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**Academic Curriculum Vitae**

**Personal Information:**

Full Name: Shawnam R. Jalal 

Academic Title: professor

Email: (university email) shawnam.jalal@su.edu.krd

Mobile: 009647504709424

**Education:**

* **BSc -** In engineering metallurgy and production / Iraq / University of Technology / Baghdad /1981
* **MSc**- In engineering metallurgy and production / Iraq / University of Technology / Baghdad /1985 the name of thesis (Aluminization of low carbon steel and their oxidation at high temperature) .
* **PhD**-In engineering metallurgy / Iraq / University of Salahaddin / Erbil / 2004 the name of thesis (The effect of thermomechanical treatments on the mechanical properties and stress corrosion cracking of certain Al alloys.
* State all educations accomplished

**Employment:**

Date of first assignment in Salahaddin University: 7 -4 – 1987 until now.

Workplace: - University of Salahaddin –College of Engineering –Mechanical Department-Erbil

* a-Assistant lecturer: -1987
* b-Lecture: -1991
* c-Assistant professor; -1999
* d-dean of Eng. College from 2008-2012
* e-professor: -2012
* Dean of Eng. college from2008-2012

 -Head of Engineering Consulting Bureau/college of Eng.Salahaddin University 2008-2012

**Qualifications**

1- Work shop in university of salahaddin –Erbil organized by the department of mechanical engineering AND TU bergakademie SIMULATION AND MODELING OF TECHNICAL PROCESSES. November7 until 10 -2010

2-TRAINING in university of salahaddin –Erbil organized by the department of mechanical engineering AND TU bergakademieFreiberg OCTOBER 30-NOVEMBER 2,2010 about DASYLab software and installation of data acquisition hardware. DAAD

**Teaching experience:**

* **teaching Subject /under graduate**
* **-Eng. mechanics / static's-first year-Salahaddin University –koya university**
* **-Eng. mechanics / dynamic-second year-SalahaddinUniversity**
* **Thermodynamic second year-SalahaddinUniversitymechanics**
* **Metallurgy- second year-Salahaddin University**
* **Industrial Engineering- fourth year- Salahaddin University -**
* **Production Eng.-first year - Salahaddin University**
* **Teaching Subject /post graduate**
* **-corrosion and corrosion Control-PhD level –Mech.Dept-salahaddin university**
* **-Welding and casting Technology-PhD level –Mech.Dept-salahaddin university.**
* **-Advanced material science MSc level –Mech.Dept-salahaddin university and university of sulaymani.**
* .
* **Thesis supervised:**
* A-4 M.Sc.
* 1-Diffusion coating on a low carbon steel and its oxidation behavior inside I.C engines
* 2- Effect of cold work on the precipitation process in Al alloy (6063)
* 3-Study of mechanical properties of Al-Zn-Mg alloy welds.
* 4-Effect of carbon loading on properties of high density polyethylene DDPE 100.
* B -5-phD
* 1-Friction stir welding of some certain Al alloys
*
* 2-Mechanical and machinability properties of composite metal fabrication by modified stir casting rout.
* 3- Effect of Stirrer Parameter of Stir casting on Mechanical Properties of Aluminum alloy Composite.
* 4-Study the mechanical, morphological and wear characteristic of friction stir processing (FSP) of high-density polyethylene composites **.**
* **5-T**he influence of friction stir welding parameters on mechanical and corrosion resistance of 2024 Al- cu alloys and 2198 Al cu-Li alloys.

**Research and publications**

1- The study of sand-bind and sand additive of mechanical properties of molding sand. (**Zanko journal. No.2,1989,pp.62**)

2- Study of pre-compression stresses on the mechanical properties of low carbon steel. ( **The first scientific conference of Tikrit university ,21-23/12/1991.**)

3- Using of Aluminum and its alloys in production of some parts of textile machines. (**Zanko journal. No.4 vol.2,1991 pp.8**)

4- An investigation of mould by (Aurthrmah) sand for preparation of mould by using jolt squeeze molding machine. (**Special issue proceeding of second scientific conference of salahaddin university-Erbil 24-25 April 1993.**

5- Improve the mechanical properties of brass alloys by diffusion method. ( **journal of education No.411/15.19**94)

6**-**The corrosion of materials by rough particles in fluids.(**Zanko journal. No.1, vol.7 1995, pp.**51)

**7**- The effect of silicon rate and hot working on the graphitation of white cast Iron.(**Zanko journal. No.1 vol. 9 ,1997 pp.5**).

8- The effect of the impact process by steel ball on the mechanical properties of different material. **The first scientific conference of dohuk university 27 – 29 April, 1999.**

**9-** The effect of abrasive grain size of sand in liquid on abrasive wear rate of the metal surface. (**journal of Zanko of sulaimani . No.2 vol.2,1999 pp.31**)

 .

10- Diffusion coating on a low carbon steel and its oxidation behavior inside I.C engines emission (**Zanko journal. No.2 vol.16,2004 pp.5**).

 11- The influence of pre aging on some mechanical properties of heat treatment automobile body sheet Al alloy (6063). (**journal of engineering and technology, . No.5 vol.24,2005**).

12- Changing the design of screen shaft with accessories of via nova Asphalt plant (**Zanko journal. No.2 vol.17,2005 pp.119**).

13- Effect of cold work on the precipitation process in Al alloy (6063). (**journal of Zankosulaimani . No.1 vol.9A,2006 pp.31**).

14- The effect of gage length value in tensile test specimens on the mechanical properties of metal. **(proceeding of the international conference onmodeling and simulation)(28- 30August ,2006,konya, turkey, paper No. A118, pp.369)**

15- Study of mechanical properties of Al-Zn-Mg alloy welds. **The sixth Jordanian international mechanical Engineering Conference .22-24/10/2007, Jordon.**

16- Relation between pre straining before welding, joint design, and microstructure in welding of 7020 Al alloy.**Alrafidain engineering journal –university of Mosul ,No.3 ,vol.16 ,pp.96 ,2008 .**

17- The effect of tool tilt ingles and welding speed on mechanical and macrostructure properties Accepted for published in (of friction stir welded Al alloy **Zanko journal No.5 vol.21,2010**) .

**.**

18- Characterization of microstructure and mechanical properties of FSW Al alloy 7075 at T6 and T9 Tempers, **International conference on modeling and simulation 1-3 December 2009**

 **(AMSE-09 INDIA).**

19- The effect of process parameters on microstructural and mechanical properties of friction stir welded Al alloy 7020 at T6, T9 Tempers. **International conference on modeling and simulation 1-3 December 2009 (MS/AMSE4-O9 INDIA).**

20-Thermo mechanical treatment of 7020 Al alloy, **- International conference on modeling and simulation .15-17 JULY -BARSHELONA . (AMSE-10 BARSHELONA).2010**

**21-**charpy impact value of friction stir welded 7020 and 7075 Al alloys at different tool rotation and transverse speed. Eng **.and technology journal-university of technology ,vol.28 ,No.15 ,2010**

22-Effect of sand impact on the erosion behavior of HDPE and PVC pipes, **Journal of Asian transaction on Engineering,volume 1 ,issue 4 ,11th September, page 36-42 ,2011 .**

**23-**The effect of percentage of carbon loading on the properties of HDPE 100 **Zanco journal No.2 issue 24 2012.**

**24-**Effect of tool geometry on microstructure and mechanical properties and microstructure of friction stir welded Al alloy 2011 T6. **International conference WASET.28-29** August – Malaysia, 2012.

**25-**: “investigation of mechanical properties of shielded metal arc welding and friction stir welding in 7020-T6 Al alloy” **– international 13th European conference on spacecraft structures, materials and environmental testing, 1-4 April,Braunschweig,Germany.SSMET 2014.**

**26-**Comparasion of shear properties for high density polyethylene (HDPE) and polyvinyl chloride (PVC)polymer**, published in eng.and technology journal ,university of technology , Baghdad, Iraq. Vol.33,No.9,2015.**

 **27-**Reinforcement and processing on the machinability and mechanical properties of aluminum matrix composites**, published in in journal of materials research and technology, ELSEVIER ,vol.8,No.5 ,pp.4766-4777,2019.** <https://doi.org/10.1016/j.jmrt.2019.08.023>

 **28-The Effectiveness of Reinforcement and Processing on Mechanical Properties, Wear**

**Behavior and Damping Response of Aluminum Matrix Composites *,*published in in journal of** High Temperature Materials. Processing by DE GRUYTER vol.38: pp.927-939 ,2019 <https://doi.org/10.1515/htmp-2019-0039>

**29-influence of reinforcement and processing on aluminum matrix composites modified by stir casting route published in journal of advanced composites ,vol.28:1-8,2019**  Processing by **SAGE .**

 <https://doi.org/10.1177/2633366X19896584>

 **30-Acomparative study of the impact of stirrer design in the stir casting route to produce metal matrix composite** **published in in journal of** Advances in Materials Science and Engineering, Volume 2021 |Article ID 4311743 | <https://doi.org/10.1155/2021/4311743>, **Published**23 Sep 2021

31-Areview paper on bobbing tootl friction stir weldingBtfsw and metal inert gas welding of various materials , journal of design engineering, vol2021 , issue 6 ,pp.6597-6606, <http://www.thedesignengineering.com/index.php/DE/article/view/4141>

32- An overview of the effect of stirrer design on the mechanical properties of

Aluminium Alloy Matrix Composites fabricated by stir casting, ZANCO Journal of Pure and Applied Sciences

The official scientific journal of Salahaddin University-Erbil

https://zancojournals.su.edu.krd/index.php/JPAS

ISSN (print ):2218-0230, ISSN (online): 2412-3986,DOI: http://dx.doi.org/10.21271/zjpas, 2022, 34 (1): 18-35

33- Study the effect of stirrer design on the stirring performance of ceramic particle reinforcements in stir casting of Aluminum Matrix Composite First Published May20-2022,jornal of reinforced plastics and composite. [Volume 42, Issue 1-2](file:///C%3A%5CUsers%5CRam%20Computer%5CDownloads%5CVolume%C2%A042%2C%C2%A0Issue%C2%A01-2) <https://doi.org/10.1177/07316844221101579>

<https://doi.org/10.1177/0731684422110157>

# 34-A review on manufacturing the polymer composites by friction stir processing

[European Polymer Journal](https://www.sciencedirect.com/journal/european-polymer-journal) ,[Volume 178](https://www.sciencedirect.com/journal/european-polymer-journal/vol/178/suppl/C), 5 September 2022, 111495

<https://doi.org/10.1016/j.eurpolymj.2022.111495> .

# 35-Influence of Friction Stir Welding Process on the Mechanical Characteristics of the Hybrid Joints AA2198-T8 to AA2024-T3, [Advances in Materials Science and Engineering](https://www.hindawi.com/journals/amse/), Volume 2022 | Article ID 7055446 | <https://doi.org/10.1155/2022/7055446>

36- Dissimilar Joint Welding Through Friction Stir Techniques: Mechanical and Microstructural Properties of AA2198-T8 & AA2024-T3, Posted Date: March 22nd, 2023 ,DOI:[10.21203/rs.3.rs-2699145/v1](http://dx.doi.org/10.21203/rs.3.rs-2699145/v1)

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 37- **Effect of exfoliation corrosion on the efficient hybrid joint of AA2024-T3 and AA2198-T8 formed by friction stir welding,** Heliyon,,<https://doi.org/10.1016/j.heliyon.2023.e16577>,[Volume 9, Issue 6](https://www.sciencedirect.com/journal/heliyon/vol/9/issue/6), June 2023,

38- Optimization of stirrer parameters by Taguchi method for a better ceramic particle stirring performance in the production of Aluminum Alloy Matrix Composite,Published online: 04 Jan 2023, Cogent Engineering (2023), 10: 2154005 <https://doi.org/10.1080/23311916.2022.2154005> Page 1 of 22© 2023. Quartile: Q2 Taylor and Francis Group.

**Published**08 Oct 2022.

36-Optimization of stirrer parameters by Taguchi method for a better ceramic particle stirring performance in the production of Aluminum Alloy Matrix

Composite, Published online: 04 Jan 2023, Cogent Engineering (2023), 10: 2154005 <https://doi.org/10.1080/23311916.2022.2154005> Page 1 of 22© 2023. Quartile: Q2 Taylor and Francis Group

**Conferences and courses attended**

1-The first scientific conference of Tikrit university ,21-23/12/1991.) Iraq

 2-Special issue proceeding of second scientific conference of university of Salahaddin- Erbil 24-25 April 1993. Iraq

1. The first scientific conference of Dohuk university 27 – 29 Dohuk; 1999.Iraq

 4- DAAD university partnership program with Iraq-**Erbil 2009.**

 5-Participating in (USA- Iraqi universities Faculty Exchange Seminar Focusing on Sustainable Engineering Design and Construction Engineering Management) -August. 1-14 ,2009.

 6-- Participating in Iraqi coalition on sustainable engineering the education (CSEE) discuss planned measures in mechanical engineering, Germany – Iraq (MEGI ) 14-2012

 7-International conference on modeling and simulation )28-30 August, 2006 ,Konya , Turkey.

 8-The sixth Jordanian international mechanical engineering conference) Oct. 22-24 ,2007. Jordan.

9-The 5 congress of scientific research outlook in the Arab world scientific innovation and sustained development 26- 30 October 2008 fez-morocco

10--international conference on modeling and simulation )1- 3december India . (AMSE-09 INDIA).2009

11-Higher education conference, University of Salahaddin, Erbil,2001.

12-Work shop in Karlsruhe university of applied science in Germany for one week about wind and solar energy . July 2009.

13- International conference on modeling and simulation .15-17 JULY -BARSHELONA . (AMSE-10 BARSHELONA).2010

14- Work shop in university of salahaddin –Erbil organized by the department of mechanical engineering AND TU bergakademie SIMULATION AND MODELING OF TECHNICAL PROCESSES. November7 until 10 -2010

15-TRAINING in university of salahaddin –Erbil organized by the department of mechanical engineering AND TU bergakademieFreiberg OCTOBER 30-NOVEMBER 2,2010 about DASYLab software and installation of data acquisition hardware. DAAD.

 16- Participating in DAAD-Symposium (Resource management) in Erbil-November29- December1-2010 . in mechanical Eng.; urban planning ,Georesources ,business administration ,IT .

17- Work shop in university of salahaddin –Erbil organized by the department of mechanical engineering AND TU bergakademiefreiberg –IMPLEMENTATION OF JOINT MASTERS DEGREE.24-25- 10-2010 –

18-Participating in the first scientific conference of Technical education 1-2 December 2010 Duhok (Applicable scientific research contributes to the development of Kurdistan)

19-Participating in Mechanical Eng. Master program workshop 12- 16 /12-2011 freberg-Germany .

20- Work shop in University of salahaddin –Erbil department of mechanical engineering –Method of welding ,design of welding joint and argon welding 20-22-12-2011 .

21-Rehabilitation of Iraq higher education system, work shop on Assessment for quality improvement of engineering programs Erbil-16-21 June 2012 .

22- Work shop in university of salahaddin –Erbil organized by the department of mechanical engineering and TU bergakademiefriberg –Mathematical modeling ,simulation and design of experiments in technical processes ,October 14-15 ,2012.

23- international conference, 13th European conference on spacecraft structures, materials and environmental testing, 1-4 April, Braunschweig, Germany. SSMET 2014.

24-Work shop in university of salahaddin –Erbil mechanical department –Eng. organized by the department of mechanical engineering and TUbergakademiefriberg – Germany (software and hardware modern measuring in the laboratory ) 20-21/10-2015.

25--Work shop in university of salahaddin –Erbil mechanical department –Eng. organized by the department of mechanical engineering and TUbergakademiefriberg – Germany (Lab view) 13-14/12-2015.

26--Work shop in university of salahaddin –Erbil mechanical department –Eng. organized by the department of mechanical engineering and TUbergakademiefriberg – Germany (Renewable energy utilization) 2-4/5-2016.

 27-Work shop in university of salahaddin –Erbil mechanical department –En

 Curriculum changes according to theBologna System, 23-1-2023.

**Funding and academic awards**

**Non**

**Professional memberships**

-Member of the Iraqi Engineering Union from 1981

- Member of Kurdistan Engineering Union from

**Professional Social Network Accounts:**

1. https://www.webofscience.com/wos/author/record/HIK-2856-2022

 2------https://orcid.org/signin

3- https://scholar.google.com/citations?hl=ar&user=Gvubq5UAAAAJ&view\_op=list\_works&gmla=AJsN-F6ojGqmOVzwUi1vYK8jducBObYdu\_cQBqVfOZTAQcjbeQCZQQRNlLTq5mC-EwoQ6ch4omAye9rxl1iNrFT3omiDtE4wwfFqnbb9vHAB40C8XGDXR-1IEDfYPswGtLeypcqL9nGB