


## Faculty Vitae

### General Information:

Name	Nationality	Photo
Dr. Osama Ahmed Mohamed Abdelaal	Egyptian	

### Education:

Degree	Discipline	Institution	Year
B.Sc.	Mechanical Design and Production	Faculty of Engineering, Assiut University, Egypt	2005
M.Sc.	Mechanical Design and Production	Faculty of Engineering, Assiut University, Egypt	2009
Ph.D.	Manufacturing Engineering	Egypt-Japan University of Science and Technology- (E-JUST), Alexandria, Egypt, through joint supervision with Tokyo Institute of Technology (TokyoTech), Japan,	2014

### Academic Experience:

Institution	Title	Period	FT/PT
Faculty of Engineering, Assiut University, Egypt	Demonstrator	2006-2010	FT
Faculty of Engineering, Assiut University, Egypt	Assistant Lecturer	2010-2014	FT
Faculty of Engineering, Assiut University, Egypt	Assistant Professor	2014- 2021	FT
Department of Material Science (Lehrstuhl für Werkstoffkunde: LWK), Paderborn University, Germany	Post Doctoral Fellow	April 2016 – October 2016	FT
College of Engineering, Majmaah University, Saudi Arabia	Assistant Professor	Feb.2017- Present	FT
Faculty of Engineering, Assiut University, Egypt	Associate Professor	July 2021- Present	FT

### Honors and awards:

1	DAAD - German Egyptian Research Short Term Post- Doctoral Scholarship (GERSS).	(April 2016- Oct. 2016)
2	Governmental Mission, full funded Scholarship by the Egyptian Ministry of Higher Education to obtain PhD from the Egypt - Japan University of Science and Technology, Egypt and Tokyo Institute of Technology, Japan.	(Feb. 2011- Feb. 2014)
3	Mitsubishi Corporation research grant at Egypt Japan University of Science and Technology, Alexandria, Egypt.	(Aug. 2010- Feb. 2011)
4	Certificate of Excellence from head of Assuit Engineers syndicate due to my excellence during my undergraduate studies	2007
5	Certificate of appreciation from head of Mechanical Engineering Department due to my contribution in Assuit University international conference on mechanical	2006
6	Syndicate of Egyptian Engineers award for first class honor.	2005

7	Prof. Dr. Fathi Abdallah Abd-Elhafiz Award in Machine Design, Assiut University.	2004
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## Publications

<b>1. Journals:</b>		
1	Abdelaal, Osama, and Saleh Ahmed Aldahash. 2024. "Realization of Impression Evidence with Reverse Engineering and Additive Manufacturing" <i>Applied Sciences</i> 14, no. 13: 5444. (Q1-ISI, IF=2.5). <a href="https://doi.org/10.3390/app14135444">https://doi.org/10.3390/app14135444</a>	
2	Osama Abdelaal, Florian Hengsbach, Mirko Schaper, and Kay-Peter Hoyer, "LPBF Manufactured Functionally Graded Lattice Structures Obtained by Graded Density and Hybrid Poisson's Ratio", <i>Materials</i> 15, No. 12: 4072. 2. (Q1-ISI, IF=3.748). (DOI: <a href="https://doi.org/10.3390/ma15124072">https://doi.org/10.3390/ma15124072</a> ).	
3	Bahaa Saleh, Ibrahim Maher, Yasser Abdelrhman, Mahmoud Heshmat, and Osama Abdelaal, "Adaptive neuro-fuzzy inference system for modelling the effect of slurry impacts on PLA material processed by FDM", <i>Polymers</i> , 13(1), No. 118, December 2020. (Q1-ISI, IF=4.967). (DOI: <a href="https://doi.org/10.3390/polym13010118">https://doi.org/10.3390/polym13010118</a> ).	
4	Osama Abdelaal, Mahmoud Heshmat, Yasser Abdelrhman "Experimental investigation on the effect of water-silica slurry impacts on 3D-Printed polylactic acid", <i>Tribology International</i> , Vol. 151, Pp., 106410, November 2020. (Q1-ISI, IF=5.62). (DOI: <a href="https://doi.org/10.1016/j.triboint.2020.106410">https://doi.org/10.1016/j.triboint.2020.106410</a> ).	
5	Saleh Ahmed Aldahash, Osama Abdelaal, Yasser Abdelrhman "Slurry Erosion– Corrosion Characteristics of As-Built Ti-6Al-4V Manufactured by Selective Laser Melting", <i>Materials</i> , Vol. 13, Issue 18, September 2020. (Q2-ISI, IF=3.748). (DOI: <a href="https://doi.org/10.3390/ma13183967">https://doi.org/10.3390/ma13183967</a> ).	
6	Osama Abdelaal, Saied Darwish, Khaled Abd Elmougoud, Saleh Aldahash, "A new methodology for design and manufacturing of a customized silicone partial foot prosthesis using indirect additive manufacturing", <i>The International Journal of Artificial Organs</i> , Vol. 42, No. 11, Pp., 645-657, November 2019. (Q3-ISI, IF=1.631). (DOI: <a href="https://doi.org/10.1177/0391398819847682">https://doi.org/10.1177/0391398819847682</a> ).	
7	Osama Abdelaal, Saied Darwish, Hassan El-Hofy, Yoshio Saito "Patient-specific design process and evaluation of a hip prosthesis femoral stem", <i>The International Journal of Artificial Organs</i> , 42(6), pp.271-290, December 2018. (Q3-ISI, IF=1.631). (DOI: <a href="https://doi.org/10.1177/0391398818815479">https://doi.org/10.1177/0391398818815479</a> ).	
8	Hend A Mostafa, Osama AM Abdelaal, Wael M Khier and AA Khalil, "Patient Specific Finite Element Modeling of Human Vertebra", <i>European Journal of Advances in Engineering and Technology</i> , Vol. 4, No. 11, Pp., 807-813, June 2018. (ISSN: 2394 - 658X) .	
9	Mohamed Adel, Osama Abdelaal, Abdelrasoul Gad, Abu Bakr Nasr, AboelMakaram Khalil "Polishing of fused deposition modeling products by hot air jet: Evaluation of surface roughness", <i>Journal of Materials Processing Technology</i> , Vol. 251, Pp., 73-82, January 2018. (Q1-ISI, IF=6.162).(DOI: <a href="https://doi.org/10.1016/j.jmatprotec.2017.07.019">https://doi.org/10.1016/j.jmatprotec.2017.07.019</a> ).	
10	M. Adel, Osama Abdelaal, Abdelrasoul Gad, Abu Bakr Naser, Aboel Makaram Khalil, "Enhancing the surface roughness of fused deposition modeling products", <i>Journal of Engineering Sciences</i> , Vol. 45, No. 3, pp. 324 – 332, May 2017.	
11	Osama A. M. Abdelaal and Saied M. H. Darwish, " Analysis, Fabrication and a Biomedical Application of Auxetic Cellular Structures," <i>Int J of Engineering and Innovative Technology</i> , Vol. 2, No. 3, September 2012.	
12	Osama A. M. Abdelaal, Khalil, A. A., Nasr, A. A. "Characteristics of OilLubricated Partially Herringbone Grooved Journal Bearing", <i>Journal of Engineering Sciences</i> , Vol. 37, No. 4, PP.925-942, Assiut University, July 2009.	

## Peer review

1	Reviewer of the Arabic translation of the book " H-POINT: The Fundamentals of Car Designand Packaging" , By Stuart Macey and Geoff Wardle translated by the translation center at King Saud University, Riyadh, Saudi Arabia.
2	Reviewer of Scientific Reports Journal, published by the Nature Publishing Group, 2014 Impact Factor is 5.578
3	Reviewer of Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, published by the SAGE Publications, 2016 Impact Factor is 0.996

### Scientific and Professional Memberships

1	Member in the Egyptian Syndicate of Engineers
2	Member in the Society for the Advancement of Material and Process Engineering (SAMPE®).
3	Engineering Consultations Center, Assiut University, Egypt

### Funded Research Projects

1	Principal Investigator of a project entitled: "Development of Improved Fused Deposition Modeling Nozzle System". STDF Research Support & Technology Development Grant (RSTDG), Egypt, 2015 (Project ID: 12612).
2	Investigator member of a research project entitled: " Development and Evaluation of New Customized Prostheses Utilizing Additive Manufacturing". Funded by King Abdulaziz City for Science and Technology, Saudi Arabia, (Project ID: 3-17-05-018-0002).
3	Investigator member of a research project entitled: "Advanced Manufacturing" Funded by Deanship of Scientific Research- Majmaah University, Saudi Arabia, (Project ID: RGP-2019-18)

### Research Areas

1	Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Aided Engineering (CAE), Reverse Engineering (RE), 3D Printing/Additive manufacturing, Auxetic materials, and Lattice structures.
2	Custom design and manufacturing of biomedical implants and medical devices.