



# Department of **MECHANICAL ENGINEERING**

## Newsletter Biannual Bulletin

**UPDATES AND INNOVATIONS IN ENGINEERING**

**December 2024 Edition**

**Volume 4, Issue 1**

### **Editors**

Namita Soni (Assistant Professor)

Monika Khurana (Assistant Professor)

Aditya Sharma (Student)

Yug Jangir (Student)

**Innovate. Design. Build.**

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## About the Department

The Department of Mechanical Engineering started its academic activities in the year 2003 with an objective of incorporating excellence in teaching-learning, research and development, entrepreneurship and industry outreach activities. Presently, the department offers B. Tech. (Mechanical Engineering), M. Tech. (Renewable Energy Technology) and PhD programmes. The department has modern laboratories developed and designed from the perspective of the latest requirements of industry and academia. The B.Tech. programme was accredited in 2009 and subsequently re-accredited by NBA with current accreditation status till June 2025.



Volume 4 Issue 1



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## From the Editor's Desk

"It gives us immense pride to bring you this edition of the Mechanical Engineering newsletter. Within these pages, you'll find a snapshot of our department's dynamic progress—ranging from academic accomplishments and cutting-edge research to student-led innovations. We hope this issue not only informs but also inspires our readers to keep pushing the boundaries of engineering excellence."



Ms. Namita Soni  
(Chief Editor)

## From the HOD's Desk

"With the arrival of a new year, we embrace fresh opportunities and renewed aspirations. January has been a time of reflection, academic engagement, and strategic planning for the challenges ahead. As a department, let us uphold our commitment to excellence, foster innovation, and collectively contribute to the enduring legacy of Mechanical Engineering."



Dr. Dheeraj Joshi  
(Professor and Head)

# **Vision and Mission of the Department**

## **Vision**

To become a nationally visible mechanical engineering department with excellence in teaching-learning, research and development, entrepreneurship and industry outreach activities.

## **Mission**

M1 - To provide facilities and environment conducive to high quality education and research and development in the field of mechanical engineering.

M2 - To inculcate technical, professional and communication skills in students, staff and faculty members.

M3 - To instil innovative skills, critical thinking, leadership & team work in students through various teaching-learning activities and industry linkages

M4 - To inculcate strong ethical qualities in the students and faculty for realizing lifelong learning and serving the society and nation at large.



# DEPARTMENTAL ACTIVITIES



## Expert Talk on “Materials Characterisation in the Age of 3D Printing”

The Department of Mechanical Engineering at Swami Keshvanand Institute of Technology, Management and Gramothan (SKIT) hosted an insightful expert talk on "Challenges in Materials Characterization in the Age of 3D Printing" delivered by Prof. Nikhil Gupta, a distinguished professor from the Mechanical and Aerospace Engineering Department at New York University, USA.

The event, held on 08 August 2024, was a significant opportunity for students and faculty members to gain deeper insights into the evolving field of 3D printing and the associated challenges in materials characterisation. Prof. Nikhil Gupta shared his extensive knowledge and research findings, highlighting the advancements, current hurdles, and future prospects in this innovative domain.

The event commenced with a warm welcome by Prof. Dheeraj Joshi, HoD Mechanical Engineering, who expressed his gratitude for Prof. Gupta's presence and emphasized the importance of such expert interactions in enhancing the academic and research capabilities of the institution. The program was coordinated by Dr. Deepak Kumar and Mr. Praveen Saraswat. The program concluded with a vote of thanks by Prof. Dheeraj Joshi, expressing gratitude to Prof. Gupta and participants for their active involvement.



## (IRIS-2024)

### “अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार”

स्वामी केशवानंद इंस्टिट्यूट ऑफ टेक्नोलॉजी, मैनेजमेंट एंड ग्रामोथान (SKIT), जयपुर में राष्ट्रीय संगोष्ठी (IRIS-2024, 24 – 26 अक्टूबर, 2024) का आयोजन किया गया, जिसे AICTE-VAANI द्वारा प्रायोजित किया गया था। इस संगोष्ठी का मुख्य उद्देश्य नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार में नवीन विकास को बढ़ावा देना था।

संगोष्ठी में संधारणीय विकास, स्वच्छ ऊर्जा, जलवायु परिवर्तन, कार्बन कैप्चर, ऊर्जा भंडारण और सरकारी पहलों जैसे महत्वपूर्ण विषयों पर चर्चा की गई। विभिन्न विशेषज्ञों ने अपने विचार प्रस्तुत किए, जिसमें से डॉ. राजेंद्र सिंह (वाटर मैन ऑफ इंडिया) ने जल संरक्षण और पारंपरिक जल प्रबंधन पर जोर दिया, जबकि श्री रिपुदमन मगोन ने जलवायु परिवर्तन और हरित ऊर्जा के महत्व पर प्रकाश डाला। डॉ. अनिल कुमार (दिल्ली तकनीकी विश्वविद्यालय) ने कार्बन उत्सर्जन और नवीकरणीय ऊर्जा की भूमिका पर चर्चा की, और प्रो. डी.के. जैन ने सतत विकास व नवाचार को लेकर अपने विचार साझा किए। सम्मेलन के दौरान कई तकनीकी सत्रों में शोधपत्र प्रस्तुत किए गए। इसके अतिरिक्त, प्रतिभागियों को जयपुर के हिंगोनिया गौशाला बायोगैस संयंत्र का दौरा कराया गया। कार्यक्रम के अंत में प्रतिभागियों को प्रमाण पत्र वितरित किए गए।

कुल मिलाकर, IRIS-2024 संगोष्ठी ने नवीकरणीय ऊर्जा और जलवायु सुधार के क्षेत्र में नवीन विचारों को बढ़ावा दिया और शोधकर्ताओं, शिक्षाविदों और नीति निर्माताओं को एक मंच प्रदान किया। कार्यक्रम के समन्वयक प्रोफेसर आशीष नैयर, यांत्रिकी विभाग, सह-समन्वयक डॉ. सविता चौधरी, प्रबंधन विभाग और आयोजक श्री दिनेश कु. शर्मा, असिस्टेंट प्रोफेसर, यांत्रिकी विभाग डॉ. चंदन कुमार, एसोसिएट प्रोफेसर, यांत्रिकी विभाग, श्री अंकित अग्रवाल, एसोसिएट प्रोफेसर, यांत्रिकी विभाग डॉ. मनीषा कौशिक, एसोसिएट प्रोफेसर, प्रबंधन विभाग थे।

# FACULTY ACHIEVEMENTS

## PAPERS PUBLISHED IN JOURNAL

AUTHOR/S	TITLE	JOURNAL
Dr. Dharmendra Hariyani	Leveraging digital technologies for advancing circular economy practices and enhancing life cycle analysis: A systematic literature review.	Waste Management Bulletin, Vol. 2; Issue 3; (2024) pp. 69-83.
Dharmendra Hariyani, Poonam Hariyani, Sanjeev Mishra, Milind Kumar Sharma	Causes of organizational failure: A literature review	Social Sciences & Humanities Open, Vol. 10; (2024) pp. 101153.
Dr. Raj Kumar	Enhancing wear resistance of aluminum 6061 composites with fly ash: A sustainable approach for industrial applications	Advances in Mechanical Engineering, Vol. 16; Issue 10; (2024) pp. 1-11.
Dr. Dharmendra Hariyani	Stakeholders' perspectives and performance outcomes of sustainable market-focused manufacturing system in Indian manufacturing organizations.	Advances in Mechanical Engineering, Vol. 13; (2024).
Dr. Raj Kumar	Enhancing wear resistance of aluminum 6061 composites with fly ash: A sustainable approach for industrial applications.	Advances in Mechanical Engineering, Vol. 16; Issue 10; (2024).
Dr. Raj Kumar	Impact of Alumina and Silicon Carbide Fillers on Epoxy/Glass Fiber Based Hybrid Composites' Dimensional Stability.	Journal of The Textile Association, Vol. 85; Issue 3; (2024) pp. 307-313.
Dr. Dharmendra Hariyani	A literature review on green supply chain management for sustainable sourcing and distribution.	Waste Management Bulletin, Vol. 2; (2024) pp. 231-238.

# FACULTY ACHIEVEMENTS

## PAPERS PUBLISHED IN JOURNAL

AUTHOR/S	TITLE	JOURNAL
Dr. Dharmendra Hariyani	Statistical analysis of total quality management employees, customers, suppliers, and management dimensions in hotel industries in Jaipur city, Rajasthan, India	Sustainability Analytics and Modeling, Vol. 4; (2024) pp. 100033.
Dr. Dharmendra Hariyani	A review of the structured framework for sustainability audits in manufacturing organizations.	Green Technologies and Sustainability, Vol. 3; (2024) pp. 100170.
Dr. Dharmendra Hariyani	A literature review on transformative impacts of blockchain technology on manufacturing management and industrial engineering practices.	Sustainability Analytics and Modeling, Vol. 3; (2024) pp. 100169
Deepak Kumar, Achin Srivastav, Manoj Kumar Sain, Vikash Gautam	Exploring Regression Analysis in Predictive Modelling with Python tool.	SKIT Research Journal, Vol. 14 (2); (2024) pp. 52-55

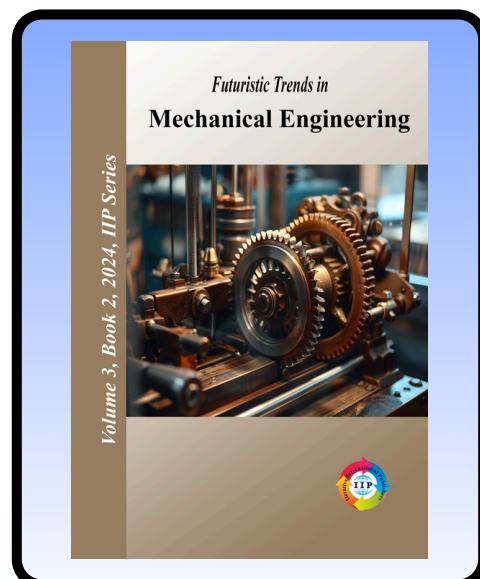
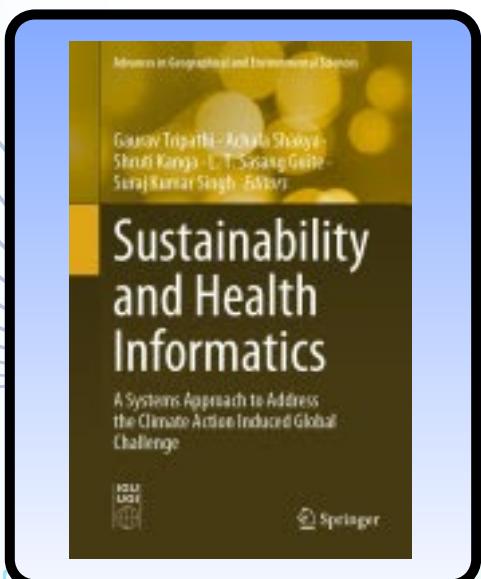


**"Engineers are not mere technicians and should not be treated as such. They are the creators of a new world."**  
— Sir M. Visvesvaraya

# FACULTY ACHIEVEMENTS

## BOOK CHAPTERS PUBLISHED

AUTHOR/S	BOOK	BOOK CHAPTER	PUBLISHER
Mr. Deepak Kumar	Sustainability and Health Informatics	Sustainability and Health Informatics, Vol. 1; pp-99-120, 2024	Springer, Singapore
Dr. Raj Kumar	Futuristic Trends in Mechanical Engineering	The Significance of Entropy and the Second Law of Thermodynamics: A Discussion, Vol. 3; pp. 1-10, 2024	IIIP Series



# FACULTY ACHIEVEMENTS

## PAPERS PUBLISHED IN CONFERENCE

### PROCEEDINGS

AUTHOR/S	TITLE	PROCEEDING
Ankit Agarwal, Chandan Kumar, Dinesh Kumar Sharma, Naveen Kumar Sain, Nitin Goyal, Amit Jhalani, Arun Beniwal	Sustainable Development Methods for Drying Ginger	2nd International Conference on Environmental Pollution Abatement and Disaster Management, organized by the Department of Chemistry, SKIT Jaipur, pp-210-218, August 2024
Dr. Raj Kumar	Random Forest approach optimized by the Grid Search process for predicting the dropout	IEEE, GHRaosini College of Engineering, Nagpur, pp- 1-6, August 2024
सुदेश गर्ग, मधुकर कुमार, चंद्र मोहन, अमित बंसल	सौर-फोटो वॉल्टिक तकनीक में नवाचार: हरित भविष्य के लिए दक्षता, स्थिरता एवं एकीकरण में सुधार	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मैकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 33-38, अक्टूबर 2024
सुदेश गर्ग, प्रेम सिंह, मधुकर कुमार, चंद्र मोहन कुमार	संधारणीय विनिर्माण उद्योग में आभासी वास्तविकता (वीआर) और इंटरनेट ऑफ थिंग्स (आईआईओटी) के माध्यम से आमूल परिवर्तन	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मैकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 39-44, अक्टूबर 2024
अमित कुमार बंसल, सुदेश गर्ग, प्रेम सिंह, मधुकर कुमार, चंद्र मोहन कुमार	ऊर्जा भण्डारण उपकरणों की समीक्षा	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मैकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 49-51, अक्टूबर 2024

# FACULTY ACHIEVEMENTS

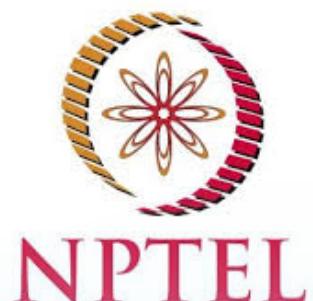
## PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS

AUTHOR/S	TITLE	PROCEEDING
चंद्र मोहन कुमार, अमित कुमार बंसल, सुदेश गर्ग, मधुकर कुमार	भारतीय स्मार्ट शहरों में ऊर्जा प्रबंधन : चुनौतियां एवं अवसर	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचारमेकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 61-66, अक्टूबर 2024
मधुकर कुमार, चंद्र मोहन कुमार, सुदेश गर्ग, अमित बंसल	संभावनाओं का दोहन: ऊर्जा संरक्षन एवं स्थिरता के लिए बायोमास एकीकरण	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मेकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 181-187, अक्टूबर 2024
संजय बैरवा, मोनू गुप्ता, निखिल शर्मा, नमिता सोनी	धातु मैट्रिक्स कॉम्पोजिट में घनत्व और रिक्तियों का विश्लेषण: एल्युमिनियम 5083 में तांबा और निकल कणों	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मेकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 83-90, अक्टूबर 2024
संजय बैरवा, निखिल शर्मा, सुमिता हेमरोम, सौरभ गुप्ता	तांबा और निकल कणों से सुदृढ़ एल्युमिनियम 5083 धातु मैट्रिक्स यौगिकों के यांत्रिक गुणों की जांच: फ्लेक्स्युल और तन्यता व्यवहार का अध्ययन	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मेकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 95-102, अक्टूबर 2024
संजय बैरवा, मोनू गुप्ता, योगेश शर्मा	एल्यूमिनियम 6061 और 5083 मिश्र धातुओं में कणीय सुदृढ़ीकरण के प्रभाव का यांत्रिक गुणों पर तुलनात्मक	अभातशिप प्रायोजित नवीकरणीय ऊर्जा एकीकरण और जलवायु सुधार के लिए संधारणीयविकास में में नवाचार, मेकैनिकल विभाग, एसकेआईटी जयपुर द्वारा आयोजित, पृष्ठ संख्या 126-134, अक्टूबर 2024

# FACULTY ACHIEVEMENTS

## NPTEL ACHIEVEMENT

NAME OF FACULTY	ACHIEVEMENT
Dr. Achin Srivastav	NPTEL Star (Jul Dec 2024)
Sanjay Bairwa	NPTEL Star (Jul Dec 2024)
Dr. Achin Srivastav	Topper of 2% (Jan Dec 2024) (Work System Design)
Dr. Prem Singh	Topper of 1% (Jan Dec 2024) (Basics of Mechanical Engineering - 1)
Sumita	Topper of 5% (Jan Dec 2024) (Introduction to Internet of Things)
Vinay Singh Marwal	Topper of 2% (Jan Dec 2024) (Engineering Metrology)
Vishnu Jangid	Topper of 1% (Jan Dec 2024) (Production Technology: Theory and Practice)



# FACULTY PARTICIPATIONS

## FDP ATTENDED

TITLE	DATE	ATTENDED BY	ORGANIZED BY
PHP and MySQL.	8 to 12 July 2024.	Prem Singh, Achin Srivastav, Deepak Kumar	SKIT, Jaipur
Financial Education a Life Skills Under NEP 2020.	9 to 13 July 2024.	Prem Singh, Achin Srivastav, Brij Mohan Sharma, Vinay Singh Marwal	SKIT, Jaipur
Electric Vehicles: Tribology and Additive Manufacturing.	23 to 27 July 2024.	Mr.Raj Kumar	VIT-AP
Advance Antenna Technologies for Sensing and Imaging Applications.	2 to 6 September 2024.	Mr.Nitin Goyal	ICFAI TECH, IFHE HYDERABAD
One week National Level FDP on “Project Management In Digital Age”	9 to 14 September, 2024	Sudesh Garg, Sanjay Bairwa, Prem Singh, Madhukar Kumar	Dept. of Mechanical Engineering of Sanjay Gandhi Polytechnic, Ballari.
Ergonomic Product Design	9 to 13 September, 2024	Mrs. Sumita	NITTTR
Institutional Management and Academic Administration	5 to 9 August, 2024	Mrs. Sumita	NITTTR

# FACULTY PARTICIPATION

## FDP ATTENDED

TITLE	DATE	ATTENDED BY	ORGANIZED BY
Additive Manufacturing Advancements in Different Applications.	21 to 26 Oct 2024.	Deepak Kumar, Vikash Gautam, Sanjay Bairwa, Brij Mohan Sharma, Prem Singh, Achin Srivastav	SRM Institute of Science & Technology, Tamil Nadu, India.
Cyber Security: Advance concepts and practices.	21 to 25 Oct 2024.	Nitin Goyal	AISSSMS Institute of Information Technology.
Data Science and Machine Learning Applications for Engineering and Sciences.	21 to 27 Oct 2024.	Mr.Brij Mohan Sharma	Shri Vishnu Engineering College of Women (Autonomous), Bhimavaram,
Six-Day Online International Faculty Development Program on Progress.	14 to 19 Oct, 2024	Mr.Sudesh Garg	SRM Institute of Science and Technology.
Recent Advancement in AI & IOT- Industry Perspective	25 to 30 November, 2024	Mr.Sanjay Bairwa	Periyar Maniammai Institute of Science & Technology
Artificial Intelligence Edge with soft computing.	9 to 14 December, 2024	Mr.Deepak Kumar	ATAL-AICTE

# FACULTY PARTICIPATION

## FDP ATTENDED

TITLE	DATE	ATTENDED BY	ORGANIZED BY
Outcome based Education and Accreditation Process.	25 to 29 November, 2024	Mr.Achin Srivastav	Curriculum Development Centre Department, NITTTR Chandigarh
Financial Planning & Investment Strategies.	17 to 21 December, 2024	Achin Srivastav, Deepak Kumar, Raj Kumar, Chandan Kumar	DMS, SKIT in association with Wealth Pyramid Private Ltd
Sustainable Manufacturing Practices and Environmental Impact Optimization Techniques	9 to 14 December, 2024	Mr.Vikash Gautam	Dayanand Sagar College of Engineering
Sustainable Materials for Future Technology.	16 to 21 December, 2024	Mr.Vikash Gautam	Chandigarh College of Engineering
Robotics and Industrial Automation.	04 to 09 November, 2024	Dr.Raj Kumar	CBIT at Hyderabad
Exploring the Research in Mechanical Engineering for Sustainable Growth	16 to 20 December, 2024	Mr.Brij Mohan Sharma	K.L.N. College of Engineering, Pottapalayam, TN
Data Science using Python	25 to 29 November, 2024	Dr.Raj Kumar	NITTTR Chandigarh

# STUDENT ACHIEVEMENTS

NAME OF THE STUDENT	SEMESTER	NAME OF THE AWARD/MEDAL	TEAM/INDIVIDUAL	UNIVERSITY/STATE/NATIONAL/INTERNATIONAL	SPORTS/CULTURAL/TECHNICAL
Hari Shankar Kumar	III Semester	Third in Poster Making IRIS 2024	Individual	National	Technical
Saurabh Sharma	III Semester	ICI FEST '24- First Prize	Individual	National	Technical
Saurabh Sharma	III Semester	RC Car Racing- First Prize	Individual	University	Technical
Abhishek Kulariya	V Semester	RTU Kota_kabbadi tournament_WIN NER	Team	State	Sports
Aditya Sharma	V Semester	SIH- 2024_PARTICIPATION_THE OLYMPIANS	Individual	National	Technical
Aditya Sharma	V Semester	SIH- 2024_PARTICIPATION_TEAM THE OLYMPIANS	Team	National	Technical



# Contact Us

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