CURRICULUM VITAE

PERSONAL INFORMATION:

Name: Ali Hasan Ali Alqahtani
Nationality: Saudi Arabia
Date of Birth: 1/7/1397 H (17/6/1977)
Marital Status: Married
Address: Riyadh, Saudi Arabia
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Phone Number: +966505654723 (mobile phone)
Languages: Arabic (native language), English
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EDUCATION:

-Ph.D. 1438 (2016)

- **Major/Minor**: Electrical Engineering/ Communications
- **Year of completion**: 1438 H (2016)
- **University/College**: King Saud University/ Engineering
- **Department**: Electrical Engineering
- **G.P.A.**: 4.50/5.00
- **Thesis Title:** Rateless Space-Time Block Codes for Large-Scale Multiple-Input Multiple Output Wireless Communication Systems

-M.Sc. 1430 (2009)

- **Major/Minor**: Electrical Engineering/ Communications
- **Year of completion**: 1430 H (2009)
- **University/ College**: King Abdul Aziz University/Engineering
- **Department** : Electrical & Computer Engineering
- **G.P.A.**: 4.84/5.00
- **Thesis Title:** Analysis and Simulation of MC-CDMA System for WiMAX Technology/ IEEE 802.16

-B.Sc. 1422 (2001) (Hons.)

- **Major/Minor**: Electrical Engineering/Communication & Electronics
- **Year of completion**: 1422 H (2001)
- **University/ College**: King Abdul Aziz University/Engineering
- **Department:** Electrical & Computer Engineering
- **G.P.A.**: 4.54/5.00

ACADEMIC AND WORK EXPERIANCE:

1: **College of Applied Engineering, Almuzahimiah Campus, King Saud University, Saudi Arabia**

- **Period:** 25/3/1439 H – Present **(12/2017- Present)**
- **Position:** **faculty member/ Associate Professor** (10/2023- Present)
  faculty member/ Assistant Professor (12/2017- 10/2023)
- **Department:** Applied Electrical Engineering Program.

2: **College of Telecommunications & Information (CTI),TVTC, Riyadh, Saudi Arabia**

- **Period**: 9/10/1431 H – 24/3/1439 H (9/2010- 12/2017)
- **Position**: faculty member/ instructor
- **Department:** Telecommunication Technology Dep.

3: **College of Technology at Abha (CTA), TVTC, Saudi Arabia**

- **Period**: 23/6/1423 H–8/10/1431 H (8/2002-9/2010)
- **Position**: faculty member/ instructor
- **Department:** Electronic Technology Dep.

4: **Saudi Telecommunication Company (STC), Jizan, Saudi Arabia**

- **Period**: 2/9/1422 H – 22/6/1423 H (11/2001-8/2002)
- **Position**: Telephone Network Engineer
- **Duties:** Constructions Supervisor, Network Designer.

ADMINISTRATIVE DUTIES:

6/2021-Present: **Dean of College of Applied Engineering, King Saud University.**
6/2021-12/2023: Member of Council of King Saud University.
9/2019-6/2021: Vice Dean for Educational and Academic Affairs, College of Applied Engineering.
2018-2020: Head of Committee of Faculty Members, Teaching Assistants and Scholarships.

TEACHING EXPERIENCE:

More than 20 years in teaching and supervising undergraduate students of electrical, electronics and communications engineering and technologies. Extensive experience in preparing teaching materials and course outlines, administering and marking test papers to evaluate students' progress, conducting seminars and group discussions.

Courses taught:

1. Data Communications & Networking
2. Signals and Systems
3. Digital Signal Processing
4. Wireless Communications
5. Digital Communications
6. Mobile Communications
7. Communications Theory
8. Communication System Principles
9. Introduction to Microcontroller
10. Digital Logic Design
11. Electronics
12. Electric Circuits
13. Electronic Circuits
14. Antennas & Waves Propagation
15. Engineering Electromagnetics
16. Fiber Optics & Transmission Lines
17. Microwaves & Satellite Communication
18. Power Electronics
19. Automatic Control Systems
20. Structured Computer Programming (MATLAB)
21. Data Communications & Networking Lab
22. Electric Circuits Lab
23. Electronics Lab
24. Digital Logic Design Lab
25. Microwaves & Communications Lab
26. Senior Graduation Projects

I'm able to teach the following courses:

1. Introduction to Random Processes
2. Computer Networks
3. Wireless and Sensor Networks
4. Digital Speech Processing
5. Digital Image Processing
6. Wireless and Multimedia Networks
7. Mobile Computing and Wireless Networks
8. Engineering Stochastic Processes and its applications
9. Personal Communication Systems
10. Optical Networks
11. Sensor Networks

SELECTED TRAINING COURSES:

Training Course	Place	Start Date	Duration
Modern Specific Publications Ecosystem	Riyadh-KSU-DSD	30 April 2019	6 hours
Scientific Publishing in ISI	Riyadh-KSU-DSD	22 Jan 2019	5 hours
Academic Accreditation Criteria	Riyadh-KSU-DSD	16 Oct 2018	10 hours
Black Board e-learning	Riyadh-KSU-DSD	8 April 2018	10 hours
Design of Academic Course	Riyadh-KSU-DSD	25 Mar 2018	10 hours
Plagiarism Detection Techniques	Riyadh-KSU-DSD	21 Mar 2018	5 hours
Small-groups Teaching	Riyadh-KSU-DSD	7 Mar 2018	4 hours
Assessment of Learning Outcomes	Riyadh-KSU-DSD	5 Mar 2018	9 hours
Academic Leadership Skills	Riyadh-KSU-DSD	28 Feb 2018	10 hours
Social Media in University Learning	Riyadh-KSU-DSD	25 Feb 2018	10 hours
Active Teaching Skills	Riyadh-KSU-DSD	27 Mar 2017	10 hours
4G LTE Wireless Communications	Philippine-Manila-TESDA	7 Sep 2015	2 Weeks
Satellite Communications	Riyadh -CTI	25 May 2013	5 Days
Electronics Troubleshooting	Riyadh - MVTI	22 Oct 2011	5 Days
ICDL	Jeddah- KAU	26 Jun 2006	6 Months
Telephone Networks	Jeddah- STC	29 Dec 2002	5 Days

DSP: Deanship of Skills Development, CTI: College of Telecomm and Information, MVTI: Military and Vocational Training Institute, CTI: College of Technology at Abha

Training Courses I have trained:

Course	Place	Trainees	Date	Duration
Introduction to MATLAB	KSU	KSU students	2016	10 hours
Principles of Electronics	CTI	Saudi Intelligence	2016	20 hours
Microwave & Satellite Communications	CTI	Saudi Royal Guard	2016	50 hours
CCNA1 ver. 6 CISCO	CTI	CTI students	2014	50 hours
Principles of Digital Communications	CTI	Saudi Army	2013	50 hours

RESEARCH EXPERIENCE:

https://www.webofscience.com/wos/author/rid/AGU-2026-2022 ,
Web of Science Researcher ID: AGU-2026-2022
ORCiD: https://orcid.org/0000-0001-8143-7981 , Scopus Author ID: 57196765320, SciProfiles: 1833583

Selected Publications:

[1] **Ali H. Alqahtani**; Esam M. Almohimmah; Mohammed T. Alresheedi; Ahmad Fauzi Abas; Ahmad-Adnan Qidan; Jaafar Elmirghani. "*Decoding-Order-Based Power Allocation (DOPA) Scheme for Non-Orthogonal Multiple Access (NOMA) Visible Light Communication Systems*". **Photonics** 2022, 9, 718 . https://www.mdpi.com/2304-6732/9/10/718#

[2] **Ali. H. Alqahtani**, Y. T. Aladadi, and M. T. Alresheedi, "*Dielectric Slabs-Based Lens for Millimeter-Wave Beamforming*," **Applied Sciences**, vol. 12, no. 2, p. 638, Jan. 2022. https://doi.org/10.3390/app12020638

[3] **Ali H. Alqahtani**, Khaled Humadi, Ahmed Iyanda Sulyman, and Abdulhameed Alsanie, "*Experimental Evaluation of MIMO-OFDM System with Rateless Space-Time Block Code*," **International Journal of Antennas and Propagation**, vol. 2019, Article ID 6804582, 8 pages, 2019. https://doi.org/10.1155/2019/6804582.

[4] **Ali H. Alqahtani**, Ahmed Iyanda Sulyman, and Abdulhameed Alsanie, "*Rateless Space Time Block Code for Mitigating Pilot Contamination Effects in Multicell Massive MIMO System with Lossy Links*," **IET Communications Journal**, vol.10, no.16, p:2252-2259, Nov 2016. http://ieeexplore.ieee.org/document/7654692/

[5] **Ali H. Alqahtani**, Ahmed Iyanda Sulyman, and Abdulhameed Alsanie, "*Rateless Space Time Block Code for Massive MIMO Systems*," **International Journal of Antennas and Propagation**, vol. 2014, Article ID 154261, 10 pages, 2014. http://dx.doi.org/10.1155/2014/154261

[6] Y. M. Al-Moliki, M. T. Alresheedi, Y. Al-Harthi and **A. H. Alqahtani**, "*Robust Lightweight Channel-Independent OFDM-Based Encryption Method for VLC-IoT Networks*," in **IEEE Internet of Things Journal**, 2021, DOI:10.1109/JIOT.2021.3107395.

[7] M. T. Alresheedi, Y. M. Al-Moliki, Y. Al-Harthi, and **Ali H. Alqahtani**, "*Dynamic Hyperchaotic Key Generation Using Optical Orthogonal Frequency Division Multiplexing-based Visible Light Communication Networks*," **IEEJ Transactions on Electrical and Electronic Engineering** (2021). https://doi.org/10.1002/tee.23557

[8] Umair, M., Ghaffar, A., Alkanhal, M., **Alqahtani, A**., & Khan, Y. (2020). "*Transverse electric surface waves in ferrite medium surrounded by plasma layers*". **Journal of the European Optical Society**, 16(1). https://doi.org/10.1186/s41476-020-00138-3

[9] Zaed S. A. Abdulwali; **Ali H. Alqahtani**; Yosef T. Aladadi; Majeed A. S. Alkanhal; Yahya M. Al-Moliki; Khaled Aljaloud; Mohammed Thamer Alresheedi. "*Miniaturized Broadband Bi-Yagi Antenna Array for Ambient RF Energy Harvesting.*" ***Micromachines*** 2023, 14, 2181 . https://www.mdpi.com/2072-666X/14/12/2181

[10] Niamat Hussain, Khaled Aljaloud, Rifaqat Hussain, **Ali H. Alqahtani**, Zia Ullah Khan, Farooq A. Tahir & Qammer H. Abbasi. "*Dual-sense slot-based CP MIMO antenna with polarization bandwidth reconfigurability*". ***Sci Rep*** 13, 16132 (2023). https://doi.org/10.1038/s41598-023-42569-1

[11] Muhammad Arfan, Abdul Ghaffar, Majeed. A. S. Alkanhal, Yasin Khan, **Ali. H. Alqahtani**, Sajjad Ur Rehman, "*Electromagnetic Radiation Force of Vortex Electromagnetic wave exerted on a perfect electromagnetic conductor (PEMC) Sphere*", ***Kuwait Journal of Science***, 2023 | Journal article, DOI: 10.48129/KJS.20775

[12] M. Arfan, A. Ghaffar, Majeed A. S. Alkanhal, Y. Khan, **Ali H. Alqahtani** & I. Shakir. *Extinction efficiency and scattering asymmetry of a PEMC sphere illuminated by vortex electromagnetic waves*. ***Optical and Quantum Electronics*** **55**, 891 (2023). https://doi.org/10.1007/s11082-023-05156-2

[13] Rifaqat Hussain, Khaled Aljaloud, Abida S. Rao, Abdul Aziz, Yosef T. Aladadi, **Ali H. Alqahtani**, Saad Alhuwimel, "*Slot-based CubeSat antenna with wide tunning capabilities*", ***Microwave and Optical Technology Letters***. 2023; 65: 1664-1669. doi:10.1002/mop.33593

[14] Zaed S. A. Abdulwali; **Ali H. Alqahtani**; Yosef T. Aladadi; Majeed A. S. Alkanhal; Yahya M. Al-Moliki; Khaled Aljaloud; Mohammed Thamer Alresheedi "*A High-Performance Circularly Polarized and Harmonic Rejection Rectenna for Electromagnetic Energy Harvesting*," ***Sensors***, vol. 23, no. 18, p. 7725, Sep. 2023, doi: 10.3390/s23187725.

[15] Muhammad Arfan; Abdul Ghaffar; Majeed A. S. Alkanhal; Yasin Khan; **Ali H. Alqahtani**; Sajjad Ur Rehman. *Laguerre–Gaussian Beam Scattering by a Perfect Electromagnetic Conductor (PEMC) Sphere*. ***Arabian Journal for Science and Engineering*** **48**, 8001–8009 (2023). https://doi.org/10.1007/s13369-022-07385-1

[16] Ejaz, Asma, Iqra Jabeen, Zia Ullah Khan, Akram Alomainy, Khaled Aljaloud, **Ali H. Alqahtani**, Niamat Hussain, Rifaqat Hussain, and Yasar Amin. "*A High Performance All-Textile Wearable Antenna for Wristband Application*," **Micromachines**, vol. 14, no. 6, p. 1169, May 2023, doi: 10.3390/mi14061169. [Online]. Available: http://dx.doi.org/10.3390/mi14061169

[17] M. Umair; A. Ghaffar; Majeed A. S. Alkanhal; Y. Khan; **Ali. H. Alqahtani**. 2023. "*Light Plasmon Coupling in Planar Chiroplasma–Graphene Waveguides*." **Plasmonics** , no. : 1-7.https://doi.org/10.1007/s11468-023-01824-x

[18] Hussain, Rifaqat, Khaled Aljaloud, Abida Shaheen Rao, Abdullah M. AlGarni, **Ali H. Alqahtani**, Abdul Aziz, Yosef T. Aladadi, Saad I. Alhuwaimel, and Niamat Hussain. 2022. "*Miniaturized Folded-Slot CubeSat MIMO Antenna Design with Pattern Diversity*" **Sensors** 22, no. 20: 7855. https://doi.org/10.3390/s22207855

[19] Arfan, M., Alkanhal, M.A.S., Ghaffar, A., **Alqahtani Ali H**. *Scattering of Laguerre–Gaussian beam from a chiral-coated perfect electromagnetic conductor (PEMC) cylinder*. **Journal of Computational Electronics 21**, 253–262 (2022). https://doi.org/10.1007/s10825-021-01834-0

[20] M. Azam, M. Umair, A. Ghaffar, Majeed A.S. Alkanhal, **Ali H. Alqahtani** & Y. Khan (2021) "*Dispersion characteristics of surface plasmon polaritons (SPPs) in graphene–chiral–graphene waveguide*", **Waves in Random and Complex Media**, DOI: 10.1080/17455030.2021.1902018

[21] Yaqoob, M., Ghaffar, A., Alkanhal, M., Naz, M., **Alqahtani, A.**, & Khan, Y. "*Electromagnetic surface waves supported by a resistive metasurface-covered metamaterial structure"*. **Scientific Reports** 10, 15548 (2020). https://doi.org/10.1038/s41598-020-72396-7

[22] M. Z. Yaqoob, A. Ghaffar, Majeed A. S. Alkanhal, Sajjad ur Rehman, **Ali H. Alqahtani** & Y. Khan. *"Hybrid surface waves in chiral loaded resistive metasurfaces"*. **European Physical Journal Plus**, *136, 666 (2021). https://doi.org/10.1140/epjp/s13360-021-01574-x*.

[23] M. Arfan, A. Ghaffar, Majeed A.S. Alkanhal, M.Y. Naz, **Ali H. Alqahtani**, Y. Khan, "*Orbital angular momentum wave scattering from perfect electromagnetic conductor (PEMC) sphere*", **Optik**,Volume 253,2022,168562, https://doi.org/10.1016/j.ijleo.2021.168562.

[24] Majeed A.S. Alkanhal, M. Umair, A. Ghaffar, M.Y. Naz, **Ali H. Alqahtani**, Y. Khan, "*Propagation of Hybrid Surface Waves in Ferrite Anisotropic Plasma Planar Structures*", **Optik**, Volume 229, 2021, 166255, https://doi.org/10.1016/j.ijleo.2020.166255.

[25] Muhammad Azam, Muhammad Zeshan Yaqoob, Abdul Ghaffar, Majeed A. S. Alkanhal, Yasin Khan & **Ali H. Alqahtani**. "*Electromagnetic Energy Surface Modes in Metamaterial-Filled Bi-layer Graphene Structures*". **Plasmonics** 16, 1175–1194 (2021). https://doi.org/10.1007/s11468-021-01375-z.

[26] M. Umair, A. Ghaffar, Majeed A. S. Alkanhal, M.Y. Naz, **Ali H. Alqahtani** & Y. Khan (2021) "Dispersion characteristics of hybrid surface waves at chiral-plasma interface", **Journal of Electromagnetic Waves and Applications**, 35:2, 150-162, https://doi.org/10.1080/09205071.2020.1828184

[27] M. Saeed, Majeed A. S. Alkanhal, A. Ghaffar, **Ali H. Alqahtani** & Y. Khan. "*Energy Plasmon Modes in Metamaterial-filled Double-layer Graphene-wrapped Cylindrical Waveguides*". **Plasmonics** 16, 695–709 (2021). https://doi.org/10.1007/s11468-020-01328-y.

[28] M.Z. Yaqoob, A. Ghaffar, Majeed A.S. Alkanhal, M.Y. Naz, **Ali H. Alqahtani**, Y. Khan, "*Tunable surface waves supported by graphene-covered left-handed material structures*", **Optics Communications**, Volume 489, 2021, https://doi.org/10.1016/j.optcom.2021.126874.

[29] M. T. Alresheedi, Y. M. Al-Moliki, Y. Al-Harthi, and **Ali H. Alqahtani**, "Dynamic Hyperchaotic Key Generation Using Optical Orthogonal Frequency Division Multiplexing-based Visible Light Communication Networks," IEEJ Transactions on Electrical and Electronic Engineering (2021). https://doi.org/10.1002/tee.23557

[30] Saeed, M., Ghaffar, A., Alkanhal, M., **Alqahtani, A.**, Khan, Y., & Ur Rehman, S. (2020). "*Plasmon modes supported by metamaterial-filled monolayer graphene cylindrical waveguides"*. **Journal of the Optical Society of America B: Optical Physics**, 37(11), 3515-3525, https://doi.org/10.1364/JOSAB.405960

IEEE Conferences:

[C1] **A. H. Alqahtani**, "*Dielectric Flat Lens for Millimeter-Wave Applications*," 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI). https://ieeexplore.ieee.org/document/9887042

[C2] **A. H. Alqahtani**, A. I. Sulyman and A. Al-Sanie, "*Loss-tolerant large-scale MUMIMO system with rateless space time block code*," 22nd Asia-Pacific Conference on Communications (APCC), Yogyakarta, Indonesia, August 2016, pp. 342-347. http://ieeexplore.ieee.org/document/7581419/

[C3] **Ali H. Alqahtani**, A. I. Sulyman and A. Al-Sanie, "*Rateless space time block code for antenna failure in massive MU-MIMO systems*," IEEE Wireless Communications and Networking Conference (WCNC), Doha, Qatar, April 2016, pp. 1-6.
http://ieeexplore.ieee.org/document/7565135/

[C4] Rabah W. Aldhaheri, and **Ali H. Alqahtani**, "*Performance Analysis of Fixed and Mobile WiMAX MC-CDMA-Based System*", IEEE Conference On Wireless Communication Systems (ISWCS) , pp.436-440, May 2010. http://ieeexplore.ieee.org/document/5624484/

[C5] **Ali H. Alqahtani**, "*Performance Study of Adaptive Modulation and Coding Schemes in WiMAX OFDM-based System*", IEEE Conference on Communications (MICC),pp.836-839, December 2009. http://ieeexplore.ieee.org/document/5431447/

Another Conference:

[C6] **Ali H. Alqahtani**,"*Multi-Purpose Wireless Sensors Networks Using Massive MIMO Technology over Hajj Area*", 17th Scientific Forum for Research of Hajj, Umrah and Madina Visit-Scientific Portal for 1438H,pp.173-180, May 2017.

Current Research Interests:

Wireless Communication Systems and Networks:

- Physical Layer Techniques for 6G
- STC (Space Time Codes)
- Massive MIMO systems
- Visible-Light Communication Systems and Networks
- Reconfigurable Intelligent Surfaces (RIS)
- Electromagnetic Energy Harvesting

4- Professional Associations And Activities:

- **Membership of Scientific Societies:**

Member of the Institute of Electrical and Electronic Engineer (IEEE): IEEE Communication Society.

- **Reviewer:**

Conferences:

ICMSAO'19
MobiApps 2018
DPNoC'18, SCS'18
IEEE VTC-Spring 2018
IEEE VTC-Spring 2017
9th IEEE-GCC 2018 TPC
10th IEEE-GCC 2019 TPC

Journals:

IEEE Access
IEEE Transactions on Vehicular Technology
IEEE Communications Letters
MDPI Sensors
MDPI Electronics

REFERENCES:

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4-Prof. Rabah W. Aldhaheri
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