

Dr. Dr. Pragna Amratlal Vadher

Principal (GES-I),
Government Science College, Idar
At & Post - Sapavada,
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Gujarat(INDIA)

Education

Ph.D. in Physics from Department of Physics, Sardar Patel University, Vallabh Vidyanagar (March, 2012)

Title of the Thesis: Theoretical Modeling of Tribological problems using Magnetic fluids as Lubricants.

M.Sc. (Physics) with 60% from Department of Physics, Gujarat University, (April-1995)

B.Sc. (Physics) with 70% from, Gujarat University, (April-1993)

Professional Positions

Assistant Professor: From January, 2008 at Government Science College, Sector-15, Gandhinagar to 8th March 2019

Assistant Professor: From July, 1997 to January, 2008 at Gujarat Arts and Science College, Ellisbridge, Ahmedabad

Principal (In-charge): At Government Science College, Sector-15, Gandhinagar since 27th August, 2010 to 1st September, 2016

Joint Director (In-charge): At Commissionerate of Higher Education, Gandhinagar since 2nd July, 2013 to 30th April, 2014

Director (In-charge): At Commissionerate of Higher Education, Gandhinagar since 27th May, 2012 to 26th October, 2014

Principal (GES-I): At Government Science College, Idar since 09th March, 2019

Special Achievement

- A State level award - Prof. Dolarrai Mankad award for Excellence in Research was awarded by IQAC, Saurashtra University, Rajkot for outstanding contributions for published research paper in year 2007-08.
- A State Level award – Awarded by Sardar Patel University for recognition of Best Research Work for the year 2011-12.
- Furthermore, in recognition of my contributions to the field of education, I was nominated by the Education Department of the Government of Gujarat to represent the state as a delegate of the British Council of India. This nomination facilitated my participation in a study tour in the United Kingdom from 1st December, 2013 to 8th December, 2013. During this enriching tour, I had the opportunity to visit the Higher Education Academy (HEA) in the UK along with several other prominent universities. The primary objective of this tour was to share and exchange best practices in teaching and learning. It included observing the application technology in education, gaining insights into the widely practiced Professional Standard Framework (PSF) in UK universities and understanding the processes of Accreditation,

Recognition and Reward in these institutions. Additionally, the tour provided a comprehensive overview of the Continuous Professional Development (CPD) schemes endorsed by the HEA, which are integral to maintaining high standards in education and professional growth within UK universities. This experience significantly broadened my perspective on global educational practices and contributed to my professional development in the field of higher education.

Publications

- Research papers in International Level Journal - 24
- Research papers in National Level Journal - 05
- Research papers in State Level Journal - 01
- **Please refer Annexure 1 for the details**

Annexure 1

a) Research Papers:

Sr. No.	Title of the paper	Author(S)	Name of the Journal	Vol. No.	Page No.	Year	ISSN
1	Hydromagnetic squeeze film between conducting porous transversely rough triangular plates.	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>Journal of Engineering Annals of Faculty of Engineering Hunedoara.</i>	6(1)	155-168	2008	1584-2665, 1584-2673
2	Behavior of hydromagnetic squeeze films between two conducting rough porous circular plates.	P. A. Vadher, P. C. Vinodkumar, G. M. Deheri and R. M. Patel	<i>Journal of Engineering Tribology</i>	222(4)	569-579	2008	Print ISSN: 1350-6501 Online ISSN: 2041-305X
3	A study on the performance of hydromagnetic squeeze film between two conducting truncated conical plates	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>Jordan Journal of Mechanical and Industrial Engineering</i>	2(2)	85-92	2008	1995-6665
4	A Study on the behavior of hydromagnetic squeeze films between two conducting rough porous annular plates.	P. A. Vadher, P. C. Vinodkumar, G. M. Deheri and R. M. Patel	<i>Proc. Pakistan Acad. Sci.</i>	45(2)	81-95	2008	0377-2969
5	Effect of surface roughness on the performance of hydromagnetic squeeze film between conducting porous infinitely long rectangular plates	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>International Journal of Applied Mechanics and Engineering, Polland.</i>	13(2)	473-498	2008	1425-1655

6	The Effect of Surface Roughness on the Performance of Hydromagnetic Squeeze Films between Two Conducting Rough Porous Elliptical Plates	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>Turkish Journal of Engineering and Environmental Sciences</i>	32	219-227	2008	ISSN 1300-0160E-ISSN 1303-6157
7	MAGNETIC FLUID BASED SQUEEZE FILM BETWEEN ANNULAR PLATES AND TRANSVERSE SURFACE ROUGHNESS EFFECT	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Journal of Engineering Annals of Faculty of Engineering Hunedoara.</i>	8(1)	51-56	2010	1584-2665, 1584-2673
8	Performance of hydromagnetic squeeze films between conducting porous rough conical plates.	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>MECCANICA</i>	45(6)	767-783	2010	0025-6455 (Print) 1572-9648 (Online)
9	Magnetic fluid based short bearing and roughness effect	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Journal of Science</i>	1(1)	102-106	2010	
10	Performance of a magnetic fluid based squeeze film between transversely rough triangular plates	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Tribology in Industry</i>	32(1)	33-39	2010	0354-8996 (print version); 2217-7965 (electronic version)
11	Lubrication of an infinitely long bearing by a magnetic fluid	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>FLUID DYNAMICS AND MATERIAL PROCESSING</i>	6(3)	277-290	2010	1555-256X (printed) 1555-2578 (online)
12	Performance of a magnetic fluid based short bearing	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Acta Polytechnica Hungarica</i>	7(3)	63-78	2010	1785-8860

13	Magnetic fluid based squeeze film performance between porous infinitely long parallel plates with porous matrix of non-uniform thickness and effect of transverse surface roughness.	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Journal of Balkan Tribological Association</i>	17(2)	305-318	2011	13104772
14	Effect of transverse surface roughness on the performance of hydromagnetic squeeze film between conducting truncated conical plates	P. A. Vadher, G. M. Deheri and R. M. Patel	<i>Journal of Marine Science and Technology</i>	19(6)	673-680	2011	0948-4280 (Print) 1437-8213 (Online)
15	Magnetic fluid based squeeze film between circular plates and surface roughness effect	Rakesh M. Patel, G. M. Deheri and Ms. P. A. Vadher	<i>Bulletin of Pure and Applied Mathematics</i>	5(2)	262-275	2011	Print ISSN: 0970-6577 Online ISSN: 2320-3226
16	A study on the effect of transverse surface roughness on the performance of a magnetic fluid based squeeze film behavior between rotating porous circular plates having concentric circular pocket with velocity slip	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>Journal of Tribology and Surface Engineering</i>	2(3-4)	155-174	2011	1949-4866
17	A Study On The Performance Of An Infinitely Long Rough Slider Bearing In The Presence Of A Magnetic Fluid Lubricant	R. M. Patel, G. M. Deheri and Ms. P. A. Vadher	<i>Mathematics Today</i>	28	50-62	2012	

18	Performance of Hydromagnetic porous long bearings	G. M. Deheri, R. M. Patel and Ms. P. A. Vadher	<i>Annals of Faculty Engineering Hunedoara, International Journal of Engineering .</i>	11(1)	131-136	2013	1584-2665, 1584-2673
19	Performance of a magnetic fluid based squeeze film between infinitely long rough porous rectangular plates	R. M. Patel, G. M. Deheri and Ms. P. A. Vadher	<i>Proceedings of ICATES – 2013, Springer Publications.</i>		59-71	2013	
20	Magnetic fluid based squeeze film in rough porous long plates: Effect of non-uniform thickness	R. M. Patel, G. M. Deheri and P. A. Vadher	<i>SOP TRANSACTIONS ON APPLIED MATHEMATICS</i>	1(2)	194-209	2014	ISSN(Print): 2373-8472 ISSN(Online): 2373-8480
21	Hydromagnetic Rough Porous Circular Step Bearing	Rakesh M. Patel, Gunamani Deheri and Pragna A. Vadher	<i>Eastern Academic Journal</i>	3	71-87	2015	ISSN: 2367–7384
22	Hydromagnetic Short Bearings	G.M.Deheri, R.M.Patel and P.A.Vadher	<i>Journal of Mechanical Engineering and Technology</i>	7(2)	19-32	2015	ISSN(Print): 2180-1053 ISSN(Online): 2289-8123
23	Squeeze Film in a Ferrofluid Lubricated Rough Conical plates: Comparison of Porous Structures	R.M.Patel, Gunamani Deheri And Pragna A. Vadher	<i>Springer Nature Singapore Pte Ltd., 2020 K.N.Das et al. (eds.), Soft Computing for Problem Solving, Advances in Intelligent Systems and Computing 1057, https://doi.org/10.1007/978-981-15-0184-5_21</i>	7	235-248	208	ISSN: 2194-5357

24	Magnetic fluid based squeeze film in rough curved circular plates with Kozeny-Carman model based porous structure	R.M.Patel, G.M.Deheri and P.A.Vadher	<i>JASC: Journal of Applied Science and Computations</i>	VI(V)	1193-1207	2019	ISSN: 1076-5131
25	Effect of slip velocity on hydromagnetic squeeze film between rough porous circular plates	R.M.Patel, G.M.Deheri and P.A.Vadher	<i>International Journal of Information and Computing Science</i>	6(5)	435-445	2019	ISSN: 0972-1347
26	Transversely rough circular plate model: Hip joint lubrication	Ms.P.A.Vadher, G.M.Deheri and R.M.Patel	<i>Adalya Journal</i>	8(7)	39-46	2019	ISSN:1301-2746
27	Effects of viscosity variation and velocity slip in hydromagnetic squeeze films between two conducting porous circular plates	Ms. Pragna A. Vadher, Gunamani Deheri and Rakesh M. Patel	<i>International Journal of Engineering Technology Research & Management</i>	4(8)	83-95	2020	ISSN:2456-9348
28	Hydromagnetic squeeze film between conducting transversely rough curved circular plates lying along the surfaces determined by exponential and hyperbolic functions	G.M.Deheri, Ms. P.A.Vadher, Lakshmi S. Desai and R.M.Patel	<i>International Journal of Engineering Inventions</i>	11(12)	69-84	2022	ISSN(Print): 2319-6491 ISSN(Online): 2278-7461
29	Hydromagnetic squeeze film between conducting transversely rough curved circular plates	Ms. Pragna A. Vadher, Gunamani B. Deheri, Akhil S. Mittal, Mahaveer P. Shekhawat and Rakesh M. Patel	<i>International Conference on Mathematical Science and Applications (ICMSA-2023) for publication in Taylor and Francis</i>	1(2)	73-180	2023	Accepted and under publication in Taylor and Francis journal

30	A comparative study of longitudinal roughness effects on slider bearing: steady and unsteady fluid film lubrication	Prin. Dr. Pragna A. Vadher, Dr. Gunamani B. Dheeri, Dr. Sanjeev Kumar and Rakesh M. Patel	<i>2nd International Conference on Recent Advances in Applied Mathematics (RAAM 2024) to be published in International Journal of Numerical Methods for Heat & Fluid Flow (Q1, SCIE & Scopus)</i>			2024	<i>Accepted and under publication in International Journal of Numerical Methods for Heat & Fluid Flow (Q1, SCIE & Scopus)</i>
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