



# AAROHAN

## NEWSLETTER

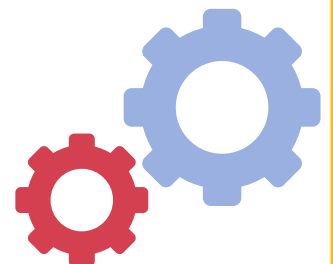
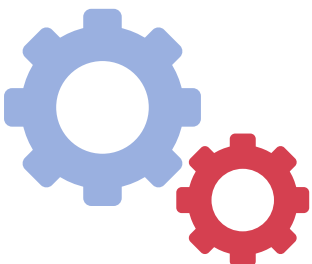
### DON BOSCO INSTITUTE OF TECHNOLOGY

#### DEPARTMENT OF MECHANICAL ENGINEERING



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## MESSAGES



**DR. PRASANNA NAMBIAR, PRINCIPAL, DBIT**

## PRINCIPAL'S DESK

The department of mechanical engineering at DBIT has been a very vibrant and progressive department. The faculty team along with the non-teaching staff is committed to providing the students with unique learning experiences in curricular as well as co-curricular domains. As the industry gears up for Manufacturing 4.0, the department has taken the initiative to provide valuable workplace skills through value-added courses and certification programs. The student chapters have forged a strong link with the industry with visits and expert talks. The MoUs with industry and industry associations have helped provide opportunities for faculty and students to gather valuable experience in working on real-life problems. The quality of student projects has also improved by leaps and bounds over the years. However, the department needs to drive the digital agenda in mechanical engineering. Students have to be at equal ease with programming and allied areas as with core mechanical subjects. The demand for mechanical engineering is presently on the wane but this is a purely temporary phenomenon driven by unsubstantiated speculation. The department needs to use this opportunity to reposition itself as an agile unit that willingly and enthusiastically responds to the varying demands of the workplace. I am confident that the faculty and students of the department will take this challenge and march ahead with renewed confidence and vigor. I wish the department the very best.

## HOD'S DESK

It gives me immense pleasure to present to you the annual newsletter of the Department of Mechanical Engineering. We are committed to imparting quality education with hands-on experience to our students and ensuring holistic development of students through Three-track Program viz. Academic, Aspirational & Wellness. We are making conscious efforts through student-centric & student-driven activities so that students would realize their passion over the span of four years while still they are on our campus. For this purpose, we have introduced three new student clubs viz. MESA, Energy, and ARC despite having well-established ISHRAE and MadGear Motorsports Club. These efforts are aimed at improving students' employability and transforming them into responsible citizens. At DBIT, we believe that every engineer must contribute to deriving sustainable solutions that can solve industrial as well as societal problems. Creative and innovative ideas are often generated at the educational level by young, enthusiastic, and creative minds which may lead to start-ups. The Start-up and entrepreneurship activities have gained momentum in India in the last ten years and in line with this, we will facilitate the conversion of research activity into entrepreneurial ventures leading to a paradigm shift in students' attitude from being a job-seeker to becoming a job-creator



**DR. PRADEEPKUMAR SURYAWANSHI,  
PHD (MECH), IIT BOMBAY**

## STUDENTS' MESSAGES

### RISHAB AGARWAL

I remember being a shy introvert on the first day of my class. I had no idea that four years later, I'd be sitting here writing down my experience as I opted for my BE undergraduate course in Mechanical Engineering at Don Bosco Institute of Technology (D.B.I.T). Participating in different intra- and inter-college competitions, technical, cultural, and sporting activities, as well as clubs like the DBIT-Maths Physics Club, ABU ROBOCCON Club, and MadGear Motorsports Club, has secured my entire development from the beginning. I would like to express my gratitude to all the teaching and non-teaching faculties for assisting me in any manner they could. My gratitude and appreciation to Don Bosco Institute of Technology's Training and Placement Department for their continuous assistance throughout this journey for determining the next step for my future & paved a clear goal.



### TEJAS PAYMODE

Tejas Paymode would like to thank Don Bosco Institute of Technology for supporting me at every turn during those crucial years of the life. At DBIT, there is a close bond between the professors and the students. My three years at DBIT have allowed me to better develop my knowledge and talents. The extra assistance given by all staff members and mentors, both during traditional courses and during Pandemic, where we could contact them even beyond college hours, made us all feel comfortable and created the impression of a cohesive classroom throughout our Google and Zoom meetings. DBIT has been tremendously helpful and influential in guiding my career. Thank you DBIT; it was a wonderful experience and a memory to last a lifetime.



### HARSH BONDRE

"Greetings fellow mates. From a back bencher to getting placed in a Core Dream Company, DBIT has truly been a life-changing experience for me. From variety of Competitive teams like Robocon & Madgears Motor Club, to a bunch full of organisations like ISHRAE, Women's Development Cell and events including Sport's Day & Cultural Day, DBIT has a lot of things to offer. The staff is not only well qualified but the pedagogy is very good. I am really thankful and express my gratitude to all the faculty members and training cell for their support and efforts."



## TOP ACADEMIC PERFORMER

Strong academic is the backbone of the institute. Our department strives hard to maintain it. Many students of the department have achieved distinction and the top among them are listed.

### FINAL YEAR (BE)



**TEJAS PAYMODE**



**PRAJAKTA PATIL**



**HARSH BONDRE**

### THIRD YEAR (TE)



**TARUN MULANI**



**JEROM BIJU**



**SAURABH MISHRA**

### SECOND YEAR (SE)



**PRASAD DAS**



**PRATIK POL**



**ANURAGDHAR DWIVEDI**

## PRIDE OF DEPARTMENT

Department believes every individual in the department has a unique quality and we are proud of each and every student. Department has selected few categories among best qualities.



**Harsh Shreeram Bondre**

**Best Outgoing Student**



**Rishab Rajendra Agarwal**

**Overall Excellence**



**Tejas Sanjay Paymode**

**Academic excellence**



**Sauvik Sankar Giri**

**Technical excellence**

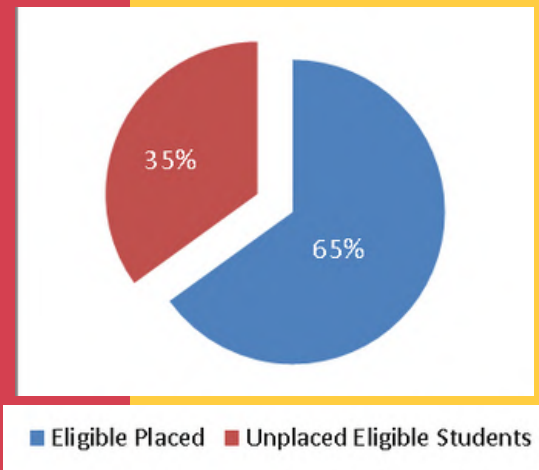


**Aylmer Adrich Gonsalves**

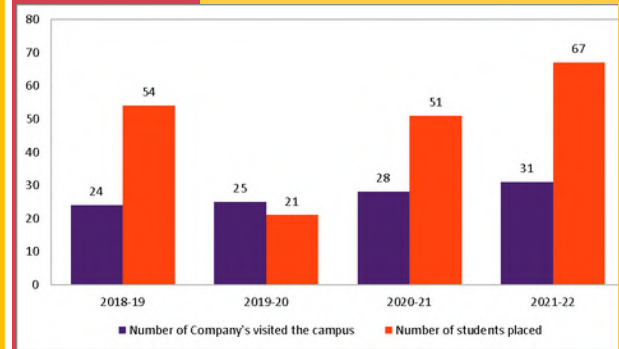
**Sports and extra curricular  
excellence**

## PLACEMENT & INTERNSHIP

The effort of the department in Academic, Co-curricular, and extracurricular activities reflects the recruitment and overall development of students. Despite of COVID-19 pandemic, the department continues to retain its best efforts. 2021-22 was a successful year, where almost 31 Industries visited the campus for placement and 65% of students were placed in core MNC companies with an annual package of **6.5 Rs.lac.**



Company Name	# Students Placed	Company Name	
L&T Heavy Engineering	3	4	Reliance Retail
JSW	5	3	Anglo Eastern
Godrej & Boyce	6	2	NewGen
Royal Enfield	3	2	Vedam
TCS	2	3	NetCore
Anthony Waste Handling	2	1	Solar Lab
Evosys	3	1	Keyence
Link Group	3	1	Faurecia
Faurecia	1	1	Jinendra Industries
Capgemini	1	1	Good Lives
VishudhAjivam	1	1	Pixel Space
Qspider	3	1	Clevernest
Square Yard	9	1	Pradman
Dyson	1	1	Network18



## INTERNSHIP

The training and placement team takes every effort to provide internships to students in the best industries. This helps the students to upgrade their industrial knowledge and helps to understand the ongoing process and latest technologies. Despite of COVID-19 Pandemic, more than 40 students have availed themselves of internships in core mechanical-related companies.

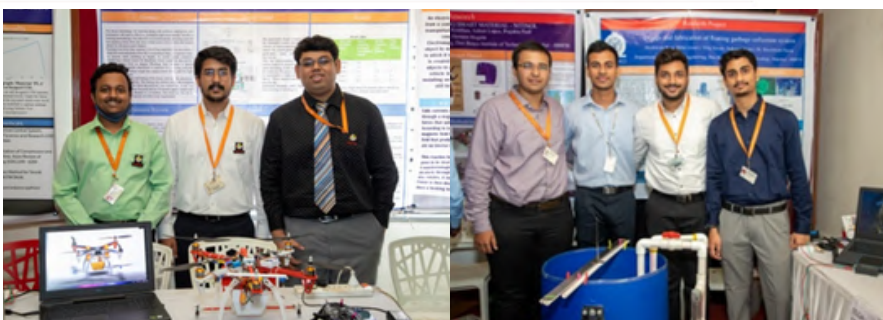
Wellness forever Medicare Pvt Ltd	PepsiCo	Arsh Hyundai Service Center
Godrej & Boyce Mfg. Co. Ltd.	White hat Jr	Oriental Containers Ltd
Tata Motors	Reliance Retail	IOCL Gujrat Refinery
Maruti Suzuki Arena	Tata Power Thermal Power Plant	Godrej and Boyce Mfg
Royal Enfield	Central Railway Locomotive W/s	Indian Railways, Parel
Mazgaon Dock Shipbuilders Ltd.	ARCON	Hindalco
Siemens	Sharp Engineering	JSW Steel Limited
Ram Motor Cycle	N.N. Control	Exide Industries Ltd.

# INNOVEX

INNOVEX is a platform provided by the Institute for the final year students to showcase their year-long effort in their projects and help them in open-ended discussions and deliberations for improving the scope of the project. Out of a total 73 projects, department of Mechanical Engineering students **exhibited 21 projects**.

Mr. Prashant Chouthkanthiwar, *Vice President, Godrej & Boyce Mfg. Co.* & Mr. Mohan Bhide, Retired as Assistant professors from *VJTI* with 32 years of teaching experience reviewed the projects.

Rank	Project Title	Project Guide	Student Team
<b>Best Projects</b>			
1	Design and Fabrication of floating garbage collection system	Dr. Shashikant Pawar	Hrishikesh K Raul Mihir A Gosavi Viraj M Yevale Indrajeet H Yadav
2	Design, Fabrication and Testing of a Smart Mini Incinerator	Prof. Johnson Nellisery	Atharva A Mohidekar Sumit P Mudaliyar Atharva A Mohite Archit A Ranadive
3	3D Printing Hand Cast using Photogrammetry	Prof. Shreeprasad Manohar	Mitul Shetty Aniket P Bind Jordan Joy Nereparambil Alwin Wilson
<b>Consolation Winners</b>			
1	Design of Passive Exoskeleton to Assist Overhead Tasks	Dr. Pradeepkumar Suryawanshi	Bhavesh B Wallecha Durvesh D Korgaonkar Sahil S Talathi Gauri P Patil
1	Solar Panel with Sun Position Tracking and Automatic Solar Cleaning	Prof. Sudhakar Ambhore	Steve Aranha Rishab R Agarwal Harsh S Bondre Dipesh R Gandhi
1	Road Safety for Two-Wheeler	Dr. Prasanna Nambiar	Atharva Joshi Abhijeet Joshi Chaitanya Kasar Laukik Dhumal



## DEPARTMENT CLUBS

As a part of a three-track program, apart from academic needs, wellness and aspiration attributes being identified, The department has added MESA, Automation & Robotics (AAR), and Energy clubs. These clubs help the students to understand various aspects of Mechanical Engineering and provides a platform to further excel in their respective domain.

### ISHRAE

- Organized Webinar on
  - "HVAC Design Changes Amid Covid In Hospitals"
  - "Women in Leadership: Achieving an Equal Future" in collaboration with Blue star and L&T Heavy Engineering industries on 16-01-22
- Ms. Prajakta Patil and Mr. Raj Vaswani won First and Second prizes at the Inter-college Quiz competition.
- Organized workshop on AC Maintenance & Installation between 5th to 22nd Oct-21.
- Carried out Industrial visits at Zeco Aircon Ltd, Kruger Ventilation, and Advantek Air Systems Ltd.
- Carried out K12 Activity (Tips and Tricks on Maths & Science)



### MESA

- Conducted Webinar on "Government Job Opportunities for Mechanical Engineering Student" on 9th April 22
- Conducted Workshop on "Fire Safety and Awareness Training Program for Mechanical Engineering Students" by Sr Station Officer, Kurla Fire station on 18th April 2022.

### MAD GEARS MOTORSPORTS CLUB

- Organized workshop on the "Fundamentals of an Automobile" on 25/09/21
- Participated in Electric bike design challenge (EBDC) competitions on 18/10/21 and secured 4th position. Here 06 students presented the design report, manufacturing report, sales report, and cost report to FMAE.



### AUTOMATION AND ROBOTICS CLUB

- Conducted Value added course on "Robotics and Automation"

### ENERGY CLUB

- Conducted Webinar on "Energy Related Opportunities for Mechanical Engineering Student in Industries"
- Carried out a detailed Energy Audit of DBIT
- Organized quiz competition.



## ACHIEVEMENTS OF FACULTY

The department has a well-blended mixture of faculties. Many of them are not only highly qualified from institutes of repute but also have rich industrial exposure. Few contributions of faculty in research, consultancy, and expert lecture are

### Dr. Pradeepkumar Suryawanshi



- Delivered Four expert lectures on "Introduction to Research" for students and Faculty members
- P. Suryawanshi and A. Gupta presented, "A mass-spring model for the physically-realistic haptic rendering of deformable objects," in *ICHVR-2021 and published in 2022 International Symposium on Electrical, Electronics and Information Engineering (ISEEIE). IEEE, 2022, pp.278–281.*
- P. Suryawanshi and A. Gupta, "A novel mass-spring model for simulating deformable objects," Accepted for Publication in *Journal of Mechanics of Materials and Structures*, Jun-2022
- Raised funding for establishing the Don Bosco Incubation Centre (DBIC) to the tune of up to **Rs. 2Cr** in March 2022.
- Organized and delivered FDP on Entrepreneurship, NISP, and DBIT Innovation and Startup Policy on November 20 21.

### Prof. Shreeprasad Manohar

- Published four papers on
  1. "A review of Materials suitable for Tissue-engineered bone scaffolds", at *2nd International Conference on Emerging Global Trends in Engineering and Technology* sponsored by (AICTE EGTET-2022), April 21-23, 2022, ADBU, Assam, India
  2. "Recent Advances in Manufacturing Processes and Systems. Lecture Notes in Mechanical Engineering. Jan 2022, pp 869-883, Springer, Singapore.
  3. "Developing a 3D printed patient-specific cast for a fractured wrist from CT Scan Data, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) ISSN (P): 2249-6890; ISSN (E): 2249-8001 Vol. 11, Issue, Aug, 2021, 241-250.
  4. Review of enhancement of polymer for Mechanical extrusion process by combining with filler material, 2nd International Conference on Recent Advances in Manufacturing (RAM-2021), Jun. 10-12, 2021, SVNIT, Surat, Gujarat, India
- Pursuing Ph.D. from Assam Don Bosco University in "Biomedical application of 3D printing"

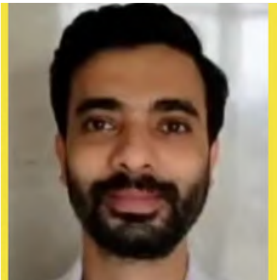


### Dr. Yogesh S Padiya

- Carried out an Industrial Consultancy on "Designing Zero Liquid Discharge System " for Industrial Effluent for **Rs.10 lakh**
- Carried out Detailed Energy Audit of DBIT.

## Prof. Sudhakar Ambhore

- Published two papers
  - 1] "Solar Panel with Sun Position Tracking and Automatic Cleaning System" at *International Journal for Research in Applied Science & Engineering Technology Journal*
  - 2] "Effect of Core Geometry, Orientation, and Support on the Core Shift in Mould" at *International Journal for Research in Applied Science & Engineering Technology Journal*



## Dr. Shashikant S Pawar

- Published a paper on "Design and Fabrication of Floating Garbage Collection System" at *International Journal of Advances in Engineering and Management (IAEM) Volume 4, Issue 6 June 2022*

## Prof. Clea Pereira

- Published a paper on "Passive Cooling System to Provide Thermal Comfort" at *International Journal for Research in Applied Science & Engineering Technology Journal*



## Prof. Buddhipriy Chavan

- Pursuing Ph.D. from *Indian Institute of Technology, Mumbai*

## Prof. Johnson Varghese

- Delivered Guest lecture on "Applications of Mechanical bearings and selection" at *Padre Conceicao College Engineering, Verna, Goa on 23rd Sept. 2021*



## Prof. Nilesh Gaware

- Published a paper on "Coconut Harvesting Robot" at *DBIT Journal*

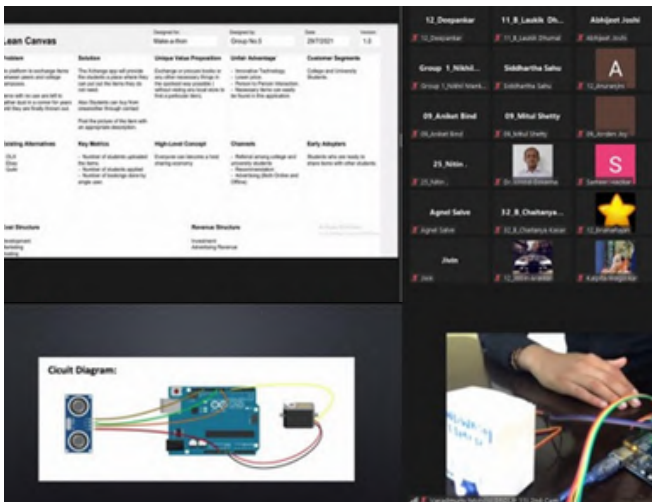
## COCURRICULAR, EXTRA CURRICULAR & OUTREACHED ACTIVITIES

- **Conducted value-added course under Automation and Robotics Club**
- **Carried out an Industrial Visit at "Nuclear Power Plant" Kakrapur, Gujrat** & organized a one-week hands-on training workshop on "Arduino UNO Controller" for the faculty of the department
- **Conducted 40 hrs workshop on a 3D Map course** for 100 school children in the vicinity area as a part of **CSR activities funded by Techno talent India Pvt. Ltd, Bangalore, India**. Here students were trained in basic 3D modeling using Solidworks, 3D printing using FDM printed, and 3D sculpting using Z-Brush software.
- **Signed an MoU with TSSIA and COSIA with DBIT** in February 2022
- **Conducted industrial visit at Ankita Technologies Pvt. Ltd, Rabale**
- **Organized state-level webinar on "Apprenticeship: A Career Building Program"** in association with BOAT organization on 23-11-21 for all degree and diploma students.
- **Organized Research Talk on "Methods of Improving Research Culture in the Department"** for all department faculty on 12/03/2022
- **Organized a camp to create awareness amongst the farmers about investment options.**



# MAKE-A-THON 2.0:2021

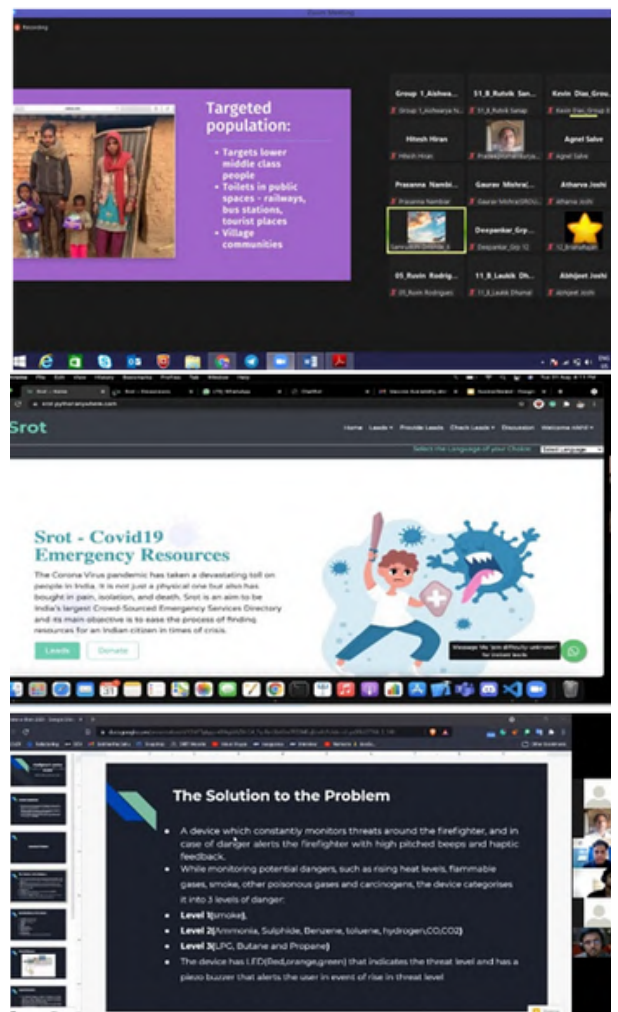
Dr. Pradeepkumar Suryawanshi successfully organized a virtual state-level flagship program of DBIT Mumbai in **Startup and Entrepreneurship** (Software & Hardware Edition), from Jun-Aug 2021



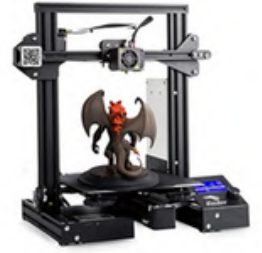
Start-up is a buzzword in India today and many Hackathons are being organized across the country. However, hardware editions of hackathons are not regular and large numbers of students who want to participate in hackathons are deprived of this experience. To cater to this need Placement & Incubation Cell of the department of Mechanical Engineering and E-Cell of DBIT, Mumbai pioneered a flagship event on start-up and entrepreneurship "Make-a-Thon 2019" under the guidance of Dr. Pradeepkumar Suryawanshi

Make-A-Thon is an event where students from various departments at the DBIT level collaborate for a limited time (2-3 months) to ideate, create & deliver solutions to various challenges & problems, either of their interest or from the database of problems provided by the Make-a-thon organizers. Event kick-starts with challenges being selected/proposed to participants, for which they have to come up with an innovative solution and develop a prototype within 2-3 months of Ideation. Solutions can be based on hardware and software projects and are refined based on feedback from faculty and other industry experts. The event concludes with judging and prize distribution/incubation.

Due to the COVID pandemic, Hon. PM Shri Narendra Modi had given a call for Atma-Nirbhar Bharat, hence we, as a nation, have resumed to some extent our original entrepreneurial mindset. Also, entrepreneurship and startup are at the core of the New Education Policy 2020. At DBIT, we have adopted National Innovation Startup Policy (NISP) by the Ministry of Education as it is and have been conducting pre-incubation activities for quite a time now and our flagship program in this genre is Make-A-Thon. Despite the pandemic, we successfully conducted the Make-A-Thon 2.0 online from Jun-Aug 2021 with great pomp and grandeur.



# 3 D PRINTING FACILITIES



## 1. FDM Printers

FDM printers use a thermoplastic filament, which is heated to its melting point and then extruded, layer by layer, to create a three-dimensional object.

## 2. SLA Printers

Stereolithography (SLA) is an industrial 3D printing process used to create concept models, cosmetic prototypes, and complex parts with intricate geometries in a day. A wide selection of materials, extremely high feature resolutions, and quality surface finishes are possible with SLA

## ACTIVITIES

- 1 to 5 days workshops for students about "Introduction to 3D Printing Technology, various Software involved, and Printing Parameters"
- Conducting Courses for under privilege school children from nearby vicinity through CSR fund to introduce 3D printing technologies
- Offering consultancy work in the area of design, prototyping, and product development for the medical industry is going on with Mangeshkar Hospital Pune
- Working on research projects in Biomedical applications.



## VORTEX

Vortex is an attempt at putting Department together and is one of the biggest, craziest celebrations for the year. It is the perfect blend of technical expertise and cultural flamboyance, all rolled up into one high-energy package



## CONVOCATION

Every student admitted has a dream to bag a degree certificate while wearing a convocation gown. Both 2019-20 and 2020-21 batches couldn't able to fulfill their dream on time due to the COVID-19 pandemic. The institute eventually organized the Mega convocation events along with 2021-22 graduates.



## OUR FAMILY



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**DIRECTOR**



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**EXECUTIVE DIRECTOR**



**FR. MCENROE LOPES, SDB**  
**ADMINISTRATOR**



**DR. PRASANNA NAMBIAR**  
**PRINCIPAL**

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**Dr. S. Krishnamoorthy**

Mentor (Mechanical  
Engineering Dept)  
Advisor, DBIT



**Mr Prashant Chouthkanthiwar**

Associate Vice President at  
Godrej & Boyce



**Prof. Bhalchandra Puranik**

Professor, IIT Bombay



**Mr. Shreyas Bakshi**

Innovation Wor(k)shipper -  
Leader, Strategist, Coach,  
Advisor, Architect, Facilitator



**DR. YOGESH S PADIYA, EDITOR**

## NEWSLETTER EDITING TEAM



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