

Tajudeen. O. Olasupo
Assistant Professor of Electrical Engineering
Department of Engineering and Computer Science
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Objective

To pursue excellence with passion, learn and acquire professional experience while also adding value to organisation's cooperate goal.

Summary

Researches, models, designs, and tests wireless communications, algorithms, electronics, and network systems

Education

Doctor of Philosophy in Computer Engineering,

March, 2017

Florida Institute of Technology, Florida

GPA: 4.0

Research study

- Optimization framework for deployment, RF modeling, and building of electronic IoT wireless sensor, July 2014- May 2017

Projects

- Deployment framework GUI and demonstration of secured online client-server banking transaction

Master of Science in Electrical Engineering,

July 2014

Florida Institute of Technology, Florida

Relevant Courses

- RF Propagation, Digital Signal Process, Linear Systems, Computer Networks, Personal Communication Systems, Digital Communication Systems, Applied Statistical Analysis, Wireless Sensor Network, Satellite Communications, Research methods in system engineering, Big data network and machine learning, Secure Data Communications, Digital Image Processing, Multimedia Sensor Network

Projects

- Macroscopic propagation prediction model for cellular networks using multivariate regression analysis
- Experimental design of factors affecting the performance of wireless sensor network deployment using factorial design, ANOVA, hypothesis testing, and regression

Post graduate diploma in Theology (Distinction)

August 2010

Redeemed Christian Bible College, Lagos, Nigeria

Post graduate course of the school of disciple

August 2010

Christ the Redeemer's Ministries school of disciples, Lagos, Nigeria

Bachelor of Engineering in Electrical and Electronics Engineering

December 2005

Federal University of Technology Akure, Nigeria

Work Experience

Assistant Professor, Engineering and Computer Science Department, Seattle Pacific University, September 2017 till date

- Teach Communications, Electronics I&II, and Circuit I

Course Instructor, Electrical Engineering Department, Florida Institute of Technology, Melbourne, Florida, July 2014-2017

- Taught Computer communications and networking
- Taught Communications laboratory
- Taught Signals and systems

Graduate Teaching Assistant, Electrical Engineering Department, Florida Institute of Technology, Melbourne, Florida, July 2013

- Coordinated Lab session on Software and hardware design
- Coordinated Lab session on Computer architecture and system
- Coordinated Lab session on Wireless sensor network
- Prepared lesson notes and handled lab classes for wire-shark and socket programming
- Managed and coordinated students to implement various projects
- Performed Electronics, circuit and pcb design using OrCadence Pspice software

Achievement: Design and implementations of various projects

Microwave Transmission/Base Station Engineer

Globacom Telecommunications, Kano, Nigeria

December 2007 - March 2012

- Maintained and monitored vendor equipment and software for Globacom's 3G and dual-band GSM network, including Harris, Alcatel, Ericson, Huawei, Siemen (RNC/NodeB/BSC/BTS/Radios)
- Provided network resource planning, optimization and allocation of microwave link design
- Conducted coverage testing, analysis and implementation of work order
- Carried out troubleshooting actions to bring up any radio link that was down
- Involved in pre-installation survey, designing, planning and propagation test of proposed radio link.
- Produced link budgeting, path profiling, link quality test
- Managed the day-to-day capacity and availability requirements for good communication services
- Performed propagation model tuning for coverage analysis, run prediction and optimize the design

Projects

- Planned, designed and deployed more than 150, 3G networks and microwave links March 2010
- Base Transceiver Station (BTS) installation and maintenance project: project lead for commissioning and maintaining 50 BTSs and BSCs June 2009

Achievement: Maintained low network-down for years and successful completion of roll-outs and installations

Electrical Engineer

Setraco Engineering Construction, Abuja, Nigeria

January 2006- June 2007

- Fixed replacement parts for plant operations
- Prepared trouble shooting procedures for electrical problems on machines
- Managed PLC and control panel system
- Configured and installed control panel for utilities, plants instrumentation and DSP
- Coordinated electrical repairs on machine and utility equipment
- Prepared, interpreted and implemented schematic or engineering diagrams

Achievement: Maintained low operation-down and completion of new constructions

Skills:

Technologies: LTE, WCDMA/UMTS, GSM, OSN/OTN, PLC

RF Skills: troubleshooting, operation, maintenance, commissioning and integration of Cisco devices, L3 communication equipment, Alcatel, Siemens, Huawei and Harris Base station equipment,(SDH, PDH, LMDS) / BTS / BSC / BSS / OMC-R (HMI). Monitoring networks at network management centre, installation and maintenance of base station facilities and equipment (RBS, IDU, Rectifier, generating sets, ATS module, AMF Panel/ IP55), RF hardware, MODEM, PLL, LNA. Perform link budget and RF planning using path loss software and excel tool, propagation model tuning for coverage analysis, load and verification clutter and terrain data, run prediction and optimize the design

Programming Languages: Basic knowledge of C/C++, R, Python, MATLAB

Operating Systems: Windows, Linux (Red Hat, Kali, Ubuntu), MAC

Software: Microsoft Office Suite, LabVIEW, Minitab, SPSS, SAS, Design Expert, fritzing, circuit maker 2000, wire shark, sketch makeup, CAD, Cadence/Pspice, microwave design tool-Path loss 4.0, Excel tools for link budget and simulations, RF simulation tools -HP ADS, APLAC, Planet EV 4.0, Mentum Planet

Publications

Peer-reviewed Journals

- 1). Olasupo, T. O., Otero, C. E., "The Impacts of Node Orientation on Radio Propagation Models for Airborne-deployed Sensor Networks in Large-scale Tree Vegetation Terrains," *IEEE Transactions on Systems, Man, and Cybernetics: System 2017 (accepted)*.
- 2). Olasupo, T. O., Olasupo, K. O., "Investigation of Factor that Determine the Performance of Wireless Sensor Networks for Large-scale on-demand Deployments," *Universal Journal of Communications and Network, 2017*.
- 3). Olasupo, T.O., Otero, C.E., Olasupo, K.O., Kostanic, I., "Empirical Path loss Models for Wireless Sensor Deployment in Natural Grass Environments," *IEEE Transactions on Antenna and Propagation, vol. 64, pp. 4012-4020, 2016*.
- 4) Olasupo, K. O., Kostanic, I., Olasupo, T. O., "Analytical Modeling of LTE-based Network Capacity for Public Safety Communications," *Universal Journal of Communications and Network, 2016*.

Peer-reviewed Conferences

- 1). Olasupo, T.O., Alsayyari, A., Otero, C.E., Olasupo, K.O., Kostanic, I., "Empirical Path loss Models for Low Power Wireless Sensor Nodes Deployed on the Ground in Different Terrains," *IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT) 2017 (accepted)*.
- 2). Olasupo, K.O., Kostanic, I., Olasupo, T.O., Otero, C.E., "Link Performance Modeling of Wireless Sensor Network for Mission-Critical Applications (Underground Deployment)," *16th Annual Mediterranean Ad Hoc Networking Workshop, IEEE Conference 2017 (accepted)*.
- 3). Oraibi, I., Otero, C.E., Olasupo, T.O., "Empirical Path Loss Model for Vehicle-to-Vehicle IoT Device Communication in Fleet Management," *16th Annual Mediterranean Ad Hoc Networking Workshop, IEEE Conference 2017*.
- 4). Olasupo, T.O., Otero, C.E., Olasupo, K.O., Quershi, A., "Automatic Detection of Radio Signal Obstruction in Wireless Sensor Networks' On-demand Deployments," *IEEE Sensor Symposium, 2016*
- 5). Olasupo, T., Otero, C.E., "Effects of Terrain Variation in Wireless Sensor Network Deployments", *IEEE RFM Conference, July 2015*

Books

- 1). Simple Principles of Life, Nigeria, July 2010
- 2). The Destiny, Nigeria, July 2010

Article Reviewing Assignments

Reviewer for IEEE Sensor Letter 2017.

Reviewer for Mobile Information System journal, Hindawi Publishing Corporation, 2016 till date

Reviewer for IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE 2016).

Awards

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| Most Outstanding graduate student, Florida Tech | 2014-2016 |
| Graduate Student Assistantship Florida Tech, | 2013-2015 |
| Florida Tech Graduate Scholarship, Florida Tech, Melbourne, USA | 2012-2013 |
| Outstanding corps member in paramilitary service, Federal Republic of Nigeria, | 2007 |

Spiritual Assignments

Parish pastor (Deacon) at the Redeemed Christian Church of God, Melbourne Florida 2012-2017
Parish leader (Deacon) at the Redeemed Christian Church of God, Kano state, Nigeria 2010-2012
Minister of God and Sunday school teacher at the Redeemed Christian Church of God, Kano state, Nigeria 1995-2010

Professional Association

Institute of Electrical and Electronics Engineers 2012 till date

Student Organizations

Florida Tech RCCG-SF – President 2012-2017
Florida Tech ISSS – Member 2012-2017

Volunteering and Community Services

Volunteer at University Elementary Park School, Melbourne, Florida, 2016-2017
Volunteer at service at South Area Head start school, Palm bay, Florida 2015

- Reading to kids
- Helping kids in class room, playground, field trip, and during breakfast (4 hours every month)

Volunteer and Diplomat at Florida Institute of Technology Orientation team, 2014, 2015.