

# Curriculum Vitae

## Personal Information

Name: Rand Basil Mohammed  
Nationality: Iraqi  
Languages: English and Arabic  
Gender: Female

## Contact Information

Contact Details: [rand.basil@tiu.edu.iq](mailto:rand.basil@tiu.edu.iq)

## Webpages:

Google scholar:

<https://scholar.google.com/citations?user=r2vUMaMAAAAJ&hl=en>

Research gate:

<https://www.researchgate.net/profile/Rand-Alhashimie>

Academic Website:

<https://academics.tiu.edu.iq/user/randb.mohammed/>

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## Qualifications

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1. Doctor of Philosophy in Electronics Engineering from School of Electrical and Electronic Engineering, Faculty of Science and Engineering, University of Manchester, United Kingdom, in June 2017. The PhD thesis entitled "*Novel Scalable and Real-Time Embedded Transceiver System*".
2. Master in Electronics and Communication Engineering with a very good grade, from Electrical Engineering Department, College of Engineering, University of Mosul, Iraq in 2010. The Master thesis entitled "*Study and Design of Power Amplifier for Cellular Communications*".
3. Bachelor degree in Electronics Engineering with a 1<sup>st</sup> rank and a very good grade, from Electronic Engineering Department, College of Electronic Engineering, University of Mosul, Iraq in 2008.

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## Current Position

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- Lecturer in Mechatronics Engineering Department at Tishk International University (TIU) since Sep. 2018

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### Publications

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- 1) R. B. Mohammed, S. A. Albarwary and H. N. Sabeh, "Project-Based Learning Investigation in Mechatronics Engineering Education at TIU: A Case Study," 2025 IEEE 22nd International Multi-Conference on Systems, Signals & Devices (SSD), Monastir, Tunisia, 2025, pp. 387-393, doi: 10.1109/SSD64182.2025.10989940.
- 2) H. N. Sabeh, D. M. H. Kee, R. B. Mohammed, S. A. Albarwary and S. Khalilov, "ChatGPT in the Malaysian Classroom: Assessing Student Acceptance and Effectiveness Through UTAUT2 and IS Success Models," 2025 IEEE 22nd International Multi-Conference on Systems, Signals & Devices (SSD), Monastir, Tunisia, 2025, pp. 583-592, doi: 10.1109/SSD64182.2025.10989952.
- 3) Taha, M. S., Basil Mohammed, S., & Mohammed, R. (2025). Exploring The Transformative Impact of AI In The Design Field. *EURASIAN JOURNAL OF SCIENCE AND ENGINEERING*, 10(3), 34-46. <https://doi.org/10.23918/eajse.v10i3p4>
- 4) R. B. Mohammed, S. A. Albarwary, Sara Serwer Yonus, and Marwa Anmar, " Physiotherapy Estimation For Disabled Individuals In Erbil City," 10<sup>th</sup> IEEE International Engineering Conference On Advances In Computer And Civil Engineering, Erbil, Iraq Monastir, Oct. 2024.
- 5) Safa Anmar Albarwary, Rand Basil Mohammed, "DESIGN DEVELOPMENT OF ROBOTIC EXOSKELETONS IN REHABILITATION", Journal of China University of Petroleum (Edition of Natural Science), Vol. 48, No. 3, Mar. 2024, pp. 1285 – 1307
- 6) S. A. Albarwary, R. B. Mohammed, A. S. Alkhaiaf and Y. A. Abdualjabar, "Design and Implementation of Fluid Filling Line," 2024 21st International Multi-Conference on Systems, Signals & Devices (SSD), Erbil, Iraq, 2024, pp. 132-140, doi: 10.1109/SSD61670.2024.10548313.
- 7) Ameer Salar Mohammed & Yousif Abdulkhaliq , Dr.Rand Basil & Ms.Safa Anmar, "AUTOMATIC FLUID FILING LINE BASED ON ARDUINO", University of Nizwa , Vol. 12, Jan. 2024, pp. 505 – 508
- 8) Ahmed Adnan , Sarok Sardar, Mustafa Ismail , Dr. Rand Basil , Ms. Safa Anmar, "DISINFECTING CLEANING ROBOT ", University of Nizwa , Vol. 12, May. 2023, pp. 509 – 513
- 9) Mohammed, R.B. & Taha, M.S., R Mohammed, S.B. (2022). Smart Learning Environment for Engineering Faculty: TIU as a Case Study. *Eurasian Journal of Science and Engineering*, Vol. 8, No. 1, Jun. 2022, pp. 187 – 202. Retrieved from: <https://eajse.tiu.edu.iq/index.php/volume-8-issue-1-article-17/>
- 10) Mohammed, R. B. & van Silfhout, R. (2021). High Bandwidth Data and Image Transmission Using a Scalable Link Model with Integrated Real-Time Data Compression. *e-Prime - Advances in Electrical Engineering, Electronics and Energy*. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S2772671121000164>.
- 11) Mohammed, S.B., & Taha, M.S., & Mohammed, R.B., & Mamand, S.A., & Mohammed, D.A. (2021). Teaching Methodology for Interior Design Studio-I during COVID-19 Pandemic at Tishk International University. *Eurasian Journal of Science & Engineering*, 7(1), 185-196. 3. Retrieved from: <https://eajse.tiu.edu.iq/index.php/volume-7-issue-1-article-16/>
- 12) Mohammed, R.B., & van Silfhout, R. (2020). Lossless Compression Methods for Real-Time Images. *Eurasian Journal of Science & Engineering*, 6(2), 169-188. 4. Retrieved from: <https://eajse.tiu.edu.iq/index.php/volume-6-issue-2-article-14/>

- 13) Rand Basil Mohammed and Roelof van Silfhout, "Real-time Transceiver System Based on Rapid-I/O Protocol", Eurasian Journal of Science and Engineering (EAJSE), Vol. 4, No. 2, Dec. 2018, pp. 39 – 53 5. Retrieved from: <https://eajse.tiu.edu.iq/index.php/volume-4-issue-2-article-4/>
- 14) Rand B. Mohammed and Roelof van Silfhout, "A Novel Transceiver Architecture for High-Speed Parallel Ethernet Network", Fourth International Conference on Advance in Computing, Communication and Information Technology (CCIT), pp 122 – 126, IRED SEEK Digital Library, DOI:10.15224/978-1-6-63248-092-7-66, 17-18 March 2016. 6.
- 15) Presented Poster titled: "A Novel Transceiver Architecture for High-Speed Parallel Ethernet Network" in Postgraduate-Summer-Research-Showcase (PSRS) at the University of Manchester in 05 June 2015. 7.
- 16) Khalid K. Mohammed and Rand B. Mohammed, "Linearization of Power Amplifier Class-AB using Cartesian Feedback", 7th IEEE International Multi-Conference on Systems, Signals and Devices (SSD'2010), 27-29 June 2010, Amman-Jordan

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#### **Paper Manuscript Submitted and Under Review Process**

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- 17) Safa A. Albarwary, and Rand B. Mohammed, "Design a Home Nursing Robot for Senior People", 2025.

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#### **Courses Teaching**

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1. Embedded and Real-time Systems
2. Microprocessor and Programmer
3. Microcontroller and Programmer
4. Electronic Principles and Devices
5. Analog Devices and Circuits
6. Electrical Circuits and Network Analysis I/II
7. Computer Programming
8. Computer Organization and Architecture
9. Research Methodology

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#### **List of Supervised Graduation Projects**

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2024 – 2025

1. Autonomous Farm
2. Nursing Robot
3. Spider Robot

2023 – 2024

1. Glass Cleaning Robot
2. Smart Educational Institutes
3. Snake Robot to find survivors under collapsed buildings

2022 – 2023

1. Disinfection Cleaning Robot
2. Smart Wheelchair
3. Firefighting Drone
4. Fluid Fill Line robotic arm
5. Gate System based on Sensors and Card Reader

6. Smart Home based on IoT

2021 – 2022

1. Watering System based on IoT

2020 – 2021

1. Sorting Robot for Drugstore
2. Smart Home for Elderly People
3. Security System in Smart Home

2019 – 2020

1. Smart Image Compression System

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#### **Research Interests**

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- Embedded and Real-time System
- FPGA development and applications
- Rehabilitation Assistive Robots
- Smart Cities and Smart buildings
- PLC programming and applications
- Medical image processing

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#### **University Committees and Duties**

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- International Relation Office, Chair.
- IEC Conference, Member.
- Industrial Connection Committee, Member,
- Advisor Coordination Committee, Member.
- Scientific Committee, Member.
- Exam Committee, Head.
- International Festival of Language, Culture and Science, Member.

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#### **Duties At the Level of The Department**

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- Member of the Accreditation team for Mechatronics Engineering Department; the department was awarded with ASIIN accreditation in March 2023.
- Developing the curriculum of Mechatronics Engineering Department based on Bologna system.
- Coordinator of the Mechatronics Engineering Department since October 2019.

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### Membership

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- The Institute of Engineering and Technology (IET): since 2013.
- The Institute of Research Engineers and Doctors (IRED): since 2016.
- Member in the Journal of Modern Computing and Engineering Research (JMCER) <https://jmcer.org/> since 2022.

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### Funded and Academic Awards

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- Awarded prizes, by the Iraqi Vice-president, Iraqi Vice prime-minister, the Iraqi Minister of Higher Education, and the presidency of the University of Mosul in 2009, for getting the 1<sup>st</sup> Rank among the all graduated engineers at Mosul University in 2008.

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### Computer Skills

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Software	Level of use			
	Professional	Very good	Good	Average
MatLab	√			
Quartus II	√			
Multisim	√			
PLC Programmer (Ladder)		√		
C/C++ Programmer	√			
Visual Basic Programmer		√		
Arduino Programmer	√			
AUTO CAD			√	
Microsoft Office	√			
EMU – Microprocessor Programmer	√			
Python			√	