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Objective

To obtain a full-time electrical engineering position in wireless/RF design, development, and/or testing.

Qualifications

- *Design:* phased arrays, slotted waveguides, loop antennas, horn feeds.
- *CAD tools:* HFSS, Microstripes, FEKO, ADS.
- *Programming:* MATLAB, C and other languages.
- *Operating Systems:* Windows, Unix/Solaris, Linux.
- *Course Instruction:* parabolic reflectors, phased arrays, radar systems.
- *Applications:* Wireless, RF, Defense, Space
- US Citizen. Secret clearance
- Effective written/verbal communication, and presentation skills.

Design Experience

Georgia Electronic Design Center, Georgia Tech, Atlanta, GA
Graduate Research Student July 1, 2005 - Present

- Modeling of Carbon Nanotube EBG Gas Sensor
- Circularly Polarized Dual Band Global RFID Reader Antenna Design
- Investigation of techniques for the bandwidth and gain improvement of circular polarized antennas with the use of parasitic elements for Wireless Communications and WiFi/WiMax modules.
- Development of flexible (LCP-based) antenna arrays for remote sensing NASA applications.
- Invited speaker (10 lectures) to Georgia Tech ECE 4390 Course (“Introduction to Radar and remote sensing”).

Georgia Tech Research Institute, Sensors and Electromagnetics Laboratory, Smyrna, GA
Research Engineer I March 1, 2005 – Present

- Design and optimization of a T-junction fed multi-element waveguide slot antenna array in HFSS.
- Digital signal processing of a full radar system in Matlab and Simulink.
- Phased array antenna modeling and aperture design (MATLAB)
- Matlab compiler configuration on Windows, UNIX and LINUX. Conversion of phased array MATLAB code into C shared libraries to generate amplitude and phase data for larger models.
- Remodeling of a T-junction fed multi-element waveguide slot antenna array in subarray environment with HFSS. Investigating possible subarray architectures to improve radiation characteristics.
- Assisting in CAD model generation including radome design for missile-heads in FEKO, ridged horn design in HFSS.
- Short course instructor for a basic antenna concepts course. Topics included radiation characteristics of parabolic reflectors and phased array antennas incorporating amplitude, phase and surface discontinuity errors.
- Investigating *Time Adaptive Digital Beamforming* Theory and applying it to practical radar models in Simulink.

Tech Square Research Building, Atlanta, GA Jan 04 – May 04
Undergraduate Research Assistant

- Center and inset fed microstrip antenna design and optimization with Microstripes and HFSS CAD tools (for wireless EMI/EMC applications).
- S-Parameter and parasitic coupling (adjacent antenna elements or adjacent transmission lines) calculations and measurements for frequencies up to the millimeter-wave frequency range.
- Optimization of Microstrip Yagi antennas (real-estate planning and spacing) on wireless/RF multilayer packages in organic and ceramic materials.

Veterans Administration, Decatur, GA
Program Support Clerk

Jun 03 – Aug 03

- Organizing Preventive Maintenance Standards for biomedical equipment.

Georgia Center for Advanced Telecommunications Technology, Atlanta GA
Undergraduate Research Assistant

May 02 – Aug 02

- Data encryption and decoding with filters.

Conferences

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| • IEEE APS 2005, Washington D.C | July 2005 |
| • 15th IST Mobile and Wireless Summit, | |
| • Myconos, Greece {Invited Talk} | June 2006 |
| • PIERS 2006, Tokyo, Japan {Invited Talk} | August 2006 |
| • APMC 2006, Yokohama, Japan | December 2006 |
| • ACES 2007, Verona, Italy {Invited Talk} | March 2007 |
| • APS 2007, Honolulu, Hawaii | June 2007 |
| • ISAP 2007, Niigata, Japan {Invited Talk} | August 2007 |
| • PIERS 2007, Prague, Czech Republic {Invited Talk} | August 2007 |
| • CEM-TD 2007, Perugia, Italy {Invited Talk} | October 2007 |

Reports & Publications

R.L.Li, A.Traille, J.Laskar and M.M.Tentzeris, "Bandwidth and gain Improvement of a Circularly Polarized Dual-Rhombic Loop Antennas", IEEE Antennas and Wireless Propagation Letters, Vol.5, pp.84-87, 2006.

R.L.Li, S.Basat, A.Traille, J.Laskar and M.M.Tentzeris, "Development of Wideband Circularly Polarised Square- and Rectangular-Loop Antennas", accepted for publication to the IEE Proceedings on Antennas and Propagation, Vol.153, No.3, pp.293-300, June 2006.

R.L.Li, B.Pan, A.Traille, J.Papapolymerou, J.Laskar and M.M.Tentzeris, "Development of a Cavity-Backed Broadband Circularly Polarized Slot/Strip Loop Antenna with a Simple Feeding Structure", accepted for publication to the IEEE Transactions on Antennas and Propagation.

A.Traille and M.M.Tentzeris, "Dual-Band Antenna Arrays in "Flexible" Liquid Crystal Polymer (LCP) SOP Technology", invited presentation to the PIERS 2006 Conference, Tokyo, Japan, August 2006.

A.Traille, M.M Tentzeris, "Design and Modeling of a Novel Dual-Band Circular-Polarization Antenna for Multi-Standard/Multi-Band RFID Readers."invited presentation to the ISAP 2007, Toki Messe, Niigata, Japan, August 2007.

T.Thai, A.Traille, M.M Tentzeris, "Design and Development of Carbon-Nanotube EBG's and Sensors." Invited presentation to the PIERS 2006 Conference, Prague, Czech Republic, August 2007.

A.Traille, M.M Tentzeris, L. Yang, A. Rida, T. Wu, "Design and Modeling of Novel Multiband/Wideband Antennas for RFID Tags and Readers Using Time-/Frequency-Domain Simulators." Invited presentation into the CEM-TD Conference in Perugia, Italy, October 2007.

Education

Georgia Institute of Technology, Atlanta, GA
Masters of Science in Electrical Engineering

Expected Graduation, 2008/9

Wireless IC Design Graduate Coursework: CMOS/bipolar technology, wireless specifications, transceiver architecture, low noise amplifiers, frequency synthesizers, mixers, RF filters, analog-to-digital and digital-to-analog converters, power amplifiers.

Computational Electromagnetics Graduate Coursework: (FDTD) Finite-Difference Time-Domain Technique, stability criteria, material interfaces, absorbing boundary conditions, perfectly matched layers

EM Radiation and Antennas Graduate Coursework: Antenna fundamentals, near/far field calculations of antenna radiation, impedance, phased arrays, microstrip antennas, helical antennas,

Georgia Institute of Technology, Atlanta, GA
Bachelor of Science in Electrical Engineering

Graduation Dec 2004

RF and Microelectronics Coursework: Radar and EM Sensing, including analysis of radars for weather forecast and air traffic control, radar performance evaluation including noise, target models, fundamental parameters (power, prf and range). Electromagnetic Applications including planar transmission lines, impedance matching, s-parameters, polarization, waveguides, striplines, antenna arrays. Use of test equipment including oscilloscopes, function/waveguides generators for testing and debugging circuits.

Analog Coursework: BJT, MOSFET and JFET models, transistor biasing, small signal and DC models, frequency response, multistage and differential amplifiers, feedback circuits.

DSP Design Coursework: AM, FM and FSK signals, FIR Filtering of Images, sampling, aliasing and reconstruction of signals, synthesis of musical notes and harmonics, bandpass and nulling filters, control theory.

Activities

GA Tech: IEEE Member, Georgia Electronic Design Center, NSF Packaging Research Center.

Awards

1st Place Award for SFC ECE Fair 2007 Graduate Poster Competition

References

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