

# Dr. Mohammad Sikandar Azam

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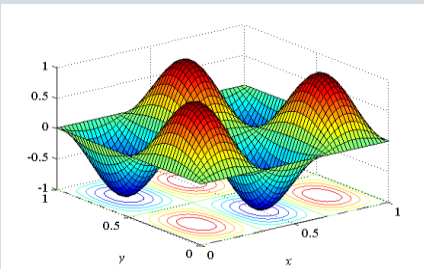
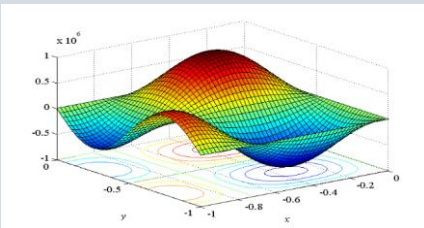
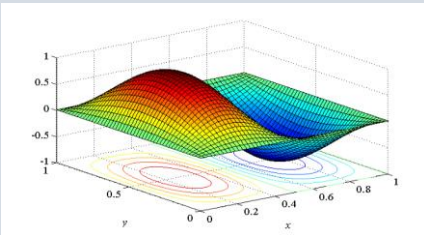
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## Research Interest

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Machine Design,  
Vibration of plated structure (FGM Plates, Nano plates,  
Plates on foundation), Structural acoustics,  
Tribology, Lubrication and bearing Design,  
Dental Material



## Education

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- Ph.D. in Mechanical Engineering from IIT(ISM) Dhanbad, INDIA.
- M.Tech.in Mechanical Engineering with specialization in Mechanical Systems Design from IIT Kharagpur, INDIA
- B.Sc Engg. in Mechanical Engineering from BIT Sindri, INDIA

## Experience

1. Organization : **IIT(ISM) Dhanbad, India**  
Post : **Assistant Professor**  
Period : February 21, 2011 onward
2. Organization : **Majmaah University, KSA**  
Post : **Lecturer**  
Period : March 09, 2010 to February 14, 2011
3. Organization : **GCET Greater Noida, India**  
Post : **Assistant Professor**  
Period : January 05, 2009 to February 2010
4. Organization : **KIIT University, Bhubaneswar, India**  
Post : **Assistant Professor**  
Period : May 22, 2007 to September 5, 2008

## Project Undertaken

Sl. No.	Project title	Sponsoring authority	Amount Sanctioned	Role	Current Status
[i]	Enhancement of Biomechanical behavior of Atraumatic Restorative (ATR) Dental Material	TEQIP III	2 lakhs	PI	Completed
[ii]	Investigation to fatigue and vibration characteristics of Rolling Element Bearing	TEQIP Collaborative Research Scheme	8.3 lakhs (BIT Sindri)	Co-PI	Ongoing

## Consultancy

- Ongoing consultancy project with M/s NJS Engineers India Pvt. Ltd; Testing of DI pipes for Dhanbad water supply Scheme, Phase-I. Consultancy Number: CONS/0050/2021-22; Total cost: Rs. 2,21,840.00 (Co-PI).

## Ph.D Supervision

Sl. No	Name of Research Scholar	Topic of Research	Guide/ Co-guide	Status
1	Rahul Kumar (2015DR0232)	Computational Analysis of Rayleigh Step Bearing operating under Elasto-hydrodynamic Lubrication	Co-guide	PhD Awarded on Feb 04, 2020
2	Piyush Pratap Singh (2014DR 270)	Vibration and buckling analysis of functionally graded plate structures resting on elastic foundation	Main guide	PhD Awarded on June 07, 2021
3	Imran Ali (2014 DR 0273)	Natural vibration characteristics of FGM plated structures by Dynamic stiffness method	Main guide	PhD Awarded on October 07, 2021
4	Tauhid Alam Ansari (17DR000334)	Fatigue analysis of Symmetric and asymmetric fiber reinforced polymer composite laminates	Co-guide	Ongoing
5	Poonam Kumari (17DR000626)	Numerical investigation of performance of sector pad bearing under thin film lubrication.	Sole guide	Ongoing
6	Rajat jain (19DR0118)	Static and dynamic analysis of Functionally Graded Beams and Plate	Sole guide	Ongoing
7	Rahul Verma (2016DR1131)	Development and Characterization of marble dust filled nanocomposite materials for automotive braking applications	Main Guide	Ongoing
8	Shahroze Akhter Khan (17DP000223)	Development and Experimental Studies of Dynamometers for Cutting Force Measurement	Main Guide	ongoing

## M.Tech Supervision

Sl. No	Name of the Candidate	Topic of Project	Status
1	Rahul Kumar (2013MT0093)	Numerical Study of Thermo-Hydrodynamic and Thermo-Elastohydrodynamic Lubrication with Surface Waviness.	Completed 2015
2	Lokendra Singh (2013MT0344)	Buckling Analysis of Plate Resting on Elastic Foundation.	Completed 2015
3	Mukesh Kumar (2013MT0114)	Vibration Analysis of Functionally Graded Rotating Disc.	Completed 2015
4	Md. Touhid Alam Ansari (14MT000385)	Vibration Analysis of Stationary and Rotating Plate with Crack.	Completed 2016
5	Md. Zahid (14MT000084)	Vibration Analysis of Cracked Rectangular Plate coupled with Water.	Completed 2016
6	Rituraj Soni (14MT000122)	Free Vibration Analysis of Rectangular Nano Plate.	Completed 2016
7	Priyanka Lalam (14MT000130)	Enhancing Air Flow Restriction Prediction of a Generator	Completed 2016
8	Vivek Sharma (14MT000143)	Hybrid Film Lubrication in Hydrodynamic Journal Bearings with Deterministic Surface Roughness.	Completed 2016
9	Patil Lokesh Rajendrasing (14MT000082)	Non Linear Dynamics of Bolted Disc Drum Joint in Rotor.	Completed 2016
10	Debojyoti Halder (14MT000486)	Analytical Solution for Magneto Rheological Dampers for Different Flow Modes.	Completed 2016
11	Ashutosh Kumar Arya (15MT000304)	Elastohydrodynamic Lubrication analysis of Rayleigh Step Bearing with Surface Roughness.	Completed 2017
12	Murtaza Ansari (15MT000009)	Vibro-Acoustic Behaviour of Cracked Rectangular Plate.	Completed 2017
13	Abhishek Yadav (15MT000424)	Vibro-Acoustic Behaviour of Cracked Circular Plate.	Completed 2017

14	Md. Mahtab Sabri (15MT000519)	Elastohydrodynamic Lubrication analysis of Journal Bearing with Surface Roughness.	Completed 2017
15	Shanayrab Hayat (15MT000406)	Design, Analysis and development of a constant volume valve	Completed 2017
16	Mukesh Kumar (16MT001305)	Performance evaluation of thrust pad bearings with different inlet conditions under thin film lubrication.	Completed 2018
17	Rahul Agarwal (16MT000838)	Vibration characteristics of functionally graded plate resting on winkler Pasternak foundation	Completed 2018
18	Praveen Kumar (16MT000956)	Effect of scaling parameter on free vibration of nano plate	Completed 2018
19	Raushan Kr. Singh (16MT001486)	Formulation of dynamic stiffness matrix for free vibration of FG plate with or without patch mass	Completed 2018
20	Shailendra Kumar Upadhyay (16MT001485)	Analytical Solution for Magneto Rheological Dampers in shear mode	Completed 2018
21	Aditya Pandey (16MT001469)	Mechanical and tribological behavior of graphite base aluminium metal matrix composites	Completed 2018
22	Vikas Kumar Kaktan (16MT001374)	Effect of Inlet condition on performance parameters of Rayleigh step bearing under thin film lubrication	Completed 2018
23	Gaurav Kumar (17MT001837)	Static analysis of functionally graded plate on elastic foundation	Completed 2019
24	Sourav Mishra (17MT002041)	Enhancement of bio-mechanical properties of dental material used in ART	Completed 2019
25	Anurodh Ranjan 18MT0307	Performance evaluation of slider thrust bearing with different inlet conditions under elastohydrodynamic lubrication regime	Completed 2020
26	Banoth Uday Raj 18MT0176	STUDY OF BIO-MECHANICAL PROPERTIES OF DENTAL MATERIAL USED IN ART	Completed 2020
27	Mudit Mishra 18MT0120	Free vibration analysis of Functionally Graded Material (FGM) plates by Dynamic Stiffness Method (DSM) using first order shear deformation theory	Completed 2020
28	Alok Kumar 18MT0328	Vibration Analysis of Functionally Graded Plate in Thermal Environment	Completed 2020
29	Thaqqyudheen Bava P A	Free vibrational analysis of functionally graded plate on elastic foundation	Completed

	18MT0523		2020
30	Ayush Yadav		Completed
	18MT0071	Buckling analysis of functionally graded plate	2020

## Reviewer

- Reviewed projects for GYTI(Gandhian Young Technological Innovation) Awards-2020
- Reviewed articles of the following Journals  
IMECH E Part C  
SIMULATION  
MATERIAL RESEARCH EXPRESS  
SHOCK AND VIBRATION  
MAPAN

## Departmental/Institutional Responsibilities

- Faculty in-charge of Tribology Lab since 2020
- Faculty in-charge of Strength of Material lab since 2020
- Co-chairman, Stock verification of assets/stores committee 2020 and 2021
- Member, Departmental Postgraduate Committee (DPGC) since 2020
- Faculty Advisor/coordinator M Tech in Mechanical engineering (Machine Design) since 2020
- Faculty advisor/coordinator, M Tech in Mechanical Engineering (MET) from 2018 to 2020
- Member, Departmental Undergraduate Committee (DUGC) from 2018 to 2020
- Faculty advisor, 3<sup>rd</sup> Year B Tech (Mechanical Engineering) from 2015 to 2020.
- Member, Library Advisory Committee (LAC) from 2012 to 2020.
- Member, Time Table Committee 2018.
- Departmental Coordinator for Concetto 2019
- Member, Accumulation of write off items 2018-19
- Member, Question paper moderation board 2018-19
- Member, Departmental Faculty selection committee (DFSC), 2018
- Tabulator for session 2012-13 and 2013-14

## **Contribution to Student Affairs at IIT(ISM) Dhanbad**

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- Faculty advisor, Abhay Dramatics club since 2019
- Faculty advisor for first year undergraduate students of Department of Mechanical Engg for 2012-13, 2013-2014 and 2014-15.
- Faculty advisor for third year undergraduate students of Department of Mechanical Engineering for 2015-16 , 2016-17 ,2017-18 and 2018-19
- Departmental Faculty co-ordinator for CONCETTO-2016 , 2018 and 2019
- Coordinator of student chapter of ASME.

## **Courses Handled at IIT(ISM) Dhanbad**

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### ***M Tech courses***

- Lubrication and Bearing Design
- Design of Tribological Components
- Theory of Lubrication

### ***B Tech courses***

- Engineering Mechanics
- Engineering Graphics
- Machine Drawing
- Mechanical Engineering I
- Mechanical Engineering II
- Mechanical Engineering Design I
- Mechanical Engineering Design II
- Machine Design
- Measurement and Control
- Tribology

## **Event Organised**

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- Convener of Cisma (Conference on Intelligent and Standardised Manufacturing and Automation), a technical festival organised by the ASME students' chapter of IIT (ISM), 16-18 March, 2018.

## **Workshop/Quality Improvement Programs Attended**

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- Participated in Quality improvement programme on "HYDROCARBON ENGINEERING" held at NIT Jalandhar for a period of two weeks (Dec 6-16,2002)
- Participated in Quality improvement programme on "TRIBOLOGY, ENGINE TECHNOLOGY AND ENGINE TECHNOLOGY" held at NIT Jamshedpur for a period of two weeks (March15-26,2004)
- Participated in Quality improvement programme on "ADVANCES IN MAINTENANCE AND TRIBOLOGY" held at IIT Delhi for a period of one week (July 7-11,2008)
- Participated in Continuing Education and Quality improvement programme on "PIPING ENGINEERING" held at IIT Bombay for a period of two weeks (May 07-19,2012)
- Participated in Professional Development Programme on "MATLAB AND SIMULINK FOR ENGINEERING APPLICATIONS" held at ISM Dhanbad for a period of one week (June 24-29,2013)
- Participated in the international workshop on "COMPUTATIONAL METHODS IN VIBRATION AND ACOUSTIC" held at ISM Dhanbad for a period of one week (March 16-21,2015)
- Participated in "9<sup>th</sup> SUMMER SCHOOL IN TRIBOLOGY" held at IIPM Gurgaon for a period of one week (June19-23, 2017) organised by Tribology Society of India.

## **Membership of Professional Bodies**

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- Life time member of Indian Science congress (L21517)
- Long term member of Tribology Society of India ( LM 5822)
- Member of Institution of Engineer, India (M-1596211)