

**New Edition**

The Annual Magazine of Department of Mechanical Engineering, MIT Muzaffarpur

# MOMENTUM

July 19-June 20

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**INSTITUTIONAL  
INTERNSHIP OF  
2K18 BATCH**

**Special  
Coverage**

**Workshop on  
Automation  
In Mechanical  
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**Message  
from HOD**

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## FROM THE HOD'S DESK

It is really a matter of immense pleasure that the Department of Mechanical Engineering, MIT, Muzaffarpur is bringing out the departmental e-magazine with an intent to showcase the literary, artistic, academic as well as non-academic activities and talents of its students. Creative writing or the urge to write on matters that we feel, see and do is an integral part of learning and education. It not only helps to unfold our imagination, thoughts and aspirations towards life but also shows the spirit for living a meaningful life. I am sure that this E-magazine provides the right platform and ample opportunity to the students of mechanical engineering to vent freely their creative minds, skills and knowledge and will definitely prove a stepping stone in developing their personalities and realising dreams. I hope the teachers, staffs and students of the department will significantly contribute to the success of the E-magazine and in achievement of its intended goal. I finally congratulate all concerned for their hard work and dedication in releasing the initial issue of the E-magazine and wish all the best for their future endeavors.

# EDITORIAL

I am privileged to present MOMENTUM Vol I 2019-20 edition. It captures the momentous moments of students, faculties and staff members of Mechanical Engineering in the academic year 2019-20. It is a compilation of the immense effort put forward by the students, faculties and staff members for the betterment of Mechanical Engineering Department. The editorial board has tried their best to make sure that no achievement goes unnoticed. The editorial board shows its gratitude to all those who have helped MIT reach new heights. On behalf of editorial team, we thank our honorable principal Prof. ( Dr.) J N Jha, faculty members, staffs and students. We hope our efforts will be cherished and we also welcome suggestions for the shortcomings in this edition.

-Mr Ankit Kumar

-Mr Santosh Kumar



# VISION & MISSION

**Vision:** To strengthen the region through imparting superior quality technical education and research; which enables the fulfillment of industrial challenge and establish itself as a Centre of Excellence in the field of Mechanical Engineering.

**Mission:** To build an academic environment of teaching and lifelong learning for students to make them competitive in context with advance technological, economical and ecological changes. To enable the students to enhance their technical skills and communications through research, innovation and consultancy projects. To share and explore the accomplishments through didactic, enlightenment, R & D programs with technical institution in India and abroad.

# FACULTY MEMBERS



**Md Irshad Alam**  
Assistant Professor  
HOD, MED



**Dr. Sheo Shanker Prasad**  
Assistant Professor



**Narayan Kumar**  
Assistant Professor  
PG Coordinator



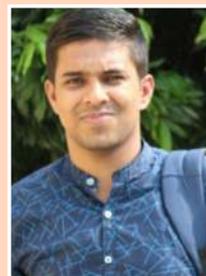
**Gulshan Kumar**  
Assistant Professor  
Time Table In-Charge



**Irfan Haider**  
Assistant Professor



**Hemant Kumar Choudhary**  
Assistant Professor



**Ankit Kumar**  
Assistant Professor  
NPTEL and Internship  
Coordinator



**Gaurav Kumar**  
Assistant Professor  
NBA Coordinator



**Santosh Kumar**  
Assistant Professor



**Arvind Kumar Madheshiya**  
Assistant Professor  
Workshop Superintendent



**Jigesh Yadav**  
Assistant Professor



**Nitesh Kumar Dubey**  
Assistant Professor



**Amit Kumar**  
Assistant Professor



**Amit Kumar**  
Assistant Professor  
GATE Coordinator



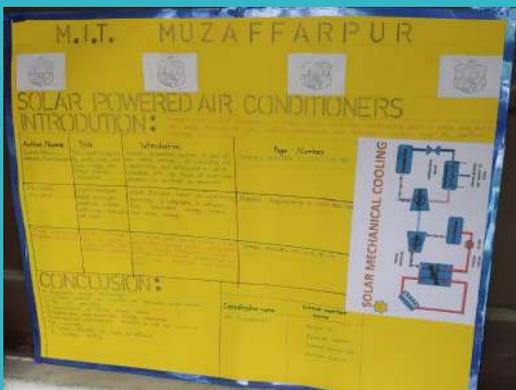
**Manhar Kumar Sah**  
Assistant Professor

## STUDENT ACTIVITIES

# INSTITUTIONAL INTERNSHIP OF 2K18 BATCH STUDENTS

Students of 2018 batch took part in an intra institutional internship as a part of their curriculum. The internship was of 4 weeks which started from July 1, 2019. The internship was divided into three parts in which the students were categorized into four groups and were allotted projects in Mechanical Engineering workshop and in their department separately. After that they were trained to improve their soft skills. For the first ten days during the internship, students had to manufacture the products in different shops in Workshop. After that they had to do projects under the faculties of Mechanical Engineering for the next 10 days followed by their soft skills training. A poster presentation was organized for showcasing the theme of their Project followed by question answer session by the faculties of Mechanical Engineering.





## WORKSHOP ON AUTOMATION IN MECHANICAL ENGINEERING

A 5-days workshop on "Automation in Mechanical Engineering" was organized in the college from 2nd Sept to 6th Sept, 2019. The objective of the workshop was to explore Automation in Thermal Power Plant and Production Engineering, Economic Perspective of Automation, Electric Vehicles, Hydraulic and Pneumatic System as well as Under Water Robotics and Robotics Simulation. The event was inaugurated by Principal-In Charge Dr. YN Sharma in the presence of Prof. SK Jha, Prof. Vikash Kumar (HOD, ME), Prof. Ashish Kumar (TEQIP Coordinator), Dr. Prabhanshu, Prof. Gulshan Kumar, Prof. Md Irshad Alam, Prof. Ankit Kumar, Prof. Santosh Kumar, Prof. Nitish Kumar Dubey, Prof. Narayan Kumar and Prof. Amit Kumar. On the 1st day of the workshop, Er. Vikram Raj (Manager, NTPC Baadh) explained to students as how automation is achieved in Thermal Plants with the help of mechanization and controlled technology, how an automated machine has the ability to decide, perform, react and evaluate based on the circumstances. He also mentioned about the increase in productivity and quality in production with the application of Automation in industries.

In the series of lectures, Prof. Md Irshad Alam elaborated the different types of valves which are used for automation in Chemical Industry. Prof. Nitish Kumar Dubey talked about the Fluid Automatic System and explained the differences between Pneumatic and Hydraulic Automation System. Prof. Ankit Kumar discussed about the challenges and shortcomings in production and usage of Electric Vehicles. He also explained how EVs are much more energy efficient than conventional combustion engines. He encouraged students to build career in Research and Development in this sector as the market of EVs is supposed to grow in India exponentially in upcoming years. A Quiz was also organized for the assessment of understanding of participants about the discussed topics. The 5-day workshop ended with a session by Mr. Atul Thakur (Asst. Professor, IIT Patna) on development of Bio-Inspired Mobile Robotics followed by Underwater Robotics and Motion Simulator. Student Coordinators for this event were Sandeep Rahul, Vishwanath, Ayush, Kehsav, Himanshu, Tejas, Sudhanshu, Pratyush and Abhimanyu. A total of 80 participants of department of Mechanical Engineering took part in this workshop.





STUDENT ACTIVITIES

# WORKSHOP ON SOLIDWORKS BY MOXIE-TECHNICAL CLUB

Moxie-The Technical Club of MIT Muzaffarpur organized a 10-day Workshop on Solidworks from 13th October to 22nd October, 2020 in the college. Total 39 students of 2nd year of Mechanical Engineering, Electrical Engineering and Civil Engineering participated in the workshop. The workshop was organized with the objective that Designing and Modeling are important skills for an Engineer. Solidworks is a software in which designing, 3D modeling, drafting and simulation can be done. It is the most popular and commonly used software for Computer Aided Designing and Computer Aided Engineering throughout the world. After the completion of the 10-day workshop, a competition among participants was also organized in two phases. The 1st phase of the competition consisted of a pen-paper based quiz with a set of 10 MCQ based on Fundamentals of Designing in Solidworks. The 2nd phase involved designing the given component in a fixed period of time.

The winners of Design competition were as follows:

Name	Award/ Title
Ashutosh Ranjan	1st Prize & Design Topper
Abhay Kumar Jaiswal	2nd Prize & Quiz Topper
Naveen Kumar	3rd Prize & Quiz Topper



## ALUMNI MEET-2020

The Alumni Meet took place on 26th February, 2020 in which following students from department of Mechanical Engineering as well as NPTEL Toppers were awarded for their Academic Performance till session 2019-20:

### BATCH 2018-22

Sl No.	Name	Roll No.	CGPA
1.	Raj Shree	18M36	9.16
2.	Sumit Kumar	18M52	8.76
3.	Supriya Kumari	18M54	8.75

### BATCH 2017-21

Sl No.	Name	Roll No.	CGPA
1.	Harsh Raj	17M60	8.79
2.	Keshav Kumar	17M02	8.52
3.	Manish Kumar	18(LE)M08	8.49

### BATCH 2016-20

Sl No.	Name	Roll No.	CGPA
1.	Shubham	16M14	8.63
2.	Sangam Kumar	17(LE)M05	8.63
3.	Sudhanshu Kumar Sharma	17(LE)M03	8.6
4.	Rahul Prasad	16M25	8.52



## PROJECTS SELECTED UNDER BIHAR STUDENT PROJECT PROGRAM

To promote innovation among engineering students, Bihar Council of Science and Technology (BCST) started an initiative known as Student Project Program in which certain selected projects submitted by final year students in B.Tech courses were given financial aid of Rs 10,000. Out of 3 project proposals sent from Mechanical Engineering Department (MIT Muzaffarpur), all 3 were selected. Following project proposals from Department of Mechanical Engineering were selected by BCST Patna under 1st series of SPP project 2019-20:

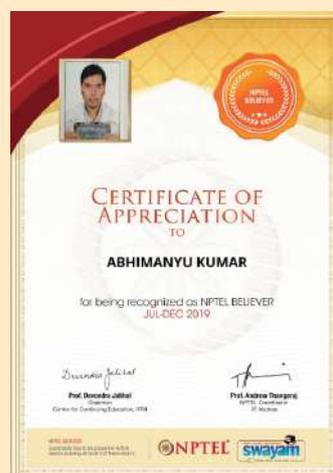
Sl No.	Name of the project	Name of the student	Name of the guide
1.	Optimization of energy through Solar Panel Tracking System	Rahul Prasad (Team Leader)	Mr. Ankit Kumar
		Anand Mohan Singh	
		Krishna Kumar	
2.	Fabrication and testing of Jute fibre reinforced epoxy composite	Kanhaiya Kumar (Team Leader)	Mr. Ankit Kumar
		Shashi Bhushan Kumar	
		Surendra Kumar	
		Vinod Kumar	
3.	Friction Stir Welding	Alok Arya (Team Leader)	Mr. Santosh Kumar
		Sangam Kumar	
		Kanhaiya Kumar	
		Piyush Kumar	

## NPTEL-SWAYAM PERFORMANCE

The National Programme on Technology Enhanced Learning (NPTEL) was initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) along with the Indian Institute of Science, Bangalore in 2003. It is essentially an asynchronous platform and a process for teaching through pre-recorded lectures, resource video materials, lecture notes, assignments and quizzes, which are usually online and provide self assessment in regular intervals during learning. The objective of enabling students obtain certificates for courses is to make students employable in the industry or pursue a suitable higher education programme. Following these online courses, an in-person, proctored certification exam will be conducted and a certificate is provided through the participating institutions and industry, when applicable.

Number of students successfully completed courses from NPTEL from Mechanical Engineering during academic year 2019-20:

Session	July'19-Dec'19	Jan'20-July'20
No. of students successfully completing the course	9	N/A
No. of students who got Elite + Gold Medal	3	N/A
No. of students who got Elite + Silver Medal	26	N/A
No. of students who got Elite Certificate	19	N/A
No. of students who got Passing Certificate	57	81



## SPONSORED RESEARCHES

Faculties of Mechanical Engineering were awarded the project under Collaborative Research Scheme of AICTE. Details of the projects are as follows:

Name of the Project	Principal investigator of the Project	Sponsoring Unit	Approximate Budget (in Rs.)
Optimization of tracking device for concentrating PV Panel	Mr. Jigesh Yadav	AICTE under Collaborative Research Scheme	17,750,00
Enhancement in solar powered air conditioners through better heat transfer techniques	Mr. Ankit Kumar	AICTE under Collaborative Research Scheme	7,31,000

Research papers published by faculties of Mechanical Engineering during the academic year 2019-20:

Sl No.	Name of Faculty	Research Paper
1.	Dr Prabhansu	Indian Sub-bituminous and Low-Rank Coal Gasification Experiments in a Circulating Fluidized Bed Gasifier Under Air Atmosphere
2.	Dr Prabhansu	Hydrodynamics of a CFB Gasifier with Two Different Cross Sections in the Riser
3.	Dr Prabhansu	Thermal degradation, characterization and kinetic modeling of different particle size coal through TGA
4.	Jigesh Yadav	Different Methods for Predicting and Optimizing Weld Bead Geometry with Mathematical Modeling and ANN Technique
5.	Jigesh Yadav	Prediction and Optimization of Weld Bead Geometry

## FIESTA- CULTURAL FEST

Junoon-The Arts and Cultural Club of MIT Muzaffarpur organized an event on the occasion of its second anniversary under the name of FIESTA 2.0. It was a stage setup for the art lovers to show their talent. The land of Muzaffarpur was enamored in the artistic and musical world of Fiesta 2.0. Fiesta was not only a celebration but an emotion, a stage of dreams and a tool to carve self talent. Various competitions were organized in this Fest in which hundreds of students participated. Fiesta encouraged students to dig out their talents, passion and has emerged as a platform for many to showcase their capabilities. The events that took place under Fiesta were Monoact, Singing Competition, Mr and Ms Fiesta, Let's Dance, Slam Poetry and Open Mic, Capture Your Campus, etc.

Following is the list of winners in different events from Department of Mechanical Engineering :

Sl No.	Name	Event	Position
1.	Ayush Vats	Solo Singing	1st
2.	Ashutosh Ranjan	Poetry Slam	1st
3.	Yeshwant Singh	Open Mic	3rd
4.	Md Amaan	Drama	1st
4.	Md Saquib Alam	Drama	1st



## TECHMITI- TECH FEST

TechMITi-The Annual Techfest of MIT Muzaffarpur was organised on 24-25 February, 2020. TechMITi'20 was all about students coming together, to innovate and experience the beauty of technology merged with fun. The inaugural ceremony of TechMITi 20 took place in the presence of Shri H R Shrinivas (Chief Electoral Officer, Bihar), Shri Chandrashekhar Singh (DM, Muzaffarpur) and Prof. (Dr.) J N Jha (Principal, MIT Muzaffarpur) on the eve of 24th February, 2020. Dr. Y N Sharma (HoD, Department of Electrical Engineering) and Dr. Vikash Kumar (HoD, Department of Mechanical Engineering) along with faculty members and staff were also present on the eve of the inauguration. After the inauguration, Chief Guest, Faculties, and students of different engineering colleges who came to participate in TechMITi witnessed a Droneshow performed by the students of MIT Muzaffarpur and GEC Samastipur. The venue was full of students filled with enthusiasm and excitement for the events they came to participate in. TechMITi was a two-day congregation for Technical Events, Workshops, Talk series, Gaming, Exhibitions, and many more events which was conducted by Moxie in association with Innovation cell and other clubs. Events like Robowar, Circuitryx, Truss Bridge, Armstrong, Codeshastra, Mad over Cad, Hurdlemania, Mazeway, Paper presentation, and Prashnavali took place in the tech fest. Here's the list of participants and winners from Department of Mechanical Engineering, who took part in TechMITi'20 :

Sl No.	Name	Batch	Event	Position
1.	Ashutosh Ranjan	2K18	Mad Over CAD	1st
2.	Sudhanshu Ranjan	2K17	Robowar	2nd
3.	Ankit Kumar	2K19	Armstrong	1st
4.	Prabhat Kumar	2K18	Armstrong	2nd
5.	Sumit Kumar	2K18	Prashnavali	2nd
6.	Anurag Anand	2K18	Prashnavali	2nd
7.	Md Amaan	2K19	Hurdlemania	3rd
8.	Viket Saurabh	2K18	Mad Over CAD	4th
9.	Prince Maurya	2K19	Armstrong	1st
10.	Bablu Kumar	2K18	Armstrong	2nd
11.	Yashshvi Kr Singh	2K18	Prashnavali	Participant
12.	Raj Shree	2K18	Truss Bridge	Participant
13.	Randhir Kumar	2K17	Paper Presentation	Participant
14.	Rinki Rani	2K18	Thrust	Participant
15.	Subhash Kumar	2K18	Prashnavali	Participant
16.	Harsh Raj	2K17	Thrust	Coordinator
17.	Mohit Raj	2K17	Armstrong	Coordinator
18.	Shivam Sagar	2K17	Mad Over CAD	Coordinator
19.	Sumeet Kumar	2K18	Mazeway	Coordinator

Sl No.	Name	Event	Batch
1.	Shivam Sagar	Ojass'19	2K17
2.	Md Haidar Ali	GES 2020	2K18
3.	Shubhash Kumar	NTPC REQC 2020	2K17
4.	Yeshwant Singh	Startup India Yatra 2018	2K18
5.	Ayush Vats	Startup India Yatra 2018	2K18
6.	Pratyush Chandra	Embark Up	2K17
7.	Ayush Kumar	SIH 2020	2K17
8.	Neebha Rani	SIH 2020	2K19
9.	Abhinav	SIH 2020	2K18
10.	Om Prakash	SIH 2020	2K18
11.	Pawan Kumar	ASME EFx	2K17
12.	Chandan Kumar Yadav	SIH 2020	2K18
13.	Madan Kumar Das	SIH 2020	2K18

## TRAINING & PLACEMENTS

Following students from Department of Mechanical Engineering were placed during campus placement in session 2019-20:

Sl No.	Name	Company/Organisation
1.	Nishant Kiran	Alstom Transport India Ltd.
2.	Anubhav Shrivastava	HCL Technologies
3.	Ashutosh Kumar	Wioska Moulding Pvt. Ltd.
4.	Sandeep Rahul	Grifeo Technology
5.	Abhishek Anand	Grifeo Technology
6.	Krishna Kumar	Grifeo Technology
7.	Kanhaiya Kumar	PIE Infocomm

## UDGAM- SPORTS MEET

Udgam'20- The 65th Annual Athletics Meet of MIT Muzaffarpur was organised on 27-28th February, 2020. The Inaugural Ceremony took place on 27th February in the presence of Chief Guest Mr Jayant Kant (SSP, Muzaffarpur), J N Jha (Principal, MIT Muzaffarpur), Ankit Kumar, Ravi Kumar, Nidhish Kumar, Santosh Kumar, other faculty members and students. Under this meet, various games as well athletic events were organised such as Cricket, Badminton, Football, Volleyball, Javelin, Shotput, Long Jump, Triple Jump, Relay Race (4X100), Discuss Throw, etc.

Here's the list of participants and winners from Department of Mechanical Engineering, who took part in Udgam'20 :

SI No.	Name	Batch	Event	Position
1.	Keshav Kumar	2K17	Badminton (Singles)	1st
2.	Himanshu Kumar	2K17	Badminton (Doubles)	1st
3.	Keshav Kumar	2K17	Badminton (Doubles)	1st
4.	Om Prakash	2K18	1500 m	1st
5.	Ajit Kumar	2K18	3000 m	1st
6.	Yeshwant Singh	2K18	Javelin Throw	1st
7.	Om Prakash	2K18	3000 m	2nd
8.	Prabhat Kumar	2K18	Long Jump	2nd
9.	Keshav Kumar	2K17	Javelin Throw	3rd
10.	Prabhat Kumar	2K18	200 m	3rd

Apart from these, the Department of Mechanical Engineering also bagged Runner-up position in Football..



## GATE 2020 RESULT

Sl No.	Name	GATE Reg. No	Score
1.	Sudhanshu Kumar Sharma	20S24011049	361
2.	Anand Mohan Singh	20S14014637	470
3.	Ashutosh Kumar Jha	20S24011047	467
4.	Shatrudhan Kumar	20S14011273	373
5.	Chandan Kumar	20S14011044	541
6.	Rupesh Kumar	20S24011174	325
7.	Suman Bharti Keshav	20S14011133	421
8.	Shiwangi Kumari	20S24011119	392
9.	Mithun Kumar	20S24011189	245
10.	Alok Arya	20S24011011	333
11.	Prince Kumar	20S24015545	317
12.	Avinash Kumar	20S14011277	285
13.	Nishant Kiran	20S24011129	367
14.	Vikash Kumar Bharti	20S24013325	448
15.	Sangam Kumar	20S14011110	339
16.	Shashi Bhushan Kumar	20S24011253	376
17.	Abhishek Kumar	20S24015304	340
18.	Amrit Raj	20S14014674	461
19.	Prabhakar Kumar	20S14015033	482
20.	Ved Prakash	20S24015282	432
21.	Shailendra Kumar	20S24011084	352
22.	Kanhaiya Kumar	20S24011237	432

## माँ

मुक्कमल होना था मुझे...  
माँ की गोद में,  
जा के मस्सरुफ हो गया ।

फक़त आँचल ही पकड़ा था माँ का  
हथेली में मेरे सारा आसमान आ गया ।

ये धूप मुझे जलाने चले थे...  
माँ का साया पड़ा मुझ पे,  
भरी दुपहरी भी ठंडी शाम हो गया ।

देखा था दर्द से कहराते उसने,  
कोई मसला भी न था...  
माँ फिर भी इतना रोई,  
बहते अशकों से सैलाब आ गया ।

खुदा का चाहा था नाम लेना...  
देख माँ, लब पे तेरा नाम आ गया ।

## समय बीता जाता है

समय बीता जाता है  
हर क्षण, हर कल्प, प्रतिपल ~  
पर .....

कुछ बातें, बातें ही रह जाती है ।  
कुछ यादें, यादें ही रह जाती है ।

तूँ उन लम्हों की बात ना कर,  
जो बारिशों में भींगी पलको पे सजाए थे सपने  
जो देखे थे संग तेरे भींगे नैनों से हमने  
पर एक मुद्दत हो गई और इक जमाना भी...  
और हमने यही सिर्फ जाना भी.....

कि,  
कुछ खबावें, खबावें ही रह जाती है  
कुछ यादें, यादें ही रह जाती है  
कुछ बातें, बस बातें ही रह जाती है ॥

-शिवम (2K17)

## खुद की पहचान

तू भी कुछ कर सकता है ।  
तू भी कुछ बन जाएगा ॥  
अपने अंदर के शोलों को जगा ।  
तू भी अंगारे बन जाएगा ॥

अपने आत्म ईंधन को चिंगारी दें ।  
तो खुद ब्रह्मास्त्र बन जाएगा ॥  
कर दे समर्पित खुद को तुम ।  
जीवन से छीन जिंदगी जी जाएगा ॥

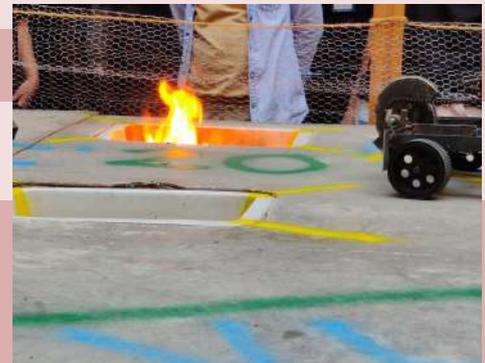
पथिक हो तुम पथ पर डटे रहो ।  
तुम देश शक्ति हो, अटल रहो ॥  
तुम ने जब यह मान लिया है ।  
आगे बढ़कर ठान लिया है ॥

तुम नव सृजन कर जाएगा ।  
तुम भारत नया बनाएगा ॥  
यह तेरी मिट्टी तेरा देश है ।  
तेरे साथ तेरा परिवेश है ॥

अब तेरे लिए कुछ न शेष है ।  
बन जा तू अब अनिमेष है ॥

-आशुतोष रंजन (2K18)





GLIMPSES



GLIMPSES



# NEWSLETTER COMMITTEE



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**Editor**  
Assistant Professor  
Department of Mechanical Engineering



**Mr Santosh Kumar**  
**Editor**  
Assistant Professor  
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**Ravi Ranjan Kumar**  
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**Rahul Kumar**  
**Student Member**  
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Department of Mechanical Engineering



**Kanhaiya Kumar**  
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Batch: 2K19  
Department of Mechanical Engineering



**Isha Singh**  
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Department of Mechanical Engineering



**Gaurav Kumar**  
**Student Member**  
Batch: 2K19  
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