Newsletter

January-June 2025

2024-25, Vol. 7

Department of Mechanical Engineering

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Shri G S Institute of Technology and Science, Indore

DEPARTMENTAL NEWS

Republic Day Celebration

Department of Mechanical celebrated 76th Republic Day on 26 January 2025 with digitally unfurling the National Flag and vocalizing National Anthem.

Moodle Training Sesson

Mr. Gaurav Suryavashi has organized a training session on application of Moodle LMS for II and III Year students for attending Quiz, Assignment submission etc.

INSTITUTE INDUSTRY INTERACTION

Expert Talk by Alumini

An Expert Talk delivered by Mr. Arun Dalaya (Alumini) for 3rd-year students on 13 February 2025 on RAC & its industrial aspect.

Meeting with Industry People

On 9th May 2025 a meeting held with Prof. Sudhir Tiwari (HOD Mechanical Engineering), Prof. M.L.Jain & Mr Anurag Surana, Senior GM, PATH India Ltd and Alumni 1988 Batch.

Industry Visit by Club

Yantriki Club students of Mechanical Engineering Department Visited Kisan Irrigation Pithampur.

Department of Mechanical Engineering

Automotive Industry Visit

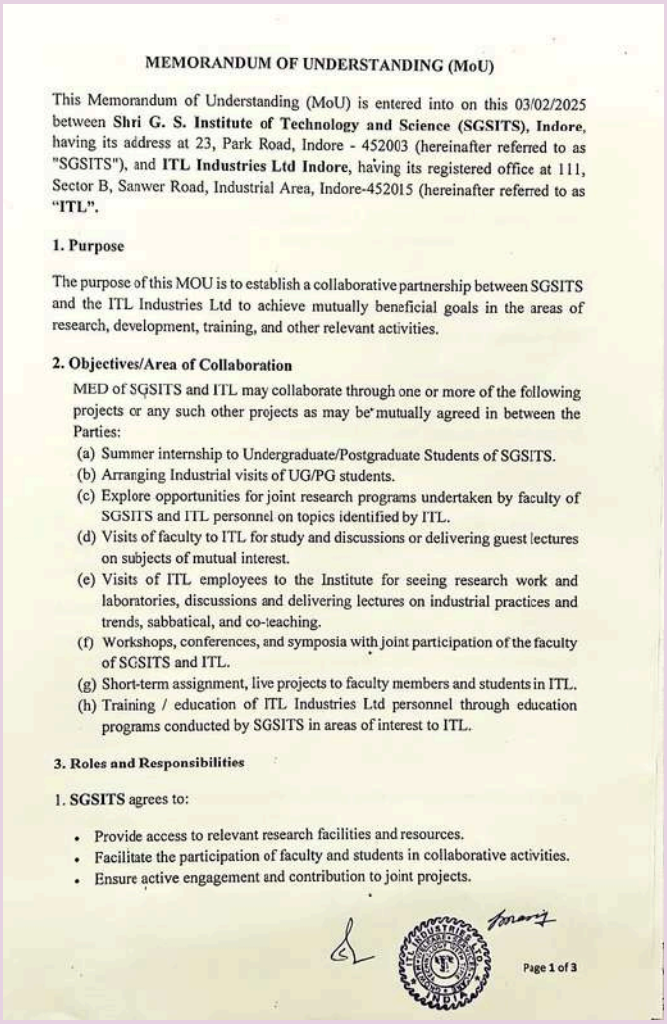
Industry Visit at Automotive Industry (Annant Shri Automobile- Xero Ev), Pithampur, Indore by II Year students of Department of Mechanical Engineering SGSITS, Indore. The aim was to provide students the practical exposure to electric vehicles (EVs) manufacturing and assembly processes.

ITL Industry Visit

An industry visit of ITL Industry for B.Tech. 3rd year students have been Organized on 20/02/2025 (Thursday). In this visit 18 students and two faculties Prof.Gangaram Mourya and Dr.Mangal singh Lodhi were present.

MoU with ITL Industry

The recent signing of a Memorandum of Understanding (MoU) between Shri Govindram Seksaria Institute of Technology and Science (SGSITS) Indore and ITL Industries marks a significant step towards enhancing academic collaboration and industry-academia partnerships.



MEMORANDUM OF UNDERSTANDING (MoU)

This Memorandum of Understanding (MoU) is entered into on this 03/02/2025 between **Shri G. S. Institute of Technology and Science (SGSITS), Indore**, having its address at 23, Park Road, Indore - 452003 (hereinafter referred to as "SGSITS"), and **ITL Industries Ltd Indore**, having its registered office at 111, Sector B, Sanwer Road, Industrial Area, Indore-452015 (hereinafter referred to as "ITL".

1. Purpose

The purpose of this MOU is to establish a collaborative partnership between SGSITS and the ITL Industries Ltd to achieve mutually beneficial goals in the areas of research, development, training, and other relevant activities.

2. Objectives/Area of Collaboration

MED of SGSITS and ITL may collaborate through one or more of the following projects or any such other projects as may be mutually agreed in between the Parties:

(a) Summer internship to Undergraduate/Postgraduate Students of SGSITS.
(b) Arranging Industrial visits of UG/PG students.
(c) Explore opportunities for joint research programs undertaken by faculty of SGSITS and ITL personnel on topics identified by ITL.
(d) Visits of faculty to ITL for study and discussions or delivering guest lectures on subjects of mutual interest.
(e) Visits of ITL employees to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices and trends, sabbatical, and co-teaching.
(f) Workshops, conferences, and symposia with joint participation of the faculty of SGSITS and ITL.
(g) Short-term assignment, live projects to faculty members and students in ITL.
(h) Training / education of ITL Industries Ltd personnel through education programs conducted by SGSITS in areas of interest to ITL.

3. Roles and Responsibilities

1. **SGSITS** agrees to:

- Provide access to relevant research facilities and resources.
- Facilitate the participation of faculty and students in collaborative activities.
- Ensure active engagement and contribution to joint projects.

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MoU with Steelinfra Agro Industry

Memorandum of Understanding (MoU) between SGSITS Indore and SteelinfraAgro (SIA) Pithampur marks a promising collaboration aimed at fostering innovation and growth in the engineering and agricultural sectors.

Department of Mechanical Engineering

Strength of Materials Laboratory

Mr. Manoj Dubey and Mr. Santosh Pal from PATH India Ltd recently visited the various laboratories department, marking an important collaboration between academia and industry.

Fluid Mechanics and Hydraulic Machines laboratory Visit

Mechatronics Laboratory Visit

STUDENTS' SECTION

Bishal Das and Sarvshresth Sharma secured 4th position at the prestigious Hackathon hosted by the Indian Institute of Technology (IIT) Madras.

Vedaang Sitlani, a first-year B.Tech student, recently completed an NPTEL course on Mechatronics, showcasing his dedication to expanding his knowledge in this interdisciplinary field.

Rudraksh Panchore's participation in TIFAN 2025 marks a signifies his journey as a burgeoning innovator.

Divyansh Soni's (B Tech I Year) completion of AutoCAD training is a testament to his commitment to self-improvement and lifelong learning.

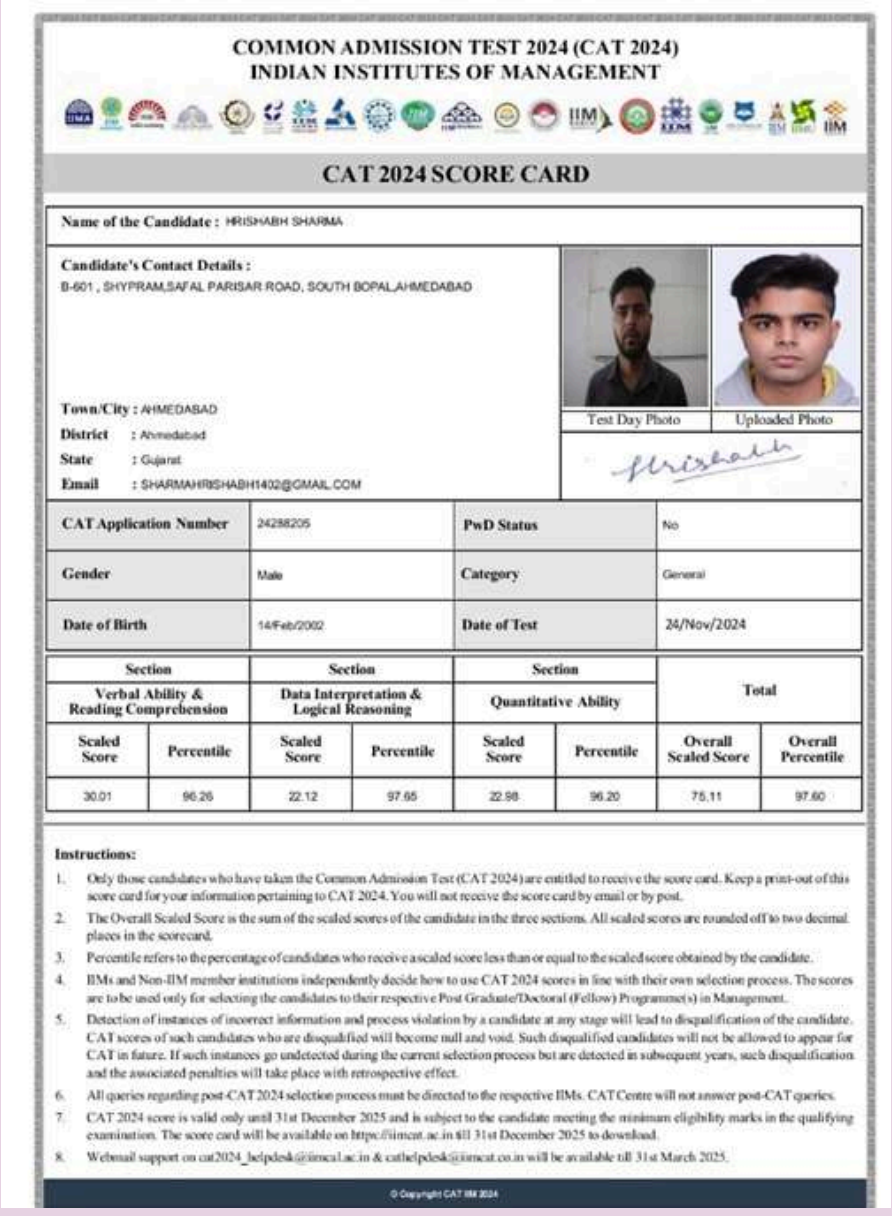
PLACED STUDENT LIST OF MECHANICAL ENGINEERING DEPARTMENT

S.No.	Enrollment #	Student Name	Company Name	Package (in INR LPA)
1	0801BM211058	Tanisha Talera	Adani Enterprises Ltd	6.5
2	0801CE211064	Pratham Sahni	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
3	0801IP211040	Pradeep Bairagi	Adani Enterprises Ltd	6.5
4	0801IP211042	Prakhar Malviya	LTIMindtree Ltd	4.05
5	0801IP211050	Rishika Garg	Larsen & Toubro Ltd	6
6	0801IP211057	Shubhanshu Jain	Shaki Pumps	5
7	0801ME211003	Aditi Bidkar	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
8	0801ME211004	Ajeet Kumar Tiwari	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
9	0801ME211006	Akshat Singh	Hewitt Robins International Pvt Ltd	5
10	0801ME211008	Aman Dhakad	Reliance Industries Ltd	7.5
11	0801ME211012	Ankush Rajoriya	Adani Enterprises Ltd	6.5
12	0801ME211014	Anurag Singh Thakur	LTIMindtree Ltd	4.05
13	0801ME211015	Arun Kumar	Adani Enterprises Ltd	6.5
14	0801ME211023	Diwakar Kaushik	Infosys Ltd	3.6
15	0801ME211025	Gaurav Sinha	Adani Enterprises Ltd	6.5
16	0801ME211026	Harsh Chouragade	Rajratan Global Wire Ltd	5
17	0801ME211028	Hatim Pipalrawanwala	Havells India Ltd	7.5
18	0801ME211036	Kumkum Gotiya	Larsen & Toubro Ltd	6
19	0801ME211039	Madhumita Chakraborty	Adani Enterprises Ltd	6.5
20	0801ME211040	Mahit Shah	Addverb Technologies Ltd	16
21	0801ME211045	Mayank Rampure	Vedanta Ltd	8
22	0801ME211047	Mayur Jain	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
23	0801ME211048	Mohit Kumar Khandel	Perfect Generator Technologies Pvt Ltd	4
24	0801ME211049	Mohit Mamtani	GreyB Research Pvt Ltd	7

S.No.	Enrollment #	Student Name	Company Name	Package (in INR LPA)
25	0801ME211050	Muskan Patel	Adani Enterprises Ltd	6.5
26	0801ME211051	Neha Tomar	LTIMindtree Ltd	4.05
27	0801ME211052	Nidhi Bannait	Reliance Industries Ltd	7.5
28	0801ME211054	Nimit Kumar Nidhi	Adani Enterprises Ltd	6.5
29	0801ME211055	Nishant Dwivedi	Adani Enterprises Ltd	6.5
30	0801ME211056	Nishant Verma	Adani Enterprises Ltd	6.5
31	0801ME211060	Prashi Tamrakar	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
32	0801ME211061	Prateek Sagitra	Adani Enterprises Ltd	6.5
33	0801ME211062	Pratham Arya	Addverb Technologies Ltd	16
34	0801ME211069	Saksham Jain	DCM Shriram Ltd	6.5
35	0801ME211070	Sangam Uikey	Adani Enterprises Ltd	6.5
36	0801ME211071	Sanjali Bhandari	ACG Associated Capsules Pvt Ltd	5.5
37	0801ME211072	Sanskar Sharma	Adani Enterprises Ltd	6.5
38	0801ME211073	Sarthak Agrawal	Infosys Ltd	3.6
39	0801ME211076	Shivam Bhatia	Addverb Technologies Ltd	16
40	0801ME211077	Shreshth Verma	Vedanta Ltd	8
41	0801ME211078	Shreya Soni	Fambo Innovation Pvt Ltd	4.71
42	0801ME211082	Soham Mehta	Larsen & Toubro Ltd	6
43	0801ME211084	Srushti Jichkar	DCM Shriram Ltd	6.5
44	0801ME211087	Sumit Kushwah	Vedanta Ltd	8
45	0801ME211091	Tanisha Agrawal	Johnson Controls-Hitachi Air Conditioning India Ltd	7.94
46	0801ME211092	Tushar Mishra	CG Power and Industrial Solutions Ltd	5
47	0801ME211095	Vaibhav Parmar	Reliance Industries Ltd	7.5
48	0801ME223D02	Ashutosh Singh Kushwaha	Adani Enterprises Ltd	6.5

GATE / CAT QUALIFIED STUDENTS

Name	Enrollment Number	Score	Rank	Qualified
Nishant Verma	0801ME211056	739	696	Yes
Sumit Kushwah	080ME211087	680	1255	Yes
tushar Mishra	0801ME211092	525	3493	Yes
Yatharth Wagh	0801ME221116	373	7498	Yes
Mitansh Jariya	0801ME221065	342	8667	Yes
Abhishek Solanki	0801ME211002	314	9989	Yes



COMMON ADMISSION TEST 2024 (CAT 2024)
INDIAN INSTITUTES OF MANAGEMENT

CAT 2024 SCORE CARD

Name of the Candidate : HRISHABH SHARMA

Candidate's Contact Details :
B-601 , SHYPRAM,SAFAL PARISAR ROAD, SOUTH BOPAL,AHMEDABAD

Town/City : AHMEDABAD
District : Ahmedabad
State : Gujarat
Email : SHARMAHRISHABH1402@GMAIL.COM

Test Day Photo | Uploaded Photo

CAT Application Number	24288205	PwD Status	No
Gender	Male	Category	General
Date of Birth	14/Feb/2002	Date of Test	24/Nov/2024

Section: Verbal Ability & Reading Comprehension		Section: Data Interpretation & Logical Reasoning		Section: Quantitative Ability		Total	
Scaled Score	Percentile	Scaled Score	Percentile	Scaled Score	Percentile	Overall Scaled Score	Overall Percentile
30.01	96.26	22.12	97.65	22.98	96.20	75.11	97.60

Instructions:

1. Only those candidates who have taken the Common Admission Test (CAT 2024) are entitled to receive the score card. Keep a print-out of this score card for your information pertaining to CAT 2024. You will not receive the score card by email or by post.
2. The Overall Scaled Score is the sum of the scaled scores of the candidate in the three sections. All scaled scores are rounded off to two decimal places in the scorecard.
3. Percentile refers to the percentage of candidates who receive a scaled score less than or equal to the scaled score obtained by the candidate.
4. IIMs and Non-IIM member institutions independently decide how to use CAT 2024 scores in line with their own selection process. The scores are to be used only for selecting the candidates to their respective Post Graduate/Doctoral (Fellow) Programme(s) in Management.
5. Detection of instances of incorrect information and process violation by a candidate at any stage will lead to disqualification of the candidate. CAT scores of such candidates who are disqualified will become null and void. Such disqualified candidates will not be allowed to appear for CAT in future. If such instances go undetected during the current selection process but are detected in subsequent years, such disqualification and the associated penalties will take place with retrospective effect.
6. All queries regarding post-CAT 2024 selection process must be directed to the respective IIMs. CAT Centre will not answer post-CAT queries.
7. CAT 2024 score is valid only until 31st December 2025 and is subject to the candidate meeting the minimum eligibility marks in the qualifying examination. The score card will be available on https://iimcat.ac.in till 31st December 2025 to download.
8. Webmail support on cat2024_helpdesk@iimcal.ac.in & catihelpdesk@iimcat.co.in will be available till 31st March 2025.

Hrishabh Sharma's achievement in qualifying for the Common Admission Test (CAT) and secured 97.6 percentile

Helica Track 2.0, an exciting event organized by Club Yantriki! 🔧💥 Test the skills, creativity, and teamwork in this thrilling challenge.

An exit meeting held on 24th April 2025 for final year students.
The group photo is here, for the event.

Mechanical Engineering Cricket Team won the SGSITS Cricket Tournament 2025.

Nishant Verma got the under 1000 rank in Mechanical Engineering Gate 2025.

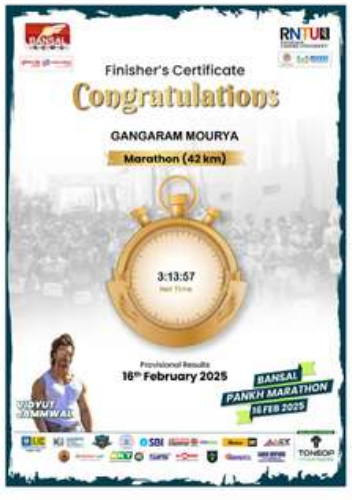
Department of Mechanical Engineering

Third year student of Mechanical Engineering **Dhruv Mac** "Bagged 3rd position in the BIS Quiz on Mineral Water, showcasing knowledge and awareness in standards and quality".

Team Navidya has made the city and institute proud by securing Second Place in Best Design and Simulation at the prestigious TIFAN (Technology Innovation Forum for Agricultural Needs) Competition 2025, held at Mahatma Jyotiba Phule Agricultural University, Rahuri, Ahmednagar, Maharashtra.

The TIFAN Competition was jointly organized by SAE India and John Deere, with the aim of fostering modern technological development in agricultural machinery. This year's theme focused on designing an automatic modern multi-vegetable transplanter machine, an innovation crucial for increasing agricultural productivity in minimal time.

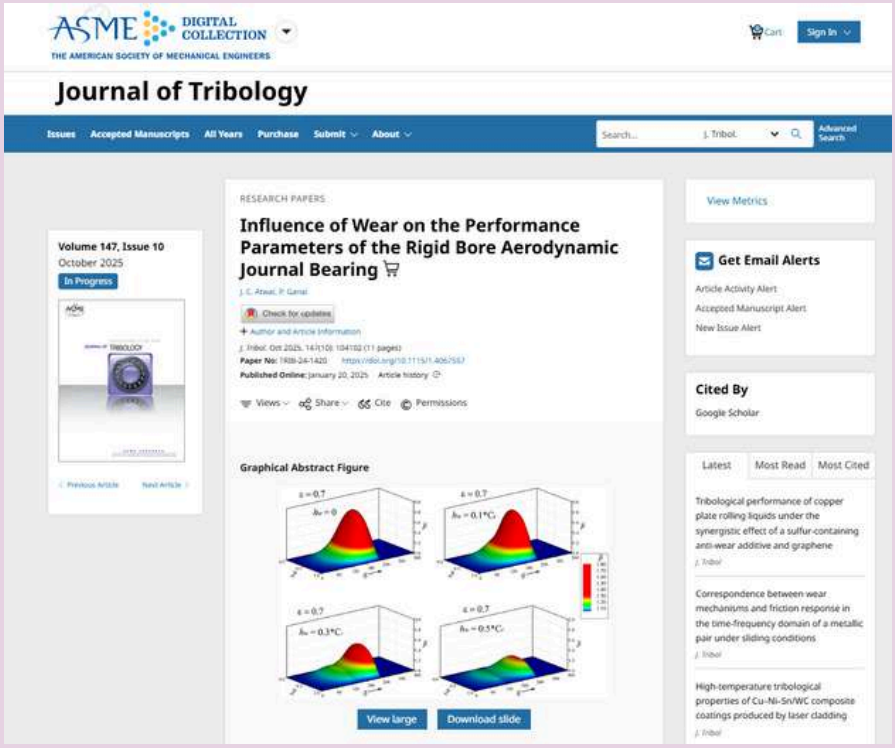
FACULTYS' CORNER



Prof. Gangaram Mourya completed 42 KM in Bansal Pankh Marathon 16 Feb 2025 & TATA MUMBAI MARATHON 19 January 2025.

Department of Mechanical Engineering

Prof. P. Ganai published an SCIE Indexed paper in ASME's journal (Journal of Tribology).



J. Inst. Eng. India Ser. C
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REVIEW PAPER

Rotor Dynamics: Modelling and Analysis—A Review

Dinesh Kumar Pasi[1] · Ashesh Tiwari[2] · Manoj Chouksey[1]

Received: 14 July 2023 / Accepted: 5 December 2024

Abstract Different types of modelling procedures, simulation and experimental practices have been developed for rotating machines in order to maintain trouble free operation. This includes analyzing the system using discrete models, finite element models, experimental modal testing, measured vibration response and related fault diagnosis techniques. In this paper, the development of rotor models and the related analysis practices, over the last 15 decades, have been presented. The importance of the accuracy of these models has been emphasized and the methods to improve them have been discussed. Various fault diagnosis procedures have been developed to entertain safe and reliable operation of the machines. Model based fault identification techniques and more recently machine learning based approaches have been emphasized due to their capabilities in online fault diagnosis of the systems. This paper reviews the work carried out on the use of simple as well as finite element models of the rotor systems to study influence of bearing anisotropy, rotor-shaft flexibility, gyroscopic forces, tangential forces, rotor faults like unbalance, bent rotor, rotor crack, misalignment on the modal behavior and dynamic response of the system. The work carried out on various fault diagnosis procedures using measured vibration data, model based fault identification techniques as well as usefulness of machine learning methods have also been discussed. In the end, a case study has been presented to discuss Campbell diagram and stability plots for rotor systems.

Keywords Balancing · Unbalance · FE modeling · Rotor System

✉ Dinesh Kumar Pasi
dkpasi25@gmail.com

[1] Department of Mechanical Engineering, Shri G. S. Institute of Technology and Science, Indore, India

[2] Mechanical Engineering Department, IET-Devi Ahilya University, Indore, India

Introduction

Rotors find their uses in varied applications ranging from domestic appliances to industrial machinery. It is desirable to have vibration free operation of the rotating machines, which otherwise may affect adversely proper functioning of the machine. Condition monitoring methods like wear debris analysis, acoustic analysis, radiography, ferrography etc. are employed to check condition of the machine time to time [1]. Vibration based condition monitoring is also one of the most commonly used technique to monitor health of the machine [2]. Model based methods and more recently machine learning approaches are being used in fault diagnosis of rotating machines [3, 4]. The review of the subject, including modeling of rotor systems and related simulation and experimental analysis, has been presented in this work. Focusing solely on rotor modelling and analysis in the review allows for an in-depth examination of this critical aspect in rotating machinery, facilitating a comprehensive understanding of its behavior and performance. This targeted approach ensures clarity and depth in analyzing the complexities of rotor systems and their implications.

The review work is structured systematically, commencing with an introduction that underscores the significance of the subject matter. Subsequently, it offers a comprehensive chronological review of rotor modeling approaches, followed by an examination of the related analyses conducted using these models. Finally, the review encompasses the impact of rotor faults on dynamic responses, their corresponding modeling techniques, and the numerical simulation and experimental research in this domain. Recent advancements

Published online: 16 December 2024

Springer

Prof. Dinesh Kumar Pasi published a paper in a SCOPUS Indexed Journal of Institute of Engineers C Series.

Asst. Professor **Mr. Neeraj Gautam** got a Certificate of Registration of Design from the Patent Office: Govt. of INDIA

Prof. Dinesh Kumar Pasi presented a paper Institute of Infrastructure, Technology, Research and Management (IITRAM) Ahmedabad in collaboration with IIT Roorkee and SVNIT Surat

VALUABLE CONTRIBUTION

Prof. Sudhir Tiwari (HOD), Mr. Dinesh Kumar Pasi (editor in chief), Mr. Gangaram Mourya (editor),
Dr. Shubham Jain (editor), Dhruv Mac (asst. editor)

Department of Mechanical Engineering