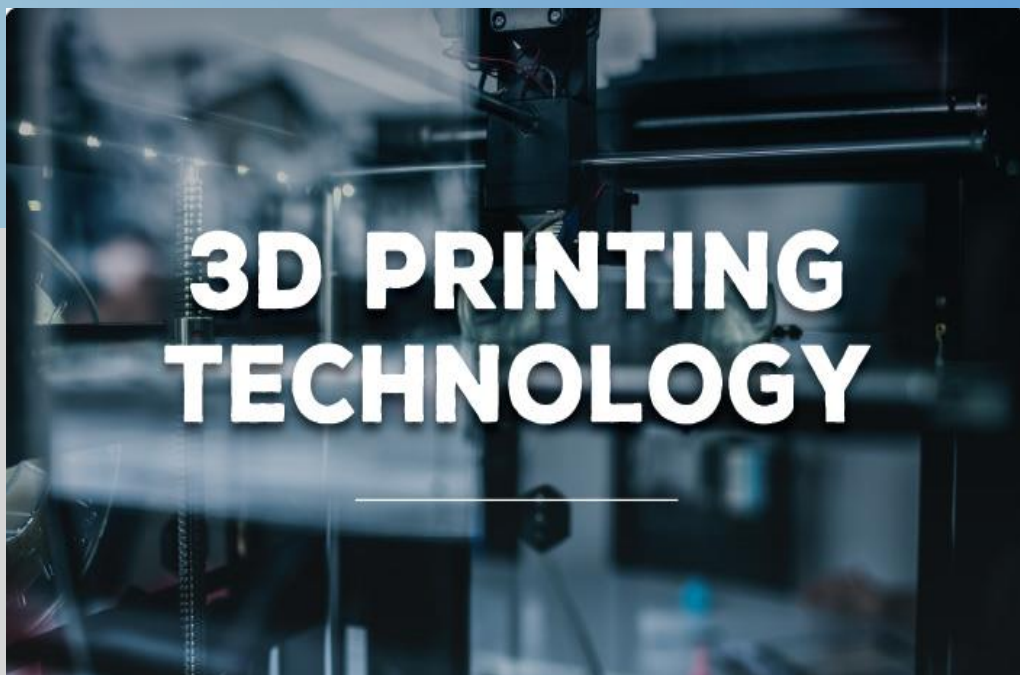


**Agnel Charities'**  
**Padre Conceicao College of Engineering , Verna**  
**Department of Mechanical Engineering**  
**Consortium of Students of**  
**Mechanical Engineering**  
**(COSME)**  
**Presents**

**ECHO '18**



**Agnel Charities'**  
**Padre Conceicao College of Engineering , Verna**  
**Department of Mechanical Engineering**  
**Consortium of Students of Mechanical**  
**Engineering (COSME)**

Presents

**ECHO**

(2017 - 2018)

***3-D PRINTING***  
***TECHNOLOGY***

## INSTITUTE PROFILE

On June 9, 1957 when the Ashram was inaugurated at Bandra, Mumbai, Our Founder, **Fr. Conceicao Rodrigues** spelt out his dream. *“Our principle aim will be to promote our rich heritage“*, he said. As the first Indian Missionary Society, we have strived to serve our fellow citizens while nurturing this dream. The Ashram has branches all over India and is immersed in the development of modern Indian society at every level.

The Agnel Ashram in Goa spreading over 25 acres of verdant, hilly slopes, at Verna, was the fulfillment of a long felt need of providing technical education facilities for the youth of Goa. Within a span of two decades, the project has made considerable progress, thanks to the generous support from the Government, friends and well wishers.

Padre Conceição College of Engineering (PCCE) is an engineering college in Verna, Goa, India, established in 1997. The college is affiliated to Goa University, Taleigao, Goa, and the programmes are approved by All India Council for Technical Education (AICTE), New Delhi. The college is a part of Agnel Technical Education Complex, Verna, Goa. PCCE has 4 Bachelor disciplines: Mechanical Engineering, Computer Engineering, Electronics and Telecommunication Engineering and Information Technology and Masters in Information Technology



## Institute Vision

**“ To establish a sustainable engineering ecosystem”**

To strive towards excellence in Technical Education and Research by facilitating students with modern technology, interdisciplinary approach and problem solving ability to meet the needs of the industry, society and nation at large.

## Institute Mission

- ❖ To continuously improve students' educational outcomes through effective teaching learning methodology.
- ❖ To provide students and faculty with advanced technology and excellent scholastic ambience for research.
- ❖ To provide opportunities for holistic development of students with a focus on self-learning, ethics, leadership, and entrepreneurship skills.
- ❖ To strengthen the network with alumni and industries.

## Mechanical Engineering Department Vision:

To empower the students to serve the society and nation, by imparting value based education through contemporary infrastructure, excellence in education and research, in the realm of Mechanical Engineering

## Mechanical Engineering Department Mission:

- To provide an effective and appropriate pedagogy to instill critical and proactive thinking in mechanical engineering students and empower them to make cogent contributions to the society.
- To endow the students with ethical values, professional and entrepreneurial skills and make them competitive at the national as well as global level.
- To develop alliances with Research & Development organisations, industries and alumni for excellence in teaching, research and consultancy.

## Program Educational Objectives (PEO):

*Within a few years of graduating, the Mechanical Engineering graduates will:*

**PEO 1:** Have successful careers in industry, academia and entrepreneurship in various fields of mechanical engineering and allied disciplines.

**PEO 2:** Have professional, ethical, leadership qualities, and proactively address a variety of technical and societal problems.

**PEO 3:** Retain intellectual curiosity and disseminate knowledge through lifelong learning, to tackle the rapidly evolving challenges of the modern world.

**PEO 4:** Contribute effectively towards the advancement of industry, society and nation through research and development.

## Program Specific Outcomes (PSO):

*At the end of this program the student will be able to:*

- Apply the knowledge of design, industrial, manufacturing, thermal engineering and multidisciplinary perspectives to address the needs of Mechanical Engineering systems.
- Develop and implement solutions for products and services with the help of engineering tools.

## HOD'S MESSAGE



Every year brings with it hard work, enthusiasm, resilience laced with knowledge and intellect which will take you to any extent you desire. Understanding the basics, relating them to real world situations and then building them into bigger things will help you to become a better engineer. Time management is another asset in the fervent stride for success. I am glad that Consortium of Mechanical Engineering (COSME) is doing excellent work. Every semester COSME comes out with a magazine, laying emphasis on recent trends , and this time they have rightly chosen the theme 3D – Printing Technology. Certainly, it is not far when Additive Manufacturing will be the next leap from basic manufacturing, which will eventually lead to lesser raw material wastage, thus keeping tap on resources. I would like to congratulate the magazine committee for their efforts.

- **Prof. Joe Kurian**

## CO-ORDINATOR'S MESSAGE



COSME is a collegiate organization which stands for Consortium of Mechanical Engineering. The objective of COSME is to create opportunities for students to enhance their knowledge about the latest developments in the technological world, by organizing various events. The COSME council of PCCE., Verna has ensured a continuous flow of ideas and knowledge by conducting seminars , guest lectures poster presentation every year. These seminars give the students a sneak peak in the outside world. COSME continuously works for the overall development of the personality of the student other than their academic responsibilities. COSME provides wings and sky to the mind which are planning to fly high and believe in wellness in work.

- Prof. Shrikant Naik

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# ABOUT COSME

**CONSORTIUM OF MECHANICAL ENGINEERS** popularly called as COSME is a collegiate organization which relates the activities under Mechanical Engineering Department. COSME is among the most active student bodies in the institute which actively takes part in the TECHYON event and works under the banner of TURBULENCE thus gathering and forming students from the department of mechanical engineering leading to a more holistic approach in the undergraduate years. Mentored by experienced faculty members of the Mechanical Engineering department, students take upon many initiatives that prepare them to face the challenges of the future. COSME aims to create opportunities for the students to enhance their knowledge about the latest developments in the technological world by organizing various events.

## **Functions of COSME:**

- Promoting the interests of students in various technical areas pertaining to mechanical engineering.
- To promote interaction between academia and industry by organizing industrial visits, special lectures and intellectual talks.
- Interacting with other technical societies, within and outside the institute to promote flow of knowledge and interest.
- To allow students to learn and focus on the cutting-edge technology by presenting it to the students in interesting manner through seminars and workshops.

# COSME COUNCIL 2017–18

## COSME FACULTY CO-ORDINATOR



*Prof. Shrikant Naik*

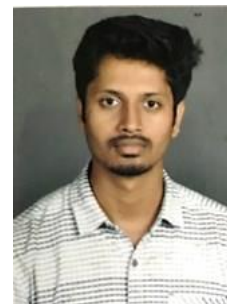
## THE STUDENT COUNCIL (COSME)



*Quentin Anthony Mascarenhas*  
( *PRESIDENT* )



*Prawar Mahadev Prabhu*  
( *SECRETARY* )



*Dikshant Mayenkar*  
( *TREASURER* )

# Some Basics of - 3D printing

Sachin Desai , ( Mech VI )

## What is 3D Printing?

3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file.

The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced horizontal cross-section of the eventual object.

3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine.

3D printing enables you to produce complex shapes using less material than traditional manufacturing methods.

## How Does 3D Printing Work?

It all starts with a 3D model. You create one yourself or download it from a 3D repository. When creating it yourself you can choose to use a 3D scanner, app, haptic device, code or 3D modeling software.

## 3D Modeling Software

There are many different 3D modeling software tools available. Industrial grade software can easily cost thousands a year per license, but there's also open source software you can get for free.

We often recommend beginners to start with Tinkercad. Tinkercad is free and works in your browser, you don't have to install it on your computer. Tinkercad offers beginner lessons and has a built-in feature to get your 3D model printed via a 3D print service.

Now that you have a 3D model, the next step is to prepare the file for your 3D printer. This is called slicing.

## Slicing: From 3D Model to 3D Printer

Slicing is dividing a 3D model into hundreds or thousands of horizontal layers and is done with slicing software.

Some 3D printers have a built-in slicer and let you feed the raw .stl, .obj or even CAD file.

When your file is sliced, it's ready to be fed to your 3D printer. This can be done via USB, SD or internet. Your sliced 3D model is now ready to be 3D printed layer by layer.

## 3D Printing Industry

Adoption of 3D printing has reached critical mass as those who have yet to integrate additive manufacturing somewhere in their supply chain are now part of an ever-shrinking minority. Where 3D printing was only suitable for prototyping and one-off manufacturing in the early stages, it is now rapidly transforming into a production technology.

Most of the current demand for 3D printing is industrial in nature. Acumen Research and Consulting forecasts the global 3D printing market to reach \$41 billion by 2026.

As it evolves, 3D printing technology is destined to transform almost every major industry and change the way we live, work, and play in the future.

## Examples of 3D Printing

3D printing encompasses many forms of technologies and materials as 3D printing is being used in almost all industries you could think of. It's important to see it as a cluster of diverse industries with a myriad of different applications.

A few examples:

- – consumer products (eyewear, footwear, design, furniture)
- – industrial products (manufacturing tools, prototypes, functional end-use parts)
- – dental products
- – prosthetics
- – architectural scale models & maquettes
- – reconstructing fossils
- – replicating ancient artefacts
- – reconstructing evidence in forensic pathology

# 3D printing A perfect solution for medical applications

Kendrick Fernandes ( Mech VI)



Roughly 13% of all 3D printing revenue comes from the medical industry. From prosthetics to surgical guides, there are a surprising number of medical applications for additive manufacturing technology. The flexibility offered by a 3D printing service lets medical professionals create patient-specific devices at an affordable cost.

## **The medical industry is already primed for additive manufacturing**

Detailed scanning and imaging processes are a necessary part of the medical industry. Laser scanning is used to take detailed images of a subject's surface, while CT scanning and MRI imaging are used to achieve cross-sectional images of bones and tissue.

Modern software is able to turn these medical images into complete models that can be used for 3D printing. Devices that were once purely theoretical can now be produced quickly, cheaply, and effectively; thanks to the detail of the images, they always match the patient exactly as intended.

## **Manufacturing requirements for the medical industry**

There are several reasons why additive manufacturing works perfectly for medical applications. An on-demand 3D printing service can be used to quickly manufacture medical devices for patients in need.

### **Complexity**

- Complexity - Surgical implants require complex and organic structures to be accepted by the host tissue. These structures are prohibitively expensive with traditional manufacturing methods, but a 3D printer can create them with no additional cost.

## **Customization**

- Customization - 3D printed parts can be shaped to fit perfectly with a patient's anatomy. Dental implants, cosmetic prosthetics, and even scale models can all be created to exact specifications.

## **Sterilization**

- Sterilization - Medical devices must be made from sterilizable materials. Most of the materials used for FDM printing or 3D metal printing can be sterilized by steam autoclave or gamma radiation.

## **Speed**

- Speed - Medical procedures seldom happen on a relaxed schedule. On-demand 3D manufacturing lets hospitals source necessary parts that can be completed with an acceptably short lead time.

## **Cost**

- Cost - The flexible nature of additive manufacturing has greatly reduced the cost of custom medical devices. Individualized prosthetics and implants have now become a reality for patients across the world.

## **Common medical 3D printing applications**

Additive manufacturing has been used to produce hearing aids, replacement limbs, surgical implants, and detailed models of organs, bones, and blood cells. Access to this technology has greatly advanced the potentials of the medical field.

### **Prosthetics - fully-functional replacement limbs**

- Prosthetics - Additive manufacturing has completely revolutionized the prosthetics industry. From cosmetic prosthetics to fully-functional replacement limbs, these devices can be customized to each individual and produced for a fraction of the previous cost.

### **Surgical guides**

- Surgical guides - Both dental and medical surgeries require extreme precision. A 3D printed guide can help a surgeon line up holes and incisions with a patient's anatomy. Thanks to additive manufacturing, these guides can be produced quickly and to exact specifications.

## **Implants**

- Implants - Additive manufacturing has the ability to produce fine mesh structures at no additional cost. This feature is necessary for surgical implants; the organic structure of the device reduces the risk of rejection after the surgery is complete. These completely customizable implants are usually manufactured with 3D metal printing; the results are strong, sterile, and perfectly suited to the patient's needs.

## **Models**

- Models - 3D printing can be used to create perfect scale models of patient-specific anatomy and structures. This allows doctors and nurses to study a subject from multiple angles and hopefully find a solution to the medical problem. Additive manufacturing is an affordable way to produce anatomical models; both medical students and experienced professionals take advantage of this technology.

As more applications are discovered, the impact of 3D printing on the medical industry has become truly astounding. 3D Hubs is proud to partner with medical professionals to offer on-demand prosthetics, implants, and surgical tools. Use the 3D Hubs online manufacturing tool to check design for viability and begin production on any custom part.

# STUDENT ACHIEVEMENTS

## TECHNICAL

[2017 - 2018]

Five students from Mechanical Engineering Department at PCCE attended a workshop organized on ROBOTICS on 23<sup>rd</sup> and 24<sup>th</sup> September by Goa College of Engineering was attended by .

Team Phoenix, consisting of mechanical engineering students from PCCE certainly needs a mention for the various success they have had for the current academic year :



**Quark'2018 (BITS- Goa)**  
2<sup>nd</sup> Place Line Follower  
2<sup>nd</sup> & 3<sup>rd</sup> Place Robo-sumo

**SPECTRUM '2018 (GEC- Goa)**  
1<sup>st</sup> & 2<sup>nd</sup> Place - Line Follower  
2<sup>nd</sup> Place - Roborace  
3<sup>rd</sup> Place - Robowars

**SAAVYAS '2018 (NIT- Goa)**  
1<sup>st</sup> Place - Robowars  
1<sup>st</sup> Place - Roborace  
2<sup>nd</sup> Place - Robo-soccer



## **NON-TECHNICAL**

[2017 - 2018]

Mr. Abhishek Singh and Mr. Dikshay Golatkar qualified for the first round of the Economic Times campus star program

## **SPORTS AND CULTURAL**

[ 2017 - 2018 ]

Mr. Pranyud Kankonkar and Mr. Akshay Shirwaikar participated at the Inter-collegiate Table Tennis championship held on 14<sup>th</sup> July 2017 organized by Goa University.

Mr. Vipul Kulkarni and Mr. Mayuresh Naik secured 3<sup>rd</sup> Place at the Inter-collegiate Chess Tournament held on 14<sup>th</sup> July 2017 organized by Goa University.

Mr. Krishnank Fallary and Mr. Pranav Desai participated in the All Goa Badminton championship on 22<sup>nd</sup> July 2017, organized by the Goa University.

Mr. Marc Ribeiro bagged a silver medal in the 100 M Backstroke and a Bronze Medal in 200 M Free-style inter-collegiate Swimming championship held on 2<sup>nd</sup> August 2017 , organized by Goa University.

Mr. Alister Fernandes secured a Bronze medal for the Inter-collegiate Powerlifting competition held on 7<sup>th</sup> August 2017 organized by the Goa University.

Mr. Gary Fernandes represented PCCE for the Inter-collegiate Taekwondo competition held on 21<sup>st</sup> September 2017 organized by the Goa University.

Mr. Ryan Desa, from FE MECH represented Goa Rugby Team at All India Rugby Senior Nationals in Patna, Bihar

### Powerlifting



### Chess Tournament



### Table-Tennis



### Swimming

Seen above are - Winners & Participants from The Mechanical Engg. Dept. in action

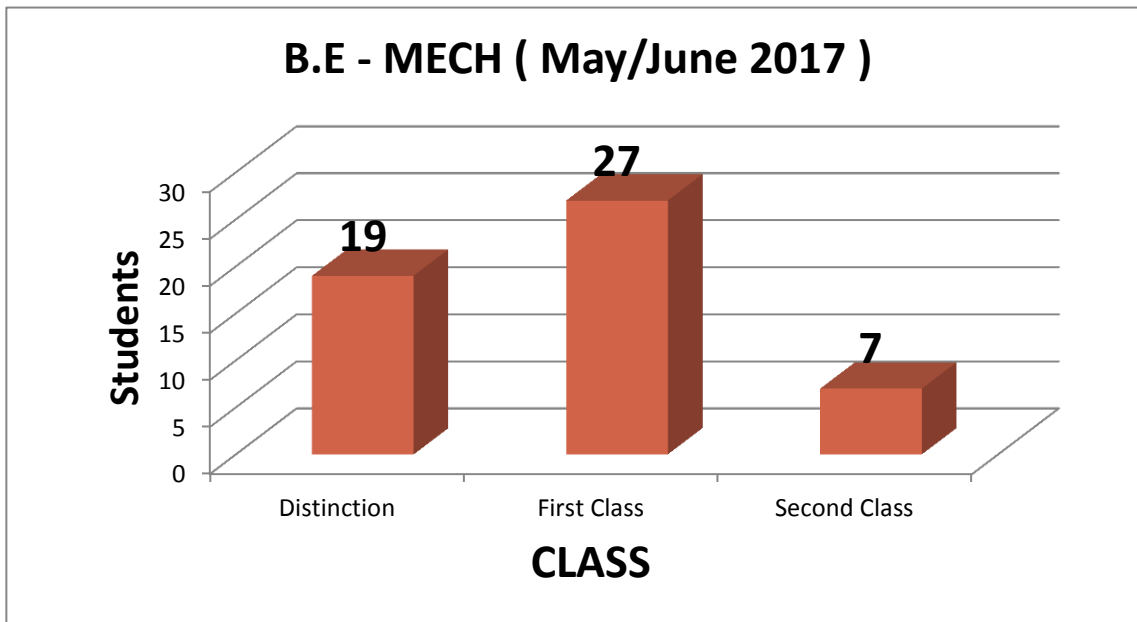
# PLACEMENT DATA

<b>SR NO</b>	<b>NAME OF THE STUDENTS</b>	<b>COMPANY NAME</b>
1	DEVIDAS OMKAR SURESH	Diebold Noxdorf India Pvt. Ltd
2	MANOREKAR VARUN SUBHASH	Jinharsh Industrial Solutions Pvt. Ltd,
3	NAIK GURUDAS SANTOSH	Crompton Greaves, Goa
4	NAIK SHUBHAM SHRIVALLABH	Was working in Turbocam
5	NAVELKAR ANANTBHUSHAN DHANANJAY	Power Engineering (India) Pvt. Ltd
6	PEREIRA WILBUR XAVIER	Bosch Packaging Technology
7	RYLAN PEROZ	Bosch Packaging Technology
8	PHALGAONKAR HARSHAL ARUN	Putzmeister Concrete Machine Pvt Ltd
9	PRABHUDESSAI PRATISH PRADEEP	Godrej & Boyce Mfg. Co. Ltd.,
10	ANCHIT SHARMA	Quest Global
11	TARI AAYESH PUNDOLICA	Putzmeister Concrete Machine Pvt Ltd (Technical Executive)
12	LAMBOR AMAR BAJA	Godrej
13	PIRES ANTUSH AGNELO	Godrej
14	BANDODKAR SHRENİK GAJANAN	Godrej & Boyce Mfg. Co. Ltd.

# MAY' 2017 Examinations

66 Students from the 2013- 2017 Batch , answered the B.E – Mechanical ( Semester VIII ) Examination.

53 out of the 66 students successfully passed out as graduate mechanical engineers.



<b>Toppers in Semester VIII</b>	
<b>Rank</b>	<b>Name</b>
1	PRABHUDESSAI PRATISH PRADEEP ( 2 <sup>nd</sup> Rank , Goa University )
2	VAZ SAVIO ANTHONY
3	MHALSEKAR KARAN ARVIND
<b>Toppers in Semester VI</b>	
<b>Rank</b>	<b>Name</b>
1	MASCARENHAS ANTHONY QUENTIN SAVIO
2	PRABHU PRAWAR MAHADEV
3	SINGH RISHABH KUMAR
<b>Toppers in Semester IV</b>	
<b>Rank</b>	<b>Name</b>
1	DESAI SACHIN SHRIPATI
2	FERNANDES KENDRICK FILIPE NERI DE SANTANA
3	FURTADO CLINTON ANTHONY

# DEC' 2017 Examinations

<b>Toppers in Semester VII</b>	
<b>Rank</b>	<b>Name</b>
1	GHUGRETKAR MAYANK BALU
2	PRABHU PRAWAR MAHADEV
3	CHODANKAR NEERAJ LAHU
<b>Toppers in Semester V</b>	
<b>Rank</b>	<b>Name</b>
1	DESAI SACHIN SHRIPATI
2	FERNANDES NOEL MACBERTH
3	FURTADO CLINTON ANTHONY
<b>Toppers in Semester III</b>	
<b>Rank</b>	<b>Name</b>
1	KANKONKAR PRANYUD ALIAS GURURAJ PRAVIN
2	KUBAL NIKHIL KISHORE
3	BELANI YASH RAJ

# Field Visits

Date	Organization /Venue	Students	Accompanying Faculty
11 <sup>th</sup> Aug ' 2017	Godrej Locking & Security Solutions, Madkai Indl. Estate, Ponda-Goa.	Semester V	Prof . Pushparaj Pingulkar & Marvin Fernandes
14 <sup>th</sup> Feb'2018	GKB Ophthalmic, Pilerne-Goa & Dynaquip Machines , Thivim-Goa	Semester VI	Prof. Gaurish Samant
22 <sup>nd</sup> – 24 <sup>th</sup> Feb' 2018	ACREX'2018 , Bangalore	Semester VIII	Prof. Mohnish Borker , Prof. Mangaldas Gaonkar & Prof. Aditi Silveira



@ Godrej Locking & Security Solutions



@ ACREX ' 2018

# *A Report*

## **TECHYON '17**

Padre Conceicao College of Engineering, Verna, hosted TECHYON 2017 in association with Numadic on the 13th and 14th of October 2017. TECHYON 2017 is an annual inter- collegiate technical festival which included technical events that were held by four departments: AAVISHKAR (ETC department), TURBULENCE (Mechanical department), DOT-SLASH (Computer department) and MINDSPARK (IT department). Staff and students from each department coordinated events like Robowars, Hackathon (building of software or applications), Hardwired (circuit building), Technical Quiz, Code Crunch, Line-follower, Electronics Art, Debate and many more technical events where students across all branches could participate.

The Chief Guest for the inaugural ceremony was Mr. Kishore Kumar (Chief Executive Officer, Vedanta Limited, Sesa Iron Ore Business). Distinguished guests Ms. Jaspreet Walia (HR Manager, Infosys - Bangalore) and Ms. Elvina Halli (Communications Lead, Numadic) were also present. Fr. Victor Rebello, Director, Agnel Technical Education Complex, Dr. Mahesh Parappagoudar, Principal, PCCE, heads of departments and other staff and students were present for the inaugural ceremony. A short film on the event was featured during the inaugural ceremony. Mr. Kishore Kumar declared the event open and wished the students the best of luck.

## **MITHYA' 18**

Come April' 2018 , PCCE was gearing up for the Annual Cultural event which was held from 11<sup>th</sup> to 13<sup>th</sup> April' 2018. The Chief Guest this year was Rev. Fr. Peter Cardozo, Director of Pilar Music Academy.

The events were judged by professionals in their respective field. All departments competed with each other to win this year's crown of champions, but it was the Mechanical department conquered it all on the final day. Information Technology, ETC and Computer, won the second, third and fourth places respectively.

Quentin Mascarenhas  
President, COSME

# **ISHRAE COLLEGIATE CHAPTER**

## **[2017 – 2018]**

**Faculty Coordinator :**

**Prof . Jisa Randhir**

## **Student Council**

**Mr. Rishabh Kumar Singh**  
**President**

**Mr. Mayank Gugretkar**  
**Secretary**

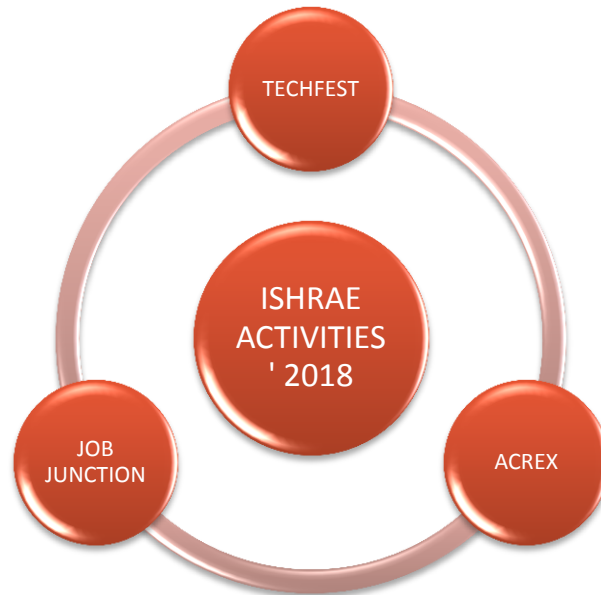
**Mr. Mayur Aigal**  
**Treasurer**





# ISHARE Activities Report

## [2017 – 2018]



- ❖ The annual event TechFest was held on 8<sup>th</sup> of September 2017 at Cidade de Goa, Dona Paula. The student members of Indian Society of Heating , Refrigeration & Air-Conditioning Engineers (ISHRAE) PCCE Goa Chapter were part of this event. The TechFest was all about the display of the new products in the field of HVAC&R and trading of the same. The function was inaugurated at the hands of honorable Chief Minister of Goa, Mr. Manohar Parrikar after which the companies started off with their presentations. The theme of this year was based on the HVAC&R in shipbuilding and the delegates from all over India participated in this function.



ISHRAE - GOA CHAPTER

With Students from Mechanical Engg. Dept. PCCE – Quentin Mascarenhas, Rishabh Singh, Mayank Gugretkar & Mayur Aigal

- ❖ Students from PCCE and other institutes took part at the ISHRAE job junction held at Lokmanya Tilak College of Engineering, Navi Mumbai – Maharashtra, from the 26th to 28th of October 2017. Rishabh Kumar Singh from Semester VII qualified the aptitude test.
- ❖ A group of 16 students of Mechanical department of PCCE attended an International Air Conditioning and Refrigeration Expo held from 22<sup>nd</sup>, 23<sup>rd</sup> and 24<sup>th</sup> February in Bangalore.. Students had the opportunity to get acquainted with upcoming technologies in the field of HVAC & R.

There were various companies and exhibitors with products like compressors, industrial pumps, blowers, humidifiers, chillers etc. Students were exposed to the various branches of industrial refrigeration products which have various applications.



The exhibitors present were Blue Star , Bell Cooling , Kirloskar, Baltimore Aircoils , Bitzer, Aspen Pumps and were very kind to explain the applications and working of their respective products. Apart from this the students also visited QUEST to experience South Asia's largest HVAC & R student level competition. In addition, students were keen to attend another exhibition which consisted of various fire hazard safety equipments such as advanced fire extinguishers, insulators, smoke detectors, thermal cameras etc.

Students were very much satisfied with this mega event and look forward to be active members of ISHRAE and continue getting updated information to contribute in future. Overall, students found it very useful in understanding the trending technologies and respective areas in refrigeration industry. This will surely help the students to peek their interest further in HVAC & R.

- Rishabh Kumar Singh  
President - ISHRAE

# FACULTY ACHIEVEMENTS

## Journal Publications /Conferences/ Book Chapter

➤ **Dr. Mahesh Parappagoudar** published 02 book chapters :

1. “Squeeze casting parameter optimization using swarm intelligence and evolutionary algorithms” for the book Critical Development and applications of Swarm Intelligence.
2. “Application of statistical modelling and evolutionary optimization tolls in resin-bonded molding sand system”, for the Handbook of Research on Investigations in Artificial Life R & D, May 2018.

➤ **Prof. Joe Kurian** presented a paper title “ A cognitive model to dynamically integrate institutional diversity using student engagement, at the International Conference of Emerging Trends in Management Studies – Goa University , January 2018.

➤ **Prof. Mohnish Borker** presented a paper as well as published a book chapter :

1. “Bioelectricity production using Plant Microbial Fuel cell with grass species *Elusine indica*”, at the International Conference on Advances in Energy Research, held at IIT Bombay in December 2017.
2. “Sustainable Bioelectricity Generation from Living Plants”, for the book Microbial Biotechnology, Vol. I : Applications in Agriculture and Environment, Springer Nature, Singapore.

➤ **Prof. Gaurish Samant** presented 03 papers on his area of research :

1. “Design and Analysis of Family Die Casting tool”, at the International conference on Emerging Trends in Mechanical Engineering, held at Cauvery Institute of Technology in December 2017. Won best paper award.
2. “A Study on Mechanical Properties of Aluminium Alloy (LM6) Reinforced with  $Al_2O_3$  ”, at the International Conference on Engineering & Technology, Dubai, March 2018.

3. “Effect of reinforcement of LM6 with SiC on mechanical behavior of Metal matrix composites ”, at the International Conference on Engineering & Technology, Dubai, March 2018.

## Participation at Workshops / Seminars & Courses Completed

Faculty	Workshop/s	Course/s
<b>Prof. Saeesh Verenkar</b>	✓ Advanced Composite Technology, Ramaiah University of Applied Sciences, Bangalore on October 6th 2017 ( 01 Day )	✓ Control of Mobile Robots, Georgia Institute of Technology, Coursera.
<b>Prof.Gaurish Samant &amp; Prof.Gaurak Phaldessai</b>	✓ Product Design at Agnel institute of Technology and Design, December 2017 (01 Week )	
<b>Prof.Dattaprakash Vernekar</b>	✓ Nuclear Technology scripting National Development, at DBCE-Goa,organized by BARC, Mumbai, January - 2018. ✓ Challenges in Project Engineering and Management”, Organized by NICMAR-Goa at Hotel Fidalgo, Panjim. 17 <sup>th</sup> Feb 2018.	

## Workshops, Seminars, Guest Lectures Conducted / Co-ordinated

- ✚ **03<sup>rd</sup> to 8<sup>th</sup> July ‘ 2017 - Prof. Saeesh Verenkar** co-ordinated in association with Protean knowledge solution a certificate course in *PLC-ADVANCE* . The course was attended by the final year mechanical and electronics and communication engineering students. The course was designed specifically for students so that they gain confidence through extensive hands on training. The course faculty was Mr. B. M. Gondhalekar who has done his graduation in Mechanical engineering from VJTI Mumbai, and has done Masters in Information Technology from Illinois State University Bloomington Illinois.

✚ 8<sup>th</sup> to 13<sup>th</sup> January '2018 – Prof. Saesh Verenkar, Prof. Pushparaj Piungulkar, Prof. Ramdas Pandit & Prof. Gaurak Phaldessai were the faculty co-ordinators and resource persons for “ Simulations using ANSYS”, attended by the Final year Mech.Engg. students.

✚ 03<sup>rd</sup> March ‘ 2018 – Prof. Saesh Verenkar co-ordinated with AUTOTECH a 02 Day workshop for T.E – Mech.Engg. students on PLC.

✚ 18<sup>th</sup> April ‘ 2018 - Prof. Gaurish Samant co-ordinated a Guest Lecture on *3D printing and its Applications* , delivered by Mr. Ryan Vaz for T.E and B.E – Mech.Engg. students.



## Career Advancement

**Mr. Joe Kurian**, Associate Professor in the Department of Mechanical Engineering took charge as the Head of the Department from 21 st December 2017. Mr. Joe has been working with PCCE for the past 19 years.

**Mr. Saish Verenkar**, Assistant Professor in the Department of Mechanical Engineering has registered for his Doctorate degree under VTU.

**Mr. Joseph J. Pereira** from Mechanical Engineering Department, has been promoted to the post of Assistant Workshop Superintendent.

# FACULTY PROFILE

<b>Dr. Mahesh Parappagoudar</b>	<b>Phd – ( IIT – Kharagpur) – Mechanical Engineering</b> Professor & Principal (Industry Exp.– 2 Years, Teaching Exp.– 24Years) Area of Interest – Manufacturing science, Soft computing
<b>Prof. Joe Kurian</b>	<b>Phd – pursuing ( Goa University)</b> <b>M.Tech ( IIT-Madras) – Maintenance Engg. &amp; Management.</b> Professor ( Industry exp. – 5 Years, Teaching Exp.– 18 Years) Area of Interest – Mechanical vibrations, Industrial automation , Six sigma management
<b>Dr. Geethalaxmi K.</b>	<b>Phd (NIT, Surathkal) – Containerless Extrusion</b> Professor ( Teaching Exp. – 18 Years) Area of Interest – Polymer composites, Nano-structured materials
<b>Prof. Jisa Randhir</b>	<b>B.E (Goa University)</b> Assistant Professor (Teaching Exp. – 11 Years) Area of Research – Manufacturing technology, Applied thermodynamics
<b>Prof. Saeesh Verenkar</b>	<b>M.Tech (SRM University) – Computer Aided Design</b> Assistant Professor (Industry Exp - 01 Year, Teaching Exp. – 04 Years) Area of Interest – FEM, Mechanical vibrations, Composites
<b>Prof. Dattaprakash Vernekar</b>	<b>M.Tech (V.J.T.I, Mumbai University) – Automobile Engg.</b> Assistant Professor (Industry Exp - 01 Year, Teaching Exp. – 03 Years) Area of Research – I.C engines, Energy conversion
<b>Prof. Marvin Fernandes</b>	<b>M.E (Mumbai University) – Machine Design</b> Assistant Professor (Industry Exp - 01 Year, Teaching Exp. – 03 Years) Area of Interest – Engg. Mechanics, Hydraulic machinery
<b>Prof. Prasad Pawar</b>	<b>M.Tech (M.G.University, Kerala) – Thermal Power Engg.</b> Assistant Professor (Teaching Exp. – 06 months) Area of Interest – Fluid mechanics, Heat transfer
<b>Prof. Pushparaj Pingulkar</b>	<b>M.Tech (N.I.E, VTU) – Machine Design</b> Assistant Professor (Industry Exp. – 2 Years, Teaching Exp. – 01 Year) Area of Interest – Kinematics, Dynamics of Machinery, FEA
<b>Prof. Mohnish Borker</b>	<b>M.Tech (NIT, Calicut) – Energy Engg. &amp; Management</b> Assistant Professor (Teaching Exp. – 01 Year) Area of Interest –Thermodynamics, Renewable Energy

<b>Prof. Shrikant Naik</b>	<b>M.E (PSG, Anna University)</b> – Industrial Engineering Assistant Professor (Industry Exp. – 01 Year ; Teaching Exp – 01 Year) Area of Interest –Lean manufacturing
<b>Prof. Ramdas Pandit</b>	<b>M.Tech (VIT, Bangalore)</b> – CAD-CAM Assistant Professor (Industry Exp. – 04 Years ; Teaching Exp–01 Year) Area of Interest – FEA, Vibrations, SCM
<b>Prof. Gaurak Phaldessai</b>	<b>M.Tech (NIT, Jamshedpur)</b> – Thermal Engineering Assistant Professor (Industry -01 Year, Teaching – 06 Months) Area of Interest –Thermal Engg., CFD, Phase change material, Solar technology
<b>Ms. Annapurna Hosalli</b>	<b>M.Tech (NIT, Jamshedpur)</b> – Production Management Assistant Professor (Industry - 01 Year, Teaching – 01 Year) Area of Interest – Manufacturing technology
<b>Mr. Mallikarjun Gurav</b>	<b>M.E (Shivaji University, Kolhapur)</b> – Design Engineering Assistant Professor (Industry -01 Year, Teaching – 01 Year) Area of Interest – Engineering graphics, Machine design
<b>Mr. Pratik Sawardekar</b>	<b>M.E (Goa University)</b> – Industrial Engineering Assistant Professor (Industry - 02 Years, Teaching – 01 Year) Area of Interest – Multi-Criterion Decision Making, Optimization Techniques





