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Seventh International Conference on Internet Technologies & Applications

EERT 2017 - 5th International Workshop on Energy Efficient and Reconfigurable Transceivers (EERT):

Towards Green 5G & Internet of Everything

14th Sept 2017

Chairs EERT Committee:

- Professor Raed A Abd-Alhameed, University of Bradford, UK, r.a.a.abd@bradford.ac.uk
- Professor Peter S Excell, Glyndwr University, Wrexham, UK, p.excell@glyndwr.ac.uk
- Professor Neil J McEwan, University of Bradford, UK, n.j.mcewan@bradford.ac.uk
- Dr. Jonathan Rodriguez, Instituto de Telecomunicações, Portugal, jonathan@av.it.pt
- Dr. Bashir Gwandu, Commonwealth ITU Group, UK, bashirgwandu@yahoo.co.uk
- Dr. Mathias Fonkam, American University of Nigeria, mfonkam@aun.edu.ng
- Dr. Charles Nche , American University of Nigeria, charles.nche@aun.edu.ng
- Dr. Issa Elfergani, Instituto de Telecomunicações, Portugal, i.t.e.elfergani@av.it.pt
- Dr. Abubakar Sadiq Hussaini, Instituto de Telecomunicações, Portugal, ash@av.it.pt

EERT Programme:

9:30 – 9:40 Opening of The EERT Workshop: Prof Raed A. Abd-Alhameed
University of Bradford, UK

9:40 – 10:30 Invited Talk: Dr. Jonathan Rodriguez
Instituto de Telecomunicações, Portugal

SECRET - Secure Network Coding for Reduced Energy Next Generation Mobile Small cells A European Training Network in Wireless Communications and Networking for 5G

Executive Summary:

SECRET is a collaborative European Training Network (ETN) committed to create an excellent educational training platform for Early Stage Researchers (ESRs) in the field of wireless communications and networking for 5G. The project is recently funded by the European Commission under the H2020 research and innovation program, through the Marie Curie People Program. This project targets to narrow

the gap between current networking technologies and the foreseen requirements of future 2020 networking, through the recruitment and training of 17 ESRs. SECRET aims to strike a note by delivering higher capacity, ability to support more users, and lowering the cost per bit by adopting technology trends widely accepted to form part of the 5G roadmap, through the deployment of new disruptive “femtocell” type cells on demand, to what we refer to as mobile small cells. This will be complemented by a wireless high-speed fronthaul to bridge the small cell network to the core. Moreover, novel techniques will be investigated, including “network coding”, “cooperation”, and “energy-aware smart front-end”. Additionally, due to the confidential information that will be communicated over in future networks, a lightweight security framework built on secure network coding will be proposed.

Bio:

Jonathan Rodriguez received his Masters degree in Electronic and Electrical Engineering and Ph.D from the University of Surrey (UK), in 1998 and 2004 respectively. In 2005, he became a researcher at the Instituto de Telecomunicações (Portugal) where he was a member of the Wireless Communications Scientific Area. In 2008, he became a Senior Researcher where he established the 4TELL Research Group targeting next generation mobile systems. He has served as project coordinator for major international research projects, including Eureka LOOP and FP7 C2POWER whilst serving as technical manager for FP7 COGEU and FP7 SALUS. He is currently the coordinator of the H2020-SECRET Innovative Training Network. Since 2009 he has served as Invited Assistant Professor at the University of Aveiro (Portugal), and attained Associate Level in 2015. In 2017 he was appointed Professor of Mobile Communications at the University of South Wales (UK). He is author of more than 400 scientific works, including 10 book editorials. His professional affiliations include: Senior Member of the IEEE and Chartered Engineer (CEng) since 2013, and Fellow of the IET (2015).

Presentation session I

10:45 am – 11:45 am

Session Chair: Dr Fauzi Elmegri

Time	Title	Authors
10:45 - 11:00	<i>Analysis and Investigation the Estimation Accuracy and Reliability of Pisarenko Harmonic Decomposition Algorithm</i>	M. A. G. Al-Sadoon , K. W. Hameed , A. Zweid , S. Jones , R.A. Abd-Alhameed , Musa Abusitta
11:00 - 11:15	<i>Indoor Millimetre-Wave Propagation Channel Simulations at 28, 39, 60 and 73 GHz for 5G Wireless Networks</i>	Ali A. AlAbdullah, Nazar Ali, Huthaifa Obeidat, Raed A. Abd-Alhmeed and Steven Jones
11:15 - 11:30	<i>Performance Comparative Study Between Vector And ECOLOCATION Algorithms For Indoor Positioning</i>	H. Obeidat, O. Obeidat, M. Bomhara, W. Shuaieb, A. Alabdullah, Y. Dama, M.S. Binmelha, S. Jones, R. Abd-Alhameed
11:30 - 11:45	<i>Low Complexity Single Snapshot DoA Method</i>	K.W. Hameed, M. Al-Sadoon, S.M.R. Jones, J.M. Noras, Y.A.S Dama, A. Masri, R.A. AbdAlhameed
11:45 - 12:00	<i>Current Technologies and Location Based Services</i>	R. Asif, Imran Ahmed, Antenna Research Group, University of Bradford

Poster session

12:00 am – 2:00 pm

Session Chair: Dr. Charles Nche & Dr. Chan See

Title	Authors
<i>Design Framework for Unobtrusive Patient location Recognition using Passive RFID and Particle Filtering</i>	George Oguntala, Huthaifa Obeidat, M. AlKhambashi, Raed Abd-Alhameed, Tu Yuxiang, and Jim Noras
<i>A Load-Pull Approach to Design an Optimum Load Impedance and Matching Network for Class-F RF Power Amplifier</i>	B. A. Mohammed, A. S. Hussaini, R. Abd-Alhameed, N. A. Abduljabbar, H. A. Obeidat, I. T. E. Elfergani, J. Rodriguez, M. Fonkam, C. Nche and B. M. Mustapha
<i>Patch Antenna for Integration In AUN Based Access Control System</i>	G. B. Tanyi, C. Nche, A.S. Hussaini1, M. Fonkam1, I.T.E. Elfergani, R.A. Abd-Alhameed3, J. Rodriguez
<i>Using Defected Ground Structure (DGS) To Improve Nonuniform Microstrip Bandpass Filters' Performance.</i>	Alaa Ibrahim Hashash, Mohammad H. Bataineh, Asem Shehadeh Al-Zoubi
<i>Electrically Small Antenna Loaded with CRLH for Notched-band Application</i>	Mohamed Lashab, M. Ngala, Adham Saleh
<i>A 2.62-GHz Class-F Power Amplifier with Lumped Element and Transmission Line Network Design.</i>	B. A. Mohammed, A. S. Hussaini, H. Migdadi, R. Abd-Alhameed1, N. A. Abduljabbar, I.T.E. Elfergani, J. Rodriguez, C. Nche, M. Fonkam3 and B. M. Mustapha
<i>Real-time Signal Processing of Data from an ECG</i>	MN. Iqbal, M. bomhara, R. Abd-Alhameed, N. Eya, R. Qahwaji, J.M. Noras
<i>A Practical Performance Analysis of Low-Cost Sensors for Indoor Localization of Multi-Node Systems</i>	Ola A. Hasan, Abdulmuttalib T. Rashid, Ramzy S. Ali, Jamal Kusha
<i>Design and Development of an Electronic Stethoscope</i>	B. Malik, N. Eya, H. Migdadi, M.J. Ngala, R.A. Abd-Alhameed, JM Noras
<i>Demonstration Of Structural Changes In Variable Structure Control Using State Space Approach</i>	B. M. Mustapha, V. C. Ikpo, Abubakar Sadiq Hussaini, I.T.E. Elfergani, R.A. Abd-Alhameed, Jonathan Rodriguez
<i>Arc-Shaped Monopole Antennas with reduced coupling for WLAN and WIMAX Applications</i>	Likaa S. Yahya, Khalil H. Sayidmarie, F. Elmegri, and R. A. Abd-Alhameed
<i>A simple self-interference cancellation technique for full duplex communication</i>	A.A. Jasim, K.M. Younus, A. Ali, K.H. Sayidmarie, A. Alhaddad, R.A. Abd-Alhameed
<i>Neurological Assessment of Music Therapy on the Brain using Emotiv Epoc</i>	F. Mulla, Eya Eya, E. Ibrahim, A. Alhaddad, R. Qahwaji, R. Abd-Alhameed
<i>Assessment of SFSDP Cooperative Localization Algorithm for WLAN Environment</i>	Nazar Ali; Ebtessam Almazrouei; Saleh R. Al-Araji
<i>Effect of sand Storms on the Microwave Links</i>	Sayeh Elhabashi, Fauzi. Elemgri, Hassan Aldeeb, Balsm Elhabashi,

Lunch

1:00 pm – 2:00 pm

Presentation session II

2:00 pm – 3:15 pm

Session Chair: Prof Peter Excell

Time	Title	Authors
2:00 - 2:15	<i>Radio-Location Techniques under Adverse Channel Conditions</i>	Wafa S. Shuaieb, Steve M. Jones, Huthaifa A. Obeidat, Raed A. Abd-Alhameed
2:15 - 2:30	<i>Dispersion Characteristics of a Gyro-Chiro-Ferrite Shielded Multilayered Microstrip Line Using the Generalized Exponential Matrix Technique</i>	S. Daoudi, F. Benabdelaziz, C. Zebiri D. Sayad , F.M. Abdussalam, and R. Abd-Alhameed
2:30 - 2:45	<i>Design and Optimization of a Bowtie Dipole Adjacent to Dielectric Material for Through-the-Wall Imaging Using Hybrid electromagnetic Computational Analysis Techniques</i>	I.M. Danjuma, F.M. Abdussalam, N. Eya, M.O. Akinsolu, M.J. Ngala, C.H See, R.A. Abd-Alhameed And J.M. Noras
2:45 - 3:00	<i>New User Authentication and Key Management Scheme for Secure Data Transmission in Wireless Mobile Multicast</i>	N Eya, E. Elkhazmi, E Jituboh, A. Masri, Y. Dama, C Abdul-jalil, O Fayemi, S.J. Shephred, Raed Abd-Alhameed
3:00 - 3:15	<i>Practical Multi-Band Antenna for 3G and 4G Mobile Services</i>	I.T.E.Elfergani , Abubakar Sadiq Hussaini, Jonathan Rodriguez, Dominique Lo Hine Tong, R.A. AbdAlhameed

Break

3:15 pm –3:30 pm

Panel Session:

3:30 pm – 4:30 pm

Topic: Big Data & 5G Future **Technology Trends of Terrestrial IMT Systems**

Panel Chair: Dr Abubakar Sadiq Hussaini

Panelist:

Prof. Raed Abd-Alhammeed

Prof. Peter Excell

Dr. Jonathan Rodriguez

Dr. Bashir Gwandu

Dr. Charles Nche

Dr. Chan See

Dr. Issa Elfergani

Dr. Mathias Fonkam

Awards & Prices for the 5th EERT Workshop 2017

Prof. Raed Abd-Alhameed

4:30 pm – 5:00 pm