



Curriculum Vitae

Farouk Abduh Kamil Hazea AL-Fuhaidy, PhD.

Personal Information

Assoc. Prof. Dr. in Electrical and Computer Engineering Dep.
Engineering and Architecture College, Ibb University, Ibb-Yemen.

B.D. 1 Jan, 1981, Yemen – Taiz

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Married – father of two sons and two daughters.

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Academic Qualification:

- **B.Sc.** In Electrical Engineering (Computers), Military Technical College (M.T.C), July, 2007. Total grade, **Excellent with honor** grade. All courses were taught in English.
- **M.Sc.** In Electrical Engineering (Computers), Military Technical College (M.T.C), Sep. 2009. The title of the Master thesis, “**Energy Aware Wireless Sensor Networks Routing Protocols.**”
- **Ph.D.** in electrical and communications, Military Technical College (M.T.C), Feb. 2013. The title of the PhD thesis, “**Advanced Signal Processing Techniques for Broadband Communication.**”

Academic Work Experience:

- **Assistant Prof. Dr. Member of** the Computer Engineering and IT department, at Dar Alsalam University, Sanaa, Yemen, from 26/3/2013 to 1/9/2014. **Appointed** as a **Head** of the dept. from oct.2013 to Sep.2014. **Partial work.**
- **Assistant Prof. Dr. Member** of the Electronic and Communication Engineering Department at **Sabaa University, Sanaa, Yemen**, Since 19/4/2013. **Appointed** as a **Head** of the Electrical Dep. Since oct.2013 to May.2015. **Partial work. Continue in Hourly work to now.**
- **Assistant Prof. Dr. Member of** the Electrical and Computer Engineering department, **IBB University**, since 19/12/2013 to now. **Government Candidate Appointment.**
- **Teaching** of many courses in Mechatronics Engineering department and Electrical Engineering Department (Computer Engineering), at **Sanaa University, Capital Sana’a, Yemen**. Since, Oct. 2014 to now. **As Assist. Prof. Dr (Visiting) and currently as Assoc. Prof. Dr (Visiting).**
- **Teaching** of many courses at the Mechatronics and Biomedical departments, **Emirates International University-Yemen**, Sanaa, Yemen. Since, Oct. 2015 to now to now. **Hourly work.**
- **Teaching** of many courses at **AZAL Univ.** and **ALNASSIR Univ.** Since March,2019.

- **Currently Work, Appointed as an Associative Professor Doctor in Electrical Engineering Dept. – Engineering College – IBB University, on Feb. 2020.**

Teaching and Research Experience

I. Teaching the following undergraduate courses:

- **Analog and Digital Signal Processing**
- **Electrical Circuits**
- **Electronic (I), (II), and (III)**
- **Digital Electronics**
- **Computer Network(I), and (II)**
- **Industrial Networks**
- **Microprocessors (I)**
- **Microprocessors (II) with Interfacing**
- **Microprocessors and Microcontrollers**
- **Embedded Systems**
- **Digital Logic circuits (I) and (II)**
- **Digital System Design**
- **Computer Organization (I)**
- **Computer Organization (II)**
- **Computer Engineering (II)**
- **Computer Architecture**
- **Digital Image Processing**
- **Discrete Mathematics**
- **Computation Theory (I) and (II)**
- **Structured Programming using C++**
- **Object Oriented Programming using C++**
- **Computer Programming using C# (Console Applications)**
- **Computer Programming using C# (Windows Applications)**
- **Advanced .Net Programming using Java**
- **Software Engineering**
- **Operating Systems**
- **Data Base Systems (I), and (II)**
- **Distributed Data Base**

In the following campus places:

- **Sanaa University, Sana'a, Yemen, and IBB University, IBB, Yemen.**
- **Sabaa University, Sana'a, Yemen.**
- **Dar Alsalim University for Science and Technology, Sana'a, Yemen.**
- **Emirates International University-Yemen, Sana'a, Yemen.**
- **AZAL University, Sana'a, Yemen, and ALNASSIR University, Sana'a, Yemen.**

II. Sharing in the following applied researches

- Replacement and Development of the Tactical Console for the Operations Rooms in the Tactical Training Simulator for the Navy Units Commanders (SATT). **Egyptian Armed Forces.**
- Tel-Yemen Conference on IPv4 to IPv6 migration, Sana'a, Yemen, 2016.

III. Supervision the development (analysis, design, and Implementation) of many Management Information systems for different applications like

- Marketing, Engineering, and Financial

IV. Supervisor of many graduate projects in Communications engineering, Computer engineering, MechaTronics Engineering, and IT departments

- **About 15** graduate projects in Mobile Communications (3rd and 4th generations including CDMA system model, LTE planning and simulation)
- About 8 graduation projects in IT, image processing, and Biomedical Engineering (including development of Far Learning Software, database applications, and breast cancer diagnostics and classifications).
- **Three** graduate projects in Mechatronics Eng. (**Autonomous Quadcopter, Design and implementation of Brain Controlled Leg, and Intensive Care Unit for Remote Patient following and treatment based on Brain & Eye Signals and IoT**).

V. Workshops and Conferences

- **Sharing in ASAT11, ASAT12, and ASAT13 (sharing and presentation) conferences, at the Military Engineering College, Cairo Egypt, May 2007, 2009, and 2011 respectively.**
- **Sharing and presentation in IECE8 conference, at the Military Engineering College, Cairo Egypt, May 2012.**
- **Sharing in workshop for preparing of learning study plans for Engineering programs and courses description, at Sabaa University, Sanaa-Yemen 2014.**
- **Sharing in the preparation of the Electronics and Communications Engineering program study plan, at the Modern Science University, Sanaa Yemen, 2014.**
- **Sharing as a member of workshop for the modification of the plan of computer Engineering and IT program, Dar El-salam University, Sanaa-Yemen, 2013.**
- **Sharing as a member of NARS Workshop for Engineering Colleges and Programs in Yemen, At Academic Certification Council, Ministry of higher education, Sanaa-Yemen, Apr.2018.**
- **Preparing and Introducing specification for the Operating Systems, Software Engineering, Data Communication and Networking, Multimedia Technology, System Integration and Administration, and IT Project managements Courses to IT Dept. at Malesia University, IBB-Yemen. 2018.**
- **Improvement of Mechatronics Eng. Dept. Program, Sana'a Univ. Mar. 2019.**
- **Sharing in Quality Evaluation and Strategy Workshop of Emirates International University-Yemen, Mar.2019.**

- **Sharing in the Strategy Workshop for Engineering & IT College, at Emirates International University-Yemen, Sanaa-Yemen, May.2019.**
- **Sharing as a member of Mechatronics Engineering Program Specification and Description, May. 2019.**
- **Preparing and Introducing specification for the Logic circuits, Advanced Digital System Design, Microprocessor-based Systems, and Embedded Systems courses to the Mechatronics Eng. Dept. at Emirates International University-Yemen, Sanaa Yemen, Jun-Jul. 2019.**
- **Revising about 10-courses specified to Mechatronics Eng. Program at Emirates International University-Yemen, Sanaa-Yemen.**
- **Revising and Improving the Microprocessors and Microcontrollers, and Embedded Systems Courses to the Mechatronics Eng. Dept. at Sanaa University, Sanaa-Yemen, Aug. 2019.**
- **Preparing and Introducing specification for the Logic circuits, Digital Electronics Circuits, Microprocessor-based Systems, Data Acquisition Systems, Industrial Networks, Analog & Digital Signal Processing, and Embedded Systems courses to the Mechatronics Eng. Program. at Sabaa, Sanaa Yemen, Jun-Jul. 2019.**
- **Revising specification sheet to 3-courses in Mechatronics Eng. Program. at Sabaa, Sanaa Yemen, Sep. 2019.**
- **Sharing as a member in development program specifications to the BSc. & Master degrees in computer Engineering, Electrical Eng. Dep. Engineering College, at Sanaa University, Sanaa-Yemen, Since Nov.2019 to Feb.2020.**

VI. List of Publications and Reviews

a. List of Publications:

- **Conferences:**

1. "Peak-to-Average Power Ratio Reduction for Single Carrier-Frequency Division Multiple Access using Repeated Clipping and Filtering." , ASAT13 Conf., MTC, Cairo, 2011.
2. "Peak-to-Average Power Ratio Reduction of Uplink Broadband Transmission Systems using Different Reduction Algorithms." , ASAT13 Conf., MTC, Cairo, 2011.
3. "Constant Envelope Single-Carrier Frequency Division Multiple Access " , IECE8 Conf., MTC, Cairo, 2012.
4. "A New Single Carrier Frequency Division Multiple Access Based on Discrete Cosine Transform Spread OFDMA. " , IECE8 Conf., MTC, Cairo, 2012.
5. "Performance Enhancement of OFDM System. " , SDWIC, GU, Bahrain, 2012.
6. "An Energy Efficient Routing Strategy for Wireless Sensor Networks. " , IEEE conf., Hammamat Alyasmin city, Tunis, 2012.

- **Journals:**

1. " Peak to Average Power Ratio Reduction for SC-FDMA using distortion reduction Algorithm", IJRRCS, 2011.

2. "A New Transceiver Scheme for OFDMA System Based on Discrete Cosine Transform and Phase Modulation", WPN Springer, 2012.
3. "Analysis of a new proposal for WiMax installation sites for maximum safety and minimum hazardous radiation on the population of Sana'a City", 2015.
4. "Performance Evaluation of SC-FDMA Systems using Wireless Images", AJCSA journal, Sep. 2017.
5. "Wireless Image Transmission over Frequency Selective Channel Using Recent OFDMA Systems", AJCCC, March. 2018.
6. "Phase Modulated OFDMA System, Study and Investigation", AJCSA Journal, May. 2019.
7. "DFT-Based OFDMA System with Phase Modulation for Broadband Communication", American Journal of Electrical and Computer Engineering, Vol. 3, No. 1, Jun. 2019, pp.1-9.
8. "Discrete Sine Transform Based OFDMA System for Wireless Broadband Communications", American Association for Science and Technology, AASCIT Communications, Vol. Jul. 2019.
9. **Three research** papers are now under **preparation and final review** in Communication Eng., Mechatronics Eng (Robotics). Field, and Image Processing (classification) field.

b. List of Review:

1. "A Combined User-order and Chunk-order Algorithm to Minimize The Average BER for Chunk Allocation in Uplink SC-FDMA Systems", IET journal, Sep. 2013.
2. "Proposed Frequency Domain PTS Scheme for PAPR Reduction in SC-FDMA Systems.", IET journal, Nov. 2013.
3. "A New Singl-Carrier Transceiver Scheme Based on the Discrete Sine Transform.", JOE journal, Apr. 2014.
4. "Peak-to-Average Power Ratio Reduction Techniques for Orthogonal Frequency Division Multiplexing Systems using Meta-heuristic Optimization Algorithm Based Tone Injection Technique.", JOE journal, Jan. 2015.
5. "Method for reducing the computation involved in 2D-DCT.", WAP journal, Apr. 2015.
6. "A Lite GA-assisted dynamic radio resource allocation for downlink OFDMA.", JOE journal, Jul. 2015.
7. "A Research on Energy consumption in Relay Underwater Acoustic Sensor Network.", JOE journal, Sep. 2016.
8. "Optimal Performance of Hybrid SC/EGC Diversity on Nakagami-0.5 Channels.", JOE journal, March 2017.
9. "A Secure Internet of Things (IOT) Architecture for Environmental Monitoring System in a Smart City", WPC, Springer, Aug. 2018.
10. "LEACH-TLC: A strategy of reducing and Uniforming Energy Consumption based on Target Location Constraint", IET Wireless Sensor Systems Journal, Nov. 2018.
11. "Environmental Monitoring System for Smart City based on Secure IOT Architecture", WPC, Springer, Dec. 2019.

12. “Energy-Balanced and Energy-Efficient Clustering Routing Protocols for Wireless Sensor Networks”, IET Communication, Jan. 2019.
13. “PI-based and Anti-windup Transmission Power Control for Wireless HART Field Device” , IET Wireless Sensor Systems, Aug. 2019.
14. Currently work on review to 2-papers to IT, Sonar & Radar-under IET-Journal.

Research Philosophy

Due to my Excellent background study in Computer and Communication Engineering and due to my currently work Experience in Mechatronics, Biomedical, Computer, Communication, and IT departments. So, My research interests and activities are in the areas of Wireless Sensor Networks (WSNs) Routing Protocols, Internet of Things (IoT), Embedded Systems, Mechatronics Systems, 3-G, 4-G, and 5-G mobile communications, and advanced signal processing, and image processing. It important to declare on my high experience in Academic Quality Assurance, since my sharing in preparing the NARS Workshop for Engineering Colleges and Programs in Yemen, sharing in preparing more than 6 Engineering Programs to different campus in Yemen (BSc. And Master Programs), Preparing specification and Study plan to more than 20-Courses and Revising about 20-Courses also.

Experience and Personal Skills

- Certificate in Oracle Development from the ITI, Egypt.
- Certificate in CCNA from the HIIT, Cairo University, Egypt.
- Certificate in MCSA from the HIIT, Cairo University, Egypt.
- Excellent in Arabic Language, and V. good in English language,

References

- Prof. Dr. Yahya Zakaria Mohasseb, MTC, Egypt, Email: mohasseb@mtc.edu.eg and mohasseb@ieee.org.
- Associative Professor / Abdelmajeed Aljunaid, IBB University, King Khaled University (currently), Saudia Arabia, Email: aalgunaid@kku.edu.sa , afaljunaid@yahoo.com .
- Assist. Prof. Dr. Hatim Al-Dois, IbbUniv. Yemen. Email: haldois@ibbuniv.edu.ye.