

CV

JAWDAT ABDALLAH AL-JARRAH

PERSONAL DATA

Name: Jawdat Abdallah Mohammad Al-Jarrah
Position Associate Professor in Production and Mechanical Design
E-Mail: jawdatj@yahoo.com
Phone No (mobile): +962-770908545
Place of Birth: Irbid- Jordan
Date of Birth: March, 5,1962
Marital Status: Married

EDUCATION

- Ph.D. in Mechanical and Industrial Engineering, 1999, (Mechanical & Industrial Engineering Department, Roorkee University (previously), (IIT of Roorkee, Now), UP, India.
Ph.D. Thesis Title: “Synthesis and Tribological Characteristics of Aluminum Base Composites”.
- M.Sc. in Mechanical Engineering, 1994, Mechanical Engineering Department, Jordan University of Science and Technology, P.O. Box 3030, Irbid 22110, Jordan.
M.Sc. Thesis Title: “Analysis of Conical Wall Jet”.
- B.Sc. in Mechanical Engineering, 1984, Mechanical Engineering Department, Yarmouk University, Irbid, Jordan.
- High School Certificate, Science Stream, 1980, Al-Ameer Al-Hassan Secondary School. Irbid, Jordan. (Cumulative Average 87.3%)

TEACHING AND WORK EXPERIENCE

- (Feb 2021--) Mechanical Engineering Department, Prince AL-Hussein Bin Abdullah II academy of Civil Protection
- Teaching: Engineering drawing, Mechanical Drawing, Strength of materials, Automatic control, Dynamics, HVAC, Fire Dynamics, problem synthesis and design, Electric and hybrid vehicles, Power generation, transmission and distribution, Renewable Energy, Electrical energy conversion systems, Simulation and modeling of electrical systems, theory of machines, vibration and fluid dynamics, Solar energy, Wind energy, Mechanical design.
- (August 2017- Feb 2021) Cultural Consultant, Higher Ministry of Education and scientific research, Jordan
- (September 2009 to August 2017) Mechanical Engineering Department, Northern Border University, Arar, Saudi Arabia
 - Teaching: Math, Mechanical Drawing using solidworks, Engineering Drawing, Engineering Economy, Mechanics of Materials, Casting, Machine element design, Automatic control, Dynamics, CAD/CAM, Mechanisms and Modern engineering materials.
 - Member of ABET committee: to prepare the self-study and all the requirements for accreditation of the mechanical program from ABET.
 - Member of curriculum committee: to prepare the mechanical and industrial engineering programs.
 - Member of mechanical labs and workshops: to study the requirements of the labs and workshops from the machines and instruments, including the writing of specifications and process of purchasing the requirements.
- (June 2007 to September 2009) Mechanical Engineering Department, AL-Huson University College, Al-Balqa Applied University, Jordan
 - Teaching: Applied Math, Automatic Control, Instrumentation, Mechanics of materials, Control of HVAC systems and AutoCAD.

- Part time teaching: CAD/CAM for graduate students (Yarmouk University)
- Part time teaching: Industrial Drawing using Mechanical desktop (Jordan University of Science and Technology)
- Advisor for two master thesis (Jordan University of Science and Technology)
 1. Comparative study between friction stir welding and tungsten inert gas welding.
 2. Investigation into the effect of friction stir welding parameters on different welded materials.
- (September 2005 to June 2007) Assistant professor, Industrial engineering Department, King Khaled University, Saudi Arabia
 - Administrative Experience: Exam committee coordinator of Engineering College
 - Teaching: Statistics and probability for Engineering, Automatic Control, Queuing Theory, Simulation of Industrial systems, AutoCAD, CAM. Statics and Dynamics
- (September 2004 to September 2005) Head of Mechanical Engineering Department, Al-Huson University College, Al Balqa Applied University, Jordan
 - Administrative Experience: Head of Mechanical Engineering Department
 - Member of Department Committee: To Develop a Curriculum for Master Degree in Technological Education – Mechanical Engineering
 - Member of TEMPUS committee: To Develop a Curriculum for Industrial System Integration as a new program
 - Part Time Lecturer in Industrial Engineering Department, Jordan of Science and Technology (JUST), Jordan
 - Teaching: Production Process I
 - External Examiner for a Master Thesis in JUST, Jordan
 - Teaching: AutoCAD, CAM, Manufacturing process, Applied Math for Engineering, Numerical Analysis.
- (September-2003 to September-2004) Lecturer, Al-Huson University College, P.O. Box 50, Irbid, Jordan.
 - Member of College Academic Council
 - Teaching: Machine Tool Design, Engineering Drawing, Physical Metallurgy, Applied Math for Engineering
- (June,2003 to September,2003) Acting Dean of Al-Musana College of Technology, Al-Musana, Oman. (My resignation has been accepted before June 2003)
 - Administrative Experience: Acting Dean, Al-Musana College of Technology
- (September 2001 to June 2003): Dean Deputy & Acting Head of Engineering Department, Al-Musana College of Technology, Al-Musana, Oman
 - Administrative Experience: Dean Deputy & Acting Head of Engineering Department, Al-Musana College of Technology
 - Teaching: Engineering Drawing, Mechanical Drawing, Material Science, Engineering Mechanics, Math I, Math II, Fits & Tolerances, Manufacturing Technology, Cutting Process, CAE, CAE Lab

- Member of Engineering Specialization Committee: Supervising Curriculum development, and Final Exams, and Labs and workshops development for all technological colleges on Oman.
- Member of Curriculum Development Committee: plan and develop four levels Program (Certificate (one year), Diploma (two years), Higher Diploma (three years), and B.Sc (4 years)) in Mechanical and Industrial Engineering.
- Member in many other college committees
- (February 2000 to September 2001): Lecturer, Engineering Department, Al-Musana College of Technology, Al-Musana, Oman
 - Teaching: Engineering Drawing, Mechanical Drawing using AutoCAD, Mechanical Workshop, Cutting Process, Manufacturing Technology, Material Science, Mechanical Technology, Engineering Mechanics, CAD/CAM
 - Member of Engineering Specialization Committee: This committee takes care of: curriculum development and implementations, Steering final exams, Labs and workshops development for all technological colleges on Oman.
 - Participate in the effort to look after and develop the diploma program in Engineering
- (September 1998 to September 2000): Lecturer in Al-Huson University College, Al-Balqa Applied University, Jordan
 - Teaching: Cutting Process, Casting, Material Science, Engineering drawing, Mechanical Drawing, Statics, Strength of Materials, Theory of Machine, and Metal Forming.
 - Participate in the effort to plan and develop the diploma program in manufacturing technology
 - Participate in the effort to develop the labs and workshop
- (September 1995 to September 1998): Research Scholar in Roorkee University, India
 - Build a set-up for stir-casting to produce composite materials
 - Synthesis different types of composite materials
 - A new stirrer developed to mix a Graphite and Alumina with a molten Aluminum Alloys
- (February 1994 to September 1995): Head of Mechanical Engineering, Al-Huson University College, Al-Huson, Jordan.
 - Administrative: Head of Mechanical Engineering Department
 - Teaching: Theory of Machine, Strength of Materials, Mechanical Drawing, Casting, Manufacturing Process, Material Science and Engineering Mechanics
 - Establishment of Material Lab
 - Member of College Academic Council
 - Technical supervisor for the north colleges (Irbid, Al-Huson and Ajloun)
- (February 1993 to February 1994): Lecturer, Al-Huson University College, Al-Huson, Irbid, Jordan

- Teaching: Mechanical Drawing, Manufacturing Technology, Mechanical Workshop, Cutting Process, Welding Technology, Theory of Machine, Engineering Mechanics
- (September 1990 to February 1993): Teaching and research Assistant, Mechanical Department, Jordan University of Science and Technology, Irbid, Jordan
 - Teaching Assistant for Courses in Hydraulic Machine, Aircraft structure, Workshop, Vibration, Engineering Drawing
- (September 1989 to September 1990): Lecturer in Taffila College, Taffila, Jordan
 - Teaching: Strength of Material, Thermodynamics, Heat Transfer, Manufacturing Process, Engineering and Mechanical Drawing
 - Build an Air-conditioning, Refrigerator and cooling Tower Lab Equipments for Air-conditioning and refrigeration Lab
 - Member of College Academic Council
- (September 1987 to September 1989): Maintenance Engineer, Armor Rebuilds Facility Workshop, Zarka, Jordan.
 - Prepare preventive maintenance schedule for different types of production machines and systems
 - Quality Control Engineer
- (September 1984 to September 1987): Lecturer, Amman Polytechnic, Amman, Jordan
 - Teaching: Theory of Machine, Metal Forming, Production Process, Hydraulics, Fluid Mechanics, Thermodynamics, Heat Transfer, Air-Conditioning, Refrigeration, Strength of Materials, Engineering Mechanics, Welding, Casting, and Engineering and Mechanical Drawings

AWARDS

- Royal scholarship for undergraduate study, Jordan
- ICCR Scholarship for Ph.D, India

RESEARCH INTERESTS

- Material and Composite Materials Technology
- Welding Technology
- Casting Technology
- Fracture Mechanics of Materials
- Tribology Behavior of Materials
- Manufacturing Technology
- Industrial Automation
- Heat Transfer

TEACHING CAPABILITIES

List of courses that I can teach:

- Engineering Materials
- Theory of Machine
- Composite Materials
- Fracture Mechanics
- Metallurgy of Welding
- Heat Treatment
- Statics & Dynamics
- Quality Control
- CAD/CAM
- Manufacturing Technology
- Computer Integrated Manufacturing
- Robotics
- Numerical Analysis
- Applied math
- Statistics and Probability for Engineering
- Simulation of Industrial Systems
- Automatic Control
- Queuing Theory
- Industrial Automation
- And any undergraduate courses in Material Science, Manufacturing and related topics
- Advanced level courses in composite material, fracture mechanics, Manufacturing Technology, CAD/CAM, CIM and tribology

AREAS OF KNOWLEDGE

Material Science, Composite Materials, Machine Tool Design, Welding, Tribology, CAD/CAM systems, Total Quality Managements, Manufacturing Technology, Heat and Mass Transfer, Fluid, Operation research, Queuing Theory and Applied Math.

PROFESSIONAL GROWTH ACTIVITIES

Attended the following training courses and workshops:

- Practical workshop on Evaluation between (4/10/2020-8/10/2020) delivered within the frame work of the European Union funded project, entitled “Technical Assistance for the monitoring and evaluation system in the Prime Minister’s Delivery Unite and Ministry of Planning and International Cooperation”.

- Theoretical workshop on Evaluation between (27/9/2020-1/10/2020) delivered within the frame work of the European Union funded project, entitled “Technical Assistance for the monitoring and evaluation system in the Prime Minister’s Delivery Unite and Ministry of Planning and International Cooperation”.
- Workshop on “search and retrieval in digital library databases”, Organized by Northern border university and held on Feb, 2, 2016
- Intensive courses “How to use Blackboard in e-learning”, Organized by Northern Border University, held on April 27-30, 2014
- Training workshop “Quality and academic accreditation” Organized by Northern Border University, held on March 4-18, 2012
- Intensive course “Effective teaching” Organized by Northern Border University, held on Feb. 20-22, 2012
- Intensive course “Statistical Analysis using SPSS Program” Organized by Northern Border University, held on May 20-24, 2012
- Workshop on “planning and managing e-learning programs”, Organized by King Fahd University, held on Oct. 31 to Nov. 01-2009
- Workshop on “Teaching and skills for on line education”, Organized by King Fahd University, held on Oct. 27-28, 2009
- Intensive courses on “Skill development of teaching members on E-learning by using Moodle program”, Organized by King Khaled University, and held on the period April, 21-25, 2007.
- Training workshop “Conducting initial quality evaluation”, Organized by King Khaled University, and held on the period April, 17-20, 2007.
- Intensive Course on “Engineering Mathematics with Mathematica and Maple”, Organized by Al-Huson University college in cooperation with Universite de Paris sud, and held in the period December 16-19, 2003
- Intensive Course on “Programming and Operating CNC Milling and Lathe Machines”, Organized by Engineering workshops, Engineering Faculty, Jordan University of Science and Technology and held in the period September 4-12, 1993

PROFICIENCY IN COMPUTER

- Programming Languages: Fortran, C++
- Scientific Packages: AutoCAD, Mechanical Desktop, Solid works, Matlab, Mathematica, Statistica, SPSS, Sigmaplot
- CNC Programming: G & M Codes
- Operating Systems: Windows, MS-Word, Latex, Scientific Word
- Application Programs for Microsoft Offices: MS-Word, Power Point, Excel, Outlook Express,

PUBLICATIONS

I JOURNALS

1. Yarub Al-Jahmany, Jawdat A. Al-Jarrah, Diana Rbeht, Hassan A. Al Massadeh and Omar A. Al-Qudah, “ Natural and mechanical ventilations for reducing the severity of hot gases and smoke in fires of large stores”, Jordan Journal of mechanical and industrial engineering. Accepted.
2. Mohammad S. E.Ali Al-wagfi, Yarub Al-Jahmany, Jawdat A. Al-Jarrah, and, Diana Rbeht “The ventilation in small-compartment fires: potential in fire retardancy”, Journal of Engineering Technolgy and applied research, Accepted.
3. Yarub Al-Jahmany, Jawdat A. Al-Jarrah, Mohammad S. E.Ali Al-wagfi, Diana Rbeht, and Hassan A. Al-Massadeh. “Numerical Evaluation of aluminum–faced sandwich panels in large enclosure fires”, Journal of Engineering Technolgy and applied research, , vol.14, No.5, pp:16984-16988, 2024
4. Yarub Al-Jahmany, Jawdat A. Al-Jarrah, Diana Rbeht, Mohammad S. E.Ali Al-wagfi and Awni Alkhazaleh. “Green solution in the fire safety strategy within medical centre”, Jordanian journal of engineering and chemical industries”, vol. 7, no.2, pp:56-60, 2024
5. Frihat, M., Al Quran, F., Al-Odat, M., Al-Jarrah, J., Influence of Current Welding on Mechanical Properties and Microstructure of Argon Arc Welding of Type-304L Austenite Stainless Steel, (2024) *International Review of Mechanical Engineering (IREME)*, 18 (4), pp. .
6. Jawdat A. Al-Jarrah, Diana Rbeht, Mohammad S. E.Ali Al-wagfi and Yarub Al-Jahmany, “Experimental study of the flame retardancy of PMMA-Graphene composite Materials”, J. of Engineering Tech. and applied research, , vol.14, No.2, pp:13324-13328, 2024
7. Yarub Al-Jahmany, Jawdat A. Al-Jarrah, Diana Rbeht, Mohammad S. E.Ali Al-wagfi and Awni Alkhazaleh. “Pressure behavior of hot gasses and smoke in fire of large enclosures with different ventilation systems”, Jordanian journal of engineering and chemical industries”, vol. 7, no.1, pp:5-10, 2024

8. Diana Rbeht, Mohammad S. E.Ali Al-wagfi and ,Jawdat A. Al-Jarrah, “ Qualitative risk assessment in water protection bottling: A case study on Maan Nestle’ pure life factory”, International journal of safety and security engineering, vol. 13 no. 6., pp:1025-1038, 2023
9. Mohammad A. Tashkandi, **Jawdat A. Al-Jarrah**, and Masoud Ibrahim, “Increasing of the mechanical properties of friction stir welded joints of 6061 aluminum alloy by introducing alumina particles”, Advances in Material Science Journal, vol. 17, No.2 (52), pp:29-40, 2017
10. Masoud Ibrahim, Mohammad A. Tashkandi, **Jawdat Al-Jarrah** and A.I.Z. Farahat, "Behavior of Triplex steel containing different aluminum contents", Advances in Material Science Journal, vol 17, No.1(51), pp:34-44, 2017.
11. **Jawdat A. Al-Jarrah**, Masoud Ibrahim and Salameh and Salameh Swalha, "Effect of applied pressure on mechanical properties of 6061 aluminum alloys welded joints prepared by friction stir welding", J. of Engineering Tech. and applied research, , vol.7, No.3, pp:1619-1922, 2017
12. Mohammad A. Tashkandi, **Jawdat A. Al-Jarrah**, and Masoud Ibrahim, "Spot welding of 6061 aluminum alloy by friction stir welding", J. of Engineering Tech. and applied research, vol.7, No.3, pp: 1629-1632, 2017.
13. Fawzy S. Abu Taleb and **Jawdat A. Al-Jarrah**, "Experimental study of air lift pump", J. of Engineering Tech. and applied research, vol.7, No.3, pp: 1676-1689, 2017.
14. Nabeel S. Gharaibeh, **Jawdat A. Al-Jarrah** and Salameh A. Sawalha,"Effect of Pin Profile on mechanical properties of 6061 Aluminum alloy welded joints prepared by friction stir welding", International J. of mechanics and applications, pp:39-42, 2016
15. Masoud Ibrahim, A.I.Z. Farahat and **Jawdat Al-Jarrah**,"Effect of Aluminum content on wear resistance of hot forged multiphase steel", Metallurgical and material transaction A, vol. 48A, pp:314-320, 2016
16. **Jawdat Al-Jarrah**, "Effect of friction stir welding parameters on abrasive wear of aluminum alloy welded joints", Pensee Journal, vol 76, pp:326-332, 2014
17. **Jawdat Al-Jarrah**, salameh Sawalha, Talal Abu Mansour, Masoud Ibrahim, Maen Al-rashdan and Deya A. Al-Qahsi "Welding quality and Mechanical Properties of Aluminum Alloys Joints Prepared by Friction Stir Welding" J. of Material and Design, vol 56, pp:929-936, 2014
18. Masoud Ibrahim, **Jawdat A. Al-Jarrah**, A.I.Z. Farahat and Talal Abu mansour "Thermo-mechanical processing of carbide free steel', International of Mechaincal engineering(IJME),Vol.3, 2014,pp 37-44, 2014
19. **Jawdat Al-Jarrah**, salameh Sawalha, Talal Abu Mansour, Masoud Ibrahim, Maen Al-rashdan and Deya A. Al-Qahsi, "Optimization of friction Stir Welding parameters For Joining Aluminum Alloys Using RMS", Adv. Theor. Applic. Mech., Vol. 6, 2013, no.1, pp 13-26.
20. Salameh Sawalha, **Jawdat Al-Jarrah**, Talal Abu Mansour, and Nabeel S. Gharaibeh, "Mechanical properties of Aluminum Joints welded by Friction StirWelding", International of Mechaincal engineering(IJME),Vol.2, 2013,pp 77-84.

21. Masoud Ibrahim, Talal Abu mansour and **Jawdat Al-Jarrah**, "Effect of Heat Treatment on the Microstructure and Hardening properties of 6061 Aluminum Alloys", Journal of applied Science and research, 8(10), 2012, pp. 5106-5113.
22. Salameh Sawalha, **Jawdat Al-Jarrah**, and Ali Dbean Al-Rashidy, "System to Remot Control The Vehicle During Chasing", International of Mechanical engineering(IJME),Vol.2, Issue 4, 2013, pp 87-98.
23. **Jawdat A. Al-Jarrah**, Gamal Abu Raya and M. N. A. Kurdieh,"Mixing parameters of Aluminum-Alumina-Graphite Composites materials by Turbine Stirrer", Port-Said Research journal, Vol.12, 2008, pp.21-43.
24. **Jawdat A. AL-Jarrah**, A. F. Khadrawi, and M.A. Al-Nimr, " Film Condensation on a Vertical Microchannel", International communication in heat and mass transfer, volume 35, issue 9, November 2008, pp 1172-1176.
25. A. F. Khadrawi, **Jawdat A. AL-Jarrah** and M.A. Al-Nimr "Carbon Mass Transfer into Composite Slaps Under the Effect of Non-Fickian Diffusion Model". Chemical Engineering communication, Volume [195](#), Issue [1](#) January 2008 , pages 1 – 10
26. **J. A. Al-Jarrah**, S. Ray and P.K. Ghosh, " Solidification Processing of Al-Al₂O₃ Composite Using Turbine Stirrer", Metall. and Mater. Trans., vol. 29A,pp1711-1718, 1998.

II. CONFERENCES

1. Mohammad Salem Al-waqfi and Jawdat Al-Jarrah "Performance Indicator as a Tool For Health and Safety Management", The 2nd International Jordanian forum for Occupational health and safety, Nov.24-25, 2021
2. Masoud Ibrahim, and Jawdat Al-jarrah,"High quality Automative gray iron disc brake manufacturing using sand casting", International Metallurgical engineering conference, METECH 16, Turkey, pp 66-73
3. G.E.Y.I Abou Raya and Jawdat A. AL-Jarrah, " Effect of Copper Addition on The Wear Resistance of Gray Cast Iron". Second International Material Conference, Al-Balqa Applied University, Jordan, 4-6 September, 2007

4. M.N.A. Kurdieh and Jawdat A. Al-Jarrah, "Effect of Volume Fraction of Carbon Particles Reinforced-Epoxy Composites on Dry Sliding. Second International Material Conference, Al-Balqa Applied University, Jordan, 4-6 September, 2007
5. Jawdat A. Al-Jarrah, S.Ray, and P.K Ghosh, "Adhesion Wear Behavior of Al- 4 wt% Mg Alloy", First International Material Conference, Al-Balqa Applied University, Jordan, May, 2005.
6. Jawdat A. Al-Jarrah, S.Ray, and P.K Ghosh, "Solidification Processing of Hybrid Composite Materials", ICT Innovative Conference, Amman-Jordan, Dec. 7-8, 2004
7. Jawdat A. Al-Jarrah, S. Ray and P. K. Ghosh "Casting and Mechanical Properties of Aluminum Graphite Composite materials", Proc. of Advances in Production and Processing of Aluminum, 12-15 Feb. Bahrain, 2001
8. J. A. Al-Jarrah, S. Ray and P. K. Ghosh "Solidification Processing and Properties of Al-Al₂O₃ Composite", Proc. Of Sixth Asian Foundry Congress, Calucutta-India, 23-26 Feb., pp 271-283, 1999
9. J.A. Al-Jarrah, S. Ray and P.K. Ghosh "Mixing and Solidification Processing of Al-Al₂O₃ Composite," Proc. Conf. Of composite Materials, Jameshpur-India, pp 9-25, 1998.