

CURRICULUM VITAE

PERSONAL DATA

Name Ibrahem Maher Abdelrahem Soltan

Present Position

- **Research Assistant and PhD. Student**

Mechanical Engineering Department,
Faculty of Engineering, University of Malaya,
Kuala Lumpur, Malaysia.

- **Staff member**

Mechanical Engineering Department, Faculty of Engineering,
Kafrelshiekh University, Egypt (on leave).

- **Member in Engineering board (Egypt)**

- **Member in MYTRIBOS (Malaysia)**

<http://www.mytribos.org/pdf/membership.pdf>

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My Professional websites

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Google Scholar

<http://scholar.google.com.my/citations?user=2dJmzJYAAAAJ&hl=en>

ORCID

orcid.org/0000-0003-3947-9971

Researcher ID

[E-9202-2015](https://orcid.org/E-9202-2015)

Scopus

<http://www.scopus.com/authid/detail.url?authorId=56191148600&eid=2-s2.0-84932146367>

Publons

<https://publons.com/author/509817/ibrahem-maher#profile>

Citizenship

Egyptian

Date of Birth

February, 01, 1978



EDUCATION

Ph.D.	University of Malaya, Malaysia, 2016, Manufacturing Engineering.
M. Sc.	Assiut University, Egypt, June 2008, Production Engineering.
B. Sc.	Assiut University, Egypt, May 2002, Production Engineering.

EXPERIENCE

May 2013 to Now	Research Assistant and PhD. Student (Malaya University, Malaysia)
2008-2013	Research and Teaching Assistant, and (Kafrelsheikh University, Egypt)
2004-2008	Instructor and Teaching Assistant (Assiut University, Egypt)

ACADEMIC HONORS

2013 - 2016	University Scholarship for PhD in Manufacturing Engineering, University of Malaya, Malaysia.
2004 - 2008	University Education Scholarship for MSc. in Production Engineering, Assiut University, Egypt.
1997 - 2002	University Education Scholarship throughout the Undergraduate Engineering Program, Assiut University, Egypt.

RESEARCH AND INNOVATION

Area of expertise

- Computer integrated manufacturing (Intelligent automation, CNC machine tools).
- Cutting tool technology (Metal cutting operations using multiple sensors, data acquisition, and signal processing technology).
- Advanced manufacturing processes (EDM, Wire-EDM).
- Machining (Higher accuracy and productivity machining technology).

Research interest

• Manufacturing Technology	• Micro-surface characterization	• EDM Wire electrodes
• Production Engineering	• Design of experiments	• Rapid prototyping
• Applied soft computing	• Powder metallurgy	• WEDM
• Fuzzy modelling	• Coating technology	• Cutting speed
• ANFIS	• Electro-thermal machining	• Surface roughness
• Neural network	• Intelligent machining	• Heat-affected zone
• Micro-machining	• Sustainable production	• Cleaner Production
• CNC machining	• Heat-affected zone	• Non-conventional machining
• Wire-EDM	• White layer zone	• 3-D printing
• Materials processing	• Chip morphology	• Melt treatment

Projects

- Development of a new performance criteria for higher wire-electrical discharge machining performance considering the ecological and economical aspects,

Amount 22,000 RM.

Project Number 20-2013B

Duration 12/2013-12/2016

COURSES TAUGHT

I have been assisting in teaching the following undergraduate and postgraduate courses in **Assiut University, Kafrelshiekh University, and University of Malaya;**

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|--------------------------|---------------------------|-------------------------------|
| • Engineering drawing | • Machine design | • Machine tool design |
| • Descriptive projection | • Engineering analysis. | • CNC |
| • Production technology | • Fortran language | • AutoCAD |
| • Production engineering | • Mechanical vibration | • Operation Research |
| • Stress analysis | • Theory of metal cutting | • Jigs and Fixtures |
| • Theory of machines | • CNC Lab | • Basic Manufacturing Process |
| • Machine construction | • Form Tester Lab | • Adv. Manufacturing Process |

COMPUTER SKILLS

I'm professional in the following programs;

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|--------------------------|-----------------------------|
| • AutoCAD (2D and 3D) | • EndNote |
| • CNC Programming | • Mendeley |
| • MasterCAM (2D and 3D). | • Photoshop |
| • Solid Works | • Matlab (Fuzzy, NN, ANFIS) |
| • Minitab | • ImageJ |
| • Microsoft Office | • SPSS |

OTHER PROFESSIONAL SKILLS

- Specialized in the development of specifications and receipt of Electric Elevators.
- Training of personnel and mechanical engineers to operate and control the machine tools that be controlled by computer (CNC).
- Training of personnel and Oil and Gas engineers to apply Fitness for Service - API 579-1/ASME FFS-1 2007.
- Training of personnel and Oil and Gas engineers to apply oil and gas laboratory operations management.

SUPERVISING

I have been assisted in supervising the following projects and masters;

Final year projects

- Improve the machining performance of Wire-EDM at different peak current, pulse on time, and wire preloading - ANFIS modelling (2013/2014). Mechanical Engineering Department, Faculty of Engineering, University of Malaya.
- ANFIS modelling to investigate the cutting performance of different wire electrodes in machining Titanium alloy (Ti6Al4V) using WEDM (2014/2015). Mechanical Engineering Department, Faculty of Engineering, University of Malaya.
- Wire vibration, lag, and breakage in wire electrical discharge machining (2015/2016). Mechanical Engineering Department, Faculty of Engineering, University of Malaya.

Masters

- Prediction of CrAlN Coating parameters on Al-Si Alloy (LM28) to enhance the surface integrity- Fuzzy Modelling (2015). Mechanical Engineering Department, Faculty of Engineering, University of Malaya.
- ANFIS modelling approach to predict the volumetric shrinkage and surface roughness in fused deposition modelling rapid prototyping process (2016). Mechanical Engineering Department, Faculty of Engineering, University of Malaya.

REVIEWER

I'm a reviewer in the following international journals:

- Journal of Cleaner Production, Publisher (Elsevier).
- Advances in Mechanical Engineering, Publisher (Hindawi Publishing Corporation)
- International Journal of Manufacturing Research, Publisher (Inderscience Publisher).
- Journal of Manufacturing Processes, Publisher (Elsevier).

Reviews: 2016 (2), 2015 (2)

Use the following link to find the details of my reviews:

<https://publons.com/author/509817/ibrahem-maher#stats>

PUBLICATIONS

2006

- [1] Ibrahim Maher, M. E. H. Eltaib and R. M. El-Zahry, (2006) surface roughness prediction in end milling using multiple regression and adaptive neuro-fuzzy inference system, fourth Assiut university International Conference on Mechanical Engineering Advanced Technology for Industrial production (MEATIP4), Assiut University, Assiut, Egypt, pp. 614-620 <http://dx.doi.org/10.13140/RG.2.1.2225.4246>

2014

- [2] Maher I, Eltaib M. E. H., Sarhan A. D, El-Zahry R. M (2014) Investigation of the effect of machining parameters on the surface quality of machined brass (60/40) in CNC end milling—ANFIS modeling. The International Journal of Advanced Manufacturing Technology, 74(1-4), pp. 531-537 <http://dx.doi.org/10.1007/s00170-014-6016-z>, **(ISI-cited Publication)**.

2015

- [3] Ibrahim Maher, Ahmed A.D. Sarhan, M. Hamdi (2015) Review of improvements in wire electrode properties for longer working time and utilization in wire EDM machining. The International Journal of Advanced Manufacturing Technology, 76(1-4), pp. 329-351 <http://dx.doi.org/10.1007/s00170-014-6243-3>, **(ISI-cited Publication)**.
- [4] Ibrahim Maher, M.E.H. Eltaib, Ahmed A.D. Sarhan, R.M.El-ZAHRY (2015) Cutting force based adaptive neuro-fuzzy approach for accurate surface roughness prediction in end milling operation for intelligent machining. The International Journal of Advanced Manufacturing Technology, 76(5-8), pp. 1459-1467. <http://dx.doi.org/10.1007/s00170-014-6379-1>, **(ISI-cited Publication)**.
- [5] Barzani, M. M., Sarhan, A. A. D., Farahany, S., Ramesh, S., & Maher, I. (2015). Investigating the Machinability of Al–Si–Cu cast alloy containing bismuth and antimony using coated carbide insert. Measurement, 62(0), pp. 170-178. <http://dx.doi.org/10.1016/j.measurement.2014.10.030>, **(ISI-cited Publication)**.
- [6] Ibrahim Maher, Liew Hui Ling, Ahmed A. D. Sarhan, , M. Hamdi (2015) Improve wire EDM performance at different machining parameters—ANFIS modeling, 8th Vienna International Conference on Mathematical Modelling (MATHMOOD), IFAC Paper Online, Vienna University of technology, Vienna, Austria, pp. 105-110. <http://dx.doi.org/10.1016/j.ifacol.2015.05.109>, **(Elsevier Publication)**.
- [7] Ibrahim Maher, Ahmed A.D. Sarhan, M. Hamdi (2015) Increasing the productivity of the wire-cut electrical discharge machine associated with sustainable production, Journal of Cleaner Production, 108(0), pp. 247-255. <http://dx.doi.org/10.1016/j.jclepro.2015.06.047>, **(ISI-cited Publication)**.
- [8] Ibrahim Maher, Ahmed A. D. Sarhan, M. Hamdi, (2015) White layer thickness prediction in WEDM-ANFIS modeling, Proceeding of Malaysian International Tribology Conference 2015,
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Malaysian Tribology Society, 16~17 November, Penang, Malaysia, pp. 240-241.

<https://books.google.com.my/books?hl=en&lr=&id=KSDNCgAAQBAJ&oi=fnd&pg=PA240&ots=smlsikwfrZ&sig=C8AsZ0Noi4hMytdrLIOcmPI7QO8#v=onepage&q&f=false>, (**Google book Publication**).

- [9] Barzani, M. M.; Sarhan, A. A. D.; Singh, R.; Maher, I.; Farahany, S. (2015) In Investigation into effect of silicon morphology on surface roughness while machining Al-Si-Cu-Mg alloy, Proceeding of Malaysian International Tribology Conference 2015, Penang, Malaysia, pp 238-239. https://books.google.com.my/books?hl=en&lr=&id=KSDNCgAAQBAJ&oi=fnd&pg=PA238&ots=smlsikxcl_&sig=vZHaSKvRiAIHamkOaL6Jb5IVVb8#v=onepage&q&f=false, (**Google book Publication**).
- [10] Marashi, H.; Sarhan, A. A. D.; Maher, I.; Sayuti, M.; Hamdi, M. (2015) In Enhanced surface roughness of AISI D2 steel machined using nano-powder mixed electrical discharge machining, Proceeding of Malaysian International Tribology Conference 2015, Penang, Malaysia, pp 242-243. https://www.researchgate.net/publication/283256941_Enhanced_surface_roughness_of_AISI_D2_steel_machined_using_nanopowder_mixed_electrical_discharge_machining, (**Google book Publication**).
- [11] Ibrahim Maher, Ahmed A. D. Sarhan, Houriyeh Marashi, Mohsen Marani Barzani, M. Hamdi. (2015) White layer thickness prediction in Wire-EDM using CuZn coated wire electrode - ANFIS modeling, Transaction of the IMF, (Accepted), (**ISI-cited Publication**).

Papers Under Review

- [12] Ibrahim Maher, Ahmed A. D. Sarhan, M. Hamdi, (2015) Propose a new performance index to identify the effect of spark energy and pulse frequency at different duty factors in WEDM-Computer controlled machining, Measurements. (Under review),
- [13] Ibrahim Maher, Ahmed A. D. Sarhan, M. Hamdi, (2015) Identify the optimum spark energy and pulse frequency values to achieve higher productivity in WEDM, Transactions of the IMF. (Under review), (**ISI-cited Publication**).
- [14] Q.M. Mehran, Ibrahim Maher, A.R. Bushroa, M.A.Fazal, (2015) Evaluation of predicted adhesion strength of CrAlN Coating on Al-Si Alloy (LM28)- Fuzzy Modeling, Transactions of the IMF. (Under review),
- [15] Ibrahim Maher, Ahmed A. D. Sarhan, M. Hamdi, (2016) Performance criteria to identify most suitable type of wire electrode for higher EDM performance considering the ecological and economic aspects, Journal of Cleaner Production. (Under review), (**ISI-cited Publication**).
- [16] Barzani, M. M.; Sarhan, A. A. D.; Singh, R.; Maher, I.; Farahany, S. Effect of strontium on surface roughness and chip morphology when turning Al-Si cast alloy, Tribology - Materials, Surfaces & Interfaces. (Under review), (**ISI-cited Publication**).
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[17] Yusuf S Dambatta, Ahmed A. D. Sarhan, Ibrahim Maher, M. Hourmand, (2016) Volumetric shrinkage prediction in fused deposition modelling (FDM) process - ANFIS modelling approach, Measurement (Under review), **(ISI-cited Publication)**.

Book Chapters

[18] Electrical discharge energy effect on white layer thickness in WEDM, **Elsevier**, (In press).

[19] Houriyeh Marashi, Ahmed A. D. Sarhana, Ibrahim Maher, Mohd Sayuti, (2015), Modeling and Experimentally Substantiated Techniques of Enhancing Electrical Discharge Machining, **Elsevier**, (In press).

Patents

[20] Ibrahim Maher, Ahmed A. D. Sarhan, M. Hamdi, (2015), Develop a new wire electrode design for wire electrical discharge machining, Malaysia, PI 2016700115.

DEVELOPMENT COURSES FACULTY MEMBERS

Assiut University

[Faculty and leadership development project \(FLDP\)..](#)

- 1 - Morals and professional ethics (April 2005).
- 2 - Effective teaching (May 2005).
- 3 - Thinking Skills (March2007).
- 4 - Recent trends in thinking (March2007).
- 5 - Teaching to the large and mini-teaching (June 2007).
- 6 - Scientific publishing (March2008).

Kafrelsheikh University.

[Faculty and leadership development center \(FLDC\).](#)

- 1 - Methods of scientific research (April 2010).
- [Faculty of education, Kafrelsheikh University.](#)
- 1 - Session of the university teacher preparation (March 2009).

NAQAAE

[National Authority for Quality Assurance and Accreditation of Education \(NAQAAE\).](#)

- 1 - Strategic planning for higher education institutions (July 2010).
 - 2 - Institutional self – evaluation for higher education (August 2010).
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