



# SAJID ALI

Assistant Professor

## Personal Data

Nationality | Pakistan

Date of Birth | 26-12-1986

Department | Mechanical & Energy Engineering Department

Official IAU Email | sakzada@iau.edu.sa

## Language Proficiency

Language	Read	Write	Speak
English	Yes	Yes	Yes

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
Jan, 2018	PhD., Mechanical Engineering	KSA	KFUPM, KSA
Oct, 2013	M.Sc., Mechanical Engineering	Pakistan	UET, Peshawar
Aug, 2009	B.Sc., Mechanical Engineering	Pakistan	UET, Peshawar

## PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Dynamics & control of vibrating webs in a roll-to-roll system
Master	Numerical investigation of effects of baffles on fluid sloshing of partially filled tanker trucks

## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Assistant Professor	Imam Abdulrahman Bin Faisal University (IAU), Dammam, Saudi Arabia	Jan. 2019 – Present
Assistant Professor	International Islamic University, Islamabad, Pakistan	June. 2018 – Jan. 2014
Lecturer	King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia	Jan. 2014 – May. 2018
Lecturer	University of Engineering & Technology (UET), Peshawar, Pakistan	Aug. 2009 – Jan. 2014



## Scientific Achievements

### Refereed Scientific Research Papers Published

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date
1	Sajid Ali	Nonlinear dynamic and stability of a small size moving beam under thermal conditions	Mathematical Methods in the Applied Sciences	2023
2	Maher Al-Turk, Sajid Ali and M. A. Hawwa	Characterization of a dual nonlinear helmholtz resonator	Micromachines	2022
3	Sajid Ali, M. A. Hawwa and D. E. Hardt	Dynamic behavior of axially moving web in multi-span roll-to-roll microcontact printing system	Journal of Systems and Control Engineering	2022
4	Sajid Ali, and M. A. Hawwa	Dynamics of axially moving beams: a finite difference approach	Ain Shams Engineering Journal	2022
5	Sajid Ali, M. A. Hawwa, and Uthman Baroudi	Effect of leak geometry on water characteristics inside pipes	Sustainability	2022
6	Sajid Ali, Fahad Al-Amri, and Farooq Saeed	Numerical and experimental performance evaluation of a photovoltaic thermal integrated membrane desalination system	Energies	2022
7	Mamon Horoub, Sajid Ali, et al.	Study the effect of changing cables' pattern on the workspace of a six DOF floating parallel marine robot (FPMR)	Alexandria Engineering Journal	2022
8	M. A. Hawwa, Sajid Ali, et al.	Transmission loss as an indicator on multiple leaks in a pipeline	Journal of Pipeline Systems Engineering and Practice	2022
9	N. G. Hariri, Sajid Ali, et al.	Experimental investigation of azimuth and sensor-based control strategies for a PV solar tracking application	Applied Sciences	2022
10	Kaffayatullah Khan, Sajid Ali, et al.	A hybrid SVR-based prediction model for the interfacial bond strength of externally bonded FRP	Polymers	2022



		laminates on grooves with concrete prisms		
11	K. A. M. Alharbi, Sajid Ali, et al.	Cattaneo–Christov heat flow model for copper–water nanofluid heat transfer under Marangoni convection and slip conditions	Scientific Reports	2022
12	Sajid Ali et al.	Transverse response of an axially moving beam with intermediate viscoelastic support	Mathematical Problems in Engineering	2021
13	Fahad Al-Amri, Sajid Ali, et al.	Innovative technique for achieving uniform temperatures across solar panels using heat pipes and liquid immersion cooling in the harsh climate in the kingdom of Saudi Arabia”,	Alexandria Engineering Journal	2021
14	Umar Nawaz Bhatti, Sajid Ali, et al.	Design and optimization of 6-dof platform top plate under realistic joint conditions	International Journal of Simulation Modelling	2020
15	Sajid Ali, and M. A. Hawwa	A parametric study on the dynamics of two-span roll-to-roll microcontact printing system	Sādhanā- Academy Proceedings in Engineering Sciences	2019
16	M. A. Hawwa, Sajid Ali and D. E. Hardt.	Influence of roll-to-roll system’s dynamics on axially moving web vibration	Journal of Vibroengineering	2019
17	Sajid Ali, M. A. Hawwa and D. E. Hardt	Vibration suppression of an axially moving web in a multi-span roll-to-roll microcontact printing system	Journal of Vibration Engineering & Technologies	2018
18	Sajid Ali et al.	Effect of baffle size and orientation on lateral sloshing of partially filled containers: a numerical study	European Journal of Computational Mechanics	2017
19	Sikandar Khan, Sajid Ali, et al.	Observation of the starting and low speed behaviour of small horizontal axis wind turbine	Hindawi Publishing Corporation, Journal of Wind Energy	2014
20	Sajid Ali et al.	Effect of fluid physical properties on rollover stability in terms of damping of	International Journal of Advanced Research	2013



	dynamic forces & moments in fluid sloshing	in Engineering and Technology
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### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Nauman Ahmed, Sikandar Khan, Sajid Ali, et al.	A comparative study among swarming intelligence algorithms and subspace-based algorithms for high resolution direction of arrival estimation	8 <sup>th</sup> International Conference on Engineering and Emerging Technologies (ICEET), 2022.
2	Fawad S. Khan, Athar Waseem, Sajid Ali, et al.	Federated learning-based UAVs for the diagnosis of plant diseases	8 <sup>th</sup> International Conference on Engineering and Emerging Technologies (ICEET), 2022.
3	Muhammad Umar Siddiqui, Sajid Ali, et al.	Optimum tilt angles of solar collectors in Saudi Arabia	3 <sup>rd</sup> International Conference on Electrical, Communication and Computer Engineering (IEEE), 2021.
4	Sajid Ali et al.	Effect of Baffles Location on the Rollover Stability of Partially Filled Road Container	2 <sup>nd</sup> International Conference on Electrical, Communication and Computer Engineering (IEEE), 2020.
5	Sikandar Khan, Sajid Ali, et al.	Dynamic modeling and analysis of a four-bar mechanism for automobile applications	2 <sup>nd</sup> International Conference on Electrical, Communication and Computer Engineering (IEEE), 2020.
6	Rizwan Ahmad, Sajid Ali, et al.	Simulation and breakdown characteristics of china clay and silica sand for improved grounding system”,	2 <sup>nd</sup> International Conference on Electrical, Communication and Computer Engineering (IEEE), 2020.
7	Sikandar Khan, Sajid Ali, et al.	Optimization of vehicle suspension system using genetic algorithm	10 <sup>th</sup> International Conference on Mechanical and Aerospace Engineering (IEEE), 2019.
8	Ahmad Albalasie, Sajid Ali et al	Design, prototype, and control design based on computed torque control of selective compliance assembly robot arm	The 9 <sup>th</sup> International Conference on CYBER Technology in Automation, Control, and Intelligent Systems (IEEE), 2019.
9	Mamon Horoub, Sikandar Khan and Sajid Ali	Comparative analysis of a floating mooring line-driven platform (FMDP) having different mooring lines patterns	The 9 <sup>th</sup> International Conference on Mechanical and Aerospace Engineering (ICMAE), 2018.



10	Umar Nawaz Bhatti, Sajid Ali et al	A numerical modeling study of the effects of various joint boundary conditions on stiffness behavior of 6-DOF platform's top plate	The 9 <sup>th</sup> International Conference on Mechanical and Aerospace Engineering (ICMAE), 2018.
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### Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Funded by Deputyship for Research & Innovation, Ministry of Education through project No. IF-2020-024-Eng.	Development and implementation of a novel active cooled-PV system driving air gap membrane desalination (AGMD)	2022
2	Funded by Deanship of Scientific Research (DSR) at IAU through project No. 2020-055-Eng.	Innovative technique for achieving uniform temperatures across solar panels using heat pipes and liquid immersion cooling in the harsh climate in the Kingdom of Saudi Arabia	2021
3	Supported by KFUPM & MIT through Project No. MIT13101/02	Micro contact printing in a roll-to-roll system funded by Center for Clean Water and Clean Energy at MIT and King Fahd University of Petroleum and Minerals	2017
4	Funded by KACST through KFUPM through project No. 12-ELE2381-04.	Leak detection and prevention in water pipes	2018

### Current Researches

#	Research Title	Name of Investigator(s)
1	Design & implementation of economical automated peritoneal dialysis machine, funded by Deanship of Scientific Research (DSR) at IAU through project No. IF-2022-044-Eng.	Team from CoE, IAU
2	Design of an automated spinal needle, funded by Deanship of Scientific Research (DSR) at IAU through project No. IF-2022-046-Eng	Team from CoE, IAU



## Membership of Scientific and Professional Societies and Organizations

- American Society of Mechanical Engineers (ASME)

## Teaching Activities

### Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Machine Design	ENRG 410	15 Lectures/Semester
2	Dynamics	ENG 311	15 Lectures/Semester
3	Thermodynamics	ENRG 308	15 Lectures/Semester
4	Heat & Mass Transfer	ENRG 313	15 Lectures/Semester
5	Electromechanical Systems	ENG 422	15 Lectures/Semester
6	Introduction to Engineering	ENG 251	15 Lectures/Semester
7	Workshop Practice	ENRG 307	15 Labs/Semester
8	System Dynamics	ME 413	15 Lectures and Labs/Semester
9	Manufacturing Processes	ME 208	15 Lectures and Labs/Semester
10	Dynamic System Modeling	MTE 303	15 Lectures and Labs/Semester
11	Robotics	MTE 408	15 Lectures and Labs/Semester
12	Sensors & Actuators	MTE 402	15 Lectures/Semester

## Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

### Committee Membership

#	From	To	Position	Organization
1	2022	Present	Member in QAE Committee CoE, IAU	College of Engineering, IAU
2	2022	Present	Head of Departmental Alumni & Summer Training Committee	Engergy Department, College of Engineering, IAU
3	2020	Present	Member in Production Workshop & FABLAB, IAU	Engergy Department, College of Engineering, IAU
4	2020	Present	Member in Departmental Quality & Accerdation Committee	Engergy Department, College of Engineering, IAU
5	2019	Present	Member in Departmental Student Advising Committee	Engergy Department, College of Engineering, IAU
6	2019	Present	Member in Safety Committee CoE, IAU	College of Engineering, IAU

## Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	MS Office
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2	MATLAB
3	Auto CAD
4	Solid Works
5	Pro-E
6	CATIA
7	Ansys Fluent
8	Zoom
9	Mendeley

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