introduction to Physics courses

OTHER QUALIFICATIONS:

Job-related Honors, Patents, Books, Awards, and Special Accomplishments

Professional Society

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member of the American Physical Society (APS)
- Member of the American Institute of Aeronautics and Astronautics (AIAA)
- Member of the Forum of Industrial and Applied Physicists (FIAP)
- Member of the Society of Hispanics and Professional Engineers (SHPE)

Honors & Awards

- 1998-2000: NASA Administrator's Fellow
- 2001 Outstanding Technical Achievement Award from the Hispanic Engineer National Achievement Awards Conference (HENAAC).
- 2003 NASA Group Achievement Award: For outstanding contributions to the field of ferroelectric thin films-based microwave components which led to the recognition of NASA Glenn Research Center as a world leader in the area of tunable microwave technology for communication applications

- 2007 NASA Exceptional Service Medal: For outstanding technical and managerial leadership in antenna and microwave technologies for space communications.
- 2007 R&D100 award: For the development of an Antenna Near-Field Probe Station Scanner.
- 2009 NASA Equal Employment Opportunity Medal for exceptional contributions to the goals of the Equal Employment Opportunity Program trough work with under-represented universities and students.
- 2009 Wall Street Journal's Technology Innovation Award as a runner-up in the wireless category for the invention, "Miniature Implantable Radio Frequency System for Real Time Telemetry from Microelectromechanical Systems Based Sensors and Actuators."
- 2010 NorTech Innovation Award for "Radio Frequency Telemetry System for Implantable Bio-MEMS Sensors."
- 2010 R&D100 award from the R&D Magazine for the development of a Thin Film Ferroelectric High Resolution Scanning Reflectarray Antenna for Aerospace Communications.
- 2010 NASA Glenn Research Center Diversity Leadership Award for his efforts to promote and further diversity in science and technology.

U.S. Patents

- "Methods and Apparatus for Testing Microwave Devices and Circuits in a Controlled Environment," by F. A. Miranda and S. Toncich; US Patent. no. 5,854,559 Dec. 29, 1998.
- "High Resolution Scanning Reflect Array Antenna," by R. R. Romanofsky and F. A. Miranda; US Patent. no. 6,081,235 June 27, 2000.
- "Frequency-locked Superconductor/Ferroelectric Thin Film Local Oscillator," By R. R. Romanofsky and F. A. Miranda; US Patent. no. 6,078,223 June 20, 2000.
- "Radio Frequency Telemetry System for Sensors and Actuators," by R. N. Simons and F. A. Miranda, US Patent no. 6,667,725 December 23, 2003.
- "Hand Held Device for Wireless Powering and Interrogation of BioMEMS Sensors and Actuators," by F. A. Miranda and R. N. Simons, US Patent no. 7,191, 013 on March 13, 2007.
- "Antenna Near-Field Probe Station Scanner," Afroz Zaman, Richard Q. Lee, William G. Darby, Philip J. Barr, and Félix A. Miranda, of Glenn Research Center; Kevin Lambert of Analex Corp., US Patent no. 7,876,276 B1 on January 25, 2011.

Book Chapters

- "Tunable Dielectric Materials and Devices for Broadband Wireless Communications," by Carl H. Mueller and Félix A. Miranda in *Handbook of Thin Film Devices*, ed. Maurice H. Francombe (Academic Press, 2000).
- "High-Temperature Superconductor/Semiconductor Hybrid Microwave Devices and Circuits," by Robert R. Romanofsky and Félix A. Miranda in *Low Temperature Electronics:Physics, Devices, Circuits, and Applications,* eds. Edmundo Gutierrez, M. Jamal Deen, and Cor L. Claeys (Academic Press, 2000).
- "High Temperature Superconductor and Ferroelectric Thin Films for Microwave Applications," by Félix A. Miranda, Guru Subramanyam, and Joseph D. Warner, edited by H. S. Nalwa, vol. 3, chapter 9, 2001 (Academic Press).
- "Thin Film Ferroelectric Microwave Devices and Their Potential for Space Applications," by Félix A. Miranda, Robert R. Romanofsky, and Carl H. Mueller; in "Ferroelectric Thin Films at Microwave Frequencies," (Research Signpost; June 2010).

Books Edited

- "Proceedings of the Ferroelectrics Workshop in Puerto Rico (FWPR99)," *Integrated Ferroelectrics, Vol. 28, No. 1-4 and Vol. 29, No. 1-2*. Eds. F. A. Miranda, R. S. Katiyar, and F. E. Fernández, Gordon and Breach Science Publishers (2000).
- "Materials Issues for Tunable RF and Microwave Devices," MRS Symposium Proceedings, Vol. 603. Eds. Quanxi Jia, Félix A. Miranda, Daniel E. Oates, and Xiaoxing Xi, Materials Society Press (2000).
- "Proceedings of the 2nd Ferroelectric Workshop in Puerto Rico (FWPR-2001)," *Integrated Ferroelectrics, Vol. 42,* Eds. R. S. Katiyar, F. A. Miranda, and F. E. Fernández, Taylor & Frances Publishers (2002).

LIST OF PUBLICATIONS IN REFEREED JOURNALS

1. Miranda, F. A.; Gordon, W. L.; Heinen, V. O.; Ebihara, B. T.; and Bhasin, K. B.: MEASUREMENTS OF COMPLEX PERMITTIVITY OF MICROWAVE SUBSTRATES IN THE 20 TO 300 K TEMPERATURE RANGE FROM 26.5 TO 40 GHz, Advances in Cryogenic Engineering **35**, Plenum Publishing Corporation, 1593-1599 (1990).
2. Miranda, F. A.; Gordon, W. L.; Bhasin, K. B.; Ebihara, B. T.; Heinen, V. O.; and Chorey, C. M.: COMPLEX PERMITTIVITY OF LANTHANUM ALUMINATE IN THE 20 TO 300 K TEMPERATURE RANGE FROM 26.5 TO 40.0 GHz, Microwave Opt. Tech. Lett. **3**, 11-13 (1990).
3. Miranda, F. A.; Gordon, W. L.; Bhasin, K. B.;Heinen, V. O.; Warner, J. D.; and Valco, G. J.: MILLIMETER WAVE TRANSMISSION STUDIES OF $YBa_2Cu_3O_{7-\delta}$ THIN FILMS IN THE 26.5 TO 40.0 GHz FREQUENCY RANGE, Superconductivity and Applications, Plenum Publishing Corporation, 735-748 (1990).
4. Miranda, F. A.; Bhasin, K. B.; Heinen, V. O.; Kwor, R.; and Kalkur, T. S.: MICROWAVE CONDUCTIVITY OF SUPERCONDUCTING Bi-Sr-Ca-Cu-O THIN FILMS IN THE 26.5 TO 40.0 GHz FREQUENCY RANGE, Physica C **168**, 91-98 (1990).
5. Miranda, F. A.; Gordon, W. L.; Bhasin, K. B.; and Warner, J. D.: MILLIMETER-WAVE SURFACE RESISTANCE OF LASER ABLATED $YBa_2Cu_3O_{7-\delta}$ SUPERCONDUCTING FILMS, Appl. Phys. Lett. **57**, 1058-1060 (1990).
6. Warner, J. D.; Bhasin, K. B.; and Miranda, F. A.: DEPENDENCE OF THE CRITICAL TEMPERATURE OF LASER ABLATED $YBa_2Cu_3O_{7-\delta}$ THIN FILMS ON $LaAlO_3$ SUBSTRATE GROWTH TECHNIQUE, Supercond. Sci. Technol. **3**, 437-439 (1990).
7. Bhasin, K. B.; Warner, J. D.; Miranda, F. A.; Gordon, W. L.; and Newman, H. S.: DETERMINATION OF THE SURFACE RESISTANCE AND MAGNETIC PENETRATION DEPTH OF SUPERCONDUCTING $YBa_2Cu_3O_{7-\delta}$ THIN FILMS BY MICROWAVE POWER TRANSMISSION MEASUREMENTS, IEEE Trans. Magn. **MAG-27**, 1284-1287 (1991).
8. Miranda, F. A.; Gordon, W. L.; Bhasin, K. B.; Heinen, V. O.; and Warner, J. D.: MICROWAVE PROPERTIES OF $YBa_2Cu_3O_{7-\delta}$ HIGH-TRANSITION-TEMPERATURE-SUPERCONDUCTING THIN FILMS MEASURED BY THE POWER TRANSMISSION METHOD, J. Appl. Phys. **70**, 5450-5462 (1991).
9. Chorey, C. M.; Miranda, F. A.; and Bhasin, K. B.: COAXIAL LINE CONFIGURATION FOR MICROWAVE POWER TRANSMISSION STUDY OF $YBa_2Cu_3O_{7-\delta}$ THIN FILMS, IEEE Trans. on Appl. Supercond. **1**, 178-180 (1991).
10. Miranda, F. A.; Bhasin, K. B.; Kong, K.-S.; Itoh, T.; and Stan, M. A.: CONDUCTOR-BACKED COPLANAR WAVEGUIDE RESONATORS OF $YBa_2Cu_3O_{7-\delta}$ ON $LaAlO_3$, IEEE Microwave and Guided Wave Letters **2**, 287-288 (1992).
11. Miranda, F. A.; Chorey, C. M.; Stan, M. A.; Nordgren, C. E.; Kwor, R. Y.; and Kalkur, T. S.: MICROWAVE PROPERTIES AND CHARACTERIZATION OF CO-EVAPORATED BSCCO THIN FILMS, Supercond. Sci. Technol. **5**, 453-460 (1992).
12. Miranda, F. A.; Toncich, S. S.; and Bhasin, K. B.: PERFORMANCE OF TWO-POLE BANDPASS FILTERS PHOTODEFINED ON DOUBLE-SIDED Y-Ba-Cu-O AND Tl-Ba-Ca-Cu-O THIN FILMS, Microwave Opt. Tech. Lett., **6**, 752-755 (1993).
13. Miranda, F. A.: MICROWAVE PROPERTIES OF Tl-Ba-Ca-Cu-O THIN FILMS, Supercond. Sci. Technol., **6**, 605-613 (1993).
14. Mueller, C. H.; Holloway, P. H.; Miranda, F. A.; and Bhasin, K. B.: EFFECT OF OXYGEN PRESSURE ON THE ORIENTATION OF $YBa_2Cu_3O_{7-x}/SrTiO_3$ FILMS DEPOSITED ON (__02) Al_2O_3 SUBSTRATES, Thin Solid Films, **238**, 123-126 (1994).
15. Ceremuga, J.; Barton, M.; and Miranda, F.: ANALYSIS OF INFLUENCE OF BUFFER LAYERS ON MICROWAVE PROPAGATION THROUGH HIGH-TEMPERATURE SUPERCONDUCTING THIN FILMS, Supercond. Sci. Technol., **7**, 855-867 (1994).
16. Miranda, F. A.; Mueller, C. H.; Cubbage, C. D.; Bhasin, K. B.; Singh, R. K.; and Harkness, S. D.: HTS/FERROELECTRICS THIN FILMS FOR TUNABLE MICROWAVE COMPONENTS, IEEE Trans. on Appl. Supercond., **5**, 3191-3194 (1995).
17. Mueller, C. H.; Miranda, F. A.; Toncich, S. S.; and Bhasin, K. B.: YBCO X-BAND MICROSTRIP LINEAR RESONATORS ON (1102) AND (1100)-ORIENTED SAPPHIRE SUBSTRATES, IEEE Trans. on Appl. Supercond., **5**, 2559-2562 (1995).
18. Mueller, C. H.; Holloway, P. H.; Budai, J. D.; Miranda, F. A.; and Bhasin, K. B.: $YBa_2Cu_3O_{7-x}$ FILMS ON OFF-AXIS Y-ZrO_2 SUBSTRATES USING Y-ZrO_2 ON Y_2O_3 BARRIER LAYERS, Journal of Materials Research., **10**, 810-816 (1995).
19. Miranda, F. A.; Chorey, C. M.; and Bhasin, K. B.: SPACE QUALIFIED SUPERCONDUCTOR/SEMICONDUCTOR PLANAR OSCILLATOR CIRCUIT, Low Temperature Electronics and High Temperature Superconductivity, eds. C. L. Claeys, S. I. Raider, R. K. Kirschman, and W. D. Brown, **95-9**, 50-57 (1995).
20. Miranda, F. A.; Mueller, C. H.; Koepf, G. A.; and Yandrofski, R. M.: ELECTRICAL RESPONSE OF FERROELECTRIC/SUPERCONDUCTING/DIELECTRIC $Ba_xSr_{1-x}TiO_3/YBa_2Cu_3O_{7-\delta}/LaAlO_3$ THIN FILM MULTILAYER STRUCTURES, Supercond. Sci. Technol., **8**, 755-763 (1995).
21. Mejia, M.; Creason, A. S.; Toncich, S. S.; Ebihara, B. T.; and Miranda, F. A.: A SINGLE-BLOCK TRL TEST FIXTURE FOR THE CRYOGENIC CHARACTERIZATION OF PLANAR MICROWAVE COMPONENTS, Advances in Cryogenic Engineering , Vol. 41, 1731-1738 (1996).
22. Creason, A. S. and Miranda, F. A.: AUTOMATION OF DATA ANALYSIS PROGRAMS FOR THE CRYOGENIC CHARACTERIZATION OF SUPERCONDUCTING MICROWAVE RESONATORS, Advances in Cryogenic Engineering , Vol. 41, 1739-1746 (1996).
23. Sabataitis, J. C.; Mueller, C. H.; Miranda, F. A.; Warner, J. D.; and Bhasin, K. B.: YBCO HIGH-TEMPERATURE SUPERCONDUCTOR FILTERS ON M-PLANE SAPPHIRE SUBSTRATES, Advances in Cryogenic Engineering , Vol. 41, 1755-1760 (1996).
24. Winters, M. D.; Mueller, C. H.; Bhasin, K. B.; and Miranda, F. A.: CHARACTERIZATION OF HYBRID FERROELECTRIC/HTS THIN FILMS FOR TUNABLE MICROWAVE COMPONENTS, Advances in Cryogenic Engineering , Vol. 41, 1747-1754 (1996).
25. Miranda, F. A.; Mueller, C. H.; Treece, R. E.; Rivkin, T. V.; Thompson, J. B., Moutinho, H. R.; Dalberth, M.; and Rogers, C. T.: EFFECT OF $SrTiO_3$ DEPOSITION TEMPERATURE ON THE DIELECTRIC PROPERTIES OF $SrTiO_3/YBa_2Cu_3O_{7-\delta}/LaAlO_3$ SUBSTRATES, Integrated Ferroelectrics, Vol. 14, pp. 173-180 (1997).
26. C. H. Mueller, R. E. Treece, T. V. Rivkin, F. A. Miranda , H. R. Mountinho, A. Swartzlander-Franz, M. Dalberth, and C. T. Rogers, TUNABLE $SrTiO_3$ VARACTORS USING PARALLEL PLATE AND INTERDIGITAL STRUCTURES, IEEE Trans. on Appl. Supercond. , Vol. 7, p. 3512 (1997).
27. R. S. Kwok, S. J. Fiedziuszko, F. A. Miranda, G. V. Leon, M. S. Demo, and D. Y. Bohman, MINIATURIZED HTS/DIELECTRIC MULTILAYER FILTERS FOR SATELLITE COMMUNICATIONS, IEEE Trans. on Appl. Supercond. , Vol. 7, pp.3706-3709 (1997).
28. F. W. Van Keuls, F. A. Miranda, R. R. Romanofsky, J. A. Dayton, C. H. Mueller, and T. V. Rivkin, SUITABILITY OF SrTiO3/YBa2Cu3o7-δ/LaAlO3 AND BaxSr1-xTiO3 THIN FILM MULTILAYER STRUCTURES FOR TUNABLE MICROWAVE DEVICES, Low Temperature Electronics and High Temperature Superconductivity, The Electrochemical Society Proceedings, Vol. 97-2, p. 47 (1997).
29. F. A. Miranda, R. R. Romanofsky, F. W. Van Keuls, C. H. Mueller, R. E. Treece, and T. V. Rivkin, THIN FILM MULTILAYER CONDUCTOR/FERROELECTRIC TUNABLE MICROWAVE COMPONENTS FOR COMMUNICATION APPLICATIONS, Integrated Ferroelectrics, Vol. 17, p 231 (1997).

30. F. W. Van Keuls, R. R. Romanofsky, D. Y. Bohman, M. D. Winters, F. A. Miranda, C. H. Mueller, R. E. Treece, T. V. Rivkin, and D. Galt, $YBa_2Cu_3O_{7-x}/SrTiO_3/LaAlO_3$ THIN FILM CONDUCTOR/FERROELECTRIC PHASE SHIFTERS AND THEIR POTENTIAL FOR PHASED ARRAY APPLICATIONS, Appl. Phys. Lett., Vol. 71, p. 3075 (1997).
31. G. Subramanyam, F. W. Van Keuls, and F. A. Miranda, A K-BAND TUNABLE MICROSTRIP BANDPASS FILTER USING A THIN FILM CONDUCTOR/FEROELECTRIC/SUBSTRATE CONFIGURATION, IEEE Microwave and Guided Wave Letters, Vol. 8, p. 78 (1998).
32. R. R. Romanofsky, F. W. van Keuls, and F. A. Miranda, A CRYOGENIC GaAs PHEMT/FERROELECTRIC Ku-BAND TUNABLE OSCILLATOR, Journal de Physique IV, Vol. 8, p. 171 (1998).
33. F. A. Miranda, F. W. Van Keuls, R. R. Romanofsky, and G. Subramanyam, TUNABLE MICROWAVE COMPONENTS FOR Ku- AND K-BAND SATELLITE COMMUNICATIONS, Integrated Ferroelectrics, Vol. 22, p. [789]/269 (1998).
34. F. W. Van Keuls, R. R. Romanofsky, D. Y. Bohman, and F. A. Miranda, INFLUENCE OF THE BIASING SCHEME ON THE PERFORMANCE OF $Au/SrTiO_3/LaAlO_3$ THIN FILM CONDUCTOR/FERROELECTRIC TUNABLE RING RESONATORS, Integrated Ferroelectrics, Vol. 22, p. 883 (1998).
35. F. W. Van Keuls, R. R. Romanofsky, and F. A. Miranda, SEVERAL MICROSTRIP-BASED CONDUCTOR/THIN FILM FERROELECTRIC PHASE SHIFTER DESIGNS USING $YBa_2Cu_3O_{7-\delta}/SrTiO_3/LaAlO_3$ STRUCTURES, Integrated Ferroelectrics, Vol. 22, p. 893 (1998).
36. F. W. Van Keuls, R. R. Romanofsky, N. D. Varaljay, F. A. Miranda, C. L. Canedy, S. Aggarwal, T. Venkatesan, and R. Ramesh, A Ku-BAND $GOLD/Ba_{1-x}Sr_xTiO_3/LaAlO_3$ CONDUCTOR/THIN FILM FERROELECTRIC MICROSTRIPLINE PHASE SHIFTER FOR ROOM TEMPERATURE COMMUNICATIONS APPLICATIONS, Microwave and Optical Technology Letters, Vol. 20, p. 53 (1999).
37. Q. X. Jia, J. R. Groves, P. N. Arendt, Y. Fan, A. T. Findikoglu, S. R. Foltyn, H. Jiang, and F. A. Miranda, Appl. Phys. Lett., Vol. 74, p. 1564 (1999).
38. F. A. Miranda, G. Subramanyam, F. W. Van Keuls, and R. R. Romanofsky, A K-BAND (HTS,GOLD)/FERROELECTRIC THIN FILM/DIELECTRIC DIPLEXER FOR A DISCRIMINATOR-LOCKED TUNABLE OSCILLATOR, IEEE Trans. Appl. Supercond., Vol. 9, pp. 3581-3584 (1999).
39. C. L. Chen, H. H. Feng, Z. Zhang, A. Brazdeikis, A. Benneker, F. A. Miranda, F. W. Van Keuls, R. R. Romanofsky, Z. J. Huang, Y. Liou, C. W. Chu, and W. K. Chu, EPITAXIAL FERROELECTRIC $Ba_{1-x}Sr_xTiO_3$ THIN FILMS FOR ROOM TEMPERATURE HIGH FREQUENCY TUNABLE ELEMENT APPLICATIONS, Appl. Phys. Lett., Vol 75, pp. 412-414 (1999).
40. F. A. Miranda, F. W. Van Keuls, G. Subramanyam, C. H. Mueller, R. R. Romanofsky, and G. Rosado, CORRELATION BETWEEN MATERIAL PROPERTIES OF FERROELECTRIC THIN FILMS AND DESIGN PARAMETERS FOR MICROWAVE DEVICE APPLICATIONS: MODELING EXAMPLES AND EXPERIMENTAL VERIFICATION, Integrated Ferroelectrics , **24**, p. 195-214 (1999).
41. G. Subramanyam, F. W. Van Keuls, F. A. Miranda, C. L. Canedy, S. Aggarwal, T. Venkatesan, and R. Ramesh, CORRELATION OF ELECTRIC FIELD AND CRITICAL DESIGN PARAMTERS FOR FERROELECTRIC TUNABLE MICROWAVE FILTERS, Integrated Ferroelectrics, **24**, (1999).
42. F. W. Van Keuls, C. H. Mueller, F. A. Miranda, R. R. Romanofsky, J. S. Horwitz, W. Chang, and W. J. Kim, THIN FILM $Ba_{1-x}Sr_xTiO_3$ Ku- AND K-BAND PHASE SHIFTERS GROWN ON MgO SUBSTRATES, Integrated Ferroelectrics, **28**, pp. 49-61 (2000).
43. C. H. Mueller, F. W. Van Keuls, R. R. Romanofsky, F. A. Miranda, J. D. Warner, S. A. Alterovtz, C. L. Canedy, and R. Ramesh, CHARACTERIZATION OF $Ba_{0.5}Sr_{0.5}TiO_3$ THIN FILMS FOR Ku-BAND PHASE SHIFTERS, Integrated Ferroelectrics, **28**, PP. 139-149 (2000).
44. H. Jiang, W. Hu, S. Liang, V. Fouflyguine, J. Zhao, Q. X. Jia, J. R. Groves, P. Arendt, F. Miranda, A. Drehman, S. Wang, and P. Yip, HIGH QUALITY $Ba_xSr_{1-x}TiO_3$ FILMS GROWN BY MOCLD AND NOVEL FERROELECTRIC/FERRITE STRUCTURES FOR DUAL-TUNING MICROWAVE DEVICES, Integrated Ferroelectrics, **28**, pp. 63-79 (2000).
45. G. Subramanyam, F. W. Van Keuls, and F. A. Miranda, EFFECT OF DC BIASING ON YBCO/STO/LAO TUNABLE MICROSTRIP FILTERS, Integrated Ferroelectrics, **28**, pp. 81-93 (2000).
46. C. L. Chen, Z. Zhang, H. Feng, G. P. Luo, S. Y. Chen, A. Heilman, W. K. Chu, C. W. Chu, J. Gao, B. RaFFerty, S. J. Pennycook, Y. Liou, F. A. Miranda, and F. Van Keuls, EPITAXIAL BEHAVIOR AND INTERFACE STRUCTURES OF BSTO THIN FILMS, Integrated Ferroelectrics, **28**, pp. 237-246 (2000).
47. W-Y Lin, H. Huang, F. Yang, J. Schmitt, A. Hunt, R. Romanofsky, F. Van Keuls, F. Miranda, C. Mueller, THIN FILM OF CCVD $Ba_{0.5}Sr_{0.5}TiO_3$ AND $SrTiO_3$ FOR ELECTRICALLY TUNABLE COUPLED MICROSTRIPLINE PHASE SHIFTERS, Integrated Ferroelectrics, **29**, pp. 1-12 (2000).
48. C. L. Canedy, S. Aggarwal, A. Henry, H. Li, L. Salamanca-Riba, T. Venkatesan, R. Ramesh, F. W. Van Keuls, R. R. Romanofsky, N. D. Varaljay, and F. A. Miranda, STRUCTURAL AND DIELECTRIC PROPERTIES OF $Ba_{1-x}Sr_xTiO_3/Bi_4Ti_3O_{12}/ZrO_2$ HETEROSTRUCTURE GROWN ON SILICON, Appl. Phys. Lett., Vol. 77, No. 10, pp. 1523-1525 (4 September (2000).
49. F. A. Miranda, G. Subramanyam, F. W. Van Keuls, R. R. Romanofsky, J. D. Warner, and C. H. Mueller, DESIGN AND DEVELOPMENT OF FERROELECTRIC TUNABLE MICROWAVE COMPONENTS FOR Ku- AND K-BAND SATELLITE COMMUNICATION SYSTEMS, IEEE Trans. On Microwave Theory and Techniques, Vol. **48**, NO. 7, pp.1181-1189, July 2000.
50. G. Subramanyam, F. W. Van Keuls, and F. A. Miranda, A K-BAND-FREQUENCY AGILE MICROSTRIP BANDPASS FILTER USING A THIN-FILM HTS/FERROELECTRIC/DIELECTRIC MULTILAYER CONFIGURATION, IEEE Trans. On Microwave Theory and Techniques, Vol. 48, No. 4, pp.525-530 (2000).
51. G. Subramanyam, F. A. Miranda, F. W. Van Keuls, R. R. Romanofsky, C. L. Canedy, S. Aggarwal, T. Venkatesan, and R. Ramesh, PERFORMANCE OF A K-BAND VOLTAGE CONTROLLED LANGE COUPLER USING A FERROELECTRIC TUNABLE MICROSTRIP CONFIGURATION, IEEE Microwave and Guided Wave Letters, Vol 10, NO.4, April, 2000.
52. R. R. Romanofsky and F. A. Miranda, HIGH –TEMPERATURE SUPERCONFDUCTOR/SEMICONDUCTOR HYBRID MICROWAVE DEVICES AND CIRCUITS, in *Low Temperature Electronics: Physics, Devices, Circuits, and Applications*, pp. 841-900; eds. E. A. Gutierrez, M. J. Deen, and C. L. Claeys (Academic Press, 2000).
53. R. R. Romanofsky, J. T. Bernhard, F. W. Van Keuls, F. A. Miranda, G. Washington, and C. Canedy, "K-BAND PHASED ARRAY ANTENNAS BASED ON $Ba_{0.60}Sr_{0.40}TiO_3$ THIN-FILM PHASE SHIFTERS," IEEE Trans. On Microwave Theory and Techniques, Vol. 48, 2504-2510 (2000).
54. E. Saenz, G. Subramanyam, F. Van Keuls, and F. A. Miranda, FIXED-FREQUENCY AND FREQUENCY AGILE HTS MICROSTRIP BANDSTOP FILTERS FOR L-BAND APPLICATIONS, *IEEE Trans. Appl. Supercond*. March 2001.
55. F. W. Van Keuls, C. T. Chevalier, F. A. Miranda, C. M. Carlson, T. V. Rivkin, P. A. Parrilla, J. D. Perkins, and D. S. Ginley, COMPARISON OF THE EXPERIMENTAL PERFORMANCE OF FERROELECTRIC CPW CIRCUITS WITH METHOD OF MOMENT SIMULATIONS AND CONFORMAL MAPPING ANALYSIS, *Microwave and Opt. Tech. Lett*., **29**, 34-37, April 5, 2001.
56. F. A. Miranda, F. W. Van Keuls, R. R. Romanofsky, C. H. Mueller and J. D. Warner, "Life Cycle Testing of $Ba_xSr_{1-x}TiO_3$ Thin Films in a Tunable Microwave Device," Integrated Ferroelectrics, Vol 34, pp. 247-254 (2001).
57. R. R. Romanofsky, F. W. Van Keuls, and F. A. Miranda, K-BAND SCANNING ANTENNAS BASED ON FERROELECTRIC FILMS, *International Journal of RF & Microwave CAD*, November 2001.

58. C. H. Mueller, Robert R. Romanofsky and F. A. Miranda, FERROELECTRIC THIN FILM DEVICES FOR BROABAND SATELLITE COOMUNICATION SYSTEMS, IEEE Potentials (2001).
59. C. L. Chen, J. Shen, S. Y. Chen, G. P. Luo, C. W. Chu, F. A. Miranda, F. W. Van Keuls, J. C. Jiang, E. I. Meletis, and H. Y. Chang, EPITAXIAL GROWTH OF DIELECTRIC $Ba_{0.6}Sr_{0.4}TiO_3$ THIN FILM ON MgO FOR ROOM TEMPERATURE MICROWAVE PHASE SHIFTERS, *Appl. Phys. Lett.,* **78**, 652-654 (2001).
60. R. Romanofsky, G. Fox, F. Van Keuls, C. Mueller, F. Miranda, F. Gladden, and F. Chu, PROGRESS IN ECONOMICALLY VIABLE AGILE MICROWAVE CIRCUITS BASED ON THIN FERROELECTRIC FILMS, *Integrated Ferroelectrics*, Vol. 38, pp. 299-311 (2001).
61. F. W. Van Keuls, C. H. Mueller, R. R. Romanofsky, J. D. Warner, F. A. Miranda, and H. Jiang, A COMPARISON OF MOCLD WITH PLD $Ba_xSr_{1-x}TiO_3$ THIN FILMS ON $LaAlO_3$ FOR TUNABLE MICROWAVE APPLICATIONS, *Integrated Ferroelectrics*, Vol. 38, pp. 437-448 (2001).
62. C. R. Cabrera, J. D. Warner, C. H. Mueller, F. W. Van Keuls, F. A. Miranda, R. Tremont, D. Blasini, and A. Morales, SELF-ASSEMBLED 3-MERCAPTOPROPYLTRIMETHOXYSILANE (MPS) ON $Ba_{0.5}Sr_{0.5}TiO_3$ AS AN ADHESION LAYER FOR MICROWAVE DEVICES, *Integrated Ferroelectrics*, Vol. 38, pp. 269-277 (2001).
63. G. Subramanyam, A. Zaman, N. Moshina, F. W. Van Keuls, F. A. Miranda, R.Romanofsky, J. D. Warner and P. Boolchand, FERROELECTRIC TUNABLE COPLANAR WAVEGUIDE COMPONENTS FOR Ku- AND K-BAND APPLICATIONS, *Integrated Ferroelectrics*, Vol. 34, pp. 197-206 (2001).
64. S. B. Majumder, M. Jain, A. Martinez, R. S. Katiyar, F. W. Van Keuls, and F. A. Miranda, Sol–gel derived grain oriented barium strontium titanate thin films for phase shifter applications, Journal of Appl. Phys., Vol. 90, pp. 896-903 (July 15, 2001).
65. Q. X. Jia, J. R. Groves, P. N. Arendt, P. Lu, and F. A. Miranda, MONOLITHIC INTEGRATION OF SUPERCONDUCTING YBCO AND DIELECTRIC $SrTiO_3$ FILMS ON POLYCRYSTALLINE FERRITES, *Integrated Ferroelectrics*, Vol. 42, pp. 71-78 (2002).
66. F. A. Miranda, F. W. Van Keuls, R. R. Romanofsky, C. H. Mueller, S. A. Alterovitz, and g. Subramanyam, FERROELECTRIC THIN FILM-BASED TECHNOLOGY FOR FREQUENCY- AND PHASE-AGILE MICROWAVE COMMUNICATION APPLICATIONS, *Integrated Ferroelectrics*, Vol. 42, pp. 131-149 (2002).
67. G. Subramanyam, N. Mohsina, A. Zaman, F. W. Van Keuls, F. A. Miranda, R. R. Romanofsky, J. D. Warner, and C. Chen, DESIGN AND DEVELOPMENT OF FERROELECTRIC TUNABLE COPLANAR WAVEGUIDE COMPONENTS FOR Ku- AND K-BAND APPLICATIONS, *Integrated Ferroelectrics*, Vol. 42, pp. 151-163 (2002).
68. C. L. Chen, T. Garret, Y. Lin, J. C. Jiang, E. I. Meletis, F. A. Miranda, Z. Zhang, and W. K. Chu, INTERFACE STRUCTURES AND EPITAXIAL BEHAVIOR OF FERROELECTRIC $(Ba,Sr)TiO_3$ THIN FILMS, *Integrated Ferroelectrics*, Vol. 42, pp. 165-172 (2002).
69. F. W. Van Keuls, C. H. Mueller, R. R. Romanofsky, J. D. Warner, F. A. Miranda, S. B. Majumder, M. Jain, A. Martinez, R. S. Katiyar, and H. Jiang, EVALUATION OF CHEMICAL SOLUTION DEPOSITED $Ba_XSr_{1-X}TiO_3$ THIN FILMS ON $LaAlO_3$ IN TUNABLE MICROWAVE DEVICES, *Integrated Ferroelectrics*, Vol. 42, pp. 207-217 (2002).
70. M. Jain, S. B. Majumder, A. Martinez, R. S. Katiyar, F. W. Van Keuls, R. R. Romanofsky, and F. A. Miranda, HIGHLY TEXTEURED CHEMICAL SOLUTION DEPOSITED $Ba_{0.5}Sr_{0.5}TiO_3$ (x~0 TO 5 at %) THIN FILMS FOR MICROWAVE DIELECTRIC APPLICATIONS, *Integrated Ferroelectrics*, Vol. 42, pp. 343-355 (2002).
71. C. Titus, J. Pouch, H. Nguyen, F. Miranda, and P. Bos, CONTINUOUS BEAM STEERING FROM A SEGMENTED LIQUID CRYSTAL OPTICAL PHASED ARRAY, Optical Engineering (published by SPIE, Bellingham, WA. 10/28/02).
72. C. H. Mueller, N. Theofylaktos, N. J. Pinto, D. C. Robinson, and F. A. Miranda**, Electrical Characterization of Polyaniline/Polyethylene Oxide Nanofibers for Field Effect Transistors,** Nanotech 2003, Vol. 3**, www.nsti.org,** ISBN 0-9728422-2-5**,** pp. 301-304 (February 2003)
73. M. Jain, S. B. Majumder, R. S. Katiyar, F. A. Miranda, and F. W. Van Keuls, IMPROVEMENT IN ELECTRICAL CHARACTERISTICS OF GRADED MANGANESE DOPED BARIUM STRONTIUM TITANATE THIN FILMS, Appl. Phys. Lett., Vol. 82, pp. 1911-1913 (March 2003).
74. G. Subramanyam, F. W. Van Keuls, F. A. Miranda, R. R. Romanofsky, and J. D. Warner, DESIGN AND DEVELOPMENT OF FERROELECTRIC TUNABLE HTS MICROSTRIP FILTERS FOR Ku- AND k-BAND APPLICATIONS, Materials Chemistry and Physics 79, pp. 147-150 (2003).
75. M. Jain, S. B. Majumder, R. S. Katiyar, A. S. Bhalla, F. A. Miranda, and F. W. Van Keuls, INVESTIGATIONS OF SOL-GEL DERIVED HIGHLY (100)-ORIENTED $Ba_{0.5}Sr_{0.5}TiO_3$:MgO COMPOSITE THIN FILMS FOR PHASE SHIFTER APPLICATIONS, Appl. Phys. A 00, pp. 1-3, 2003.
76. M. Jain, S. B. Majumder, R. S. Katiyar, A. S. Bhalla, F. A. Miranda, and F. W. Van Keuls, TAILORING OF BST AND MgO LAYERS FOR PHASE SHIFTER APPLICATIONS, *Science* (September 2003).
77. N. J. Pinto, A. T. Johnson, A. G. MacDiarmid, C. H. Mueller, N. Theofylaktos, D. C. Robinson and F. A. Miranda, ELECTROSPUN POLYANILINE/POLYETHYLENE OXIDE NANOFIBER FIELD-EFFECT TRANSISTOR, *Appl. Phys. Lett*. Vol. 83, No. 20, pp. 1-3, November 2003.
78. M. Jain, S. B. Majumder, Y. I. Yuzyuk, R. S. katiyar, A. S. Bhalla, F. A. Miranda, and F. W. Van Keuls, DIELECTRIC PROPERTIES AND LEAKAGE CURRENT CHARACTERISTICS OF SOL-GEL DERIVED $(Ba_{0.5}Sr_{0.5})TiO_3$:$MgTiO_3$ THIN FILM COMPOSITES, Ferroelectric Letters, Vol. 30, No. 5/6 (2003).
79. B. Riehl, G. Subramanyam, R. Biggers, A. Campbell, F.W. Van Keuls, F.A.Miranda, D.Tomlin, "SYNTHESIS AND CHARACTERIZATION OF NANOSTRUCTURED BSTO THIN-FILMS FOR MICROWAVE APPLICATIONS", *Integrated Ferroelectrics*, vol.55, pp. 825-837 (2003).
80. Oleg Pishnyak, Lyubov Kreminska, Oleg Lavrentovich, John Pouch, Felix Miranda, and Bruce Winker, "DIGITAL BEAM STEERING DEVICE BASED ON DECOUPLED BIREFRINGENT PRISM DEFLECTOR AND POLARIZATION ROTATOR," in Optical Engineering, Published by SPIE, Bellingham, WA (May 2004).
81. M. Jain, N. K. Karan, R. S. Katiyar, A. S. Bhalla, F.A. Miranda, and F.W. Van Keuls $PB_{0.3}SR_{0.7}TIO_3$ THIN FILMS FOR HIGH FREQUENCY PHASE SHIFTER APPLICATIONS, Appl. Phys. Lett., **85**, 275 (July 2004)
82. N.J. Pinto, C.H. Mueller, N. Theofylaktos, A.T. Johnson Jr. and F.A. Miranda, "EFFECT OF USING SPLIT GATE ELECTRODES ON A PENTACENE BASED FIELD EFFECT TRANSISTOR", Bull. Am. Phys. Soc. 50, 332 (2005).
83. Angel Morales, Fred W. Van Keuls, Félix A. Miranda and Carlos R. Cabrera, "SELF-ASSEMBLED MONOLAYERS AND CHEMICAL DERIVATIZATION OF BA0.5SR0.5TI03> THIN FILMS: APPLICATIONS IN PHASE SHIFTER DEVICES," Applied Surface Sciences, Vol. 252, pp. 981-995 (2005).
84. Van Keuls, F. W.; Varaljay, N. C.; Mueller, C. H.; Alterovitz, S. A.; Miranda, F. A.; and Romanofsky, R. R.: "PERFORMANCE OF A LARGE SAMPLE OF THIN FILM $BA_XSR_{1-X}TIO_3$ MICROWAVE PHASE SHIFTERS FABRICATED ON $LAALO_3$ SUBSTRATES," Integrated Ferroelectrics, Vol. 77, pp. 51-62, 2005.
85. X. Wang, B. Wang, P. J. Bos, P. F. McManamon, J. J. Pouch, F. A. Miranda, and J. E. Anderson, "MODELING AND DESIGN OF AN OPTIMIZED LIQUID CRYSTAL OPTICAL PHASED ARRAY," Journal of Applied Physics, Vol. 98, (Published on-line 10 October 2005).

86. C. H. Mueller, N. Theofylaktos, F. A. Miranda, A. T. Johnson, Jr., and N. J. Pinto, "DEMONSTRATION OF LOGIC AND DEVICE USING A SPLIT-GATE PENTACENE FIELD EFFECT TRANSISTOR;" Thin Solid Films, Vol. 496, pp. 494-499 (2006).
87. P. Barr, A. Zaman, and F. Miranda, "A COMPACT, BROADBAND ANTENNA FOR PLANETARY SURFACE-TO-SURFACE WIRELESS COMMUNICATIONS," Microwave and Optical Technology Letters, Vol. 48, No. 3, pp. 521-524, March 2006.
88. James A. Nessel, Afroz J. Zaman, and Félix A. Miranda, "A MINIATURIZED ANTENNA FOR SURFACE-TO-SURFACE AND SURFACE-TO-ORBITER APPLICATIONS," Microwave and Optical Technology Letters, Vol. 48, No. 5, pp. 859-862, May 2006.
89. Oleg Pishnyak, Andrii Golovin, Liubov Kreminska, John Pouch, Félix A. Miranda, Bruce K. Winker, and Oleg D. Lavrentovich, "SMETIC-A-FILLED BIREFRINGENT ELEMENTS AND FAST SWITCHING TWISTED DUAL-FREQUENCY NEMATIC CELLS USED FOR DIGITAL LIGHT DEFLECTION," Optical Engineering, 45(4) (April 2006).
90. N. J. Pinto, R. Perez, C. H. Mueller, N. Theofylaktos and F. A. Miranda, "DUAL INPUT AND GATE FABRICATED FROM A SINGLE CHANNEL POLY(3-HEXYLTHIOPHENE) THIN FILM FIELD EFFECT TRANSISTOR," Journal of Applied Physics (Vol 99; on line publication date: May 2, 2006).
91. Angel L. Morales-Cruz, Estevão Fachini, Félix A. Miranda, and Carlos R. Cabrera, SURFACE ANALYSIS MONITORING OF POLYELECTROLYTE SYSTEMS ON $Ba_{0.5}Sr_{0.5}TiO_3$ THIN FILMS, Applied Surface Science, Vol. 253, No. 22, pp. 8846-8857, September 15, 2007.
92. Félix A. Miranda, Robert R. Romanofsky, Frederick W. Van Keuls, and Carl H. Mueller, "$Ba_XSr_{1-X}TiO_3$ (BST) THIN FILM FERROELECTRIC COUPLED MICROSTRIPLINE PHASE SHIFTERS (CMPS) WITH REDUCED DEVICE HYSTERESIS," J. American Ceramics Society, Vol. 91, Issue 6, pp. 1864-1867, June 2008.
93. Carl H. Mueller, Frederick W. Van Keuls, Robert R. Romanofsky, and Félix A. Miranda, "ERROR VECTOR MEASUREMENTS OF BST COUPLED MICROSTRIPLINE PHASE SHIFTERS (CMPS) USING DIFFERENT TYPES OF MODULATION," Integrated Ferroelectrics, Vol. 100, pp.1-11, 2008.
94. Félix A. Miranda, Carl H. Mueller, Frederick W. Van Keuls, Robert R. Romanofsky and Guru Subramanyam, "Tunable Microstrip Filters Using Selectively Etched Ferroelectric Thin-Film Varactors for Coupling," Integrated Ferroelectrics, Vol. 112, pp. 8-23, 2009 (printed edition June 2010).
95. Helen Schwerdt, Wencheng Xu, Sameer Shekhar, Abbas Abbaspour-Tamijani (ASU), Bruce C. Towe (ASU) Félix A. Miranda, and Junseok Chae, "A Fully-Passive Wireless Microsystem for Recording of Neuropotentials using RF Backscattering Methods" (Accepted for publication in IEEE/ASME Journal of Microelectromechanical Systems, June 28, 2011).

LIST OF PUBLICATIONS IN SYMPOISUM DIGEST/CONFERENCE PROCEEDINGS

1. Heinen, V. O.; Miranda, F. A.; and Bhasin, K. B.: MAGNETIC PENETRATION DEPTH OF $YBa_2Cu_3O_{7-\delta}$ THIN FILMS DETERMINED BY THE POWER TRANSMISSION METHOD, Proc. 4th International Symp. on Supercond., Tokyo, Japan, Oct. 14-17; 755-758(1991).
2. Bhasin, K. B.; Toncich, S. S.; Romanofsky, R. R.; Chorey, C. M.; Miranda, F. A.; Rohrer, N. J.; Valco, G. J.; and Kapoor, V. J.: HIGH-T_c SUPERCONDUCTOR/SEMICONDUCTOR HYBRID MICROWAVE CIRCUITS AND THEIR POTENTIAL APPLICATIONS, Proceedings of the Symposium on Low Temperature Electronics and High Temperature Superconductivity of the 183rd Meeting of the Electrochemical Society, **Vol. 93-22**, 531-542 (1993).
3. Toncich, S. S.; Miranda, F. A.; Bhasin, K. B.; and Kascak, T. J.: PERFORMANCE OF YBCO MICROSTRIP LINEAR RESONATORS PATTERNED ON CeO_2 AND YSZ BUFFER LAYERS ON SAPPHIRE SUBSTRATES, Proceedings of the Symposium on Low Temperature Electronics and High Temperature Superconductivity of the 183rd Meeting of the Electrochemical Society, **Vol. 93-22**, 553-559 (1993).
4. Toncich, S. S.; Miranda, F. A.; Bhasin, K. B.; and Kascak, T. J.: PERFORMANCE OF HYBRID HTS FILTER/GaAs LOW NOISE AMPLIFIER AND MICROWAVE CHARACTERIZATION OF YBCO HTS RESONATORS ON R-PLANE SAPPHIRE, Proceedings of the 23rd European Microwave Conference, Madrid, Spain, Sept. 6-9, 182-184 (1993).
5. Miranda, F. A.; Chorey, C. M.; and Bhasin, K. B.: HTS THIN FILMS:PASSIVE MICROWAVE COMPONENTS AND SYSTEMS INTEGRATION ISSUES, Proceedings of the Fourth International Conference and Exhibition: World Congress on Superconductivity, June 27-July 1, 1994, Orlando, FL., NASA Conference Publication 3290, 611-620 (1994).
6. Mueller, C. H.; Koepf, G. A.; Heiny, M.; Zhang, Z.; Rivkin, M.; Yandrofski, R. M.; Miranda, F. A.; and Bhasin, K. B.: FREQUENCY TUNABLE FERROELECTRIC/SUPERCONDUCTING STRUCTURES FOR MICROWAVE APPLICATIONS, in the Proceedings of the 7th International Symposium on Integrated Ferroelectrics, March 20-22, 1995, Colorado Springs, Colorado.
7. F. A. Miranda, R. R. Romanofsky, F. W. van Keuls, J. A. Dayton, S. Sengupta, and L. C. Sengupta, FERRITE/FEROELECTRIC MATERIALS AND THEIR POTENTIAL ASSESSMENT FOR USE IN EW APPLICATIONS, Proceedings of the Joint Electronic Warfare Conference, Fort Briggs, TX, May 5-8, 1997.
8. G. Subramanyam, F. W. Van Keuls, and F. A. Miranda, A NOVEL K-BAND TUNABLE MICROSTRIP BANDPASS FILTER USING A THIN FILM HTS/FEROELECTRIC/DIELECTRIC MULTILAYER CONFIGURATION, IEEE MTT-S International Microwave Symposium Digest, Vol 2, p. 1011 (1998).
9. H. Jiang, W. Hu, S. Liang, V. Foulyguine, J. Zhao, Q. X. Jia, J. R. Groves, P. Arendt, F. Miranda, C. Vittoria, and H. How, LOW LOSS FERROELECTRIC FILMS GROWN ON POLYCRYSTALLINE FERRITE SUBSTRATES FOR DUAL-TUNING MICROWAVE DEVICES, Proceedings of MRS Spring Meeting, San Francisco, CA., (1999).
10. F. W. Van Keuls, C. H. Mueller, F. A. Miranda, R. R. Romanofsky, C. L. Canedy, S. Aggarwal, T. Venkatesan, R. Ramesh, J. S. Horwitz, W. Chang, and W. J. Kim, ROOM TEMPERATURE THIN FILM $Ba_{1-x}Sr_xTiO_3$ Ku-BAND COUPLED MICROSTRIP PHASE SHIFTERS: EFECTS OF FILM THICKNESS, DOPING, ANNEALING, AND SUBSTRATE CHOICE, IEEE MTT-S Digest, p. 737 (1999).
11. R. S. Kwok, S. J. Fiedziusko, T. Schnabel, F. A. Miranda, N. C. Varaljay, and C. Mueller, LOW-PROFILE MULTILAYER YBCO/MGO FILTER MODULE, IEEE MTT-S Digest, p. 1377 (1999).
12. C. H. Mueller, F. W. Van Keuls, F. A. Miranda, R. R. Romanofsky, C. L. Canedy, and R. Ramesh, MICROSTRUCTURAL OPTIMIZATION OF FERROELECTRIC THIN FILMS FOR Ku-BAND PHASE SHIFTERS, MRS-Spring Meeting Proceedings (1999).
13. R. R. Romanofsky, F. W. Van Keuls, F. A. Miranda, J. D. Warner, C. H. Mueller, and H. Qureshi, ANALYSIS AND OPTIMIZATION OF THIN FILM FERROELECTRIC PHASE SHIFTERS, MRS Symposium Digest (1999).
14. C. Canedy, M. R. Burr, D. Steinhauer, S. Anlage, T. Venkatesan, R. Ramesh, F. W. Van Keuls, R. R. Romanofsky, N. D. Varaljay, and F. A. Miranda, DIELECTRIC PROPERTIES OF BSTO THIN FILMS TAILORED FOR TUNABLE MICROWAVE APPLICATIONS, MRS Symposium Digest (1999).

15. G. Subramanyam, F. A. Miranda, F. Van Keuls, R. Romanofsky, J. Warner, C. Mueller, and V. Heinen, PERFORMANCE OF A HYBRID FERROELECTRIC TUNABLE PRE-SELECT FILTER/LOW NOISE APMPLIFIER, MRS Symposium Digest (1999).
16. G. Subramanyam, F. A. Miranda, R. R. Romanofsky, C. L. Canedy, S. Aggarwal, T. Venkatesan, and R. Ramesh, A FERROELECTRIC TUNABLE MICROSTRIP LANGE COUPLER FOR K-BAND APPLICATIONS, published in the 2000 IEEE MTT-S Digest.
17. R. Romanofsky, J. Bernhard, G. Washington, F. Van Keuls, F. Miranda, and C. Cannedy, A K-BAND LINEAR PHASED ARRAY ANTENNA BASED ON BSTO THIN FILM PHASE SHIFTERS, published in the 2000 IEEE MTT-S Digest.
18. F. W. Van Keuls, R. R. Romanofsky, C. H. Mueller, J. D. Warner, C. L. Canedy, R. Ramesh, and F. A. Miranda, CURRENT STATUS OF THIN FILM (Ba,Sr)TiO3 TUNABLE MICROWAVE COMPONENTS FOR RF COMMUNICATIONS, Proceedings ISIF 2000 Conference, Aachen, Germany, March 12-15, 2000;
19. F. A. Miranda, C. Mueller, F. Van Keuls, R. Romanofsky, S. Alterovitz, and J. Warner, SYSTEMATIC EVALUATION OF FERROELECTRIC BSTO THIN FILMS DRIVEN BY A SPECIFIC TUNABLE MICROWAVE APPLICATION, 2000 Fall MRS Symposium, Boston, MA (Nov. 2000).
20. R. Ramesh, S. Anlage, S. Tidrow, E. Adler, F. Van Keuls, R. Romanofsky, and F. Miranda, MICROWAVE PROPERTIES OF THIN FILM FERROELECTRICS, presented at 2000 Fall MRS Symposium, Boston, MA (Nov. 2000).
21. H. Li, T. Tran, C. L. Canedy, S. P. Alpay, L. Salamanca-Riba, R. Ramesh, F. Van Keuls, R. Romanofsky, and F. A. Miranda, THE EFFECT OF INTERNAL STRESS AND DEFECTS ON THE DIELECTRIC PROPERTIES OF (Ba,Sr)TiO_3 THIN FILMS FOR TUNABLE MICROWAVE APPLICATIONS, 2000 Fall MRS Symposium, Boston, MA (Nov. 2000).
22. C. H. Mueller, F. W. Van Keuls, R. R. Romanofsky, and F. A. Miranda, FERROELECTRIC AND SiGe DEVICE DEVELOPMENT FOR HIGH DATA RATE COMMUNICATIONS, 2000 Asia Pacific Microwave Conference, p. 923-928 (Sydney, Australia, 2000).
23. E. Saenz, G. Subramanyam, F. Van Keuls, and F. A. Miranda, FIXED-FREQUENCY AND FREQUENCY AGILE HTS MICROSTRIP BANDSTOP FILTERS FOR L-BAND APPLICATIONS, 2000 Applied Superconductivity Conference, Sept. 16-22, 2000, Virginia Beach, VA.
24. G. Subramanyam, N. Mohsina, A. Al Zaman, F. A. Miranda, F. W. Van Keuls, R. Romanofsky and C-L. Chen, "FERROELECTRIC THIN FILM BASED ELECTRICALLY TUNABLE Ku-BAND COPLANAR WAVEGUIDE COMPONENTS," *IEEE International Microwave Symposium Digest (IMS 2001)*, Vol. 1, pp. 471-474 (2001).
25. S. B. Majumder, M. Jain, A. Martinez, R. S. Katiyar, F. A. Miranda, F. W. Van Keuls, P. K. Sahoo, and V. N. Kulkarni, ELECTRICAL CHARACTERISTICS OF SOL-GEL DERIVED (100) ORIENTED $Ba_{0.5}Sr_{0.5}TiO_3$ THIN FILMS ON $LaAlO_3$ (100) SUBSTRATES, 10th International Meeting on Ferroelectricity, Sept. 3-7, 2001, Madrid, Spain.
26. V. Rodriguez-Santiago, Y. Gonzalez, F. E. Fernández, C. H. Mueller, F. W. Van Keuls, and F. A. Miranda, MICROWAVE PROPERTIES OF STRONTIUM BARIUM NIOBATE THIN FILMS GROWN BY PULSED LASER DEPOSITION, 2001 Fall MRS Meeting, Boston, MA. Nov. 26-30, 2001; Mat. Res. Soc. Symp. Proc., Vol. 688 2002 Materials Research Society.
27. S. B. Majumder, M. Jain, A. Martinez, R. S. Katiyar, E. R. Fachini, F. W. Van Keuls, F. A. Miranda, P. K. Sahoo, and V. N. Kulkarni, PROCESS INDUCED MODIFICATION OF THE HIGH FREQUENCY DIELECTRIC BEHAVIOR OF (100) TEXTURED $Ba_xSr_{1-x}TiO_3$ (x=0.5 and 0.6) THIN FILMS, 2001 Fall MRS Meeting, Boston, MA. Nov. 26-30, 2001.
28. R. S. Katiyar, M. Jain, S. B. Majumder, R. R. Romanofsky, F. W. Van Keuls, and F. A. Miranda, INVESTIGATIONS ON SOL-GEL DERIVED TRANSITION METAL DOPED BST THIN FILMS FOR PHASE SHIFTER APPLICATIONS, 2002 MRS Spring Meeting, San Francisco, CA, April 1-5, 2002.
29. C. H. Mueller, F. W. Van Keuls, R. R. Romanofsky, S. A. Alterovitz, and F. A. Miranda, INTERPLAY BETWEEN THIN FILM FERROELECTRIC COMPOSITION, MICROSTRUCTURE, AND MICROWAVE PHASE SHIFTER PERFORMANCE, NASA TM 2002-211987 (October 2002); Presented at the 13th International Symposium on Integrated Ferroelectrics, Nara, Japan, May 28-June 1, 2002.
30. F. A. Miranda, C. H. Mueller, F. W. Van Keuls, G. Subramanyam, and S. Vignesparamoorthy, PERFORMANCE ENHANCEMENT OF TUNABLE BANDPASS FILTERS USING SELECTEIVE ETCHED FERROELECTRIC THIN FILMS, 13th International Symposium on Integrated Ferroelectrics, Nara, Japan, May 28-June 1, 2002.
31. C. Titus, P. Bos, J. Pouch, H. Nguyen and F. Miranda, DIFFRACTION EFFICIENCY OF THIN FILM HOLOGRAPHIC BEAM STEERING DEVICES, SPIE International Symposium on Optical Science and Technology, July 7-11, 2002, Seattle, WA.
32. C. H. Mueller, N. Theofylaktos, N. J. Pinto, D. C. Robinson, and F. A. Miranda, ELECTRICAL CHARACTERIZATION OF POLYANILINE/POLYETHYLENE OXIDE NANOFIBERS FOR FIELD EFFECT TRANSISTORS, The Nanotechnology Conference and Trade Show, February 23-27, 2003, San Francisco, CA.
33. M. Jain, S. B. Majumder, R. S. Katiyar, A. S. Bhalla, D. C. Agrawal, F. Van Keuls, F. A. Miranda, R. R. Romanofsky, and C. H. Mueller, IMPROVED DIELECTRIC PROPERTIES OF HETEROSTRUCTURED Ba0.5Sr0.5TiO3 THIN FILM COMPOSITES FOR MICROWAVE DIELECTRIC DEVICES, 2002 Fall MRS Meeting, Dec. 2-6, Boston, MA (2002); Mat. Res. Soc. Symp. Proc. Vol. 748, pp. U17.4.1-U17.4.6 (2003 Materials Research Society).
34. Anthony Guiseppi-Elie, Sean Brahim, Sheena Abraham, Gymama Slaughter, Felix Miranda, Rainee Simons, Luciana Torres, Robert Diegelmann, Wayne Barbee, and Kevin Ward, 'FEASIBILITY STUDIES IN DEVELOPMENT OF A TEMPORARY IMPLANTABLE LACTATE SENSOR BIOCHIP FOR MONITORING DURING HEMORRHAGE' Advanced Technology Applications for Combat Casualty Care 2003 Conference, Tradewinds Island Beach Resort, St. Pete Beach, St, Petersberg, Florida, USA, August 18-20, 2003.
35. F. A. Miranda, R. R. Romanofsky, M. D. Valerio, F. W. Van Keuls, C. H. Mueller, and S. A. Alterovitz, CONTINUOUS OPTIMIZATION OF THIN FILMS FERROELECTRICS FOR TUNABLE MICROWAVE DEVICES FOR COMMUNICATIONS APPLICATIONS, *Proceedings of the Tuneable Ferroelectric Materials and Devices for Microwave Applications*, pp. 65-68, EuMC 2003, Munich, Germany, October 6-10, 2003.
36. X. Wang, B. Wang, J. Pouch, F. Miranda, M. Fisch, J. E. Anderson, V. Sergan, and P. Bos, LIQUID CRYSTAL ON SILICON (LCOS) WAVEFRONT CORRECTOR AND BEAM STEERER, *Proceedings of the 2003 SPIE Conference on High-Resolution Wave-front Control*: Methods, Devices, and Applications, San Diego, CA, August 3-8, 2003.
37. Xinghua Wang, Bin Wang, Philip Bos, James Anderson, John Pouch, Felix Miranda, and Paul McManamon, "LASER BEAM STEERING/SHAPING FOR FREE SPACE OPTICAL COMMUNICATIONS," SPIE defense and Security Symposium, Orlando, FL, April 12-16, 2004.
38. R. N. Simons, D. G. Hall, and F. A. Miranda, RF TELEMETRY SYSTEM FOR AN IMPLANTABLE BIO-MEMS SENSOR; IEEE MTT-S Digest Inter. Microwave Symp. Digest, Vol. 3, pp. 1433-1436, Fort Worth, TX, June 6-11, 2004.
39. R. N. Simons, D. G. Hall, and F. A. Miranda, PRINTED MULTI-LOOP ANTENNA FOR RF BIO-TELEMETRY; IEEE Antennas and Propagation Society Inter. Symp. Digest , Vol. 2, pp. 1339-1342, Monterey, CA, June 20-25, 2004.
40. F. A. Miranda, R. N. Simons, and D. G. Hall, VALIDATION OF RADIO FREQUENCY TELEMETRY CONCEPT IN THE PRESENCE OF BIOLOGICAL

TISSUE-LIKE STRATIFIED MEDIA; IEEE Antennas and Propagation Society Inter. Symp. Digest , Vol. 2, pp. 1335-1338, Monterey, CA, June 20-25, 2004.

41. R. N. Simons, D. G. Hall, and F. A. Miranda, "SPIRAL CHIP IMPLANTABLE RADIATOR AND PRINTED LOOP EXTERNAL RECEPTOR FOR RF TELEMETRY IN BIO-SENSORS SYSTEMS," Proceedings of RAWCON 2004, September 19-22, 2004, Atlanta, Georgia.
42. Ingram, M.A.; Romanofsky, R.; Lee, R.; Miranda., F.; Popovic, Z.; Langley, J.; Barott, W.; Ahmed, M.; Mandl, D.; "OPTIMIZING SATELLITE COMMUNICATIONS WITH ADAPTIVE AND PHASED ARRAY ANTENNA" Proc. 2004 Earth Science Technology Conference, Palo Alto, CA, June 22-24, 2004
43. Xingua Wang, Bin Wang, Philip Bos, James Anderson, John J. Pouch, Felix A. Miranda, and Paul F. McManamon, "WIDE ANGLE LIQUID CRYSTAL OPTICAL PHASED ARRAY," Optical Society of America Annual Meeting, Rochester NY, October 10-14, 2004.
44. Dan Mandl, Stu Frye, Sandra Grosvenor, Mary Ann Ingram, John Langley, Felix Miranda, Richard Q. Lee, Robert Romanofsky, Afroz Zaman , Zoya Popovic , Robert Sherwood, Steve Chien, Ashley Davies, "LINKING SATELLITES VIA EARTH "HOT SPOTS" AND THE INTERNET TO FORM AD HOC CONSTELLATIONS", SPIE Conference (November 2004, Honolulu, HI).
45. Romanofsky, R. R; Miranda, F. A.; Van Keuls, F. W.; and Valerio, M. D.: "RECENT ADVANCES IN MICROWAVE APPLICATIONS OF THIN FERROELECTRIC FILMS AT THE NASA GLENN RESEARCH CENTER," Mater. Res. Soc. Symp. Proc., Vol. 833, pp. 173-181 (March 2005); Symposium held November 29-December 1, 2004, Boston, MA.
46. Dan Mandl, Sandra Grosvenor, Stu Frye, Robert Sherwood, Steve Chien, Ashley Davies, Ben Cichy, Mary Ann Ingram, John Langley, Felix Miranda, Richard Q. Lee, Robert Romanofsky, Afroz Zaman , and Zoya Popovic , "SENSOR WEBS: AUTONOMOUS RAPID RESPONSE TO MONITOR TRANSIENT SCIENCE EVENTS," American Metereological Society 2005, Jan. 10-13, 2005, San Diego, California.
47. Lee, Choon Sae; Lee, Chanam; and Miranda, Félix A.: "BEAM-STEERABLE FLAT-PANEL REFLECTOR ANTENNA," Proceedings of the IEEE Antennas and Propagation Society Inter. Symp., Washington, D.C., July 3-8, 2005.
48. R. Q. Lee, E. B. Clark, D. M. Wilt, A. M. Pal, F. A. Miranda, C. H. Mueller, and M.A.Smith, "INTEGRATED SOLAR CELL ARRAY ANTENNA FOR SATELLITE AND TERRESTRIAL COMMUNICATIONS," Proceedings of the IEEE Antennas and Propagation Society Inter. Symp., Washington, D.C., July 3-8, 2005;
49. Rainee N. Simons and Félix A. Miranda "RADIATION CHARACTERISTICS OF MINIATURE SILICON SPIRAL CHIP ANTENNA FOR IMPLANTABLE BIO-MEMS SENSORS," Proceedings of the IEEE Antennas and Propagation Society Inter. Symp., Washington, D.C., July 3-8, 2005.
50. Ingram, M.A.; Barott, W. C.; Popovic, Z; Rodineau, S.; Langley, J; Romanofsky, R.; Lee, R. Q; Miranda., F.; Steffes, P; and Mandl, D.; "LEO DOWNLOAD CAPACITY ANALYSIS FOR A NETWORK OF ADAPTIVE ARRAY GROUND STATIONS" ESTC 2005, College Park, MD., June 2005.
51. Van Keuls, F. W.; Varaljay, N. C.; Mueller, C. H.; Alterovitz, S. A.; Miranda, F. A.; and Romanofsky, R. R.: "PERFORMANCE OF A LARGE SAMPLE OF THIN FILM $BA_XSR_{1-X}TIO_3$ MICROWAVE PHASE SHIFTERS FABRICATED ON $LAALO_3$ SUBSTRATES," 2005 ISIF Conference, Shanghai, China, April 18-20, 2005.
52. R. S. Katiyar, M. Jain, N. K. Karan, A. S. Bhalla, F. A. Miranda, and F. W. Van Keuls, "COMPARATIVE STUDIES OF FERROELECTRIC THIN FILMS FOR HIGH FREQUENCY PHASE SHIFTER APPLICATIONS," Proceedings of Symposium on Ferroelectricity and Piezoelectricity IMRC 2004, Cancun, Mexico, 22-26, August, 2004; Integrated Ferroelectrics, Vol. 71, pp. 11-19 (2005).
53. James A. Nessel, Carol L. Kory, Kevin M. Lambert, Roberto J. Acosta, and Félix A. Miranda, "A Microstrip Patch-Fed Short Backfire Antenna for the Tracking and Data Relay Satellite System Continuation (TDRSS-C) Multiple Access (MA) Array," IEEE Antennas and Propagation Society International Symposium, July 2006, pp. 521-524.
54. R. N. Simons and F. A. Miranda, "MODELING OF THE NEAR FIELD COUPLING BETWEEN AN EXTERNAL LOOP AND AN IMPLANTABLE SPIRAL CHIP ANTENNA IN BIOSENSOR SYSTEMS," 2007 IEEE Antennas and Propagation Society Inter. Symp., Albuquerque, New Mexico, July 9-14, 2006.
55. James A. Nessel, Phil Barr, Afroz J. Zaman, and Félix A. Miranda, "Miniature Antennas for Lunar and Planetary Surface Communications," IEEE Antennas and Propagation Society International Symposium, July 2006, pp. 631-634.
56. Rainee N. Simons, Félix A. Miranda, Jeffrey D. Wilson, and Renita E. Simons, WEARABLE WIRELESS TELEMETRY SYSTEM FOR IMPLANTABLE BIO-MEMS SENSORS, Proceedings of the 28th Annual International Conference (IEEE EMBC 2006) sponsored by the Institute of Electrical and Electronics Engineers in Medicine and Biology Society (EMBS), New York City, New York, August 30-September 3, 2006.
57. Sébastien Rondineau, Charles Dietlein, Zoya Popovic, Richard Q. Lee, Félix A. Miranda, Robert R. Romanofsky, Mary Ann Ingram, William C. Barrot, John Langely, and Daniel Mandl, GROUND STATIONS OF ARRAYS TO INCREASE THE LEO DOWNLOAD CAPACITY, Proceedings of the 36th European Microwave Conference, pp. 874-877, Manchester, United Kingdom, September 2006.
58. Félix A. Miranda, James A. Nessel, Robert R. Romanofsky and Roberto J. Acosta, A REVIEW OF ANTENNA TECHNOLOGIES FOR FUTURE NASA EXPLORATION MISSIONS, pp. 437-444, Proceedings of the 12th Ka and Broadband Communications Conference, pp. 437-444, September 27-29, 2006, Naples, Italy. (www.Kaconf.org).
59. Richard Q. Lee, Zoya Popovic, Sébastien Rondineau, and Félix A. Miranda "STEERABLE SPACE FED LENS ARRAY FOR LOW-COST ADAPTIVE GROUND STATION APPLICATIONS," Proceedings of the IEEE Antennas and Propagation Society International Symposium, June 11-15, 2007, Honolulu, HI.
60. James A. Nessel, Rainee N. Simons, and Félix A. Miranda, "NEAR FIELD RADIATION CHARACTERISTICS OF IMPLANTABLE SQUARE SPIRAL CHIP INDUCTOR ANTENNAS FOR BIO-SENSORS, Proceedings of the IEEE Antennas and Propagation Society International Symposium, June 11-15, 2007, Honolulu, HI.
61. Félix A. Miranda and Richard Q. Lee, "ASSESSMENT OF KA-BAND BEAM STEERABLE ANTENNA TECHNOLOGIES FOR NASA SPACE COMMUNNICATIONS," Proceedings of the 13th Ka and Broadband Communications Conference, pp. 493-500, September 24-26, 2007, Turin, Italy.
62. Carl H. Mueller and Félix A. Miranda, "HIGH TEMPERATURE PERMITTIVITY OF ALUMINA ENHANCED THERMAL BARRIER (AETB-8) MATERIAL FOR CEV ANTENNA RADOMES," in Proceedings of the 2010 AP-S International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, July 11-17, 2010, Toronto, Ontario, Canada.
63. David Cure, Thomas Weller, Félix Miranda, and Paul Herzig, "ONE DIMENSIONAL CAPACITIVE LOADING IN A FREQUENCY SELECTIVE SURFACE (FSS) FOR LOW PROFILE ANTENNA APPLICATIONS," 12th Annual IEEE Wireless and Microwave Technology Conference (WAMICON), Clearwater Beach, FL., April 18-19, 2011.

64. Helen Schwerdt, Wencheng Xu, Sameer Shekhar, Félix A. Miranda, and Junseok Chae, "PRELIMINARY THERMAL CHARACTERIZATION OF A FULLY-PASSIVE WIRELESS BACKSCATTERING NEURO-RECORDING MICROSYSTEM," In Proceedings of Tranducers'11: The 16th International Conference on Solid-State Sensors, Actuators and Microsystems, June 5-9, 2011, Beijing, China.
65. David Cure, Thomas Weller, Félix Miranda, and Paul Herzig "ONE DIMENSIONAL CAPACITIVE LOADING IN A FREQUENCY SELECTIVE SURFACE FOR LOW PROFILE ANTENNA APPLICATIONS," In Proceedings of the 2011 IEEE Antennas and Propagation Conference, July 3-8, 2011, Spokane, Washington.

NASA TECH BRIEFS PUBLICATIONS

1. "Graphene-Based reversible nano-Switch/Sensor Schottky Diode," *Félix A. Miranda, Michael A. Meador, Noulie Theofylkaktos, Carl H. Mueller and Nicholas Pinto,* Vol. 34, No. 10, pp. 24-25, October 2010
2. "Thin Film Ferroelectric-Coupled Microstripline Phase Shifters with Reduced Device Hysteresis," *Félix Miranda, Robert Romanofsky, Carl Mueller and Frederick Van Keuls*, Vol. 34, No. 5, pp. 33-34, May 2010.
3. "Large Aperture Inflatable/Deployable Antennas and Their Role in NASA's Vision for Space Exploration and Earth Science," *Dr. Robert R. Romanafsky and Dr. Felix A. Miranda, p. 71, Vol.32, No. 12, December 2008.*
4. "Nematic Cells for Digital Light Deflection," *Oleg Pishnyak, Andrii Golovin, Oleg Lavrentovich, Liubov Kreminska, Bruce Winker, John Pouch and Felix Miranda, Vol. 32, No. 9. September2008.*
5. "Hand-Held Units for Short-Range Wireless Biotelemetry," *Félix A. Miranda and Rainee N. Simons, p. 22, Vol. 32, No. 5, May 2008.*
6. "Wearable Wireless Telemetry System for Implantable BioMEMS Sensors," *Rainee N. Simons and Félix A. Miranda, pp. 22-26, Vol. 32, No. 5, May 2008.*
7. "Dual-Input AND Gate From Single-Channel Thin-Film FET," *N. Theofylaktos, F. Miranda,N.Pinto, R. Perez, and C. Mueller, pp. 46-48, Vol. 32, No. 4, April 2008*.
8. "Patterned Ferroelectric Films for Tunable Microwave Devices," *Félix A. Miranda and Carl Mueller, pp. 35-36, Vol. 32, No. 1, January 2008.*
9. "Hilbert-Curve Fractal Antenna With Radiation-Pattern Diversity," James Nessel and Félix Miranda, *Sep 30 2007*
10. "Printed Multi-Turn Loop Antennas for RF Biotelemetry," *Rainee N. Simons, David G. Hall and Félix A. Miranda, pp. 48-50, Vol. 31, No.6, June 2007.*
11. "Compact Packaging of Photonic Millimeter-Wave Receiver," *Hung Nguyen, John Pouch and Félix Miranda, pp. 8a-10a, Vol. 31, No. 5, May 2007.*
12. "Digital Beam Deflectors Based Partly on Liquid Crystals," *John Pouch, Félix Miranda, Liubov Kreminska,Oleg Pishnyak, Andrii Golovin, Oleg Lavrentovich, and Bruce Winker, p. 19a, Vol 31, No. 5, May 2007.*
13. "Probe Station and Near-Field Scanner for Testing Antennas," *Afroz Zaman, Richard Lee,William Darby, Philip Barr, and Félix Miranda, pp. 44-46, Vol. 30, No. 10, October 2006.*
14. "FETs Based on Doped Polyaniline/Polyethylene Oxide Fibers," *N. Theofylaktos, D. Robinson, F. Miranda, N. Pinto, A. Johsnosn, A. MacDiarmid, C. Mueller, pp. 38-40, Vol. 30, No. 6, June 2006.*

NASA TECHNICAL MEMORANDUM/CP PUBLICATIONS

1. Miranda, F. A.; Gordon, W. L.; Eck, T. G.; Bhasin, K. B.; Warner, J. D.; and Jenkins, K.A.: MILLIMETER WAVE SURFACE RESISTANCE OF $RBa_2Cu_3O_{7-\delta}$ (R=Y, Eu, Dy, Sm, Er) SUPERCONDUCTORS, NASA-TM **102571** (1990).
2. Bhasin, K. B.; Warner, J. D.; Chorey, C. M.; Ebihara, B. T.; Romanofsky, R. R.; Heinen, V. O.; Miranda, F. A.; and Gordon, W. L.: MICROWAVE CONDUCTIVITY OF LASER ABLATED $YBa_2Cu_3O_{7-\square}$ SUPERCONDUCTING FILMS AND ITS RELATION TO MICROSTRIP TRANSMISSION LINE PERFORMANCE, NASA-CP **3100** (1990).
3. Rainee N. Simons and Félix A. Miranda "RADIATION CHARACTERISTICS OF MINIATURE SILICON SPIRAL CHIP ANTENNA FOR IMPLANTABLE BIO-MEMS SENSORS," NASA/TM—2005-213563.
4. Rainee N. Simons, Félix A. Miranda, Jeffrey D. Wilson, and Renita E. Simons, WEARABLE WIRELESS TELEMETRY SYSTEM FOR IMPLANTABLE BIO-MEMS SENSORS, NASA/TM—2006-214422.
5. Félix A. Miranda, Robert R. Romanofsky, and Cindy Dreibelbis, "LARGE APERTURE ANTENNAS FOR USE AT NASA AND BEYOND," NASA Technology Innovation, pp. 20-21, Vol. 15, No.1, 2009.

MOST RECENT INVITED TALKS

1. "**NASA Activities as they Relate to Microwave Technology for Aerospace Communications Systems**," 12th Annual IEEE Wireless and Microwave Technology Conference (WAMICON), Clearwater Beach, FL., April 18-19, 2011.
2. "**Antenna technology and other Radio Frequency (RF) Communications Activities at the Glenn research Center in support of NASA's Exploration Vision**," Distinguish Lectures in Electrical Engineering, Penn State University, January 31, 2007.
3. "**Antenna Technologies for NASA Applications**." IDGA Military Antenna Systems: Advancements and Roadmaps, September 18-20, 2006, Arlington, Virginia.
4. **"Antenna Technologies for Future NASA Exploration Missions."** Keynote Speaker at the 2006 IEEE International Workshop on Antenna Technology (2006 IWAT): Small Antennas and Metamaterials, May 6-8, White Plains, New York.
5. **"Aerospace Communications at the NASA Glenn Research Center."** Keynote Speaker "Living with a Star, Future of Space Research and Exploration-Part II," The Polytechnic University of Puerto Rico, September 22, 2005.

OTHER INVITED TALKS

1. Materials Research Society Meeting, Boston, MA. December 2, 2000.
2. 11th International Symposium on Integrated Ferroelectrics, Colorado Springs, CO, March 12, 1999.
3. University of Puerto Rico, San Juan Campus, November 20, 1998.
4. MRSEC, The University of Maryland, College Park, MD, April 1, 1998.
5. IEEE FallCon'97, Cedar Rapids, IA, October 22, 1997.
6. The University of Northern Iowa, Cedar Falls, IA, October 22, 1997.
7. The University of Puerto Rico, Mayagüez, PR, June 23-24, 1997.
8. Superconducting Core Technologies, Golden, CO, March 6, 1997.
9. International Symposium on Integrated Ferroelectrics, Santa Fe, NM, March 2-5, 1997.
10. Electrochemical Society Meeting, Reno, NV, May 21026, 1995.
11. Ohio Northern University, Ada, OH, November 29, 1994.
12. Electrochemical Society Meeting, Honolulu, HI, May 1621, 1993.