

1- Personal Details

Name : Dr. Osama Abdelaal
Designation : Assistant Professor
Date of Birth : July 02, 1983
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2- Area of specialization:

Major	Mechanical Engineering
Minor	Mechanical design and production engineering

3- Education & Qualifications

Date	Degree	University name	Country	Title of the Dissertation
2014	Ph.D.	Egypt-Japan University of Science and Technology-(E-JUST)	Egypt	"Development of Innovative Hip Implant Using Functionally Graded Auxetic Structures"
2009	Master	Assiut University	Egypt	"Influence of Journal Groove Geometry on the Performance of Oil- Lubricated Grooved Journal Bearings".
2005	Bachelor	Assiut University	Egypt	"Reverse Engineering of a Mechanical Press Using Computer- Aided Design and Engineering (CAD/CAE)"

4- Professional Activities:

Job Title	Place	Country	From	To
Member, Accreditation and Quality Development Committee, (2017 - 2019). (The MIE Program received full ABET Accreditation in August 2019).	CoE, Majmaah University	Saudi Arabia	2017	2019
Member, NCAAA Accreditation steering committee, (2019- 2023). (The MIE Program received NCAAA Accreditation in May 2023).	College of Engineering, Majmaah University	Saudi Arabia	2019	2023
Member, Laboratories and Equipment Procurement Committee, (2017-now)	CoE, Majmaah University	Saudi Arabia	2017	now
Member, Undergraduate Curriculum Development Committee, (2019- 2023)	College of Engineering, Majmaah University	Saudi Arabia	2019	2023
Coordinator, student academic advising Committee, (2017- now)	CoE, Majmaah University	Saudi Arabia	2017	now
Coordinator, exams schedule and academic timetable preparation committee, (2019-now)	College of Engineering, Majmaah University	Saudi Arabia	2019	now
Coordinator, student's innovation and entrepreneurship committee, (2018- 2020)	CoE, Majmaah University	Saudi Arabia	2018	2020
Coordinator, Student Activities Committee (SAC), (2019- now)	College of Engineering, Majmaah University	Saudi Arabia	2019	now

5- Teaching Experiences

#	Teaching Experiences	University	From	To
1				
1	Nondestructive Examination of Materials	Majmaah University, Saudi Arabia	2018	Present
2	CAD, CAM, CAE	-Sohag University, Egypt -Majmaah University, Saudi Arabia) -Assiut University, Egypt	2014	present
2	Engineering Mechanics	-Majmaah University, Saudi Arabia	2017	2020
4	Engineering metrology	-Majmaah University, Saudi Arabia -Assiut University, Egypt)	2014	2016
5	Design of machinery	-Assiut University, Egypt) -Al Azhar University, Egypt -Majmaah University, Saudi Arabia	2014	2018
1	Nondestructive Examination of Materials	Majmaah University, Saudi Arabia	2018	Present

6- Areas of Specialization

#	Areas of Specialization
1	Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Aided Engineering (CAE), Reverse Engineering (RE), Tribology, 3D Printing/Additive manufacturing, materials characterization, Auxetic materials, and Lattice structures.
2	Custom design, analysis and manufacturing of biomedical implants, Prostheses, Tissue Engineering scaffolds and medical and sports devices.

7- Current membership in professional organizations

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

8- Publications (Most important publications in the last 5 Years)

#	Publications / Presentations	Journal (Conference)	Publishing Year (Conference Date)
1	“Realization of Impression Evidence with Reverse Engineering and Additive Manufacturing”	Applied Sciences.	2024
2	"LPBF Manufactured Functionally Graded Lattice Structures Obtained by Graded Density and Hybrid Poisson's Ratio"	Materials	2022
3	“Adaptive neuro-fuzzy inference system for modelling the effect of slurry impacts on PLA material processed by FDM"	Polymers	2020
4	"Experimental investigation on the effect of water-silica slurry impacts on 3D-Printed polylactic acid"	Tribology International ,	2020
5	“Slurry Erosion–Corrosion Characteristics of As-Built Ti-6Al-4V Manufactured by Selective Laser Melting”,.	Materials	2020
6	“A new methodology for design and manufacturing of a customized silicone partial foot prosthesis using indirect additive manufacturing”	The International Journal of Artificial Organs	2019
7	“Patient-specific design process and evaluation of a hip prosthesis femoral stem”	The International Journal of Artificial Organs	2018

8	“Polishing of fused deposition modeling products by hot air jet: Evaluation of surface roughness”	Journal of Materials Processing Technology	2018
9	“Adaptive neuro-fuzzy inference system for modelling the effect of slurry impacts on PLA material processed by FDM”	Polymers	2020
10	"Experimental investigation on the effect of water-silica slurry impacts on 3D-Printed polylactic acid"	Tribology International ,	2020

9- MAJOR RESEARCH PROJECTS

#	Research Project	Status (Now/Finished)	Funded by
1.	Development of Improved Fused Deposition Modeling Nozzle System	Finished	STDF Research Support & Technology Development Grant (RSTDG), Egypt