

Richard O. AFOLABI, Ph.D.

PERSONAL DATA

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CAREER OBJECTIVES

Richard Afolabi is passionate about problem-solving and applying innovative technologies to practical business problems through scientific data analysis, research and development (R&D). With over 7 years of scientific research experience in radio resource management (RRM) domain, he has authored several papers in top international journals and conferences and won Best Researcher Award. Currently a Postdoctoral Researcher at the University of Nevada, Las Vegas (UNLV) where he works on unmanned aerial systems (UAS).

TECHNICAL EXPERTISE

Algorithm Development, radio resource management (RRM), Optimization, Scheduling, LTE/A, WiMAX, SDN, OFDM/OFDMA, 4G/5G systems, Cellular Networks, Cognitive Radio, Discrete-Event Simulations, OPNET.

PROFESSIONAL EXPERIENCES

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| 05.2014 - CURRENT | RESEARCH SCIENTIST Computer Science Dept., University of Nevada Las Vegas (UNLV), USA
<i>Achievements:</i> Developing proposals for research grants on network security, analytics and intelligence. |
| 04.2014 - 03.2015 | TEACHING FACULTY Computer Engineering Dept., CHOSUN University, Gwangju, Korea
<i>Duties:</i> Training and mentoring students. Teaching Data Communications & Networking, and C Programming Lang.
<i>Research:</i> Multicast resource allocation and network optimization algorithm development.
<i>Achievement:</i> 95% rating by students on passion for teaching and ability to clearly explain difficult theoretical concepts. |
| 08.2009 - 03.2010 | BUSINESS DEVELOPER (INTERN) WITH SOLUTION INC. Korea Elect. Tech. Inst. (KETI), Korea
<i>Achievements:</i> Helped build client satisfaction by producing product catalogues and user manuals. Solved English-Korean communication problems by providing language interface supports, and follow-up sales leads on potential overseas clients. |
| 09.2004 - 12.2006 | SALES & SUPPORT ENGINEER KOOCHI COMMUNICATIONS LTD. Abuja, Nigeria
<i>Achievement:</i> Installing, configuring & commissioning Tsunami C/Ku-Band wireless base stations and VSAT receivers. |

EDUCATION

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| 2010-2014 | Gwangju Institute of Science & Technology, GIST, South Korea
<i>Doctorate Degree & Research Assistant</i>
<i>Advisor:</i> Prof. Kiseon KIM (kskim@gist.ac.kr) Phone: +82-(62)-970-2207
<i>Research:</i> "Radio resource management, optimization, cognitive radio, data communications."
<i>Thesis:</i> "Spectrum and Power Efficient Multimedia Transmissions in OFDMA Wireless Networks" |
| 2007-2009 | Gwangju Institute of Science & Technology, GIST, South Korea
<i>Master of Science, Communications Engineering</i>
<i>Advisor:</i> Prof. Kiseon KIM (kskim@gist.ac.kr) Phone: +82-(62)-970-2207
<i>Thesis Title:</i> "Security Issues in Spectrum Sensing of Next Generation Cognitive Radio Networks" |
| 1999 - 2004 | University of Ibadan, UI, Nigeria
<i>Bachelor of Science, Computer Science, Advisor:</i> Prof. (Mrs.) Adenike OSOFISAN
<i>Thesis Title:</i> "Development of a WAP-Enabled Mobile App for the National Examination Commission" |

TECHNICAL SKILLS

Technical Background	OFDMA, LTE, WiMAX, Cognitive Radio, DES Simulations, Wireless Networking.
Scientific Programming:	MATLAB, Mathematica, OPNET, PYTHON, Numpy, Scipy, Pandas, C/C++, L ^A T _E X
Web Application & Frameworks:	HTML5 & CSS3, Bootstrap, PYTHON, FLASK, SQL, Meteor
Operating Platforms :	Mac OS X, Linux Distros (Ubuntu, etc), Windows, Windows CE, Server OSs, iOS.

SCHOLARSHIPS, HONORS & AWARDS

- NEW** FEB. 2015 WINNER: Best Research Award, Korea Atomic Energy Research Institute (KAERI)
AUG. 2014 RECIPIENT: 2nd Runner-up GIST Startup Business Contest Award, Korea
2007-2014 RECIPIENT: Korean Government Funded Technology Research Scholar & Project Award
NOV. 2004 RECIPIENT: Innovative & Promising Undergraduate Research Project Award, Nigeria
MAR. 2002 RECIPIENT: Dean's Award for Exemplary Academic Performance, Nigeria

PROJECTS & IMPLEMENTATIONS

- (1.) *Non-Invasive Blood Test using IoT-Based Smart Device*: Design of a fast, secure and painless blood test for Diabetic patients without needle pricks. *Skills- Machine learning, Embedded systems, Mobile Apps*
- (2.) *Intellisense Home Security Systems*: Development of a low-cost self-monitored, IoT-enabled, cloud-based smart security system that can learn, adapt and make decisions - aim at developing countries.
- (3.) *Channel-Aware routing protocols for smart grid*: Design of a channel aware routing protocol for communications in modern smart grid. *Tools: OPNET modeler and C programming.* [PROJECT DETAILS](#)

ADDITIONAL INFORMATION

- (1.) FOUNDER, MOBILEWEB.COM.NG: Nigerian Visas and Passport payment processing service / platform.
- (2.) ICT CONSULTANT, Embassy of Nigeria, Seoul, Korea: Development, integration, training and contracts.
- (3.) ICT STRATEGIC ADVISER, Int. Centre for Energy & Environmental Sustainability Research, Nigeria ICEESR.ORG.NG
- (4.) OWNER, BLOGGER, SMARTFOXSECURITY.COM: Video security & surveillance, data security, IoT security.

SELECTED PUBLICATIONS

JOURNALS:

- (1.) A. Dadlani, S. K. Muthukrishnan, **R.O. Afolabi**, and K. Kim, "Opportunistic Spectrum Access with Retrial Phenomenon in Cognitive Radio Networks", IN REVIEW.
- (2.) **R.O. Afolabi**, B. V. Nguyen, A. Mehrabi, and K. Kim, "QoS-Aware Multimedia Multicasting with Minimum Outage in Future Multicarrier Cellular Networks", IN REVIEW.
- (3.) **R.O. Afolabi**, B. V. Nguyen, and K. Kim, "Amortized Weighted Averaging For Multimedia Broadcast and Multicast Systems", in *IEEE Comms. Letters*, March 2014. [VIEW](#).
- (4.) B. V. Nguyen, **R.O. Afolabi**, and K. Kim, "Dependence of Outage Probability of Cooperative Systems with Single Relay Selection on Channel Correlation", in *IEEE Communications Letters*, Aug. 2013. [PUBLISHED](#).
- (5.) **R.O. Afolabi**, A. Dadlani, and K. Kim, "Multicast Scheduling and Resource Allocation Algorithms for OFDMA-based Systems: a Survey", in *IEEE Comm. Surveys and Tutorials*, vol. 15, no. 1, pp. 240-254, March 2013. [PUBLISHED](#).
- (6.) **R.O. Afolabi**, A. Ahmad, and K. Kim, "Security Assessments of IEEE 802.15.4 Standard Based on X.802 Framework", in *International Journal of Security and Networks*, vol. 5, no. 2, pp. 118-197, March 2010. [PUBLISHED](#).

CONFERENCES:

- (1.) **R.O. Afolabi** and K. Kim, "Adaptive Resource Allocation in Multicast OFDMA Transmissions Using Scalable Amortize Factor", in *Proc. 4th IEEE Int. Conf. on Ubiquitous and Future Networks, (ICUFN'12), Phuket, Thailand*, pp. 225-260, July 2012. [VIEW](#).
- (2.) **R.O. Afolabi**, A. Ahmad, and K. Kim, "On Secure Spectrum Sensing in Cognitive Radio Networks Using Emitters Electromagnetic Signature", in *Proc. 18th IEEE Int. Conf. on Computer Comm. & Networks, (ICCCN'09), San Francisco, CA, USA*, Aug. 2009. [VIEW](#).