# Curriculum Vitae Ahmed Falh Hasan AL-Gailani

# **Objective**

To earn a position of responsibility in the fields of Materials Engineering and Materials Design (Process modelling, Welding, Tool wear, and Material testing and inspection, Powder technology, Corrosion, Radiography), that enables me to utilize my skills and theoretical expertise to deal with industrial problems. In addition, my postgraduate degrees enable me to university teaching and working.

# **Personal Information**

Academic degree: Associated Professor

Scopus ID: 57206433211 Researcher ID: E-9016-2019

ORCID: 0000-0003-1547-1908

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Birth Date & Place: September, 05, 1976 – Iraq

Nationality: Iraqi

Passport Number: A14913358 valid until January 2027

Marital Status: Married – Four children

Mobile: Iraq\+964 7736458960

Email: ahmedfalh.eng@gmail.com and ahmedfalh@engineering.uodiyala.edu.iq

Website: www.uodiyala.edu.iq

License: Iraqi International Driving License.

Postal address: Department of Chemical Engineering, College of Engineering, Diyala University,

Baquba City, Diyala Governorate, ZIP 32001, Iraq.

#### **Professional Strength and Skills**

- Very effective in Friction Stir Welding (FSW), high viscous flow modeling using Computational Fluid Dynamics (CFD), Tool wear in FSW. Effective in inspection, measurement and material testing and very effective in powder technology.
- Wide theoretical knowledge in most subject of mechanical engineering such as engineering material, metallurgy and phase diagram, manufacturing technology, fluid flow, failure analysis.

## **Educational Qualifications**

 PhD. Material design and material engineering, University of Nottingham, Nottingham, England -UK

• MSc. Extractive metallurgy, University of Technology Baghdad, 1999-2002 Iraq. (English Curriculum).

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• B.Sc. Metallurgy Engineering, University of Technology Baghdad, Iraq. (English Curriculum).

1994-1999

### **Memberships and Academic positions**

- Member of Scientific Committee of Materials engineering department College of Engineering Diyala University 2019 till now.
- Head of Chemical Engineering Department College of Engineering Diyala University since January 2017-2019.
- Diyala University, College of Engineering, Iraq. Lecturer from 2005-2011 and since October 2016 till now.
- Member of Scientific Committee of Chemical engineering department College of Engineering Diyala University 2017 till now.
- Coordinator of communication department from 2007-2011- College of Engineering Diyala University
- Director of research and development unit College of Engineering Diyala University from 2005-2007.
- Member of Iraqi Engineers Union (IEU) since 1999 till now.

Wiember of fragiliteers Union (IEO) since 1999 till now.					
Training and Courses .					
•	Public speaking skill for PGR teachers	08/06/2016			
•	Performance in lecturing				
•	Introduction to C for engineering programmers	11,18/02/2016			
•	MATLAB for engineering programmers	09,14/12/2015			
•	A practical look at core teaching skills	03/12/2015			
•	Supporting students doing undergraduate projects and dissertation	09/11/2015			
•	Quantitative methods for engineering	02,06/06/2014			
•	Marking and assessment	08/11/2013			
•	Presentation skills :structure and technique	25/10/2013			
•	Centre for English language education, processional program, University of Nottingham, Nottingham, England	05/01/2012 - 29/06/2012			
•	IELTS, test	2012			
•	TOEFL ,ITP, test	2011			
•	Training course ,"Dazy lab and sensor technology" Freiberg, Germany.	4-10/1/2010			

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Trainer in CSP (IRD),INC "Business Management" Iraq. April 2008 to May 2009
 English Language Certification, College of Languages, Baghdad University, Iraq
 Methods of Teaching Certification College of Education, Diyala University, Iraq.
 Computer Programming Certification, University of 1999
 Technology, Baghdad –Iraq.

#### Languages

• English: Written and spoken (Excellent)

• Arabic: Mother tongue.

# **Employment History (Academic & Technical)**

## **Divala University - College of Engineering**

(2005 – till now)

Location: Diyala – Iraq

Position: Head of Chemical Engineering Department-2017-2019.

Academic degree: Lecturer

Description: Teaching: Properties of engineering materials for the third year, engineering mechanics and strength of the material. Engineering drawing and AUTOCAD for the first class. Management & economic engineering for the fourth class, Corrosion, Third Year, Material selection year four material department.

### The University of Nottingham - Faculty of engineering

**Location: Nottingham – England** 

Position: PhD researcher

Academic degree: course demonstrator & assessor and research group member

Description: demonstrator & assessor MM4 CFD, Computational Fluid Dynamics (M.Eng. and B.Eng. Class).

Research group member in Gas Turbine& Transmissions Research Centre.

#### Supervision of Theses and dissertations

#### Reviewer and referee

Reviewer and referee in:

### https://publons.com/researcher/1219679/ahmed-falh-hasan/

- 1. International Journal of Engineering & Technology
- 2. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences
- 3. Diyala Journal of Engineering Sciences.
- 4. Scientific International Conference-Najaf
- 5. International Scientific Conference of Engineering Sciences

# **Awards and Prizes**

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## Membership of journal editorial board

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**International Journal of Materials Science and Applications.** 

# Published Research Papers

0	Title of research	Journal name	Publisher or hosting	ISSN
1	Numerical study on the thermal energy storage employing phase change material with honeycomb structure: the effect of heat transfer fluid configuration and honeycomb cell angles <a href="https://doi.org/10.1002/est2.396">https://doi.org/10.1002/est2.396</a>	Energy Storage 2022	John Wiley & Sons, Ltd.	2578-4862
2	Computational optimum design of natural convection in a concentric and eccentric annular cylinder using nanofluids <a href="https://doi.org/10.1177/09576509221117">https://doi.org/10.1177/09576509221117</a> 936	Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy 2022	SAGE Publications	ISSN: 0957-6509 Online ISSN: 2041-2967
3	Numerical study and experimental validation of the effects of orientation and configuration on melting in a latent heat thermal storage unit.  https://doi.org/10.1016/j.est.2019.04.013	Journal of Energy Storage, 2019.	Elsevier	ISSN: 2352-152X
4	CFD modelling of friction stir welding (FSW) process of AZ31 magnesium alloy using volume of fluid method. <a href="https://doi.org/10.1016/j.jmrt.2018.11.016">https://doi.org/10.1016/j.jmrt.2018.11.016</a>	Journalof Materials Research and Technology 2019	Elsevier	ISSN: 2238-7854
5	Numerical study on the effect of the location of the phase change material in a concentric double pipe latent heat thermal energy storage unit <a href="https://doi.org/10.1016/j.tsep.2019.03.00">https://doi.org/10.1016/j.tsep.2019.03.00</a>	Thermal Science and Engineering Progress,201 9	Elsevier	ISSN:2451-9049

6	A numerical methodology for predicting tool wear in Friction Stir Welding. <a href="https://doi.org/10.1016/j.jmatprotec.2016">https://doi.org/10.1016/j.jmatprotec.2016</a> <a href="https://doi.org/10.1016/j.jmatprotec.2016">.11.009</a>	Journal of Materials Processing Technology. 2017. 241: p.129-140.	Elsevier	0924-0136
7	A numerical comparison of the flow behaviour in Friction Stir Welding (FSW) using unworn and worn tool geometries. <a href="https://doi.org/10.1016/j.matdes.2015.08.">https://doi.org/10.1016/j.matdes.2015.08.</a> 016	Materials & Design, 2015. 87: p. 1037-1046.	Elsevier	0264-1275
8	The Role Of Composite Phase Change Material On The Thermal Performance Of A Latent Heat Storage System: Experimental Investigation 2019	Journal of Harbin Institute of Technology (New Series). Issue 1, 2020	Published by Harbin Institute of Technology	ISSN 1005-9113
9	Experimental study of melting of composite phase change materials used in honeycomb energy storage system <a href="https://doi.org/10.22061/jcarme.2022.874">https://doi.org/10.22061/jcarme.2022.874</a> <a href="https://doi.org/10.22061/jcarme.2022.874">1.2175</a>	Journal of Computationa I & Applied Research in Mechanical Engineering (JCARME) 2022	Shahid Rajaee Teacher Training University (SRTTU)	Volume 12, Issue 1 - Serial Number 23 Pages 31-40 2228-7922
10	Solidification enhancement of phase change material implemented in latent heat thermal energy storage <a href="https://doi.org/10.1063/5.0000091">https://doi.org/10.1063/5.0000091</a>	AIP Conference Proceedings 2020	AIP	Volume 2213,  Issue 1  10.1063/5.00000  91
11	Characterization of Mechanical and Electrical Properties of Polystyrene Composite Reinforced by Hybrid Reinforcement Filler	Diyala Journal of Engineering Sciences 2022	Diyala University	Vol.15, No 3, September 2022 1999-8716

12	A. Effect of cooling rate on the mechanical properties of dual phase steel welding.	Journal of developmen t and engineering, Vol.14, No.1, 2010.	Published by Al Mustansiriya h University, Iraq	2520-0917
13	A. Use of Artificial Neural Network for Estimation of the Dissolved of Rutile Ore.	Diyala Journal for pure sciences, Vol 7, No. 2, 2010.	Published by Diyala University, Iraq	2222-8373
14	A. State some mechanical properties for Alalloy welded by seam welding technique.	Diyala journal of engineering sciences, Vol. 3, No.1, 2010.	Published by Diyala University, Iraq	19998716
15	A. Experimental study for preparation and evaluation the mechanical properties of composite material	Diyala journal for applied researchers, Vol.4, No. 1, 2008.	Published by Diyala University, Iraq	1992-0784
16	Preparation acid resistance ceramic from Iraq ore.	Diyala Journal of applied researchers, Vol.2, No.1, 2006.	Published by Diyala University, Iraq	1992-0784
17	A. Manufacturing of high frequency transformer core from Nickel ferrite.	Journal of Diyala education, No.22, 2006.	Published by Diyala University, Iraq	
18	A. Effect of mullite phase on some properties of hard porcelain.	AL-Fatih Journal, No.27	Published by Diyala University, Iraq.	1996-8752

Conferences

CVAhmed F Hasan

No	Conference	Paper title	Proceeding or journal name
1	1st- International Scientific Conference of Engineering Sciences - 3rd Scientific Conference of Engineering Science (ISCES) 2018. Iraq	Comparison and optimization design methodology for openloop subsonic wind tunnel	DOI: 10.1109/ISCES.2018.8340551 Publisher: IEEE https://ieeexplore.ieee.org/document/8340551
2	AIP conference preceding The 4th International Conference on Sustainable Engineering Techniques	INVESTIGATION OF USING HYBRID REINFORCEMENT FILLER ON THE MECHANICAL AND ELECTRICAL PROPERTIES OF HIGH- DENSITY POLYETHYLENE (HDPE) COMPOSITE 2022	Accepted
3	TriboUK 2015	A numerical Methodology for calculating tool wear in Friction Stir Welding "A".	In Tribo UK conference. 2015. Loughborough University
4	First Scientific Conference in Engineering Sciences, Dailya University, College of Engineering, Dec. 22-23, 2010. Iraq.	A. State strain and deformation for polymer composite material by using numerical solution.	Diyala Journal for Engineering Sciences, special issue. ISSN 1999-8716.
5	AME2007 conference. 2007. UKM- Malaysia.	Computer added predication of advance ceramic laser sealing "	AME2007 conference. UKM
6	IConMEAS 25/09/2019, UoT Baghdad - Iraq	Solidification Enhancement of Phase Change Material Implemented in Latent Heat Thermal Energy Storage	IConMEAS 2019,Iraq

Published Books				
No	Book title and publisher	ISBN		
1				

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https://www.scopus.com/authid/detail.uri?authorId=56902240900

https://www.researchgate.net/profile/Ahmed\_Hasan6

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https://uodiyala.academia.edu/AhmedHasan

Google Scholar 🔯

https://scholar.google.com/citations?user=jkAUA3IAAAAJ&hl=en

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