

Age : 50

PhD in Electric Engineering from  
University of Brest, Brest, France.

Al-Bakr neighborhood

MOSUL

IRAQ

Mobile : +9647713959590

E-mail : omar.hazem@ntu.edu.iq

Was born in Mosul, Iraq, in 1974. He received the B.Sc. and M.Sc. degrees both in electrical engineering, from the electrical power systems engineering department in the University of Technology of Baghdad, Baghdad, Iraq, in 1996 and 2004 respectively. After graduation, he joined the Technical College of Mosul, Northern Technical University, Mosul, Iraq, as a Lecturer. He awarded the Ph.D. in Electrical engineering at the University of Brest, Brest, France. He has many publications, conferences and scientific journals on the subject of renewable energies systems and currently works as a Asst. Prof. at the Northern Technical University, He is a member and a scientific reviewer for many scientific journals and scientific conferences locally and internationally.



## EDUCATION AND QUALIFICATIONS :

**2023:** Postdoctoral Research Fellowship for Six Months at the IRENA Laboratory for Electrical Engineering, Saint Nazaire, University of Nantes, France.

**28/6/2022-Until now:** Head of the Francophone Corner Unit at Northern Technical University.

**08/02/2021:** Head of the Department of Missions and Cultural Relations at the Northern Technical University.

**04/01/2021:** Granting a scientific title (Assistant Professor) from Northern Technical University.

**25/08/2020:** Responsible for the Academic Promotions Division at the Northern Technical University.

**26/03/2018:** Responsible for the Cultural Relations Division in the Missions and Cultural Relations Department at the Northern Technical University.

**26/05/2016:** Award the PhD in Electrical engineering with a mention of excellence (**très honorable**) from FRE CNRS 3744 IRDL -University of Brest/ ENSTA Bretagne / ENIB, IUT of Brest – UBO, Kergoat - CS 93837 - 29238 BREST CEDEX 03, FRANCE.

**2012-2016:** PhD Student in FRE CNRS 3744 IRDL -University of Brest / ENSTA Bretagne /ENIB, IUT of Brest – UBO, Kergoat - CS 93837 - 29238 BREST CEDEX 03, FRANCE.

Which previously was called Brest Mechanics and Systems Laboratory – LBMS, EA 4325 - University of Brest/ ENSTA Bretagne / ENIB, IUT of Brest – UBO, Kergoat - CS 93837 - 29238 BREST CEDEX 03, FRANCE.

**2011-2012:** Student in a French language course, University Stendhal - Grenoble 3, 25 - 38040 Grenoble Cedex 9, France.

**2004-2011:** Assist lecturer in technical college Mosul-Iraq and in the Department of Electrical and Electronic Engineering, University of Technology- Baghdad (lecturer for the following subjects: power electronics, modern control systems, Electrical machine Technology).

**2004** M.sc in Electrical Power Systems Engineering University of Technology-Baghdad

**2001-2004:** M.sc Student in Electrical Power Systems Engineering department in University of Technology-Baghdad (Courses in power systems, power electronics, modern control systems, and reliability with protection devices). My Thesis in M.sc (optimal capacitor placement in power systems using a genetic algorithm).

**1996-2001:** Electrical engineer training (training of students in the following laboratories: computer Lab., measurement Lab., machines Lab., power electronics Lab., control systems lab.).

**1996** B.sc in Electrical and Electronics Engineering from university of technology-Baghdad, I am the 1st on my department (Department of Electrical and Electronic/ university of technology-Baghdad).

**1992-1996:** B.sc Student in Electrical and Electronics Engineering department in former military college of engineering, Then I graduated from college in 1996, I was the 1st in my department (Electrical and Electronic department/General electrical).

## LANGUAGES :

1. Arabic language is language maternal.
2. English language: I have a certificate of TOFEL ITP Score 427 /600. "Good working knowledge".
3. French language: I have a certificate of A2; I took the course in French Lang. Level B2 in C.U.I.F institute in Grenoble, "Good command of French".
4. Cours in "FLE (français langue étrangère) " / ECOLES DOCTORALES/ Université de Bretagne occidentale.
5. Course in "FLE (French as a Foreign Language)" / Francophone University Agency / French Cultural Institute in Erbil / Iraq.
6. Courses in « Anglais intensif » / ECOLES DOCTORALES/ Université de Bretagne occidentale.

## EXPERIENCE, CERTIFICATES & COURSES :

1. Holds a training certificate by participating in the training course of the Sustainable Energy and Economic Development in Jordan (SEED) project entitled "Applied PV Systems", online training, 15-18 June 2020, Jordan.
2. Holds a training certificate by participating in the advanced training course electrical machines held in Cairo Held in Cairo From August 01st till August 12th, 2009, Implemented by the Staff Training Institute (STI) in cooperation with Technology Competency Center (TCC); presented by the Productivity & Vocational Training Department (PVTD) under the auspices of the Ministry of Trade and Industry.
3. I have IC3 (Internet and computing core certification) and my score (77/100).
4. Systems: Windows NT/9X/2000/XP/Vista/7, All the Microsoft office.
5. Design of **Artificial intelligence** as **Neural Networks** for Power Systems, Application of **Genetic Algorithms** and **Particle Swarm Optimization** to obtain the optimization in power distribution and generation systems.
6. Computer languages (Matlab, Visual Basic, turbo c, C++), computer network, (combination & maintenance parts of computer).
7. In power system stations, (generation, distribution, maintenance), Protection devices.
8. Design of electrical power systems using HOMER program.
9. Teaching (power systems, power electronics, control systems, reliability and protection.
10. Cours in «Elaborer son projet professionnel / ECOLES DOCTORALES/ Université de Bretagne occidentale.
11. Cours in «Maîtriser un logiciel de références bibliographiques : ZOTERO» / ECOLES DOCTORALES/ Université de Bretagne occidentale.
12. Cours in «Use the **latex** in the writing of scientific research » / ECOLES DOCTORALES/ Université de Bretagne occidentale.

13. Cours in «Techniques de communication – L'orateur en situation» /ECOLES DOCTORALES/ Université de Bretagne occidentale.
14. Successfully participated in "Doctors & Breton Companies 2016" organized by several youth associations researchers (Nicomachean and Dakodoc), that held Friday, June 17, 2016, in ISTIC Rennes – University of Rennes, France.
15. Participation in a 10-hour awareness-raising workshop on this theme, "Mediation: a tool for conflict prevention and management", which was held online on December 6, 7, 12, 13 and 14, 2023.
16. Participation in an 18-hour awareness-raising workshop on this theme, "Mediation: a tool for conflict prevention and management", which was held on September 16, 17 and 18, 2024 at the Franco-Iraqi Cultural Institute.

## PUBLICATIONS

1. **"Optimal Shunt Capacitor Placement in Power Distribution System using a Genetic Algorithm"** Journal: IRAQI JOURNAL OF COMPUTERS, COMMUNICATION AND CONTROL & SYSTEMS ENGINEERING Year: 2004 Volume: 4 Issue: 1 Pages: 76-88".
2. **"Select the optimal sensitivity factor in power distribution systems using a genetic algorithm"**, 10th scientific conference for foundation of technical education-Baghdad, March 2007.
3. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid and T. Tang, "Hybrid Generation Systems Planning Expansion Forecast: A Critical State of The Art Review,"** in Proceedings of the IEEE IECON 2013 (International Conference of the IEEE Industrial Electronics Society), Vienna, Austria, p.1666-1671, November 2013.
4. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid and A.A. Elbaset, "Optimal Design of a PV/Fuel Cell Hybrid Power System for The City of Brest in France,"** in Proceedings of the IEEE ICGE 2014 (The First International Conference on Green Energy, to be held in Sfax), Tunisia, March 2014.
5. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid, G. Feld, T. Tang and A.A. Elbaset, "Optimal Design of a Stand-Alone Hybrid PV/Fuel Cell Power System for the City of Brest in France,"** International Journal on Energy Conversion ,Vol.2, N.1, January 2014.
6. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid and T. Tang, "HOMER-based optimal design of a stand-alone hybrid PV/fuel cell power system for the city of Brest in France,"** in Proceedings of the 2014 ICIEM, Batna (Algeria), p. 401-406, May 2014.
7. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid, "Cost Analysis and Design of Hybrid Renewable System for Stand Alone Site in Bretagne,"** dans les Actes de JCGE 2015 (Journée des Jeunes Chercheurs en Génie Électrique), Cherbourg (France), Juin 2015.
8. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid and G. Feld, "Optimal Design and Energy Management of Hybrid Wind/Tidal/PV Power Generation System for a Remote Site in Bretagne (France),"** Accepted in IEEE IECON 2016, Florence (Italy), p. 1-5, October 2016.
9. **O.H. Mohammed, Y. Amirat, M.E.H. Benbouzid, G. Feld, "Hybrid Generation Systems Planning Expansion Forecast State of the Art Review: Optimal Design vs**

**Technical and Economical Constraints,"** Journal of Electrical Systems, Vol.12, N.1, p.20–32, March 2016.

10. **O.H. Mohammed**, Y. Amirat, M.E.H. Benbouzid and G. Feld, Chapter in the book entitled: Smart Energy Grid Design for Island Countries-Challenges and Opportunities by Springer "**Optimal Design and Energy Management of a Hybrid Power Generation System based on Wind/Tidal/PV Sources: Case Study for the Ouessant French Island**", 2017.
11. **O.H. Mohammed**, "**Integration of a Hydropower-Solar-Batteries hybrid system for satisfying off-grid residential electrical load in Mosul, Iraq,**" 1st Scientific Conference for Renewable Energies in Institute of Hawija, Kirkuk(Iraq), March 7-8/3/2018.
12. **O.H. Mohammed**, Y. Amirat, M.E.H. Benbouzid, G. Feld, "**Economical Evaluation and Optimal Energy Management of a Stand-Alone Hybrid Energy System using Genetic Algorithm-based Strategies,**" Electronics, 2018, vol.7(10) p.p 233.
13. **O.H. Mohammed**, "**Optimal Hybridisation Of a Renewable System to Fulfill Residential Electrical Load: In Mosul, Iraq,**" to 3rd Scientific Conference of Electrical Engineering (SCEE2018) in University of Technology, Technically Sponsored by IEEE, Baghdad, Iraq.
14. **O.H. Mohammed**, Y. Amirat, M.E.H. Benbouzid, "**Particle Swarm Optimization Of a Hybrid Wind/Tidal/PV/Battery Energy System. Application To a Remote Area In Bretagne, France,**" Energy Procedia, Vol.162, p.p (87-96), Avril 2019.
15. Mohammed Kharrich, **O. H. MOHAMMED**, M. MAKHERRAZ, "**Assessment of Renewable Energy Sources in Morocco using Economical Feasibility Technique**", International Journal of Renewable Energy Research, December 2019 vol.9(4) p.p 1856-1864.
16. Kharrich, M., **O. H. MOHAMMED**, Suliman, M., Akherraz, M., "**A Review on Recent Sizing Methodologies for Hybrid Microgrid Systems**", (2019) International Journal on Energy Conversion (IRECON), 2019 vol.7 (6), pp. 230-240.
17. Mohammed Kharrich, **O. H. MOHAMMED**, M. MAKHERRAZ, "**Design of Hybrid Microgrid PV/Wind/Diesel/Battery System: Case Study for Rabat and Baghdad**", EAI Endorsed Transactions on Energy Web, 2020, vol.20(7) p.p 1-9.
18. Alshrefy, Z. A., Yousif, S. S., AL-Rifaei, S. H., & **O. H. Mohammed**, (2020). "**Assessment of relative humidity, indoor temperature and (CO2) amount with different air conditioning systems and ventilation in Northern Technical University buildings in Mosul, Iraq**", Solid State Technology, 63(6), 1894-1912.
19. KHARRICH, Mohammed, **MOHAMMED**, Omar Hazem, ALSHAMMARI, Nahar, et al. "**Multi-objective optimization and the effect of the economic factors on the design of the Microgrid hybrid system**", Sustainable Cities and Society, 2020, p. 102646.
20. KHARRICH, Mohammed, **MOHAMMED**, Omar Hazem, KAMEL, Salah, et al. "**Development and Implementation of a Novel Optimization Algorithm for Reliable and Economic Grid-Independent Hybrid Power System**", Applied Sciences, 2020, vol. 10, no. 18, p. 6604.
21. KHARRICH, Mohammed, KAMEL, Salah, ABDEEN, Mohamed, **MOHAMMED**, Omar Hazem et al. "**Developed Approach Based on Equilibrium Optimizer for Optimal Design of Hybrid PV/Wind/Diesel/Battery Microgrid in Dakhla, Morocco**", IEEE Access, 2021, vol. 9, p. 13655-13670.

22. M. Kharrich, **O. H. Mohammed**, S. Kamel, M. Aljohani, M. Akherraz and M. I. Mosaad, **"Optimal Design of Microgrid Using Chimp Optimization Algorithm,"** 2021 IEEE International Conference on Automation/XXIV Congress of the Chilean Association of Automatic Control (ICA-ACCA), 2021.
23. **Mohammed, Omar Hazem**, and Mohammed Kharrich. Chapter in the book entitled: **"An Overview of the Performance of PSO Algorithm in Renewable Energy Systems."**, No.9, p. 307-320, 2021.
24. Al-Salmany, Z. T. **Mohammed, Omar Hazem**, (2021). **Modeling and management of a grid-connected hybrid renewable energy system. Design Engineering**, 10255-10268.
25. **O. H. Mohammed** and Z. T. Al-Salmany, **"Performance Optimization of Solar PV System Utilized for Cooling System"**, EAI Endorsed Trans Energy Web, vol. 9, no. 39, p. e5, Jun. 2022.
26. S. Ghosh, M. Majumder, **O. H. Mohammed**, M. Bajaj, A. R. Singh, and S. Kamel, **"Estimation of failure probability of wave energy farms by group method of data handling: An Indian scenario,"** Front. Energy Res., vol. 10, p. 1009987, Oct. 2022.
27. **Mohammed, Omar Hazem**, Dina Khalid Hashim, and Mohammed Y. Suliman. **"The Optimal Energy Management Methods of The Hybrid Power System."** NTU Journal of Renewable Energy 4.1 (2023): 7-17.
28. **O. H. Mohammed** and A. Abdullah, **"Intelligent Energy Management Technique for Hybrid PV/PEMFC/Battery System,"** 2023 International Conference on Engineering, Science and Advanced Technology (ICESAT), Mosul, Iraq, 2023, pp. 121-126.
29. R. Madjeda, D. Ahmed and **M. O. Hazem**, **"Design study of a solar-powered hydrogen fuel station in the Ouargla region,"** 2024 International Conference on Advances in Electrical and Communication Technologies (ICAECOT), Setif, Algeria, 2024, pp. 1-5.

### Reviewer and Committee Member

1. Reviewer in the International Journal on Energy Conversion (**IRECON**).
2. Reviewer in the International Journal of Renewable Energy Research (**IJRER**).
3. Reviewer in the Third Science Conference of Electrical Engineering 2018 (**SCEE2018**).
4. Reviewer in the International Conference on Advanced Science and Engineering 2019 (**ICOASE2019**).
5. Reviewer in the 2nd international conference on electrical, communication, computer, power and control engineering (**ICECCPCE19**).
6. Reviewer in the 4th Scientific International Conference 2019 (**4th-SICN-2019**).
7. Member of the Scientific Committee of the 1st International Conference on Material Engineering & Science (**IConMEAS 2018**), held at Istanbul Aydin University, Istanbul - Turkey from 08 to 09 August 2018.
8. Reviewer in the 2nd International Conference on Materials Engineering and Science (**IConMEAS 2019**), which hold at the University of Technology Baghdad – Iraq.
9. A member of the Scientific Committee (In the Technical Program (TPC) and Smart Grid Technologies (SGT)) of the 1st International Conference on Smart Cities and Smart Technologies (**MIC-Smart 2019**), which hold in Istanbul, Turkey in the period 7-9 June 2019.

10. Member of the Scientific Committee (in TPC and Energy Systems and Nuclear Engineering (ESNE)) of the 1st International Congress on Engineering Technologies (**EngiTek 2020**) in the period 16-18 June 2020, FoE-JUST, Irbid, Jordan.
11. Member of the Congress Scientific Committee (CSC membership) (mainly editing of journal special issues) in (1st International Conference on Energy Systems and Technologies (**MIC-Energy 2020**), which hold in Dubai, UAE in the period 17-19 January 2020.
12. Member of the Scientific Committee of the 1st International Conference on Sustainable Development Techniques (ICSdT 2022), which hold on 15-16 Jun 2022 in Mosul City, Iraq.
13. Reviewer in Universal International Journal of Photoenergy.
14. Reviewer in the Engineering and Technology Journal.
15. Reviewer in Journal of Electrical Engineering & Technology.
16. Reviewer in Universal Journal of Electrical and Electronic Engineering.
17. Reviewer in EAI Endorsed Transactions on Energy Web Journal.
18. Reviewer in Journal of Nuclear Energy Science & Power Generation Technology.
19. Reviewer in Recent Advances in Electrical and Electronic Engineering journal.
20. Reviewer in Advances in Electrical and Electronic Engineering journal AEEE.
21. Reviewer in EAI/Springer Innovations in Communication and Computing journal.
22. Reviewer in Energy Conversion and Management Journal.
23. Reviewer in the International Multi-Disciplinary Conference: "Sustainable Development and Smart Planning" (**IMDC SDSP 2020**).
24. A member of the Scientific Committee in the Technical Program (**TPC**) the International Multi-Disciplinary Conference: "Sustainable Development and Smart Planning" (**IMDC SDSP 2020**) will be held in the period June 2020.
25. Member of the Power Systems Management and Economics (**PSME**) Committee and a member of the technical program committee (**TPC**) at the 1st Mosharaka International Conference on Power Engineering and Applications (**MIC-Power 2020**). Which will be held in Valencia, Spain from 4-6 September 2020.
26. Reviewer in the International Conference on Automation **IEEE ICA/ACCA2020**.
27. Reviewer in the International Conference on Advanced Science and Engineering 2020 (**ICOASE2020**).
28. Reviewer in the **SN Applied Sciences** Journal.
29. Reviewer in the **IEEE ICA/ACCA2021** (IEEE International Conference on Automation/XXIV Congress of the Chilean Association of Automatic Control (ICA-ACCA 2021)).
30. Reviewer in the 4th International Conference on Engineering Technology and its Applications [**4thiiceta2021**], 2021.
31. Reviewer in the International Conference on Advances in Sustainable Engineering and Applications, [**ICASEA'21**], 2021.
32. Reviewer in the **Cogent Engineering** Journal.
33. Reviewer in the **Sustainability** Journal.
34. Reviewer in the **Journal of Intelligent & Fuzzy Systems**.
35. Reviewer in the 4<sup>th</sup> International Conference on Advanced Science and Engineering [**ICOASE2022**], 2022.

36. **Guest Editor** for the special issue of the energies journal on Title "Special Issue "Challenges with Microgrids, Mini-Grids, and Nanogrids in Remote Communities: Modeling, Control, and Operation", 2022.
37. Member of the Scientific Committee of the International Conference on Engineering, Science, and Advanced Technology (**ICESAT**), Which will be held at Northern Technical University | Technical Engineering College / Mosul TECM, IRAQ, in the period May 31- June 01, 2023.
38. [Member of the editorial board of the global journal of energy technology research updates.](#)
39. [Member of the advisory board of The Scholar Journal for Sciences & Technology. It is affiliated with the Scientific and Technological Studies and Research Unit at the Danish Arab Center for Future Studies of the Northern European Academy in Copenhagen / Denmark.](#)
40. Member of the (Scientific Research) Committee of the Regional Conference of Francophone University Rectors for the Middle East 2024 (**CONFREMO**) committees.
41. Member of the Scientific Committee of 3rd International Conference On Renewable Energy ( **ICRE 2025**), will be held in Sulaymaniyah in IRAQ from April 16 to 17, 2025.

### Scientific sites

1. **Google scholar:**

<https://scholar.google.com/citations?user=pEM31VYAAAAJ&hl=ar&authuser=2>

2. **ResearchGate :**

[https://www.researchgate.net/profile/Omar\\_Mohammed24](https://www.researchgate.net/profile/Omar_Mohammed24)

3. **Publons :**

<https://publons.com/researcher/1546906/dr-omar-hazem-mohammed/>

4. **Scopus** Preview :

<https://www.scopus.com/authid/detail.uri?authorId=7005092219>

5. **Linkedin :**

<https://www.linkedin.com/in/dr-omar-hazem-mohammed-b6558445/?originalSubdomain=fr>

6. **ORCID**

<https://orcid.org/0000-0001-6960-6033>

7. **Mendeley**

<https://www.mendeley.com/profiles/omar-hazem-mohammed/>

8. **Researcherid**

<http://www.researcherid.com/ProfileView.action?returnCode=ROUTER.Unauthorized&Init=Yes&SrcApp=CR&queryString=KG0UuZjN5WknVAoomZdKlQkBhfGpHtkxCGFiuSX%252BdNo%253D>

## Volunteer Activities and Sport:

- Working in local organizations to help students and the poor in Grenoble, France (EMF GRENOBLE).
- Design the photo and Art program as Photoshop, coral draw, Inkscape, etc.
- Montage the films.
- The Graphic programs.
- Installation, maintenance, repair and detection of mobile phones and computer software problems.
- Playing the football, swimming.
- Driving license of the car.