KHALID HAMED ALHARBI

Assistant Professor, Department of Electrical and Computer Engineering, King Abdulaziz University

Education

Degree	*Field of Study*	*Institution*	*Year*
Ph.D.	Nanoscale Electronics	University of Glasgow, UK	2016
MS	Wireless Communication Technologies	Glasgow Caledonian University, UK	2011
BS	Electronics and Communications Engineering	King Abdulaziz University	2004

Academic Experience

From	*To*	*Institution*	*Rank*	*Title*	*Full or Part Time*
2016	Date	KAU	Assistant Professor		Full Time

Current Membership in Professional Societies and Organizations

	Society/Organization	*Rank*	*Since*
i.	IET (***Institution of Engineering and Technology***)	Member	2012

Honors and Awards

Best paper in the workshop on terahertz communications in the 9th International Congress on Ultra-Modern Telecommunications and Control Systems and Workshops (ICUMT), Munich, Germany, 6 – 8 November 2017.

Principal Publications/Presentations from the Past Five Years

[1] **K. Alharbi**, Ata Khalid, A. Ofiare, J. Wang, and E. Wasige, "Diced and grounded broadband bow-tie antenna with tuning stub for resonant tunnelling diode terahertz oscillators, " IET Microwaves, Antennas & Propagation journal, vol. 11, no. 3, pp. 310-316, Feb. 2017.

[2] **K. Alharbi**, Ata Khalid, A. Ofiare, J. Wang, and E. Wasige, "Diced and grounded broadband bow-tie antenna with tuning stub for resonant tunnelling diode terahertz oscillators, " IET Colloquium on mm-wave and THz Engineering & Technology, London, 2016.

[3] **K. Alharbi**, Ata Khalid, A. Ofiare, J. Wang, and E. Wasige, "Broadband bow-tie slot antenna with tuning stub for resonant tunnelling diode oscillators with novel configuration for substrate effects suppression, " European Microwave Week London, 3-7 Oct 2016, pp. 421-424..

[4] **K. Alharbi**, A. Ofiare, M. Kgwadi, A. Khalid and E. Wasige, "Bow-tie antenna for terahertz resonant tunnelling diode based oscillators on high dielectric constant substrate," Ph.D. Research in Microelectronics and Electronics (PRIME), 2015 11th Conference on, Glasgow, 2015, pp. 168-171.

[5] **K. Alharbi**, A. Ofiare, J. Wang, Ata Khalid, D. Cumming, and E. Wasige, "On-wafer 2D characterisation technique for quasi-yagi antenna for G-and applications, " In Progress In Electromagnetics Research Symposium, Prague, Czech Republic, 6-9 July 2015, p. 1527.

[6] **K. Alharbi**, A. Ofiare, J. Wang, M. Kgwadi, A. Khalid, D. Cumming and E. Wasige, "Broadband slotted bow-tie antennas for terahertz resonant tunnelling diode based oscillators, " Progress In Electromagnetics Research Symposium, Czech Republic, 6-9 July 2015, pp. 1847-1852.

[7] **K. Alharbi**, A. Ofiare, J. Wang, Ata Khalid, D. Cumming, and E. Wasige, "Radiation pattern characterisation setup for G-band planar Yagi antennas," in the IET 2nd Annual Active and Passive RF Devices seminar

programme, Birmingham, 29 October 2014, pp.1-3.

[8] S. Watson, A. Al-Khalidi, M. Kgwadi, **K. Alharbi**, W. Zhang, J. Wang, E. Wasige and A. E. Kelly, "Terahertz Wireless Communication Using a Single Low Power Resonant Tunneling Diode Oscillator," Transactions on Terahertz Science and Technology (Submitted).

[9] A. Al-Khalidi, **K. Alharbi,** j. Wang, and E. Wasige, "THz Electronics for Data Centre Wireless Links - the TERAPOD Project," in the 9th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT), Munich, Germany, 6 – 8 November 2017. **(BEST PAPER IN THE WORKSHOP ON TERAHERTZ COMMUNICATIONS)**

[10] E. Wasige, **K. Alharbi**, A. Al-Khalidi, J. Wang, and A. Khalid, "Resonant Tunnelling Diode Terahertz Sources for Broadband Wireless Communications, " Proc. SPIE 10103, Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications X, San Francisco, CA, USA, 28 Jan - 2 Feb 2017, pp. 101031J.

[11] E. Wasige, A. Al-Khalidi, **K. Alharbi**, and J. Wang, "High performance microstrip resonant tunneling diode oscillators as terahertz sources", UK-Europe-China Workshop on mm-waves and THz Technologies committee (UCMMT2016), Qingdao, China, 5-7 Sep 2016, pp. 25-28.

[12] M. Kgwadi, **K. Alharbi**, J. Wang, and E. Wasige, "Slot-ring multiport driven antenna with improved airside radiation for terahertz communications," European Microwave Week, London, 3-7 Oct 2016, pp. 1247-1250.

[13] J. Wang, A. Al-Khalidi, **K. Alharbi**, A. Ofiare, H. Zhou, J. Figueiredo and E. Wasige, "High performance resonant tunneling diode oscillators as terahertz sources, " European Microwave Week, London, 3-7 Oct 2016, pp. 341-344.

[14] J. Wang, A. Al-Khalidi, **K. Alharbi**, A. Ofiare, H. Zhou and E. Wasige, "G-Band MMIC resonant tunneling diode oscillators," Compound Semiconductor Week (CSW), Toyama, Japan, 2016, pp. 1-2.

[15] J. Wang, **K. Alharbi**, A. Ofiare, H. Zhou, A. Khalid, D. Cumming and E. Wasige, "High performance resonant tunneling diode oscillators for THz applications, " IEEE Compound Semiconductor IC Symposium, USA, October 2015.

[16] J. Wang, **K. Alharbi**, A. Khalid, and E. Wasige, "Planar Fabrication Process Development for Mm-Wave Resonant Tunneling Diode (RTD) Using BCB Etch-Back, " In: 27th International Conference on Indium Phosphide and Related Materials, Santa Barbara, CA, USA, 28 June - 2 July 2015,

[17] Ofiare, J. Wang, **K. Alharbi**, A. Khalid, E. Wasige and L. Wang, "Novel tunnel diode oscillator power combining circuit topology based on synchronisation," 2015 Asia-Pacific Microwave Conference (APMC), Nanjing, 2015, pp. 1-3.

[18] J. Wang, A. Ofiare, **K. Alharbi**, R. Brown, Ata Khalid, D. Cumming, and E. Wasige, "MMIC resonant tunneling diode oscillators for THz applications," Ph.D. Research in Microelectronics and Electronics (PRIME), 2015 11th Conference on, Glasgow, 2015, pp. 262-265

[19] Ofiare, R. Brown, **K. Alharbi**, J. Wang, Ata Khalid, D. Cumming, and E. Wasige, "Accurate pulsed I-V measurement of the NDR region of tunnel diodes and resonant tunneling diodes, " In: UK Semiconductors, Sheffield, UK, 1-2 July 2015.

[20] Ata. Khalid, J. Wang, A. Ofiare, **K. Alharbi**, D. Cumming, and E. Wasige, "Resonant tunneling and planar Gunn diodes: a comparison of two solid state sources for terahertz technology," In the 7th European/UK-China Workshop on Millimeter Waves and Terahertz Technologies, Chengdu, China, 2–4 September 2014.

[21] A. Ofiare, **K. Alharbi**, Ata. Khalid, J. Wang, D. Cumming, and E. Wasige, "Wideband planar Yagi antennas for millimetre wave frequency applications, " In the 7th European/UK-China Workshop on Millimeter Waves and Terahertz Technologies, Chengdu, China, 2–4 September 2014.

[22] J. Wang, **K. Alharbi**, A. Ofiare, Ata. Khalid, L. Wang, D. Cumming, and E. Wasige, "Series coupled resonant tunneling diode oscillators for terahertz applications" In the 7th European/UK-China Workshop on Millimeter Waves and Terahertz Technologies, Chengdu, China, 2–4 September 2014.

[23] J. Wang, L. Wang, C. Li, **K. Alharbi**, Ata. Khalid, E. Wasige, "W-band InP-based resonant tunnelling diode oscillator with milliwatt output power," in The 26th International Conference on Indium Phosphide and Related Materials (IPRM), Montpellier, France, 11-15 May 2014, pp.1,2

Recent Professional Development Activities (*Workshops, Trainings etc.)*

QAAU 2020 Consultants Team Project, Faculty of Engineering, KAU