GEETANLALI INSTITUTE OF TECHNICAL STUDIES UDAIPUR

# MECHNOBLAZE

EDITION

VOLUME IV ISSUE I January – December 2020

## INSIDE



**VISION: -**

- *To impart comprehensive knowledge that enables the students to become innovative and successful entrepreneur to learn the advanced fields of mechanical engineering that meets the recent industrial demands and social needs..*

**MISSION:-**

- *To provide quality education to the students which will enhance their skills and ability to create, innovate and design systems based on new technologies for the society.*
- *To foster logical thinking among the students to design system required real-life situation.*
- *To equip the students through the state-of-art learning* environment that can provide academic environment of excellence, entrepreneurship and moral guidelines with lifelong learning.

## DEPATMENT OF MECHANICAL ENGINEERING

Department offers Mechanical engineering programs at the bachelor's and master's level. Its strong and interactive curriculum and hands-on learning makes the students capable of taking their career to the next level, whether it be in the professional engineering practice or in advanced studies. The department is focusing on high-quality teaching along with integrated laboratory experience.

The discipline of mechanical engineering effectively connects teaching of engineering education to active research in different areas. The department has the most modern infrastructure to undertake high-end teaching, research and developmental activities in laboratories.

Aim of Department's to provide our students with a perfect blend of intellectual and practical experiences that helps them to serve our society and address a variety of needs. With a solid grounding in the principles and practice of mechanical engineering, our undergraduates are ready to engage in ethical approaches to engineering, with concern for society and the environment. Our program at the postgraduate level aligns academic course work with research, to prepare students in specialized areas within the field of mechanical engineering.

The department has a team of highly qualified and experienced faculty.

# DIRECTOR'S DESK

## Dr. Vikas Mishra

"Challenges are what makes life interesting and overcoming them is what makes life meaningful ."

I am very happy that Mechanical Engineering Department is releasing 2nd Edition of "Mechanoblaze" as a forerunner of department activities. It is a technical platform to bring out the hidden talents of students and faculty. The major strength of the department is a team of well qualified and dedicated faculties who are continuously supporting the students for their academic excellence.

We have arranged several industrial visits and workshops for our 2nd, 3rd and 4th year students in this semester. The seminars held have been enlightening for both the students and the faculty. The workshops have made our students professionally competent with huge moral values, ethics and leadership qualities that would enable them to serve the society in the best possible manner.

The students have not only academically excelled but have also gained excellence in sports and other extracurricular activities.

The GITS family is an ever increasing family and I feel proud to be a part of it. Congratulations to all the students who have excelled in various fields and good luck to those who are on their way to achieve success.

# HOD'S DESK

## Dr. Deepak Paliwal

Casting the world, Forging the campus, Shaping the universe, Welding the rest of all branches, Bcoz, We are the Men, We are the machine, and we are Mechanical Engineer's.

It gives me immense pleasure to lead the department of Mechanical Engineering .Our college is one of the premier institutions in the region, unique like a prism reflecting the manifold shades of learning and co-curricular activities. Geetanjali Institute of Technical Studies is striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence.

The motto of our department is to provide quality education. The process of learning is extremely important in life. What you learn, how you learn and where you learn play a crucial role in developing ones intellectual capability, besides career. The excellent infrastructure, teaching faculty of the best kind ensuring quality education such as interaction among students, parents and staff, along with a Training and Placement Cell ensures a bright future to its students. Thus we are confident that our Engineers will emerge as assets not only to this institution and to the organization they belong, but also to the country at large.

# EDITOR'S DESK

**SUCCESS IS NO ACCIDENT.**

"It is hard work perseverance, learning, studying, sacrifice and most of all, love of what you are doing "

It gives me an immense pleasure to introduce this Newsletter of Mechanical Engineering, Named MECHNOBLAZE, means Enlightening Mechanical .By presenting this Newsletter, wish to provide you the same. I am grateful to our honourable Director sir and HOD sir who gave this opportunity. It has been a learning experience to all of us . I am thankful to all staffs for their co-operative nature. At last but not least I am thankful to all those helped us directly and indirectly.

Mr. NARENDRA PATEL
(Assistant professor)
DEPARTMENT OF MECHANICAL ENGIN EERING

# Webinar on Fracture Mechanics Aspect in Machine Design

This webinar is organised to make aware the students about the Design Aspects of Mechanical Components through the concepts and equation of Machine Design.

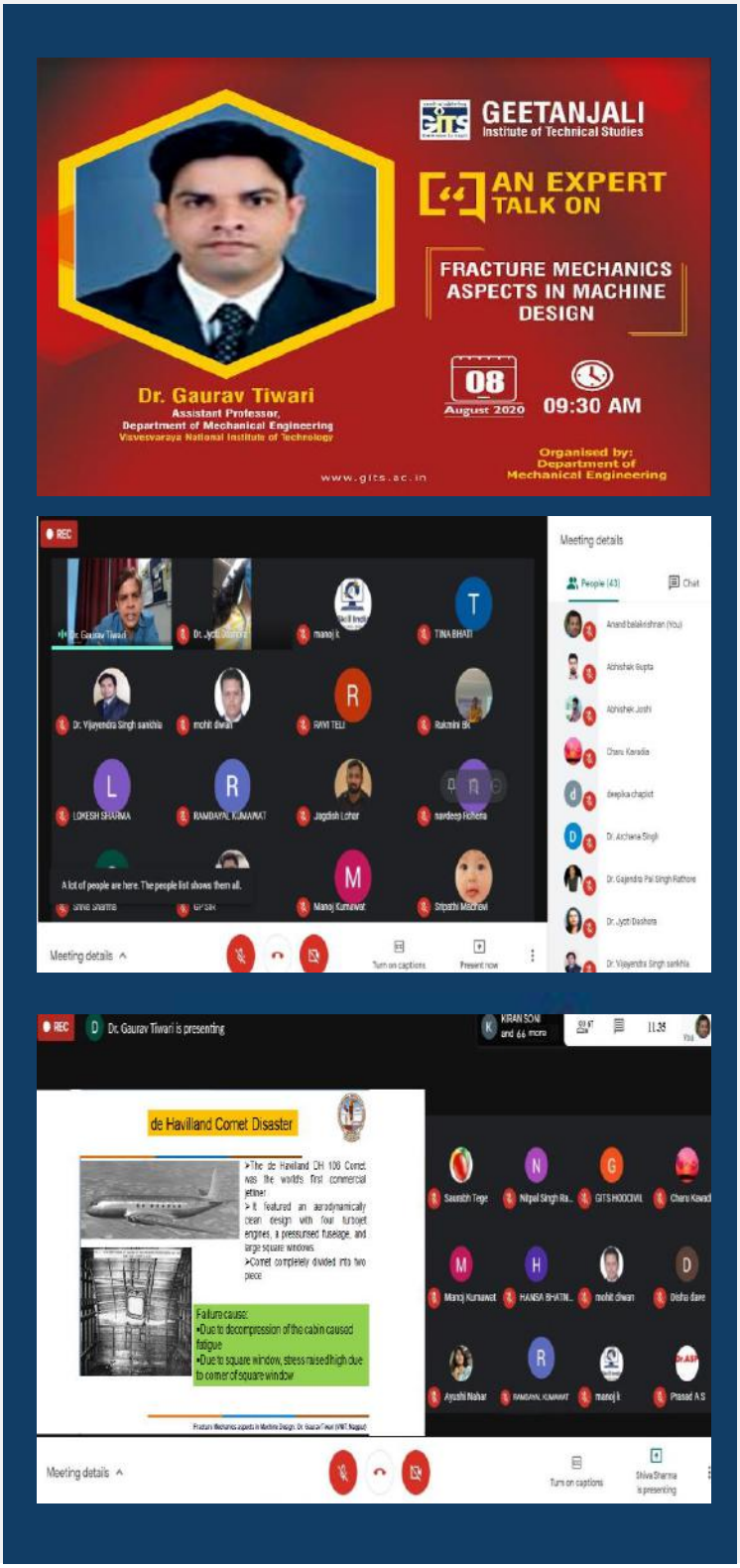
The programme was inaugurated by Ms. Surbhi Mishra, Asst. Professor by welcoming all the cherished dignitaries and participants. In welcome speech Prof.(Dr.) Vikas Misra, Director(GITS) shared his views with the participants that if they wants to develop themselves, then attending such webinars would enhance their technical skills. Dr. Mayank Patel, HoD, GITS welcome our eminent speakers Dr. Gaurav Tiwari and brief the importance of Fracture Mechanics and its application while designing of a mechanical components and machines.

The expert talk covered the enhancement operating stress levels on structures due to modern structural environment which was defined in terms of operating temperature, aggressive environments and types of loading etc. It was emphasized that Successful design of engineering structures for long term life requires the understanding of the different modes of failures and degradation mechanisms (crack growth due to service loads, corrosion, hydrogen embrittlement, irradiation damage etc..), so that sufficient margins against these mechanisms can be built-in during the design phase itself.

Dr. Tiwari explained Spectacular failure history, Test for failure analysis, Probable Causes of failure, Design for Damage tolerance, Fracture Mechanics (LEFM and EPFM), Griffith criterion, Irwin's modification, Paris law, different NDT methods in his discussion with participants. He concluded this talk by sharing important information on minimizing crack propagation.

After this lecture, audience understood the significance of ductile to brittle transformation through the example of de Havilland Comet Disaster. Various mechanical tests for failure analysis and major causes of fracture and failure were understood especially under the presence of crack in the material.

Receiving an overwhelming response with participants, webinar came to an end with valedictory session, graced by Dr.Vikas Misra, Director, GITS. Ms. Surbhi Mishra, Event coordinator summarized the outcomes of the expert talk. All participants appreciated the department for organizing such type of webinars. The program was ended with vote of thanks by Dr. Deepak Paliwal.



# One day Entrepreneurship Development Program on

## *" Innovative Thinking & Design"*

One day entrepreneurship development program on "Innovative Thinking & Design "has been organized by GITS-IIC on 25th January 2020. This was conducted with the overreaching purpose of promoting a culture of innovation & entrepreneurship within the faculty members. The ambassador of GITS-IIC Dr.Vijayendra Singh Sankhla leaded the whole program. The program was divided into four sessions.

**Session I** consist of self awareness, importance of attitudes, values & personal growth. Many in-class exercises were performed on awareness.

**Session II** involved curiosity through empathy in which participant were engaged in each other's perspectives & simulated the environment to elicit maximum empathy. Also the session consist of research methodologies for the problem areas selected. The participants in this session learned the importance of collecting information in multiple formats for the purpose of documentation for research. Exercises on developing empathy were also performed.

**Session III** was related to prioritization & interconnection in which participants created clusters of information to understand methods of learning followed by making decisions related to terminating unrelated observations. Participants created conceptual & relational maps to understand systems in general & utilize the information to find loopholes 7 gaps in systems to be selected as problems to be potentially solved .Creativity was also the major part of the session in which unique solutions to the given problems were designed by the participants & they channelized the resources according to the requirement in the environment involving feasibility, viability & desirability.

**Session IV** consisted of creating an appropriate environment in which participating team had to derive the final prototype & were to engage themselves in constructive criticism. Participants in this session were able to learn variations in their business models & also learned to improve presentation skills.

# Faculty Development Programme on

# Solar Design & Drafting

The FDP was inaugurated on **21st Septmeber 2020** with the blessings of Maa Saraswati in the presence of Patron Shri Kapil Agarwal,( Vice-Chairman, Geetanjali Group), Chief patron ,Prof. R.A. Gupta (Honorable Vice Chancellor , RTU) , Chief Convener , Prof. Dr. Vikas Misra (Director GITS) , RTU (ATU) TEQIP –III Coordinator ,Prof. Dhirendra Mathur , RTU FDP Coordinators , Dr. K B Rana & Dr. Panakaj Sharma & Host Institute Coordinator , Dr. Deepak Paliwal , (Head Mechanical Engineering , GITS)

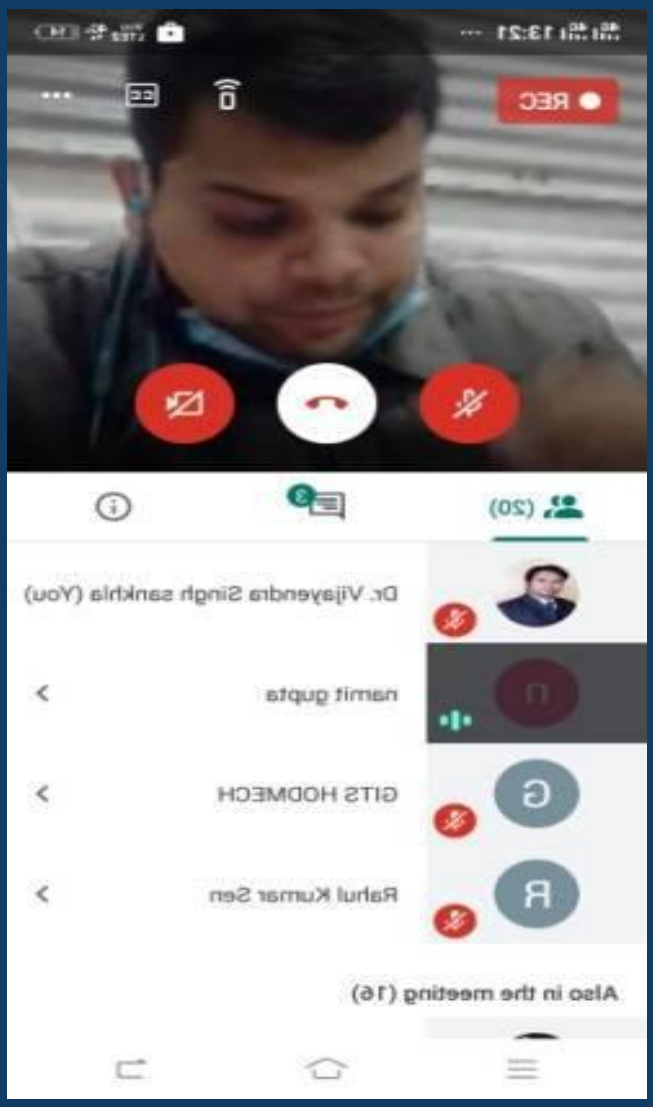
## About the FDP

World demand for energy is projected to more than double by 2050 and to more than triple by the end of the century. Incremental improvements in existing energy networks will not be adequate to supply this demand in a sustainable way. The huge gap between our present use of solar energy and its enormous undeveloped potential defines a grand challenge in energy research. The objective of FDP on solar design and drafting is to see the insides of exploring solar energy and discuss various challenges and details in converting sunlight to electricity via photovoltaic solar cells

# GITS Alumni Meet "Reconnect 2.0"

GITS Alumni meet "Reconnect 2.0" was organized on 28th of November 2020 through online zoom session. More than 250 alumni of GITS from different corners were able to connect to this interaction. In this Alumni interaction, a separate breakout sessions for various departments of engineering of GITS had also been organized. In the Mechanical Engineering break out session there 50 plus alumni & all the alumnis interacted very well in this session. They shared their college memories, their real life experiences through which they have learnt a lot & are still learning. Participants from the department also interacted with their seniors (alumnis) smoothly & gained a lot from them. Student participant also dedicated song to their ex. seniors of the college. Everyone enjoyed recreational activities like one min quiz , extempore planned for them. Few alumnis suggested some key points to be included in department for betterment. Overall the session was very interactive and was fun.

# Departmental Alumni Interaction

Departmental Alumni Interaction took place on 5th of December 2020 in which Namit Gupta was invited as a speaker. All the departmental faculties , students and Dr. Sudhakar Jindal (Director , IQAC) also joined the interaction. Namit is presently working as a site incharge in a construction company , Sterling and Wilson Pvt Ltd. He is looking after all the construction site activities including material procurement, installation, labour handling and site finance. They take turnkey projects for Mechanical Job like Fire Fighting, plumbing, HVAC, Solar System, Elevators, Electrical Job like Building electrification and ELV jobs like CCTV, Fire Alarm System, Public Address System etc.

He guided and movtivated all the student participants through his practical learnings & knowledge. Interaction was very smooth and enjoyed by all .

# Technical workshop *On*

# Artificial Intelligence & Machine Learning in CNC Machining

The workshop was inaugurated on **18th December 2020** with the blessings of Maa Saraswati in the presence of Patron Shri Kapil Agarwal,( Vice-Chairman, Geetanjali Group), Chief patron ,Prof. R.A. Gupta (Honorable Vice Chancellor , RTU) , Chief Convener , Prof. Dr. Vikas Misra (Director GITS) , RTU (ATU) TEQIP –III Coordinator ,Prof. Dhirendra Mathur , RTU workshop Coordinators , Dr. Seema Agarwal & Dr. Irum Alvi , Dr. Sudhakar Jindal (Director , IQAC GITS)& Host Institute Coordinator , Dr. Deepak Paliwal , (Head Mechanical Engineering , GITS)

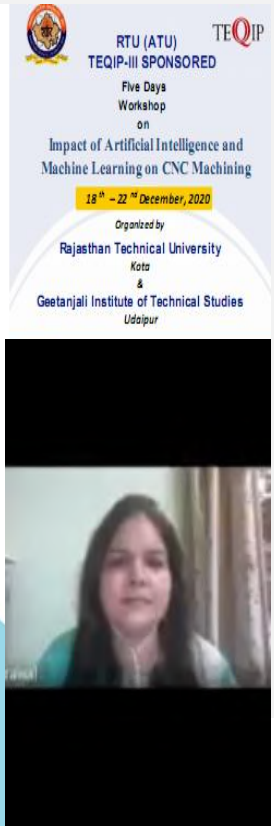
Guest of honor ***Prof. Dr. Vikas Misra* , Director GITS & Chief Convener of workshop welcomed the dignitaries and participants with his inaugural address.**spoke about the importance of the knowledge of artificial intelligence & its various scope.

***Dr. Sudhakar Jindal*** , Director IQAC GITS also addressed the gathering.

***Dr. Seema Agarwal***, RTU workshop Coordinator also briefed the participants regarding the utility of this workshop.

***Dr. Deepak Paliwal*** , Head Mechanical Engineering highlighted the importance of attending this technical workshop.






# Acadmic Topers

TOPPERS OF ME VIII sem (batch 2016-20)

| Roll Number | Name | Marks | Position |
|---|---|---|---|
| 16EGIME004 | APOORV GUPTA | 86.8 | I |
| 16EGIME031 | PIYUSH JAIN | 85.8 | II |
| 16EGIME046 | SANJAY KHOKHAWAT | 85.3 | III |

TOPPERS OF AE VIII sem (batch 2016-20)

| Roll Number | Name | Marks | Position |
|---|---|---|---|
| 16EGIAE006 | DEEPAK SHARMA | 85.8 | I |
| 16EGIAE015 | MAHIM AMETA | 83.8 | II |
| 16EGIAE009 | HARSHIT SONI | 83.1 | III |

TOPPERS OF ME VI sem (batch 2017-21)

| Roll Number | Name | Marks | Position |
|---|---|---|---|
| 17EGIME010 | DARSHAN KUMAR | 99.9 | I |
| 17EGIME052 | SHRASTI KALAL | 99.7 | II |
| 17EGIME053 | SHUBHAM KUMAR | 99 | III |

TOPPERS OF AE VI sem (batch 2017-21)

| Roll Number | Name | Marks | Position |
|---|---|---|---|
| 17EGIAE007 | PIYUSH SHRIMAL | 956 | I |
| 17EGIAE011 | YAMAN PANCHAL | 941 | II |
| 17EGIAE009 | RAHUL LOHAR | 856 | III |

TOPPERS OF ME IV sem (batch 2018-22)

| Roll No. | Student Name | SGPA | Position |
|---|---|---|---|
| 18EGIME005 | AKSHAY SINGH MERTIYA | 10.00 | I |
| 18EGIME013 | BHUVNESH MEWARA | 10.00 | I |
| 18EGIME054 | PURAN JAT | 10.00 | I |
| 18EGIME064 | SHIVANSH VAISHNAV | 9.91 | II |
| 18EGIME040 | LAXMAN KUMAWAT | 9.87 | III |

TOPPERS OF AE IV sem (batch 2018-22)

| Roll No. | Student Name | SGPA | Position |
|---|---|---|---|
| 18EGIAE003 | DILIP SINGH PUROHIT | 10.00 | I |
| 18EGIAE006 | PANSARE NAILESH CHANDRASHEKHAR | 10.00 | I |
| 18EGIAE004 | KAVISH CHAPLOT | 9.24 | II |
| 18EGIAE002 | DIGVIJAY SINGH RAO | 8.94 | III |

# Placements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PRATEEK SIROYA
MAHENDRA S. CHUNDAWAT
ASHUTOSH SHARMA
GIRISH PANWAR
DEVILAL BHATT
BHUPESH JAIN
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CHIRAG JHA
GIRISH PANWAR
KUNAL DAIYA
DHAIRYA JOSHI
DHARAM RAJ DANGI
GOVIND SHARMA
NARENDRA PHULWARIYA
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