

#### Indira Gandhi Delhi Technical University For Women Department of Mechanical and Automation Engineering

## **New Letter - March 2024**



Our Motto: Women Education, Women Enlightenment, Women Empowerment

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### **OUR MISSION**

>>> The Department strives for excellence in education to develop highly skilled world class work force in area of Mechanical and Automation Engineering and target research themes in emerging areas with the aim to produce leaders among the Engineers.

>>> The Mechanical & Automation Engineering Department strives to impart quality education to the students by enhancing their skills to make them globally competitive.

To develop and maintain state-of-theart laboratories with equipment and software to foster visualization of known Art and Knowledge.

To create research facilities in order to provide the students and the faculty with the opportunities to create, apply and disseminate knowledge.

To develop linkages with the Industry and educational institutions in order to maintain excellence in teaching and research.

To maintain a supportive environment that encourages and rewards teamwork and inculcates good human values in students to make them responsible and respectable nation builders.

## **OUR VISSION**



#### Prof. Manoj Soni

#### "The roots of education are bitter, but the fruit is sweet." - Aristotle

It feels great to be part of one of the Top Ranking Emerging Engineering Institutes of Technology in India and it is an honor to hold the post of HoD-Department of Mechanical and Automation Engineering, Indira Gandhi Delhi Technical University for Women, Delhi.

The Department of Mechanical and Automation Engineering at IGDTUW offers B Tech in 'Mechanical and Automation Engineering', Dual Degree in 'Mechanical and Automation Engineering and Management', M Tech in 'Robotics and Artificial Intelligence', and a Ph.D.

The department has a team of dedicated faculty and staff members who work around the clock to nurture the students so that they become team leaders and make a niche for themselves. Our students come from various states across the country and thus, contribute to the diversity of the department. Students are very hard-working and passionate about fulfilling their dreams.

Students work and participate enthusiastically in competitions in India and Abroad in the areas of Electric Vehicles, Solar Powered Vehicles, Super Mileage Vehicle, Drone development and flying, etc. Many students also participate in hackathons and contribute to research publications in the fields of Big Data, Data Analytics, Machine Learning, Artificial Intelligence, etc.

The Department has a very vibrant environment with the best equipment in labs and a state-of-the-art Centre of Excellence in Advanced Mechatronics Systems. The students have access to the latest CAD software, CNC Machines, Industrial Robots, Industrial Automation systems, the Industrial Internet of Things, 3D printers apart from conventional machines and lab equipment, and a growing Research infrastructure. There is a very positive culture and a supportive environment. Best of the companies visit universities for recruitment and offer handsome internships and job offers to the students. Our faculty and research scholars are actively involved in research in both conventional and new areas of Mechanical Engineering. Our major thrust areas in research include- Artificial Intelligence and Machine learning in Advanced Manufacturing (Industry 4.0 Technologies), Composites, Tribology, Advanced Mechanics, Thermal Engineering, Alternate Fuels etc.

I invite you to explore life within the department, including academics, research, and other outreach activities.

# **COURSES OFFERED**

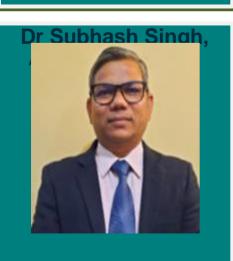
Underg	raduate				
Course Name	Specialization				
Bachelor of Technology	Mechanical and Automation Engineering				
B.Tech. + MBA (Dual Degree)	Mechanical and Automation Engineering				
Posta	raduate				
Course Name	Specialization				
Master of Technology	Robotics and Artificial Intelligence				
P	hD				
Course Name	Specialization				
	Machine Design Engineering, Tribology Fluid Film Bearing, FEM Computation Engineering, Vibration.				
Doctor of Philosophy	Alternate Fuels in IC Engines, Composite Material, Robotics & Automation, Manufacturing & Automation				
	Production and Automation Engineering, Prosthetics, Thermal Science and Engineering Thermal Power Plant.				



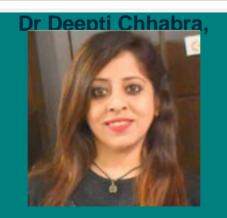
# **FACULTY PROFILE**

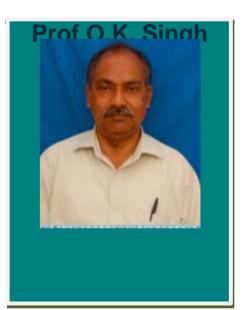




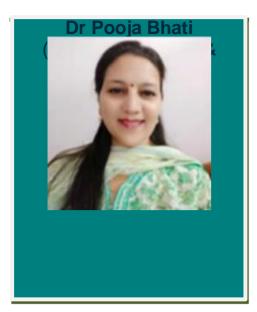
























# LAB FACILITIES



#### Industrial CNC Lab



### **3D Printing Lab**

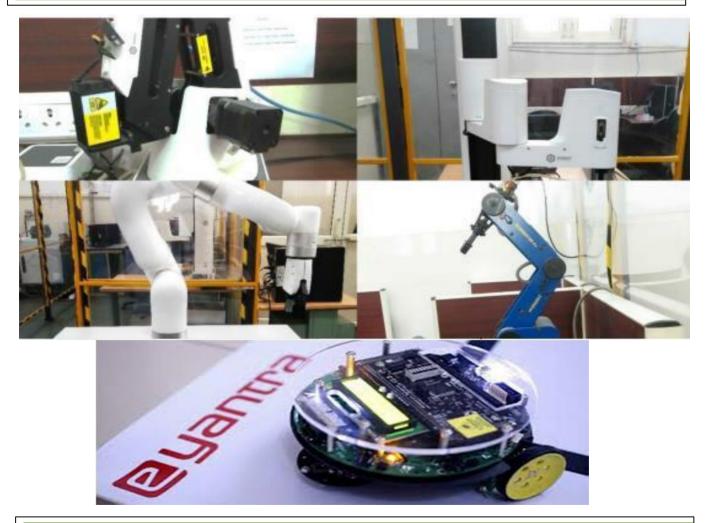


### CATIA – Design & Analysis Lab





#### IOT Lab



### Robot Lab



### Materials Lab

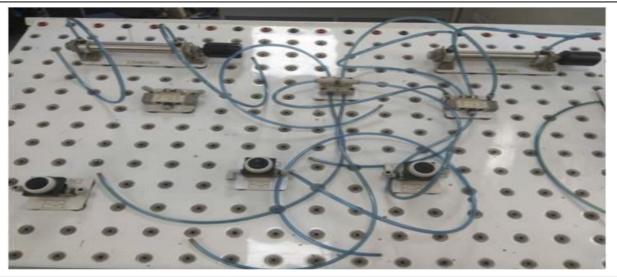


### Thermal Lab





### Refrigeration and Air Conditioning Lab



#### **Pneumatics Lab**



#### Fluid Machines Lab





#### Automobile Lab



#### Heat Transfer Lab



### Manufacturing Machines Lab



### Measurement & Metrology Lab



### TOM, Engineering Mechanics Lab

# STUDENT ACTIVITIES & PARTICIPATION



Team Shakti- Participate in E Bike Competitions





Team Aeous- Participate in Formula Car Competitions





#### Team Panthera- Participate in Shell Eco Marathon



#### Team Stellaris - Participate in Solar Electric Vehicle

#### >>> SHAGATA CHANDA, CHARU NIGAM, AIMAN ZAKIR, URJA KOHLI INDIA MOBILE CONGRESS 2023 27TH OCTOBER



# **STUDENT ACHIEVEMENTS**



#### >>> URJA KOHLI

YOUNGEST DELEGATE, THE HARVARD PROJECT FOR ASIAN AND **INTERNATIONAL RELATIONS- HPAIR 2023** 22-26TH AUGUST 2023

















AYUSHI NEGI BAGGED GOLD MEDAL IN VOLLEYBALL TOURNAMENT, AAHVAAN'23 DELHI TECHNOLOGICAL UNIVERSITY- DTU DATE-6TH-8TH APRIL 2023



#### >>> URJA KOHLI TEAM LEAD, HPAIR IMPACT CHALLENGE THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY- HKUST 25TH AUGUST



#### >>> DRISHTI KIRAR 1ST POSITION , OBJECTION OVERRULED BY OPTICA 8 NOVEMBER 2023



AYUSHI NEGI BAGGED GOLD MEDAL IN VOLLEYBALL TOURNAMENT VARCHAS'23(SPORTS FEST), IIT JODHPUR 3RD-5TH NOVEMBER 2023







#### ALISHA DHINGIA WINNER, CAD DESIGNATHON NOVEMBER 2023

PARI CHAURASIA RUNNER UP, CAD DESIGNATHON NOVEMBER 2023

INDIRA GANDHI DELET TYCHNICAL UNIVERSITY FOR WOME OPTICA STUDENT CHAPTER IGDTUW



URJA KOHLI Youngest speaker, founder's walk 20th June 2023 POOJA DIGITAL INDIA ALT HACK, IIT DELHI 19-26TH JUNE 2023





#### Organized seminars on Drone Technology and EV. March 2024. Faculty: Prof Manoj Soni



Team Shakti from IGDTUW participated in ISIE, E-Bike competition held at IES University, Bhopal from 24-1-2024 to 28-1-2024. The efforts of the team were highly appreciated and the students were given a Futures Award . Faculty: Prof Manoj Soni



Organized seminars on Drone Technology and EV. February 2024, Faculty: Prof Manoj Soni



**Our Motto: Women Education, Women Enlightenment, Women Empowerment** 

## **SEMINARS ORGANIZED**

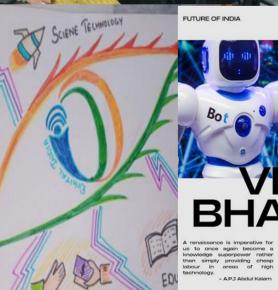
Organized seminars, Group Discussions and Poster Making competition to sensitize students towards Viksit Bharat. January 2021, Faculty: Prof Manoj Soni

## 2024

"If there is one place on the face of this Earth where all the dreams of living mean have found a home from the very earliest days when began the dream of existence, it is India."

LISHA DHINGIA MAE-1, 2026

ECONOMIC GROWTH



CORRUPTION FREE

FUTURE OF INDIA

2047

ARIN KHAN

ARAT

DREAM DREAM, DREAM, TRANSFORM INTO DREAMS THOUGHTS AND THOUGHTS RESULT IN ACTION !!



Organized seminars, Group Discussions and Poster Making competition to sensitize students towards Viksit Bharat. January 2021, Faculty: Prof Manoj Soni



### SOFT ROBOTICS FOR PROSTHETIC DEVICE SESSION



Industry Interaction Seminar organized on Design and Issues in in Electric Vehicles, Faculty Coordinator- Prof Manoj Soni



Industry Interaction Seminar organized on 3D Printing of Humanoid Robot. Faculty Coordinator- Prof Manoj Soni

## SOCIETIES & ACHEVENENTS

Year	Name of the award/ medal	Team / Iı	ndividual		r-university / state / onal / International	Name of the Event	Name of the student	event/	Date of competition(DD-MM- YYYY)	
2021	Girl's Wanna Code Mentorship	Indiv	idual	National		Flipkart	Bhanupriya 15-F Sharma 15-F		15-Feb-2021 to 15-Jun-2021	
2021	1. Secured AIR 3 in Quiz 2. Nominated for Innovative Concept Award under FB2021 (Combustion Vehicle) Business Plan and Presentation event	Charles and Charles and Charles and	us Formula dent		rmula Formula Bharat Khushi Rajput 2021		Khushi Rajput		01/2021-21/02/2021	
2021	Ceneration Coogle scholarship	Indiv	idual		International	Generation Google scholar	Sakshi Gupta		May 2021	
2021	Girl's Wanna Code Mentorship	Indiv	idual		National	Flipkart GWC 3.0	Sakshi Cupta	15-Fel	o-2021 to 15-Jun-2021	
2021	Qualified for Final Startup Track	Те	am		National	Cisco ThingQbator	Shruti Sinha	Aj	oril 2021-Ongoing	
Year	Name of the award/ n	nedal	Team / Ind	ividual	Inter-university / state / National / International	Name of the Event	Name of the student		Date of event/competition( DD-MM-YYYY)	
2021	1. Secured AIR 3 in Q 2. Nominated for Innovativ Award under FB2021 (Cor Vehicle) Business Plan Presentation ever	e Concept mbustion n and	Concept Team- A bustion Formula S and		National	Formula Bharat 2021	Surbhi Singh		February 2021	
2021	1. Secured AIR 3 in Quiz 2. Nominated for Innovative Concept Award under FB2021 (Combustion Vehicle) Business Plan and Presentation event		Team- Aious Formula Student		National	Formula Bharat 2021	Vaishnavi Rout		February 2021	
2021	Microsoft Engage 2021 Me Program	Individual		ual	National	Microsoft Engage	Aastha Chaudhary		June 2021 to July 2021	
2021	LeanIN-Hacks	LeanIN-Hacks Team		n	Inter-university	Hackathon	Aastha Chaudhary		February 27-28	
2021	Qualified for Final Startu	ed for Final Startup Track Tea		n National Cisco ThingQbator Aastha Ch		Aastha Chaudh	udhary April 2021-Ongoin			
Year	Name of the award/	medal	Team / Ind	lividual	Inter-university / state / National / International	Name of the Name of the stude Event Name of the stude		Date of dent event/competition( DD-MM-YYYY)		
2021	Microsoft Engage 2021 M Program	lentorship	Individ	lual	National	Microsoft Engage	Shruti Sinha		June 2021 to July 2021	
2021	Qualified for Final Start	up Track	Tear	n	National	Cisco ThingQbator	Anushka Jain		April 2021-Ongoing	
2021	Microsoft Engage 2021 M Program	lentorship	Individ	lual	National	Microsoft Engage	Anushka Jain		June 2021 to July 2021	
2021	Grace Hopper Celebration	Scholarship	Individ	lual	International	AnitaB.Org	Anushka Jain		27/09/21 to 01/10/21	
2021	Winner- echoAR Ti	rack	Tear	n	National	Cicada 3301:Reinvented (Hackathon)	Anushka Jain		28/05/21 to 30/05/21	

Year	Name of the award/ medal	Name of the award/ medal Team / Individual		Name of the student	Date of event/competition(DD- MM-YYYY)
2021	Nominated for unique Business Plan and Presentation	Team(Aious formula Student)	National	Chhavi Bhadana	Feburary 2021
2021	1. Secured AIR 3 in Quiz 2. Nominated for Innovative Concept Award under FB2021 (Combustion Vehicle) Business Plan and Presentation event	Team(Aious formula Student)	National	Rinki gupta	Feburary 2021
2021	Microsoft Engage 2021 Mentorship Program	Individual	National	Prerna Khera	June 2021- July 2021
2021	Microsoft Engage 2021 Mentorship Program	Individual	National	Bhanupriya Sharma	June 2021- July 2021
2021	Grace Hopper Celebration Scholarship	Individual	International	Bhanupriya Sharma	27-Sept-2021 to 01-Oct-2021

Year	Name of the award/ medal	Team / Individual	Inter-university / state / National / Name of the Event International		Name of the student	Date of event/competition( DD-MM-YYYY)
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams.	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Prashasti Tiwari	12th Decmber 2020
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Anshika Saini	12th Decmber 2020
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Anmol Singh	12th Decmber 2020
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Samridhi Sharma	12th Decmber 2020
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Khushmeet Kaur	12th Decmber 2020
2021	Secured AIR 68 in preliminary rounds out of over 200+ teams	Team Yantriki	National	BAJA SAEINDIA PRELIMINARY ROUND 2021	Shaheen	12th Decmber 2020

### PLACEMENT HIGHLIGHTS 2022-23

The placement season for the graduating class of 2023 began in earnest in July 2022. Currently, 57 B.Tech (MAE) final-year students have full time offers from reputed firms. It is mentioned with immense pride that 21 students have bagged 6-month internship offers from tech giants like Amazon, Flipkart, American Express, etc. The academic year 20-23 had seen a notable increase in the number of new companies compared to prior years. The highest CTC 50 LPA was offered by Adobe and the average CTC was 14.35 LPA for the graduating batch of 2023. It is a matter of tremendous pride to share that in comparison to that last year 2021-22, there has been a rise in average CTC from Rs. 8.73 LPA. to Rs. 14.35 LPA. There has also been a rise from 38 FTE offers in 2021-22 to 57 FTE offers in 2022- 23. In addition to that, 21 final year students were selected for the 6-month internship at some top-notch companies. The MAE Training and Placement Cell helps the students by regularly organizing industry interaction activities and competitions to stay abreast of current industrial trends and gain key technical skills to become proficient engineers in their fields.

Leading in every domain, Mechanical girls have once again proved their excellence, bagged opportunities and giving notable results. One final year student was part of the Cisco women in cyber security boost campaign 2.0. Team Yantriki participated in Aravali Terrain Vehicle Championship virtual season 2 and were AIR 1 overall winner, AIR 1 in CAE, Cost Report, DFMEA Report. 3 students were selected for Pratibha - The Eaton Excellence Award in the year 2022.15 pre-final year students were selected as a mentee in the Microsoft engage program throughout the country, while one pre-final year student was selected for the Harvard WeCode Scholarship. One student was among the top finalists of the Amex Makeathon and received an intern offer at American Express. Students participated in Scholarship and hackathons like GHC Scholar for the year 2022,



## FACULTY ACHIEVEMENTS

•Prof. Nathi Ram Chauhan organized an International Conference on Future of Engineering Systems and Engineering (FEST 2021) jointly with FIST, New Delhi in MAE Department in the F.Y. 2021-during 18-19 DEC 21.

•Department of Production & Industrial Engineering of Punjab Engineering College Chandigarh organized an International Conference on Industrial and Manufacturing Systems (CIMS-2021) in association with MAE Department of IGDTUW, coordinated by Prof. Nathi Ram Chauhan, during 11-11-2021 to 13-11-2021.

•Prof. Nathi Ram Chauhan chaired a technical session in International Conference on Industrial and Manufacturing Systems (CIMS-2021) during 11-13 November 2021 in Department of Production & Industrial Engineering of Punjab Engineering College Chandigarh.

•Prof. Nathi Ram Chauhan chaired a technical session in ITME- International Conference on Innovation Technologies in Mechanical Engineering during 17-18 December 2021 in Mechanical Engineering Department at KIET Group of Institutions, Ghaziabad.

•Prof Nathi Ram Chauhan presented a paper on 'Investigation of Roughened Hybrid Hole-Entry Journal

Bearing with Couple Stress Lubricant' in International Conference on Industrial and Manufacturing Systems (CIMS-2021) during 11-13 November 2021 in Department of Production & Industrial Engineering of Punjab Engineering College Chandigarh.

•Best Paper Presentation award won by Ms. Priyanka Singh, PhD scholar under the guidance of Prof. Nathi Ram Chauhan on 'Effect of the Addition of Ductile Phase on Mechanical Properties of Alumina/nano SiC Ceramic Composite' in International Conference on Industrial and Manufacturing Systems (CIMS-2021) in association of MAE Department of IGDTUW during 11-11-2021 to 13-11-2021.

•An expert lecture delivered by Prof Nathi Ram Chauhan on "Hydraulic and Pneumatic Systems Simulation using MATLAB" in Short Term Course-Application of MATLAB in Engineering Sciences and Research (AMESR-2021) during 27-12-2021 to 31-12-2021 in Mechanical Engineering Department at Sant Longowal Institute of Engineering and Technology, Punjab.

•An expert lecture delivered by Prof Nathi Ram Chauhan on "Role of Robotics in Automation" in Two Days National Workshop Emerging Technologies for Redesigning Future during 04-02-2022 to 05-02-2022 in Mechanical Engineering Department at Maharana Pratap University of Agricultural University Technology and Engineering, Udaipur, Rajsthan.

•Invited talk delivered by Prof Nathi Ram Chauhan on "Application of Robotics and Artificial Intelligence in Industries" Multidisciplinary Conference on Engineering, Science & Technology-2022 (MCEST-2022) on 28th May 2022 at Sahyadri College of Engineering & Management, Mangalore, Karnataka.

•Prof. Manoj Soni filed patent titled Wearable sleeping lumber pillow, class 2-01 (Corset) on 11/24/2021.

•Dr. Deepti Chabra was granted patent titled Block Chain and Machine learning implementation strategies for identification of novel corona virus on 10/28/2021

Dr Shipra Aggarwal organized an event for Rajyapal Vikas KeRajdoot for the Quarter Jan-2022 to March. 2022
Dr Shipra Aggarwal organized an event for Azadi Ke Amrit Mahotsav for the Quarter Jan-2022 to March. 2022.
Dr. Deepti Chhabra organized an Expert Lectures on Industry 4.0 and its Major Components on 19.1.2022 by Prof. Abid Haleem (Jamia) and on Sustainable Operations on 17.2.2022 by VimarTondolo(Brazil)

•Dr. Deepti Chhabra coordinated Expert lectures on Skin Care, Precautions and Post Covid 19 Measures by Dr. Arvind Kaul on 12.4.2022, on Public Health by Dr Mukul Jain on 13.4.2022, on Bone and Joint Health by Dr Manish Kumar Saini on 18.4.2022 and on Coping with Mental Health Post Covid 19 impact by Dr Shivani Sadhoo on 25.4.2022.

•Dr. Deepti Chhabra organized a quiz for students on PM Garib Kalyan Anna Yojana on Good Governance. Almost 40students participated the quiz and have won Certificates from the Ministry of Electronics and Information Technology, Government of India.

## FACULTY ACHIEVEMENTS

Singh, Sakshi, and Nathi Ram Chauhan. "Optimization of adhesive wear behaviour of B4C/AZ91D-Mg composites." Advances in Materials and Processing Technologies (2022): 1-15. Singh S., Chauhan N.R., "Influence of B4C on Microstructural, Mechanical	Journal	2022	SCIE/Scopus
Singh S., Chauhan N.R., "Influence of B4C on Microstructural, Mechanical			
and Wear Properties of Mg-based Composite by Two-Step Stir Casting" Indian Journal of Engineering & Materials Sciences Vol. 28, April 2021 pp. 189-197	Journal	2021	SCI/Scopus
Singh, Sakshi, and Nathi Ram Chauhan. "Experimental Investigation of Mechanical and Thermal Study of Mg/B4C/Cr Hybrid Composites." <i>Indian</i> <i>Journal of Pure &amp; Applied Physics (IJPAP)</i> 59.5 (2021): 379-385.	Journal	2021	SCI/Scopus
Singh S., Chauhan N.R., "Empirical Optimization of Corrosion Rate for Mg/Cr Composites". Vol. 28, May 2021, pp. 363-368 IJCT.	Journal	2021	SCI/Scopus
Singh S., Chauhan N.R., "Study of Abrasive Wear and Abrasion Heating of Mg and Al matrix Composites Reinforced with B4C and Cr", JSIR.	Journal	2021	SCI/Scopus
Aasiya Parveen, Nathi Ram Chauhan and MohdSuhaih. "Influence of Process Parameters and Reinforcements on Aluminium Hybrid Composites Developed by Powder Metallurgy Process", Physics of metals and metallography, Springer.	Journal	2021	SCI/Scopus
Parveen, Aasiya, Nathi Ram Chauhan, and MohdSuhaib. "Influence of compaction pressure and Si3N4/ZrO2 reinforcement on the properties of aluminium hybrid composites." <i>Advances in Materials and Processing</i> <i>Technologies</i> (2021): 1-13.	Journal	2021	SCIE/Scopus
Parveen, <u>Aasixa</u> , et al. "Fabrication and analysis of two-wheeler connecting rod for <u>aluminium</u> hybrid composites using finite element method." <i>Engineering Research Express</i> , Vol 3, Number 3 (2021).	Journal	2021	Scopus
Singh S., Chauhan N.R. (2021) Optimization of Hardness Properties of Magnesium-Based Composites by Using Taguchi Method. In: Muzammil M., Chandra A., Kankar P.K., Kumar H. (ads) Pecant Advances in Mechanical	CONFERENCE PROCEEDINGS	2021	SCOPUS
	<ul> <li>189-197</li> <li>Singh, Sakshi, and Nathi, Ram Chauhan. "Experimental Investigation of Mechanical and Thermal Study of Mg/B4C/Cr Hybrid Composites." <i>Indian</i> <i>Journal of Pure &amp; Applied Physics (IJPAP)</i> 59.5 (2021): 379-385.</li> <li>Singh S., Chauhan N.R., "Empirical Optimization of Corrosion Rate for Mg/Cr Composites". Vol. 28, May 2021, pp. 363-368 IJCT.</li> <li>Singh S., Chauhan N.R., "Study of Abrasive Wear and Abrasion Heating of Mg and Al matrix Composites Reinforced with B4C and Cr", JSIR.</li> <li>Aasiya Parveen, Nathi, Ram Chauhan and MohdSuhaih. "Influence of Process Parameters and Reinforcements on Aluminium Hybrid Composites Developed by Powder Metallurgy Process", Physics of metals and metallography, Springer.</li> <li>Parveen, Aasiya, Nathi Ram Chauhan, and MohdSuhaih. "Influence of compaction pressure and Si3N4/ZrO2 reinforcement on the properties of aluminium, hybrid composites." <i>Advances in Materials and Processing Technologies</i> (2021): 1-13.</li> <li>Parveen, Aasiya, et al. "Fabrication and analysis of two-wheeler connecting rod for aluminium, hybrid composites using finite element method." <i>Engineering Research Express</i>, Vol 3, Number 3 (2021).</li> <li>Singh S., Chauhan N.R. (2021) Optimization of Hardness Properties of</li> </ul>	189-197       Singh, Sakshi, and Nathi Ram Chauhan. "Experimental Investigation of Mechanical and Thermal Study of Mg/B4C/Cr Hybrid Composites." Indian Journal of Pure & Applied Physics (IJPAP) 59.5 (2021): 379-385.       Journal         Singh S., Chauhan N.R., "Empirical Optimization of Corrosion Rate for Mg/Cr Composites". Vol. 28, May 2021, pp. 363-368 IJCT.       Journal         Singh S., Chauhan N.R., "Study of Abrasive Wear and Abrasion Heating of Mg and Al matrix Composites Reinforced with B4C and Cr", JSIR.       Journal         Aasiya, Parveen, Nathi Ram Chauhan and MohdSuhaih. "Influence of Process Parameters and Reinforcements on Aluminium, Hybrid Composites       Journal         Parveen, Aasiya, Nathi Ram Chauhan, and MohdSuhaih. "Influence of compaction pressure and Si3N4/ZrO2 reinforcement on the properties of aluminium, hybrid composites." Advances in Materials and Processing Technologies (2021): 1-13.       Journal         Parveen, Aasiya, et al. "Fabrication and analysis of two-wheeler connecting rod for aluminium, hybrid composites suing finite element method." Engineering Research Express, Vol 3, Number 3 (2021).       Journal         Singh S., Chauhan N.R. (2021) Optimization of Hardness Properties of Magnesium-Based Composites by Using Taguchi Method. In: Muzammil M.,       PROCEEDINGS	189-197Image: Sakshi, and Nathi Ram Chauhan. "Experimental Investigation of Mechanical and Thermal Study of Mg/B4C/Cr Hybrid Composites." Indian Journal of Pure & Applied Physics (IJPAP) 59.5 (2021): 379-385.Journal2021Singh S., Chauhan N.R., "Empirical Optimization of Corrosion Rate for Mg/Cr Composites." Yol, 28, May 2021, pp. 363-368 IJCT.Journal2021Singh S., Chauhan N.R., "Study of Abrasive Wear and Abrasion Heating of Mg and Al matrix Composites Reinforced with B4C and Cr", JSIR.Journal2021Aasiya, Parveen, Nathi Ram Chauhan and MohdSuhaih. "Influence of Process Parameters and Reinforcements on Aluminium, Hybrid CompositesJournal2021Parveen, Aasiya, Nathi Ram Chauhan, and MohdSuhaih. "Influence of compaction pressure and Si3N4/ZrO2 reinforcement on the properties of aluminium, hybrid composites." Advances in Materials and Processing Technologies (2021): 1-13.Journal2021Parveen, Aasiya, et al. "Fabrication and analysis of two-wheeler connecting rod for aluminium, hybrid composites using finite element method." Engineering Research Express, Vol 3, Number 3 (2021).Journal2021Singh S., Chauhan N.R. (2021) Optimization of Hardness Properties of Alagnesium-Based Composites by Using Taguchi Method. In: Muzammil M.,CONFERENCE CONFERENCE 20212021

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10	Saxena ND, Chauhan NR., "Physio-chemical study SAE 20W40 and virgin coconut oil using TiO2 nat Today: Proceedings, Elsevier,2021.				FERENCE	2021	SCOPUS
11	Singh P, Chauhan NR, "Design, <u>fabrication</u> and p mini ball miller", Materials Today; Procee				FERENCE	2021	SCOPUS
12	· · · · · ·					2021	SCOPUS
13	April). Exergy and energy analysis of 4-stroke sin using <u>Rongamia</u> -ethanol-butanol fuel blends. In	na, S., <u>Vashishth</u> , S., Chauhan, S., Chauhan, N. R., & Saraswat, M. (2021, il). Exergy and energy analysis of 4-stroke single cylinder CI engine g <u>Pongamia</u> -ethanol-butanol fuel blends. In <i>Journal of Physics:</i> <i>ference Series</i> (Vol. 1854, No. 1, p. 012038). IOP Publishing.				2021	SCOPUS
14	Kaur, U., Khan, U., Chauhan, N. R., & Mukherjee, S. (2021). Collision detection and inverse dynamics control of KUKA LBR IIWA robot. <i>International</i> <i>Journal of Mechatronics and Automation</i> , 8(1), 9-21.				Journal		SCOPUS
15	Chandra, D., &Chauhan, N. R. (2021). Surface pr alloys–A review. <i>Materials Today: Procee</i>				CONFERENCE PROCEEDINGS		SCOPUS
16	Sharma P., Chauhan N.R., Saraswat M. (2021) C Fuels as Diesel Blends. In: Das L.M., Sharma A., Recent Trends in Thermal Engineering. Lectur Engineering. Springer, Singapore. https://doi.or 4_13	, Hagos F.Y., Tiwari S. (eds) are Notes in Mechanical			FERENCE	2021	SCOPUS
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