

2.3.1: Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Sr. No	Details
1	NSS Activity Report
2	Technical Committee Reports
3	Reports of Multiple Hackathons/Technovation Events conducted by the institute
4	Report of Chemergence Event

NSS-TSEC Annual Report 2016-17

NSS- A SCHEME BY THE GOVERNMENT FOR THE PEOPLE, OF THE PEOPLE, BY THE PEOPLE.

The National service scheme of Thadomal Shahani Engineering College (NSS-TSEC) 2016-17 basked into the 19th year of its community service and this year too it fulfilled its objective of “Personality Development through Community Service” with flying colors. Our journey for tenure 2016-2017 started with membership drive where students were educated, enlightened and motivated to join our hands and enroll for this noble cause; as together we serve better.

Welcome and Orientation- In order to create a feeling of togetherness in this noble cause; an orientation program was arranged where the volunteers were welcomed and a briefing of all the projects/activities to be carried out was done.

Independence Day- We celebrated our 69th Independence Day with great pomp and a spirit of patriotism was filled in each heart present there; hoisting the flag, singing our national anthem and saluting our freedom fighters who gave us Independence.

Monsoon Trek- A beautiful scenic place near Matheran to explore in monsoon with its lush green vegetation, flora and fauna at a height of 2400 ft above sea level was a feat to accomplish, giving a feeling of heaven on earth to every person reaching at the top and a satisfaction of being a part of this TREK.

AS FOOD TASTES BLAND WITHOUT PINCH OF SALT SO IS COMMUNITY, BLAND WITHOUT ITS SERVICES!

We further conducted many projects like Assisting a blind child, Teach to Preach, Joy of Giving and also we were associated with team Proinnovate as creative, publicity and volunteer partners for the Kabad Ka Jugaad. Following the lead of our Prime Minister Shri Narendra Modi; we had conducted Swacch Bharat Abhiyaan at our previous adopted village Belkadi (Vasai Road), besides Voting rally pre BMC elections, Organ Donation awareness drive, Paper Bag distributions to name a few. As the trend continues, Blood Donation Drives were conducted in each semester by TATA Memorial Department of Transfusion Medicine and we collected a total of 259 blood units donated by our enthusiastic students and teachers in the campus. We also had Thalassemia checkup where students were screened for Thalassemia trait. Coming to the most awaited project of the year, **NSS Residential Camp**, with Anandwadi at Matheran foothill as our present adopted village; where each and every volunteer experienced the rural/village life and their day to day struggles. At the camp we constructed a small Bandh (dam) at waterfall site of Anandwadi that would prevent water seepage/loss. We also received appreciation from villagers and the same was covered by media i.e local newspaper. Other projects in the camp were Mass awareness campaign through street play, Disaster management workshop, Cleanliness drive. Also we had organized a Health checkup from Rotaract club of Caduceus. Also villagers from surrounding villages joined for the same. Our other projects included Dental Checkup by My Dentist and Mass awareness program at Intercollege level titled as “Sena Tujhe Salam”.

With the journey of this year coming to end; we NSS-TSEC, continue to strive to bring a positive change and to make the society a better place to live and NOT forgetting to believe in our motto – “NOT ME BUT YOU”

NSS-Programme Officer’s Message:-

The global community has realized now the importance and necessity of inclusive development by now. By taking care and including people from different backgrounds, we can have an overall progress and development of the destitute community globally. It is just not fair to enjoy all luxuries of life by the rich in the same town where the poor do not afford a meager shelter or even a food to eat. If we do not realize this even now, then, understand the present situation of European countries, how are they now affected by the variety of problems due to hordes of migrants pouring in as a globally ignored community. The government, non-government and corporates around the world have recognized this and sparing huge amount of stakes for community development groups, startups and the concerned enterprises. Many NSS-TSECites are joining this trend as a fulltime career or are preferred in the campus placements by the companies. So, come and join **NSS-TSEC** to experience & be a part of this contemporary flavor of the global community.

NSS-TSEC Annual Report 2017-18

About The Committee

NSS or National Service Scheme is a government initiative that helps the youth contribute toward society in whatever way possible.

The NSS-TSEC Committee was created to facilitate these contributions and focus the efforts through properly planned events throughout the year.

The objective of NSS is “Not Me But You” and the committee tries to realize this by searching and organizing various social service oriented events and motivating students to volunteer for these events. Some of the events organized by the committee this year are:

1. ORIENTATION (9.08.17)

2. INDEPENDENCE DAY (15.08.17)

A tribute to those fighters who laid down their lives so that our country could breathe freely. Volunteers got to know the importance of this day and how you should keep the patriotic feeling ON for INDIA. 80 volunteers attended.

3. NADI ABHIYAN AND RALLY FOR RIVERS (01.09.2017 to 02.10.2017)

We created awareness about the Rally For Rivers campaign , explained to people the causes of river depletion. Volunteers spread awareness on Linking Road on the 1st of September, standing with placards in unison with the entire country. The volunteers asked 100 people to give missed calls on 8000980009 respectively to support the campaign. They also attended an awareness event at NSCI Dome, Worli. Many famous celebrities came to the event to show their support and spread awareness about ISHA Foundation’s Idea of Rally for rivers.

4. BEACH CLEANING DRIVE (01.09.2017)

This year NSS-TSEC celebrated Ganesh Chaturthi in a different way. 40-50 Volunteers joined in the cleanliness drive at Juhu Beach to clear out all the waste left behind after the festival.

5. FORT CLEANING (17.09.2017)

More than 100 volunteers had joined their hands for this. Garbage and waste products at Tourist spots decreases the value and importance of the national heritage spots. Volunteers picked up all the waste on route to the fort and then discarded it properly. This way the beauty of our national heritage was preserved.

6. JOY OF GIVING (25.09.2017(1 week) & 22.01.2018(1 week))

We collected dozens of books, pens and other toys and stationary, also we collected clothes for the underprivileged people and donated all the collected items to Mescos foundation for use by the needful. Around 80 volunteers helped us out.

7. BLOOD DONATION DRIVE (5.10.2017 & 07.02.2018)

More than 100 volunteers worked for both the Blood Donation Drives. With Lokmanya Tilaka MG Hospital and Tata Memorial Hospital DTM we collected 121 and 109 blood units to facilitate availability of blood for the cancer patients. We also got 170 people **checked for Thalassemia** out of which 4 were detected as Thalassemia minors by Transasia Bio-Medicals Ltd.

8. PAPER BAG PROJECT (25.08.2017 to 06.03.2018)

More than 20 Volunteers were involved in this project. With the aim of reducing plastic bags, we took the initiative to reuse old newspaper and make paper bags out of it which could be used to carry small items. We donated a couple 1000 paper bags in our local adopted area to vegetable vendors and grocery/medical shops.

9. RESIDENTIAL CAMP (02.01.2018 to 9.01.2018)

It's an event where we visit our adopted village and try to help out as much as possible through various events. The dam at Anandwadi was broken during the heavy rains of 26th July, 2005. Our volunteers with the help of the villagers covered up the damage. Health check up was organised in the village for betterment of villagers. A cleanliness drive (Swachata Abhiyan) was also organized during the camp. 45 volunteers attended the camp.

10. HELP GOVT. OF INDIA (I.T. Deptt.) IN DIGITIZATION (19.02.18 to 03.03.18)

11. SAVE WATER & ELECTRICITY

12. SAVE MANGROVES SAVE MUMBAI (10.02.2018 to 24.03.2018)

20 Volunteers joined this cause. The aim of this campaign was environment protection and restoration of mangroves in Mumbai

13. MASS AWARENESS (up to 24.03.18)

14. CARDIAC ARREST RESUSCITATION SEMINAR (01.03.2018)

Under the iCare initiative of Holy Family Hospital we had a seminar with one goal to train as many people as we can for cardiac arrest emergencies. Doctors from the hospital came to our college to educate the staff and students about the various aspects and first aid treatments for Cardiac Arrests. More than 300 people attended this seminar.

REPORT

Computer Society of India- TSEC (2016 - 2021)

Tenure 2016-17

TECHNEXT'16 (August 27th, 2016)

Event Name- Ethical Hacking Seminar

Speaker Name- Mr. Rizwan Shaikh: India's renowned hacker

Date and Time- August 27th, 2016 at 12:15 PM

Venue- Meera Wattumal Auditorium, R.D. National College

Event Name- Interactive Talk Show

Speaker Name- Prof. Acharya: Btech, Mtech and Phd from IIT, TedX Speaker

Date and Time- August 27th, 2016 at 11:00 AM

Venue- Meera Wattumal Auditorium, R.D. National College



RUBIX'17 (February 17th, 2017 - February 19th, 2017)

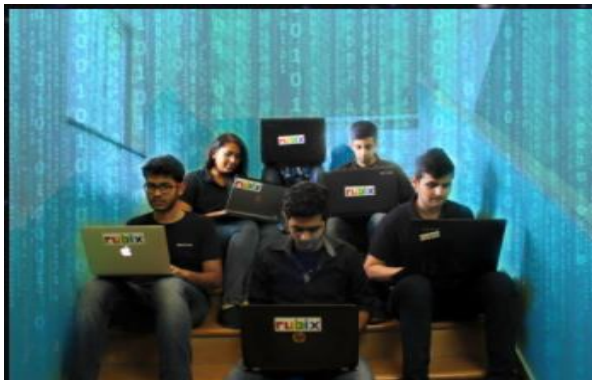
Event Name- The Pant Show

Speaker Name- Mr. Sorabh Pant

Date and Time- February 17th, 2017 at 12:00 PM

Venue- Meera Wattumal Auditorium, R.D. National College

The event had comedian's jokes revolve around spreading awareness via his satire methodically showcasing Indian behaviour via his jokes. Sorabh Pant is one of India's leading comedians, the kind to expend the last drop of energy and Glucon-D to make you laugh. Sorabh's done over 1000 shows in 60 cities across 15 countries, as well as 300+ corporate shows. He also founded the East India Comedy, India's busiest comedy company, which has raked up 115 million YouTube views with shows like EIC Outrage and EIC vs Bollywood.



TECHNEXT'17 (August 19th 2017 - August 20th, 2017)

Day 1:

Event Name- Robotics Level 1 Workshop

Team Size- Group of 4

Registration Fee- Rs.250

Date and Time- August 19th, 2017 at 10:00 AM

Event Name- Counter Strike and FIFA Gaming

Registration Fee- Rs.50

Date and Time- August 19th, 2017 all day

Event Name- Ethical Hacking Seminar

Speaker Name- Mr. Rizwan Shaikh: India's renowned hacker

Registration Fee- Rs.200

Date and Time- August 19th, 2017 at 17:00 PM

Venue- Meera Wattumal Auditorium, R.D. National College



Day 2:

Event Name- Power Bank Making Workshop

Registration Fee- Rs.100

Date and Time- August 20th, 2017 at 10:00 AM

Event Name- Talk Show

Speaker Name- Mr. Adithya Iyer

Registration Fee- Rs.100

Date and Time- August 20th, 2017 at 17:00 PM

Tenure 2018-19

TECHNEXT'18 (September 7th 2018 - September 8th, 2017)

Day 1:

Event Name- App development using python

Date and Time- September 7th, 2018 at 9:00 AM

Registration fees- Rs. 250

Event Name- Power bank making

Date and Time- September 7th, 2018 at 13:00 PM

Registration fees- Rs.100

Event Name- Robotics Workshop Level I

Date and Time- September 7th, 2018 at 9:00 AM

Registration fees- Rs.180

Event Name-AI/ML workshop

Date and Time- September 7th, 2018 at 16:00 PM

Registration fees- Rs.150

Day 2:

Event name- Entrepreneurship and indian startup culture Talk show

Speaker Name- Nabomita Mazumdar, Diyansh Saini & Himanshu Sikaria

Date and Time- September 8th, 2018 at 9:00 AM

Registration fees- Rs. 250

Venue- Meera Watumull Auditorium, R.D. National College

Nabomita Mazumdar is an Indian businesswoman who was named a Top 100 Women Achiever's Award winner by the Ministry of Women and Child Development in 2016. She worked as a Partner in an online community, Cite Community, serving more than 3 million management professionals worldwide.

Sync'18 (October 6th 2018)

Event name- Project Building & Resume review

Day- 6th October, 2018

Participants get their resumes updated and ideas noted for interviews.

Participants used this platform to Imagine, Create and Implement your hardware and software ideas.

These projects were displayed in the college and judged by professionals & the best project was rewarded.

The winner projects were funded with a working period of 4 months

Some glimpses of the event



Tenure 2019 - 20

TechNext'19 (September 28th 2019)

Event Name- Raspberry and Arduino Workshop

Date and Time: September 28, 2019 at 10:00 AM

Registration Fees: 100

Venue: TSEC, Bandra West

Arduino is an easy tool for fast prototyping, aimed at students without a background in electronics and programming. The Arduino board started changing to adapt to new needs and challenges, growing in IoT applications, wearable, 3D printing, and embedded environments. Over the years Arduino has been the brain of thousands of projects, from everyday objects to complex scientific instruments.

The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word-processing, and playing games.

Event Name- Wordpress and WooCommerce Workshop

Registration Fees: Rs. 100

Date and Time: September 28, 2019 at 15:00 PM

Venue: TSEC, Bandra West

Wordpress has become one of the most popular open source content management systems and it has been used to create more than 31% of the sites. It's easy to understand and requires no prior knowledge of any programming language. The workshop also incorporates WooCommerce in our workshop which is the most customisable e-commerce platform for building your online business. By the end of this workshop, participants will be able to create aesthetic and functional websites, without having to write any code!

Tenure 2021 - 22

TechNext'21 (September 4th, 2021 - September 5th, 2021)

CSI- TSEC organised their flagship event TechNext'21 on September 4th 2021- September 5th, 2021. TechNext is CSI's main event. It is the annual technical fest spanning over 2 days. It boasts participants from all over India.

The event consisted of a subevent on each day, the details are mentioned below.

About the event:

Day 1 (September 4th, 2021)

Event Name - Technical Debate

Time- 11:00 AM - 17:00 PM

Number of participant teams- 49

Number of participants in each team- 2-3

Judges- Prof. Monica Tolani, Mr. Vaibhav Ambhire, Dr. Anil.Z. Chhangani, Dr. Mukesh Israni, Prof. Vijal Jain, Prof. Tasneem Mirza, Dr. Bhushan Jadhav

Day 2 (September 5th, 2021)

Event Name - CSS Battle

Time- 11:00 AM - 16:00 PM

Number of participants- 366

Judges- Mr. Sohail Sayad, Mr. Sagar Ekhe

Technical Debate

The Computer Society of India - TSEC organised CSS Battle on the first day of **TECHNEXT'21**, September 4th, 2021 at 11:00 AM. This virtual event was conducted on Zoom without any registration fees. The event focused on presenting facts and point of views on a particular technical topic in a way that expresses affirmation and aspects for or against the topic, maintaining the decorum.

The event was divided into 4 rounds (**Elimination Round + 3 rounds**)

Round 1: 'The Elimination Round' was an extempore round where one person from each team came forward and spoke on the topic that was provided to them on the spot.

Round 2: On the basis of this performance 16 teams qualified for the 1st round, out of which 2 teams were paired against each other i.e, followed by 8 rounds in the 2nd round

Round 3: On the basis of this performance 8 teams qualified for the 2nd round, out of which 2 teams will be paired against each other i.e, followed by 4 rounds

Round 4: In this round, on the basis of markings given by judges the last two groups will have a final battle for third place and the first two groups will have a final round for first and second place.

In each round, teams were paired by the organizers, one team played the role of proposition and the other played the role of opposition. A coin was tossed, on the basis of the toss, the opposition and the proposition roles were allotted on the spot.

The prizes were Winner Prize- **Rs. 5,000**, First Runner up - **Rs. 3,000**, Second Runner up - **Rs. 1,000**, Consolation Prize- **Rs. 1,000**

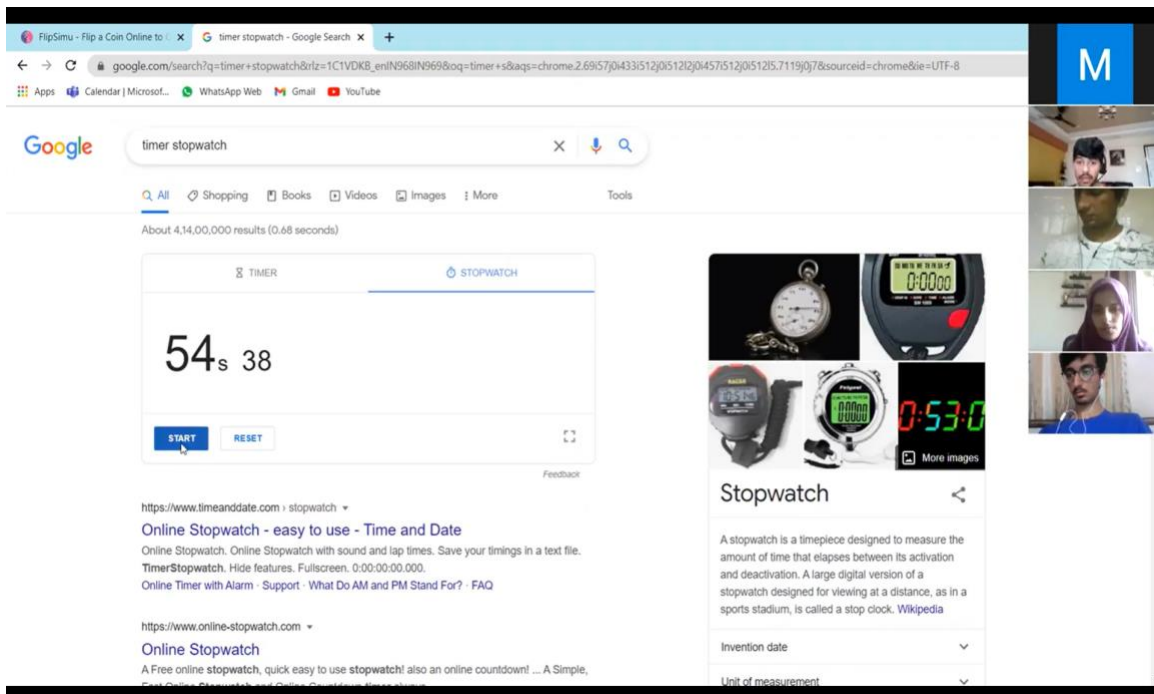
The Winners were as follows:

Winner Prize- Drop Users (Darshan Rander, Dheeraj Lalwani, Kartik Soneji)
College- Thadomal Shahani Engineering College, Mumbai

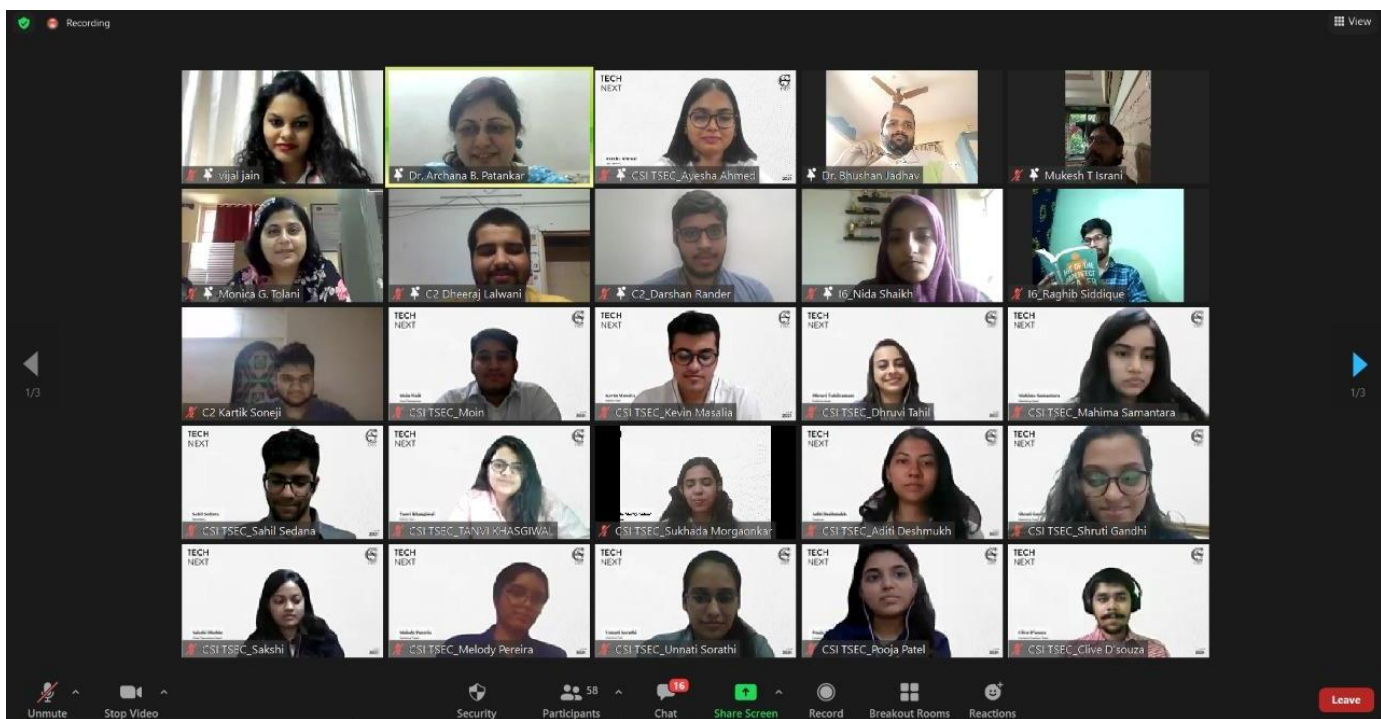
First Runner up- CreatiWitty (Raaghib Siddique, Nida Shaikh)
College- Atharva Engineering College, Mumbai

Second Runner up- Mayukh & Gagan (Gagan Awasthi, Mayukh Sen)
College- Symbiosis College, DU

Some Glimpses of the event



The screenshot shows a web browser window with a Google search for "timer stopwatch". The search results page displays an online stopwatch interface with a timer set to 54s 38. Below the timer, there are "START" and "RESET" buttons. To the right of the timer, there are several images of various stopwatches, including analog and digital models. Below the images, there is a search result snippet for "Stopwatch" with a brief description and a link to Wikipedia. The browser's address bar shows the search URL, and the top right corner of the browser window displays a blue tab with the letter "M".



CSS Battle

The Computer Society of India - TSEC organised CSS Battle on the second day of **TECHNEXT'21**, September 5th, 2021 at 11:00 AM. The Event had no registration fees. The event was conducted on the Zoom app. The event aimed on providing the participants a platform to test their CSS Skills. There were **366** registrations for the event from around the country.

The participants were asked to upload their CodePen link for fair judging

The event consisted of 3 rounds, for the first round - **'The Elimination Round'** the participants had to visually replicate a target image with the least possible CSS code. 40 participants qualified to the next round.

For the second round- **'The Replicate Bait'** the participants were given an unstyled webpage and had to style it with a good layout, that is not only nice to look at but makes the content of the page easier to use, read and comprehend, based on their own skills and innovative mindset. 15 participants qualified for the final round.

The third round - **'The Final Showdown'** was similar to the first round but with a more difficult target image.

The prizes were Winner Prize- **Rs. 5,000**, First Runner up - **Rs. 3,000**, Second Runner up - **Rs. 1,000**, Consolation Prize- **Rs. 1,000**

The Winners were as follows:

Winner Prize- Adil Ahmed
College- Jadavpur University, Kolkata

First Runner up- Hrishikesh Deuri

College- Assam Engineering College, Guwahati

Second Runner up- Neha Devendra Desai

College- Thakur College of Engineering, Mumbai

Consolation Prize- Shagun Lamba

College- Thadomal Shahani Engineering College, Mumbai

Some Glimpses of the event

The screenshot shows a Zoom meeting interface. At the top, it says "You are viewing 4_SubhanuSankarRoy's screen". The main content area is a browser window displaying a CSS Battle challenge. The browser's address bar shows the file path: `C:/Users/subha/OneDrive/Desktop/css/r3.html`. The browser window shows a green background with a cartoon dog's head and a laptop. The dog's head is a brown circle with a white muzzle and a red tongue. The laptop is a dark grey rectangle. The browser's developer tools are open, showing the CSS code for the dog's head and body. The CSS code is as follows:

```
<html lang="en">
<head>
</head>
<body>
  <div id="headbrown">
  </div>
  <div id="headlight">
  </div>
  <div id="eye">
  </div>
  <div id="nose">
  </div>
  <div id="tongue">
  </div>
  <div id="ear">
  </div>
  <div id="bodygrey">
  </div>
</body>
</html>
```

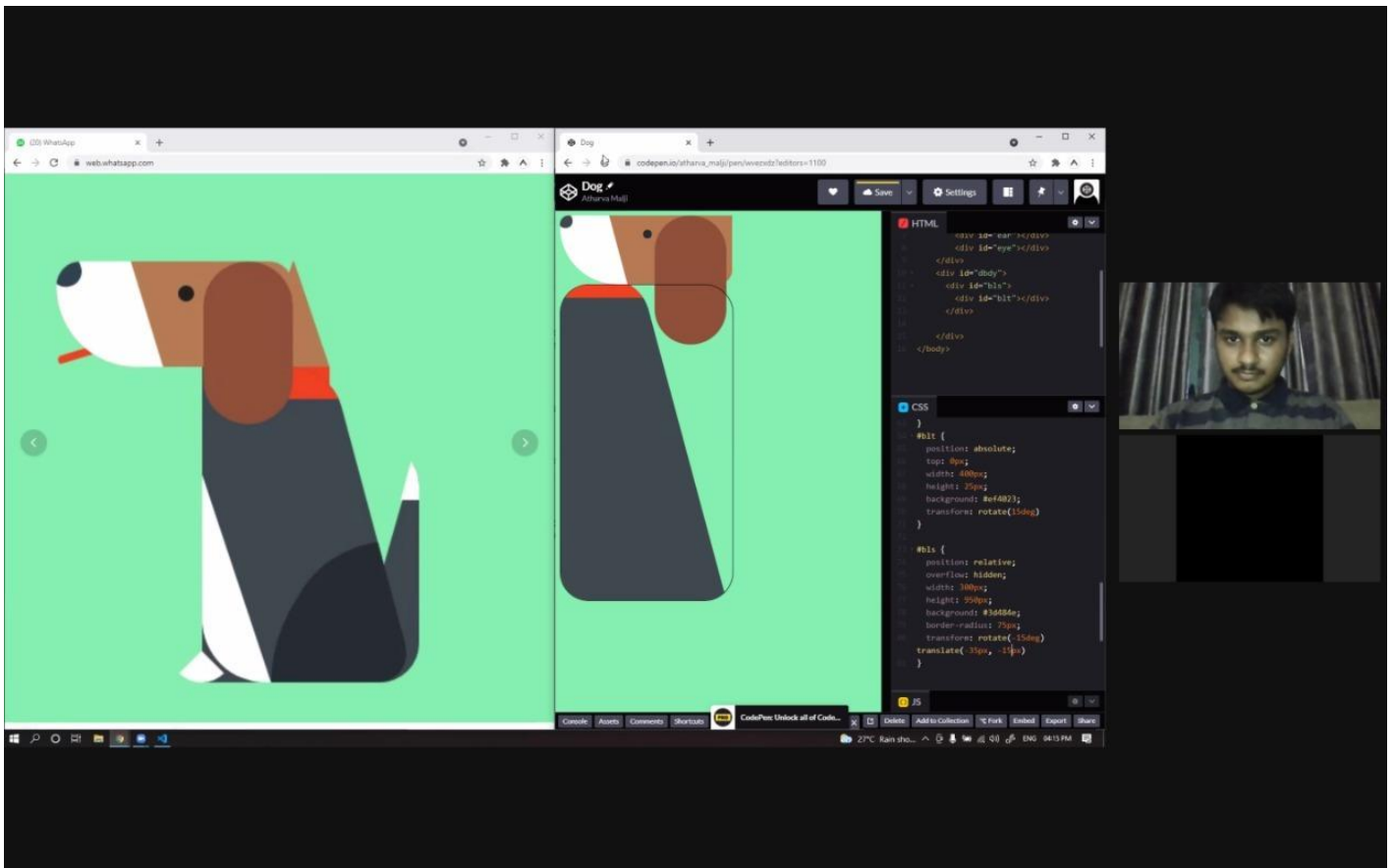
The CSS code defines the following styles:

```
body grey {
border-bottom: 18px solid #333333;
border-left: 24px solid #transparent;
border-right: 23px solid #transparent;
border-top: 18px solid #333333;
width: 300px;
}

body grey {
position: absolute;
top: 150px;
left: 60px;
width: 60px;
height: 100px;
border-radius: 30px;
transform: rotate(350deg);
background: #333333;
}

div {
display: block;
}
```

The Zoom interface includes a video feed of a participant, a list of other participants, and a "Leave Room" button.



Report Compiled and written by-
Sahil Sedana - Secretary, CSI- TSEC 2021
Ayesha Ahmed- Joint Secretary, CSI- TSEC 2021

TSEC

IETE Activity Report

2018-19

ELAN'18

Odd semester technical fest conducted on 29th and 30th of September 2018.
Following are the workshops and events conducted in the fest:

1. MSI Campus Meet
2. Technical Paper Presentation
3. Ethical Hacking Workshop
4. Android Workshop
5. Virtual Reality Workshop
6. Circuit Building Workshop
7. Python Workshop

Some images of the event



ELAN'18 poster with all of our sponsors in the main foyer



Our principal, Dr. G.T. Thampi Sir, at the opening ceremony for ELAN'18



Participants attending an Ethical Hacking Workshop in our computer Lab

OSCILLATION'19

Even semester technical fest conducted on 9th and 16th March 2019. Following are the workshops and events conducted in the fest:

1. Python Workshop
2. Machine Learning Workshop
3. Android Workshop
4. Ethical Hacking Workshop
5. Virtual Reality Workshop
6. Web Development Workshop

Some images for the event



OSCILLATION'19 poster with all of our sponsors in the main foyer



Our principal, Dr. G.T. Thampi Sir with our Teacher-in-charge, Tanuja Sarode Ma'am, at the opening ceremony for OSCILLATION'19



Our letter model for OSCILLATION'19

2019-20

ELIXIR'19

Odd semester technical fest conducted on 29th of September 2019. Following are the workshops and events conducted in the fest:

1. Ethical Hacking Workshop
2. Android App Development Workshop
3. Virtual Reality Workshop
4. Robotics Workshop
5. Python and Machine Learning Workshop

Some images of the event



Our banner for ELIXIR'19 placed in the main foyer of TSEC



Our principal, Dr. G.T. Thampi Sir with our Teacher-in-charge, Dr. Tanuja Sarode Ma'am, at the opening ceremony for ELIXIR'19



Our entire Committee team which worked on ELIXIR'19

OSCILLATION'20

Even semester technical fest was to be conducted on 21st and 22nd March 2020. Following are the workshops and events that were going to be conducted in the fest. Unfortunately, due to the ongoing COVID-19 pandemic, the fest had to be cancelled.

1. Python Workshop
2. Machine Learning Workshop
3. Android App Development Workshop
4. Ethical Hacking Workshop
5. Virtual Reality Workshop
6. Circuit Building Workshop
7. Model United Nations

2020-21

Aether

A fest conducted on a smaller scale owing to the pandemic, involving two flagship events directed towards helping people cope with the pressures of the pandemic.

1. KHOJ – A virtual treasure hunt
2. Pitch Please - A platform to express your views on how we should handle social crisis which have arisen due to this global pandemic



OSCILLATION'21

Even semester technical fest conducted on 6th and 7th March 2021. Following are the workshops and events conducted in the fest:

1. UI/UX Workshop
2. Python Workshop
3. Spark AR Workshop
4. Head start to Competitive Programming Workshop
5. MSI Laptop Workshop
6. Escape Room
7. Valorant Tournament
8. CODM Tournament
9. Virtual IPL Auction

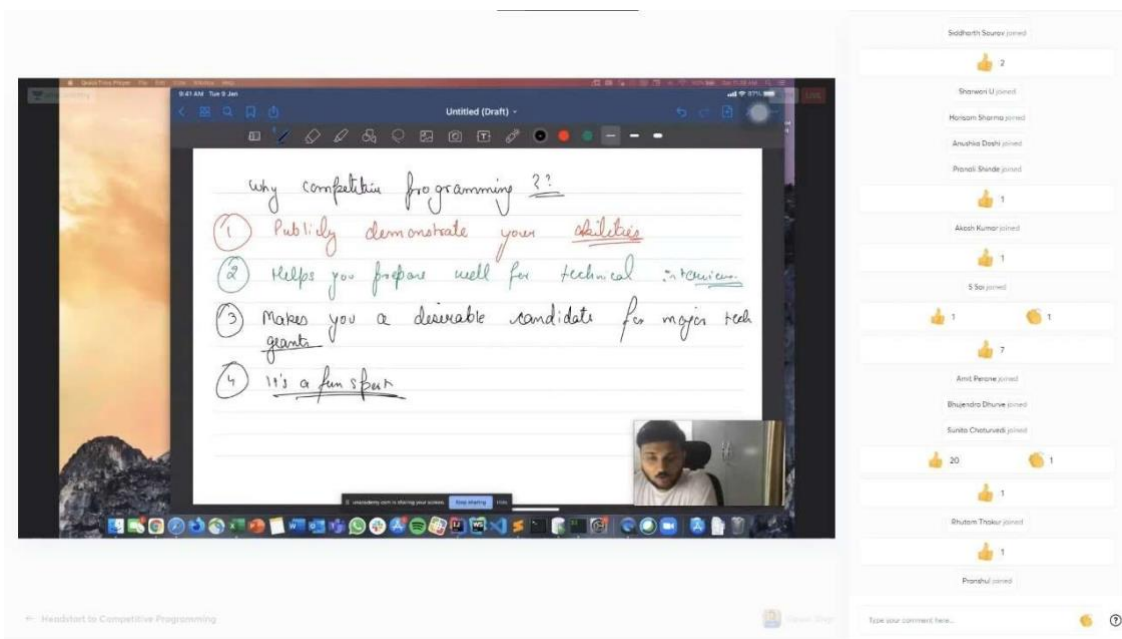
Some images of the event are:



Official Poster for OSCILLATION'21



A still from the opening ceremony featuring Dr.G.T Thampi (top-left), Dr.Tanuja Sarode (top-right), Ms.Prerana Deshpande, Public Relations Officer- IETE TSEC (bottom left) and Mr.Laksh Jethani, Chairperson – IETE TSEC (bottom right)



A still from the Competitive Programming Workshop

TSEC Hacks 2019: Event Summary

Convener: Dr. G. T. Thampi (Principal)

Co-convener: Prof. Tasneem Mirza

Co-ordinator (Computers): Prof. Dr. Pallavi Halarankar

Co-ordinator (IT): Prof. Kumkum Saxena

TSEC Hacks was held for the first time on 6th - 7th February 2019.

Registration Statistics

Event saw 422 registrations in 122 teams from 22 colleges. Each team was asked to specify their top 3 domain choices in order of preference :

First choice:

E-commerce 42 teams - 34.42%

App Development for non-profits – 48 teams - 39.34%

ML in Healthcare 27 teams – 22.13%

Cybersecurity 4 teams – 3.27%

Gamification 1 team – 0.81%

Second choice:

E-commerce 39 teams - 31.96%

App Development for non-profits – 40 teams - 32.78%

ML in Healthcare 19 teams – 15.57%

Cybersecurity 8 teams – 6.55%

Gamification 16 teams – 13.11%

Third choice:

E-commerce 22 teams - 18%

App Development for non-profits – 20 teams - 16.39%

ML in Healthcare 27 teams – 22.1%

Cybersecurity 23 teams – 18.85%

Gamification 30 teams – 24.59%

50 Teams were shortlisted with 176 participants.

Initial Registration Sheet:

https://docs.google.com/spreadsheets/d/1kWtOU90hJ3T9Q_XUiQ4Qs9AlmxscbiGCfL5eJRk1Woc/edit?usp=sharing

Shortlisted Teams Sheet:

https://docs.google.com/spreadsheets/d/1YKolsQJ75v1DWMLsLQ1Iu0DuSUVdZaD5Hj0mHKHQ_1M/edit?usp=sharing

Problem Statement Domains

1. App Development for NGOs
Design a Mobile or a Web Application that uses the concept of Data Visualization and provides the Logistics Information for the smooth running of a Non-Governmental Organization. The NGO would be the one that directly benefits children by helping them in Education, Healthcare and Livelihood in remote villages and slums across different states of India.
2. Cybersecurity
Security is the main concern for data sharing due to its vulnerabilities and confidentiality. Create a portal for sharing of files and data between many clients (users), keeping in mind security concerns that such an application would have to take into account.
3. Ecommerce
Identity Management | Verification, Personalization and more
The expected solution: needs to have the presented ideas fleshed out as a working prototype. API's, Database design, Co-relation logic needs to be working. The UI focus will not be on the e-commerce platform but to demonstrate multiple interactions with a brand. An e-commerce business should be able to personalize their online site based on the data collected. Possibilities for personalization need to be demonstrated with a minimum of three examples
4. Gamification
The Engineering syllabus consists upto 6 new subjects every semester. The concept is "Serious learning, not so boring." The intent of this problem statement is to develop a smart and engaging solution to gamify learning experiences. Choice of engineering subject is left to you.
5. ML in Healthcare
Cancer is the second leading cause of death globally, and is responsible for an estimated 9.6 million deaths in 2018. Globally, about 1 in 6 deaths is due to cancer. Can we use open data available to gain insights to help with the human effort against cancer by aiding any of the given objectives?
 - Personal point of view: To predicting likelihood of incidence using a person's demographic / medical history
 - Insurance company point of view: To assess cancer risk and decide appropriate policy premium
 - Medical researchers point of view: To devise a method to infer the effectiveness of two different treatment plans

- Pharmaceutical companies point of view: To decide which research areas are promising in the coming decade

Judges

→ Mr. Kiran Choudhary

He is currently the Assistant Vice President of Reliance Industry in Ghansoli. He has 20+ years of experience in the domain of Information Technology and holds the degree of Instrumentation Engineering from Pune University. He enjoys working in new technologies like AI, IOT and 3D printing and is an expert in Machine Learning. Since last 2 years he is leading the Data Science Center of Excellence in Reliance industries Ltd., Navi Mumbai. His team is actively involved use of AI/ML in real life business problems.

→ Mr. Bharat Tolani

He is currently a Senior Consultant at Capgemini in Mumbai. He has over 6.5 years of experience in Data warehousing project with tools like Erwin, Teradata, Datastage, Oracle, Tableau, VBA. He has been part of Physical Data Modeler as a Technical Lead and is actively learning new technologies like AWS, Python, Jira Roles.

→ Mr. Gaurav Deshpande

He is currently the Regional Sales Leader in the domain of Cyber Security working all over the world at Tata Communications. He holds special interest for areas such as Information Security, IoT, Mobile Computing and Abstract Technologies. He has also worked in many big companies in the past such as EY, IBM, KPMG etc. Has a strong academic background in Business Administration, Information Security, Network Technology and IT Infrastructure Management.

→ Mr. Nihar Shah

He is the Chief Technology Officer at The MediaHolic Co. He is an experienced Chief Technical Officer & Head of Design and has a good history of working in the information technology, marketing and advertising industries. He is skilled in many languages and technologies such as Java, Spring, SQL, PHP, HTML5, CSS, Javascript, Mobile Applications, Web Design and many more. He completed his Bachelor of Engineering (BE) in Information Technology from Thadomal Shahani Engineering College.

He has co-founded the company Mediaholic and is currently its Chief Technical Officer. Previously, he has worked in Accenture in the domain of software development.

→ Mr. Manish Tamhankar

He is currently a Senior Architect in Capgemini. He has over 15 years of experience in software industry and over 6 years of experience as a Software architect. He is interested in Solution Architect opportunities in Emerging Technologies and is a Lead Architect in many domains such as IoT, Natural User Interface Technologies (NUI), Application Portfolio Rationalization etc. He has worked at various big companies like Larson & Turbo, Hexaware, Directi and many more.

Winners

1st place: ZeroDay - DJ Sanghavi College, App Development for NGOs

Aniket Shahane
Dharmik Parikh
Jashan Banga
Aniruddha Das

2nd place: Django and Mango - DJ Sanghavi College, App Development for NGOs

Harshil Jhaveri
Ananya Malik
Shreya Desai
Swapnil Kadakia

3rd place: Novice - Shree LR Tiwari College, ML in Healthcare

Siddharth Singh
Avinash Chourasiya

4th place: Brogrammers - Rajiv Gandhi Institute of Technology, E-commerce

Nitish Talekar
Saad Ghojaria
Aayush Singh
Deepanshu Sonparote

5th place: Bit by Bit - TSEC, Gamification

Hiba Hussain
Mahima Gupta
Surya Halwasia
Maitreyee Koli

Sponsors

- Adapty
Problem Statement Sponsors, Deliverables: Rs. 35,000/-
- HackerEarth
Innovation and Platform Partner, Deliverables: Use of HackerEarth platform, Tshirts for winning teams
- Cloudsploit
Deliverables: Winners receive 4 months of Plus service (worth \$440) while top 10 teams win 4 months of Basic Service
- Wolfram
Deliverables: Winners receive 4 months of Plus service (worth \$440) while top 10 teams win 4 months of Basic Service
- Hasura
Deliverables: The best app built using the Hasura GraphQL Engine will win a Rs.5000 gift coupon from Flipkart.
- La Pinoz Pizza
Deliverables: Rs. 7,000/-
- Safarnama Cafe
Deliverables: Rs. 1,000/-
- Melting Morsels
Deliverables: 10 food boxes for judges
- Hell Energy Drink
Deliverables: 240 cans of Hell Energy Drink

Committee Members

BE:

Anshul Rawat
Kaustubh Khavnekar
Neha Makhija
Twisha Saraiya

TE:

Ankita Kar
Deetipriya Sen
Krish Shah
Kunal Desai
Neelraj Patil

SE:

Akshay Galgali
Amol Sawant

Chinmay Patil
Harsh Kukreja
Ishita Kotian
Jay Shah
Kenil Shah
Malvika Rao
Rishabh Saini
Ritika Talreja
Rohit Methwani

Volunteers:

Akshay Zantye
Aditi Acharya
Dhyey Parikh
Khushboo Galrani
Khushi Bhuwania
Kushagra Shrivastava
Paras Bhavnani
Priyanka Sheth
Samay Nasta
Shivang Raikar
Suyog Ahuja

Participants Feedback:

<https://docs.google.com/spreadsheets/d/1zdRnPbVnqw6KQaei9Jf7Q7JrzB0PzIzj8qD-OzXuMYk/edit?usp=sharing>

Report Presented On
“TSEC HACKATHON 2018”



Information Technology Department

TSEC CodeStorm

Thadomal Shahani Engineering college

TSEC HACKATHON-2018

About Event

Event Name:	TSEC Hackathon-2018
Date:	21 st - 22 nd Sept-2018
Venue:	TSEC Bandra, Mumbai-400050
Duration:	32 Hours
Number of Teams:	65-Teams
Mentor:	Dr. Madhuri Rao (H. O. D of I.T)
Winning Team Name:	Big-Oh
Problem Statement:	Blockchain & Social Cause
Challenge Tag:	#CodeToInnovate

Overview of TSEC CodeStorm

TSEC CodeStorm serves as a Campus Chapter of CodeChef and provides a proficient platform for coding and software development. The committee collocates various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. The goal is to expand and surge opportunities for aspiring coders through our events and workshops. A Hackathon will be the major event organized by us. It is a gathering where programmers collaboratively code in an extreme manner over a duration of time. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards a glowing career.

Overview of TSEC Hackathon 2018

TSEC CodeStorm organized its first ever Hackathon at Thadomal Shahani Engineering College on 21st-22nd September 2018. The event was a grand success with a grand participation of over 250 students from 50 Colleges across Mumbai. The event was organized by the committee TSEC CodeStorm which serves as campus chapter of CodeChef, the committee comprises of 9 senior committee members and 11 junior committee members. The event was an innovation over the trending technology of Blockchain. The problem statements revolved around the technology of Blockchain or over a social cause.

The participants had to code for 32 hours on a go and develop a working and a sustainable software that fulfills the requirements expected by the allotted problem statements. The food and resting facilities were arranged by the committee inside the campus for the convince of participants. The event started with an orientation ceremony, which welcomed the participants and explained the process and the flow of the event. The goals and objectives of the event were mentioned and put forward. The participants had to present their work as a final presentation to the judges. There were 2 judges for each problem statement.

Problem Statement:

1.) Centralized Government Schemes Portal / Application-

Design a Website Portal or an Application for the government schemes provided by the Central Government as well as the State Government. The proposed system should provide a centralized platform for the probing all the schemes provided by the Central and State Government. Schemes related to Education and Learning, Health and Wellness, Electricity, Water and Local services, Money and Taxes, Jobs, Justice, Law and Grievances, Travel and Tourism, Business and Self-employed, Births, Deaths, Marriages and Child care, Pension and Benefits, Transport and Infrastructure, Citizenship, Visas & Passports, Agriculture, Rural and Environment, Science, IT and Communications.

2.) Engineering Students Career Assist System-

Design an Application/Website which will help students find colleges worldwide based on their budget,percentage, percentile and their scores of internationally identified tests(GRE,TOEFL etc..). All these factors should be taken into consideration to find out in which of the top most colleges they are eligible for . This will help save student's time and and will give all the relevant as well as best results.

3.) Digital Citizen Guidance-

Mobile Application or a Web Portal for the citizens to take precautionary measures in case of emergency situations like violence, accidents, natural calamity, terrorist attack, traffic congestion due to political rallies/ processions, festival gathering, preventive maintenance of basic supplies like water/ electricity, Volatile law & order situations. The Application should help the citizens and other civic agencies to act smart in these conditions so that inconvenience/miseries to the general public can be avoided/ minimized.

4.) Staff Appreciation Program-

Appreciation is a fundamental human need. Employees respond to appreciation expressed through recognition of their good work because it confirms their work is valued by others. When employees and their work are valued, their satisfaction and productivity rises, and they are motivated to maintain or improve their good work. Design an application by which the staff of the institution/university will know that they are making a meaningful contribution for the institute's success.

5.) **Remote-voting-**

Electronic voting (e-voting), which uses electronic systems to aid casting and counting votes in an election, has been a research topic of interest for the past few decades in cryptography. Remote-voting can be viewed as special case of secure multi-party computation . Develop a secure, transparent and decentralized application for remote voting system as a medium for voting for various purposes including views on different issues or political voting . Showcase your idea, and propose an e-voting protocol based on the blockchain technology.

Glimpses of the Event:









Committee Members :

Senior Committee members

- Dhanush mukhi
- Ritu Arya
- Jasleen Kaur
- Rahul Bakhtiani
- Aniket Naik
- Saahil Chawande
- Piyush Khanna
- Jayesh Lilani
- Varkha Chhatwani

Junior Committee Members

- Saurabh Singh
- Karan Nawani
- Anirudh poroorkara
- Nivedita Lodha
- Apratim Shukla
- Miloni Vasa
- Shivani Desai
- Tanay Ganeriwal
- Siddharth Lodha
- Hiral Paghadal
- Anezka Virani

Report Created By
Ms. Varkha Chhatwani
&
Mr. Saurabh Singh

Information Technology Department

*****_***_*****

TSEC HACKS 2020 Report

Date held: 05/02/2020 - 06/02/2020

Duration: 24 Hour Hackathon

Registration fee: Rs 210.16/- per team (all inclusive of taxes)

Registration statistics:

	Original	Shortlisted
Number of participants	776	189
Number of teams	211	59

Sponsors:

Organization Name	Task	Sponsorship amount
IIDE	Distributed pamphlets, 2 seminars	Rs 50,000 /-
IMFS	1 seminar	Rs 18,000 /-
IMS	2 seminars	Rs 8,000/-
HELL Energy	Publicity and banner in college	250 cans of energy drink
Dominos	Pizza stall in college	Rs 7,500 /-
Mojo-jojo	Publicity and banner in college	Free coconut water drink
Safarnama	Banner in college	Rs 1500 /-

Prize money (cash):

1st place - Rs 25,000/-

2nd place - Rs 15,000/-

3rd place - Rs 10,000/-

Winners:

- **1st place** - Syntax terror(TSEC)
- **2nd place** - Bits N Bytes (FCRCE)
- **3rd place** - Wanc Coders(AIKTC) **and** Reactive error(Rizvi)

Judges:

- Dr.V.K. Dhar, Senior Scientist, B.A.R.C
- Mr.Prateek Gupte, VP Product, Haptik
- Mr.Darshan Pania, Lead Android Engineer, CleverTap
- Mr.Bharat Tolani, Senior Consultant, Capgemini
- Dr. Irfan Siddaratam, HOD I.T., K.J. Somaiya
- Mr. Rohan Arora, Co-founder, Bloombench
- Mr.Shravan Agarwal, Co-founder, Rirev

Convener: Dr. G.T. Thampi

Co-conveners: Prof. Tasneem Mirza and Dr. Tanuja Sarode

Co-ordinators: Prof. Darakhshan Khan and Dr. Shilpa Verma

Problem Statements:

Machine Learning:

1) Movie Recommendation System.

The prototype should be able to solve the following problems.

a. Given a particular user_id, find the genre he is most likely will love watching.

b. Given a particular user_id, find the users he is most similar to

c. Given a particular movie_id, find the other movies which are the most similar to it.

Dataset: <https://grouplens.org/datasets/movielens/>

Use 'Recommended for education and development section' full dataset of 265 MB.

2) Topic Detection System

If-else is a popular topic in Computer Programming in the Java language.

1.Problem Statement: Create an application using NLP that detects whether a given statement is from If-Else chapter or not.

2.Dataset: Link for a few books is given below. Extract the data from the pdfs by scraping..

Example :

Input: "If - Else is a conditional statement."

Output: From the If-Else Chapter.

Input: "I will give a party if Sachin scores a century today."

Output: Not from the If-Else Chapter.

https://drive.google.com/drive/u/0/folders/1ScmXLB_pMKylTIQVYzcbdy4yMNM5hoXM

You can use this link to find other books - <https://libgen.is/>

Blockchain:

1) Blockchain based E-Voting system

Currently, voting in India is done using an Electronic Voting Machine (EVM), which has several problems, namely time-consuming nature, needs a human resource for counting votes/managing, can be tampered with, etc.

A Blockchain-based e-voting system can not only make the whole voting procedure, secured and tamperproof but also allows voters to vote from their smart devices, thus reducing the time consumed.

Counting votes would also be easier and will be subject to fewer inaccuracies and more transparency.

2) Blockchain in Healthcare

Healthcare is an industry where the ability to access information or any omission in a patient's record could be the difference between life and death.

Maintaining patients' previous records is an integral part of the Healthcare Industry. The current scenario puts the onus on the patients to retain physical copies of their medical history which pose inherent challenges like portability and accessibility.

A blockchain-based solution is required that allows patients to add their medical records to the blockchain securely.

This information should be encrypted and only accessible by authorized personnel, which is allowed by the patient.

Such a tamper-proof and secured system would easily bypass the drawbacks of the current paradigm, without sacrificing functionality.

Web/Android App

1) Ecommerce

According to [a recent report by Accenture](#), 91% of consumers are more likely to buy from companies who remember them and provide relevant offers. Further, 83% of them are also willing to share their data in exchange for a personalised experience.

Personalisation can change the current scenario in the Ecommerce Industry.

Make a personalised Ecommerce Website of your choice.

Suggestions :

1)The website should be able to track customers purchases and social media accounts and make a profile out of it.

2)Using this profile:

1. Personalised Home Page can be created; for example, a fitness enthusiast can be automatically redirected to the sports section. It could also have a 'pick up where you left off' section for incomplete orders.
2. Recommendations can be made based on the customers browsing history and purchases/inventory.
3. Further geotargeting can be used to make campaigns based on the user's location.
4. Unique campaigns can be made for the customer during special occasions, for example - 10% discount on cakes on birthdays.
5. Exit-intent campaigns can be used to encourage customers to complete transactions.

2) Social Cause

The Apprentice Project

Brief :

The Apprentice Project (TAP) team (alumni from IIM, TFI, and YIF) aims to build life skills in low-income kids by placing selected high-skilled volunteers in under-resourced schools for one year.

Currently, TAP works with 2500 students across 20+ schools with 200 facilitators.

Every Saturday for three hours the volunteers/facilitators mentor and teach in one of the following verticals based on their skills: Drama, Dance, Music, Public Speaking, Ultimate Frisbee, Electronics & Coding and Visual Arts.

Problem Statement:

1) Selection

The primary job of the TAP team is to select 250 facilitators from 2500 applications; for this, they currently use manual and excel based methods for sending emails and keeping information about the volunteer.

Create a volunteer management solution which can help the TAP team select the facilitators from the three-stage process so that all the emails are automated, and the serial numbers are generated automatically, etc.

The solution should make it easier for one person to manage everything, similar to CRM and ERP software.

2) Operation

For TAP's Operations team create a solution which can automate the communication with facilitators & provide a dashboard to the admin for facilitator management.

Currently, they use Google forms & sheets to collect data from facilitators, and admin staff manually do everything, including sending out Whatsapp messages.

Resources :

Refer "Selections" and "Operations" from TAP Processes PDF

https://drive.google.com/file/d/1-GqtA6AeHPTCKHWdNnxk63_P578SP06j/view

PS: This problem statement requires WhatsApp integration. Please attempt to utilize the relevant API queries.

Photos:



The poster features a central illustration of three people working together on a large screen, surrounded by gears and a crane. The background is a light purple gradient. At the top right, there are three logos: HSNC (Haryana State Nutrition Council), TSEC Engineering College (Thadomal Shahani Engineering College), and TSEC CodeCell. The main text reads 'TSEC Codecell Presents TSEC Hacks'. Below this, it states 'Hackathon on 5th & 6th February' and 'Registrations open till 27th January'. Contact information for Rishab Saini and Ritika Talreja is provided. At the bottom, the convener Dr. G. T. Thampi and four coordinators are listed. Social media and website links for TSEC CodeCell are also included.

HSNC
HARYANA STATE NUTRITION COUNCIL

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

TSEC
CodeCell

TSEC Codecell Presents
TSEC
Hacks

 Hackathon on 5th & 6th February.
 Registrations open till 27th January.

Contact:
Rishab Saini: 98204 87592
Ritika Talreja: 97699 62696

 **Cash Prizes upto ₹50,000 !**

CONVENER
Dr. G. T. Thampi

CO-ORDINATORS
Prof. Shilpa Verma

CO-CONVENER
Dr. Tanuja Sarode

CO-CONVENER
Prof. Tasneem Mirza

CO-ORDINATORS
Prof. Darakhshan Khan

 tseccodecell  Tsec Codecell  tseccodecell.com







Report Presented On
“TSEC HACKATHON 2019”



Information Technology Department

TSEC CodeStorm
Thadomal Shahani Engineering college

TSEC HACKATHON-2019

About Event

Event Name:	TSEC Hackathon-2019
Date:	20 th - 21 st Sept-2019
Venue:	TSEC Bandra, Mumbai-400050
Duration:	32 Hours
Number of Teams:	68-Teams
Mentor:	Dr. Madhuri Rao (H. O. D of I.T)
Winning Team Name:	Brainstormers
Problem Statement:	Blockchain & Social Cause
Challenge Tag:	#CodeToInnovate

Overview of TSEC CodeStorm

TSEC CodeStorm serves as a Campus Chapter of CodeChef and provides a proficient platform for coding and software development. The committee collocates various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. The goal is to expand and surge opportunities for aspiring coders through our events and workshops. A Hackathon is the major event organized by us. It is a gathering where programmers collaboratively code in an extreme manner over a duration of time. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards a glowing career.

Overview of TSEC Hackathon 2019

TSEC CodeStorm organized Hackathon at Thadomal Shahani Engineering College for the second successive year on 20th -21st September 2019. The event was a grand success with a grand participation of over 210 students from 50 Colleges across Mumbai. The event was organized by the committee TSEC CodeStorm which serves as campus chapter of CodeChef, the committee comprises of 16 senior committee members and 7 junior committee members. The event was an innovation over the trending technology of Blockchain. The problem statements revolved around the technology of Blockchain or over a social cause.

The participants had to code for 32 hours on a go and develop a working and a sustainable software that fulfills the requirements expected by the allotted problem statements. The food and resting facilities were arranged by the committee inside the campus for the convenience of participants. The event started with an orientation ceremony, which welcomed the participants and explained the process and the flow of the event. The goals and objectives of the event were mentioned and put forward. The participants had to present their work as a final presentation to the judges. There were 4 panels of 5 judges each for Social Causes problem statements. There were 3 external judges for judging the projects based on BlockChain problem statements.

The Technical Team was allocated to help the participants regarding the frameworks, execution and any other technical issue.

There were 3 winning teams-

The Brainstormers, a team of 3, Mr. Pranay Bagrecha, Mr. Pranay Lobo, Mr. Sahil Gupta secured **1st rank in the “TSEC Hackathon-2019”** and received a cash price of **Rs. 20,000/-** and **Vouchers worth Rs. 5,000/- INR.**

The Logic View, a team of 3, Mr. Praveshnarayan Tiwari, Mr. Tarun Soni and Mr. Siddhant Kapadne secured **2nd rank** and got a cash price of **Rs. 12,000/-** and **Vouchers worth Rs. 3,000/-INR.**

The Hopeful Dreamers, a team of 3, Mr. Manas Zagade, Mr. Pratik Vaishya and Mr. Chiren Shah secured **3rd rank** and won a cash price of **Rs. 8,000/-** and **Vouchers worth Rs. 2,000/- INR.**

All the participants were provided with a participating certificate.

Problem Statements:

Blockchain:

As both nation and global marketplace is transient and undergoing several transformations to keep pace with the technological advancement. Abundant promising & challenging paradigms are conceptualized on a daily basis. These include social & governance practices, which is to be leap-frogged into next level orbit characterization speed, frugality and infallibility. Among other technological entrants, blockchain has also shown its brawn towards providing imaginative/creative solutions to business processes at large.

TSEC Hackathon is offering a platform to aspiring participants to showcase their competency in decomposing problem definition and offering solutions leveraging blockchain technologies.

In its sophomore stage, TSEC Hackathon 2019 opens the following problem domains in the realm of blockchain applications for your selection. Participants are expected to offer creative solution leveraging available information, communication & computational technologies.

Blockchain/Smart Contract based Solutions for

1. Government subsidies

The government initiates multiple subsidy schemes every year to benefit the citizens. The subsidised supplements, equipment, food ration etc. are filtered through various levels of government bodies before reaching the citizens. Due to this the subsidies reach the citizens in a tempered manner. Develop a solution that inculcates Blockchain for the above problem.

A fullproof system where there can't be any tampering with subsidies is not present.

2. HR Management

In any organization, Human Resource (HR) management is an essential task. HR personnel have to pull off chores that comprise of hiring new candidates, attendance management, promotions, etc. Transparency in such undertakings is quite superficial. Develop a Blockchain and Smart Contract based system to ensure transparency, security and proof of work.

3. Defence Procurement

Defense and National security are the most critical for Integrity of the nation. Defense data integrity and communication security are paramount and pivotal for National strategies. Defence procurement is the process through which authorities in the field of defence acquire the various goods, services or works they need in order to perform their duties and missions. The Blockchain in Defense guarantees that the information cannot be changed or altered without the consent of the parties involved in the exchange. Develop Blockchain based system upon the mentioned guidelines.

4. Infrastructure Spending by the Government

Infrastructure is the term for the basic physical systems of a business or nation like transportation, communication, sewage, water, and electric systems. Spending on Infrastructure tend to be high-cost investments and are vital to a country's economic development and prosperity. As an investment, infrastructure tends to be less volatile than some other asset classes and is sometimes sought as an investment. Develop a Blockchain and Smart Contract based system to ensure transparent, secure, trustworthy, and optimized spending on such contracts by the government.

5. Indian Railway Management of Operations

The Indian Railways are one of the largest employers in the world having over 1.50 million employees. Handling such a huge employee base manually is a difficult task. Develop a system to cover major needs of the Railways including a management system for employees and the management of the operations. Use block chain data structure for transparency in all operations.

Social Causes:

The contemporary world is faced with unequal developments of geographies and skewed distribution of wealth among global citizens. The unequal world is an antidote for social disequilibrium and turbulence which are pulling down the progress of society at large. The conscientious citizens and world community are thinking aloud to confront these problems at hand and offering solutions to minimize the social drift and suffering of less fortunate people. It is realized that pervasive and ubiquitous ICT shall leverage as a force multiplier / resource multiplier in our endeavor for contributing to social causes. We are offering problems which should be addressed in terms of technological solutions which are enlisted as under:

6. Charity Aggregator

Life is a privilege for some and struggle for some others. It is imperative that we open our hearts and minds to the people in need of financial support.

Build an application that would enable a user to identify his area of interest and allow him to donate towards a cause of their choice and help them understand how important it is to give back to the society we live in. It needs to be transparent where they are able to see exactly how their donations were utilized.

7. Natural Calamity Alert

Natural calamities can affect people of different regions at a time. Make an application which will be helpful to the victims and volunteers. The volunteers will have real-time and updated news on the potential natural disaster in a region. Safe locations officially declared by the government should also be shown along with capacity and how occupied they are. Commuters can be shown maps with safe routes to desired destinations, free from floods, and other such affected areas.

8. Application for Fighting Fake News

The internet has enabled a whole new way to share information due to which it can be difficult to tell whether the news is credible or not. Develop a solution to check, verify and distinguish fake news from legitimate news on text, video and photos. It should be also able to cite the source and check whether it is trustworthy or not.

9. Fire Station

Major Fires in our city has been rising at an alarming rate and we must be prepared at any moment to tackle such situations and reduce the effect of damages as much as possible.

Come up with the idea for a website or an app where they can display important information pertaining to the safety of the general public regarding major fires. It can also track areas where a fire hazard has occurred so that they can alert people, fire station, etc. and provide them the location.

10. Waste Collection System

Design a smart waste collection system that allows citizens to segregate the various types of solid waste they want to dispose and the municipal authorities to efficiently collect the same.

The system should have interfaces for Citizens and Garbage Collector.

Citizen should have an option to schedule a waste pickup request, to see past history, to display the amount, categories and snap of garbage.

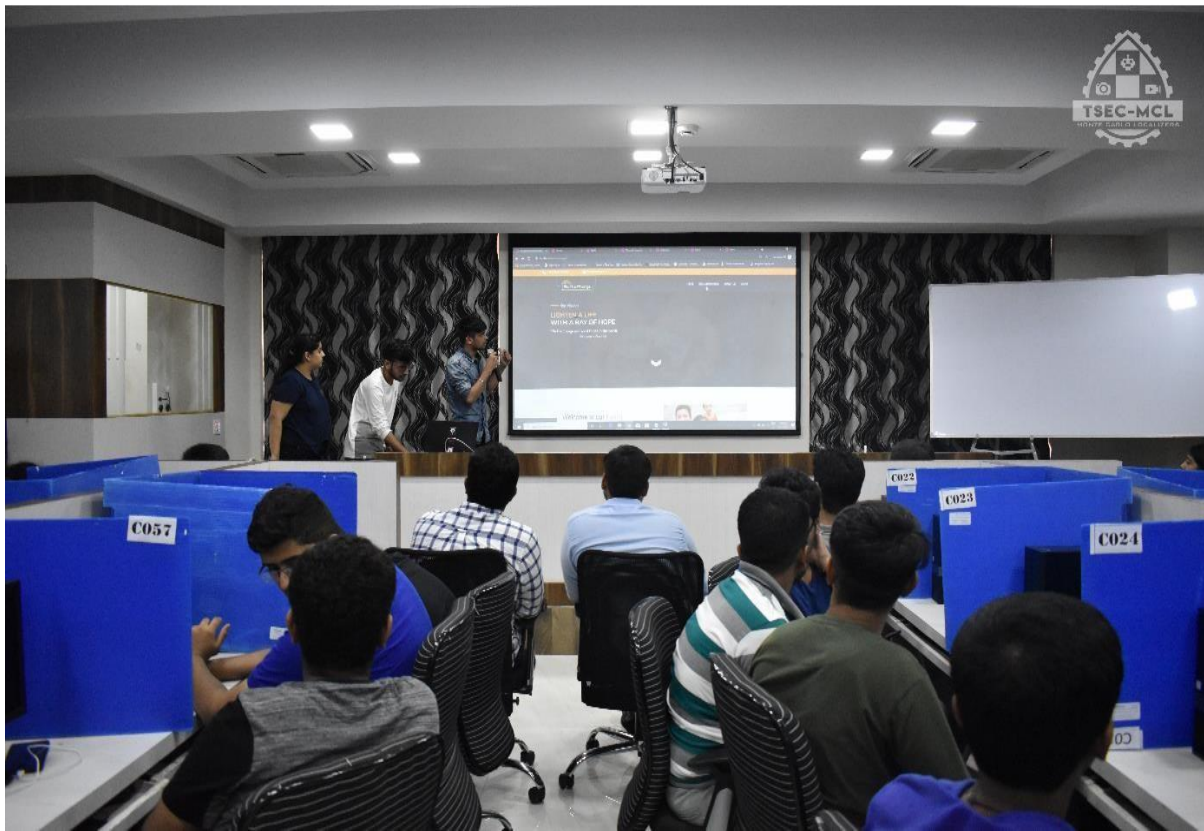
For Garbage collection you have to calculate the most optimal route for each truck as it is carrying a single type of garbage and must be GPS based, Garbage collector should be shown a list of all pickups to be made that day.

Types of Waste:

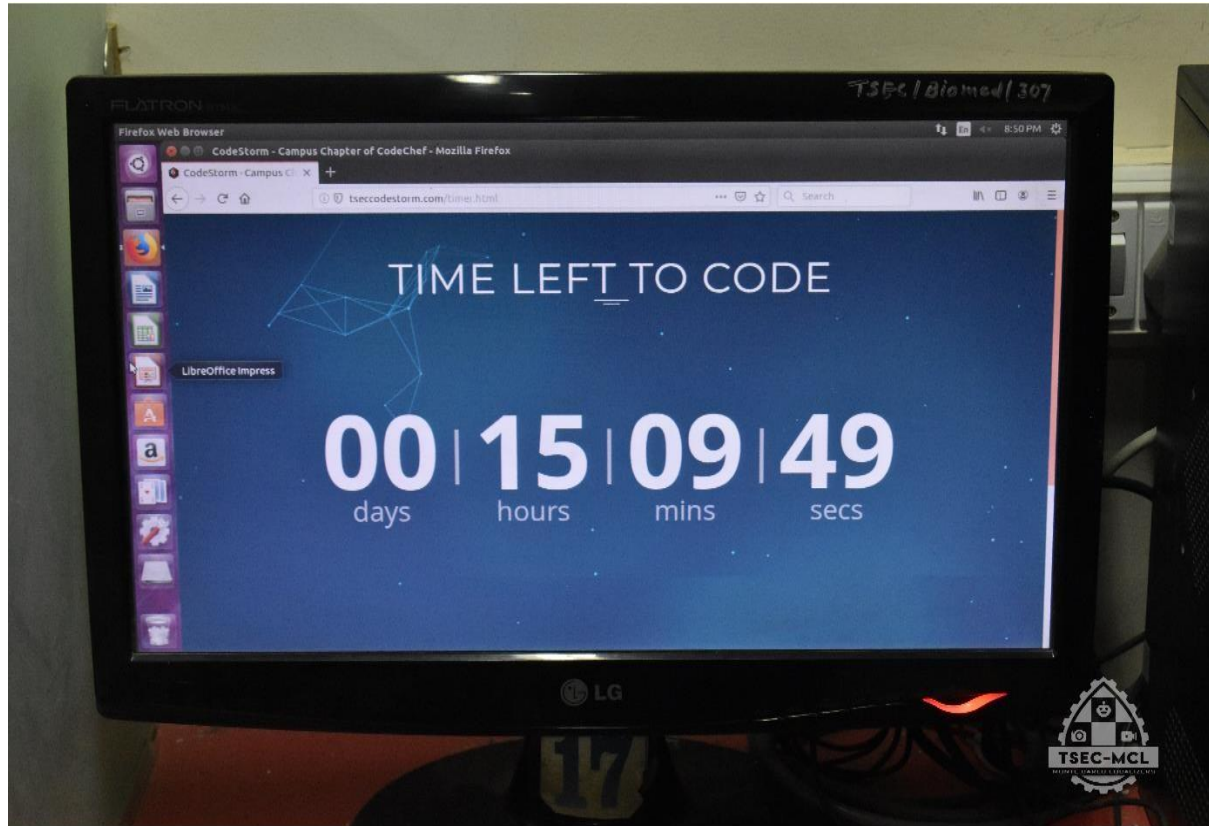
Organic waste, Recyclable waste, Toxic waste, Electronic waste, etc.

Glimpses of the Event:











TSEC HACKS 2020 Report

Date held: 05/02/2020 - 06/02/2020

Duration: 24 Hour Hackathon

Registration fee: Rs 210.16/- per team (all inclusive of taxes)

Registration statistics:

	Original	Shortlisted
Number of participants	776	189
Number of teams	211	59

Sponsors:

Organization Name	Task	Sponsorship amount
IIDE	Distributed pamphlets, 2 seminars	Rs 50,000 /-
IMFS	1 seminar	Rs 18,000 /-
IMS	2 seminars	Rs 8,000/-
HELL Energy	Publicity and banner in college	250 cans of energy drink
Dominos	Pizza stall in college	Rs 7,500 /-
Mojo-jojo	Publicity and banner in college	Free coconut water drink
Safarnama	Banner in college	Rs 1500 /-

Prize money (cash):

1st place - Rs 25,000/-

2nd place - Rs 15,000/-

3rd place - Rs 10,000/-

Winners:

- **1st place** - Syntax terror(TSEC)
- **2nd place** - Bits N Bytes (FCRCE)
- **3rd place** - Wanc Coders(AIKTC) **and** Reactive error(Rizvi)

Judges:

- Dr.V.K. Dhar, Senior Scientist, B.A.R.C
- Mr.Prateek Gupte, VP Product, Haptik
- Mr.Darshan Pania, Lead Android Engineer, CleverTap
- Mr.Bharat Tolani, Senior Consultant, Capgemini
- Dr. Irfan Siddaratam, HOD I.T., K.J. Somaiya
- Mr. Rohan Arora, Co-founder, Bloombench
- Mr.Shravan Agarwal, Co-founder, Rirev

Convener: Dr. G.T. Thampi

Co-conveners: Prof. Tasneem Mirza and Dr. Tanuja Sarode

Co-ordinators: Prof. Darakhshan Khan and Dr. Shilpa Verma

Problem Statements:

Machine Learning:

1) Movie Recommendation System.

The prototype should be able to solve the following problems.

a. Given a particular user_id, find the genre he is most likely will love watching.

b. Given a particular user_id, find the users he is most similar to

c. Given a particular movie_id, find the other movies which are the most similar to it.

Dataset: <https://grouplens.org/datasets/movielens/>

Use 'Recommended for education and development section' full dataset of 265 MB.

2) Topic Detection System

If-else is a popular topic in Computer Programming in the Java language.

1.Problem Statement: Create an application using NLP that detects whether a given statement is from If-Else chapter or not.

2.Dataset: Link for a few books is given below. Extract the data from the pdfs by scraping..

Example :

Input: "If - Else is a conditional statement."

Output: From the If-Else Chapter.

Input: "I will give a party if Sachin scores a century today."

Output: Not from the If-Else Chapter.

https://drive.google.com/drive/u/0/folders/1ScmXLB_pMKylTIQVYzcbdy4yMNM5hoXM

You can use this link to find other books - <https://libgen.is/>

Blockchain:

1) Blockchain based E-Voting system

Currently, voting in India is done using an Electronic Voting Machine (EVM), which has several problems, namely time-consuming nature, needs a human resource for counting votes/managing, can be tampered with, etc.

A Blockchain-based e-voting system can not only make the whole voting procedure, secured and tamperproof but also allows voters to vote from their smart devices, thus reducing the time consumed.

Counting votes would also be easier and will be subject to fewer inaccuracies and more transparency.

2) Blockchain in Healthcare

Healthcare is an industry where the ability to access information or any omission in a patient's record could be the difference between life and death.

Maintaining patients' previous records is an integral part of the Healthcare Industry. The current scenario puts the onus on the patients to retain physical copies of their medical history which pose inherent challenges like portability and accessibility.

A blockchain-based solution is required that allows patients to add their medical records to the blockchain securely.

This information should be encrypted and only accessible by authorized personnel, which is allowed by the patient.

Such a tamper-proof and secured system would easily bypass the drawbacks of the current paradigm, without sacrificing functionality.

Web/Android App

1) Ecommerce

According to [a recent report by Accenture](#), 91% of consumers are more likely to buy from companies who remember them and provide relevant offers. Further, 83% of them are also willing to share their data in exchange for a personalised experience.

Personalisation can change the current scenario in the Ecommerce Industry.

Make a personalised Ecommerce Website of your choice.

Suggestions :

1)The website should be able to track customers purchases and social media accounts and make a profile out of it.

2)Using this profile:

1. Personalised Home Page can be created; for example, a fitness enthusiast can be automatically redirected to the sports section. It could also have a 'pick up where you left off' section for incomplete orders.
2. Recommendations can be made based on the customers browsing history and purchases/inventory.
3. Further geotargeting can be used to make campaigns based on the user's location.
4. Unique campaigns can be made for the customer during special occasions, for example - 10% discount on cakes on birthdays.
5. Exit-intent campaigns can be used to encourage customers to complete transactions.

2) Social Cause

The Apprentice Project

Brief :

The Apprentice Project (TAP) team (alumni from IIM, TFI, and YIF) aims to build life skills in low-income kids by placing selected high-skilled volunteers in under-resourced schools for one year.

Currently, TAP works with 2500 students across 20+ schools with 200 facilitators.

Every Saturday for three hours the volunteers/facilitators mentor and teach in one of the following verticals based on their skills: Drama, Dance, Music, Public Speaking, Ultimate Frisbee, Electronics & Coding and Visual Arts.

Problem Statement:

1) Selection

The primary job of the TAP team is to select 250 facilitators from 2500 applications; for this, they currently use manual and excel based methods for sending emails and keeping information about the volunteer.

Create a volunteer management solution which can help the TAP team select the facilitators from the three-stage process so that all the emails are automated, and the serial numbers are generated automatically, etc.

The solution should make it easier for one person to manage everything, similar to CRM and ERP software.

2) Operation

For TAP's Operations team create a solution which can automate the communication with facilitators & provide a dashboard to the admin for facilitator management.

Currently, they use Google forms & sheets to collect data from facilitators, and admin staff manually do everything, including sending out Whatsapp messages.

Resources :

Refer "Selections" and "Operations" from TAP Processes PDF

https://drive.google.com/file/d/1-GqtA6AeHPtCKHWdNnxk63_P578SP06j/view

PS: This problem statement requires WhatsApp integration. Please attempt to utilize the relevant API queries.

Photos:



The poster features a central illustration of three people working together on a large screen displaying a bar chart, with gears and a crane in the background. The text is arranged in a clean, professional layout. At the top right, there are three logos: HSNC, TSEC Engineering College, and TSEC CodeCell. The main title 'TSEC Hacks' is prominently displayed in the center. Below it, the event details are listed: 'Hackathon on 5th & 6th February' and 'Registrations open till 27th January'. Contact information for Rishab Saini and Ritika Talreja is provided. The bottom section lists the Convener, Dr. G. T. Thampi, and four Co-ordinators. Social media and website links are at the very bottom.

HSNC **THADOMAL BHAIANI TSEC ENGINEERING COLLEGE** **TSEC CodeCell**

TSEC Codecell Presents
TSEC Hacks

 Hackathon on 5th & 6th February.
 Registrations open till 27th January.

Contact:
Rishab Saini: 98204 87592 Ritika Talreja: 97699 62696

 **Cash Prizes upto ₹50,000 !**

CONVENER
Dr. G. T. Thampi

CO-ORDINATORS CO-CONVENER CO-CONVENER CO-ORDINATORS
Prof. Shilpa Verma Dr. Tanuja Sarode Prof. Tasneem Mirza Prof. Darakhshan Khan

 tseccodecell  Tsec Codecell  tseccodecell.com







Report Presented On
“TSEC HACKATHON 2019”



Information Technology Department

TSEC CodeStorm
Thadomal Shahani Engineering college

TSEC HACKATHON-2019

About Event

Event Name:	TSEC Hackathon-2019
Date:	20 th - 21 st Sept-2019
Venue:	TSEC Bandra, Mumbai-400050
Duration:	32 Hours
Number of Teams:	68-Teams
Mentor:	Dr. Madhuri Rao (H. O. D of I.T)
Winning Team Name:	Brainstormers
Problem Statement:	Blockchain & Social Cause
Challenge Tag:	#CodeToInnovate

Overview of TSEC CodeStorm

TSEC CodeStorm serves as a Campus Chapter of CodeChef and provides a proficient platform for coding and software development. The committee collocates various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. The goal is to expand and surge opportunities for aspiring coders through our events and workshops. A Hackathon is the major event organized by us. It is a gathering where programmers collaboratively code in an extreme manner over a duration of time. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards a glowing career.

Overview of TSEC Hackathon 2019

TSEC CodeStorm organized Hackathon at Thadomal Shahani Engineering College for the second successive year on 20th -21st September 2019. The event was a grand success with a grand participation of over 210 students from 50 Colleges across Mumbai. The event was organized by the committee TSEC CodeStorm which serves as campus chapter of CodeChef, the committee comprises of 16 senior committee members and 7 junior committee members. The event was an innovation over the trending technology of Blockchain. The problem statements revolved around the technology of Blockchain or over a social cause.

The participants had to code for 32 hours on a go and develop a working and a sustainable software that fulfills the requirements expected by the allotted problem statements. The food and resting facilities were arranged by the committee inside the campus for the convenience of participants. The event started with an orientation ceremony, which welcomed the participants and explained the process and the flow of the event. The goals and objectives of the event were mentioned and put forward. The participants had to present their work as a final presentation to the judges. There were 4 panels of 5 judges each for Social Causes problem statements. There were 3 external judges for judging the projects based on BlockChain problem statements.

The Technical Team was allocated to help the participants regarding the frameworks, execution and any other technical issue.

There were 3 winning teams-

The Brainstormers, a team of 3, Mr. Pranay Bagrecha, Mr. Pranay Lobo, Mr. Sahil Gupta secured **1st rank in the “TSEC Hackathon-2019”** and received a cash price of **Rs. 20,000/-** and **Vouchers worth Rs. 5,000/- INR.**

The Logic View, a team of 3, Mr. Praveshnarayan Tiwari, Mr. Tarun Soni and Mr. Siddhant Kapadne secured **2nd rank** and got a cash price of **Rs. 12,000/-** and **Vouchers worth Rs. 3,000/-INR.**

The Hopeful Dreamers, a team of 3, Mr. Manas Zagade, Mr. Pratik Vaishya and Mr. Chiren Shah secured **3rd rank** and won a cash price of **Rs. 8,000/-** and **Vouchers worth Rs. 2,000/- INR.**

All the participants were provided with a participating certificate.

Problem Statements:

Blockchain:

As both nation and global marketplace is transient and undergoing several transformations to keep pace with the technological advancement. Abundant promising & challenging paradigms are conceptualized on a daily basis. These include social & governance practices, which is to be leap-frogged into next level orbit characterization speed, frugality and infallibility. Among other technological entrants, blockchain has also shown its brawn towards providing imaginative/creative solutions to business processes at large.

TSEC Hackathon is offering a platform to aspiring participants to showcase their competency in decomposing problem definition and offering solutions leveraging blockchain technologies.

In its sophomore stage, TSEC Hackathon 2019 opens the following problem domains in the realm of blockchain applications for your selection. Participants are expected to offer creative solution leveraging available information, communication & computational technologies.

Blockchain/Smart Contract based Solutions for

1. Government subsidies

The government initiates multiple subsidy schemes every year to benefit the citizens. The subsidised supplements, equipment, food ration etc. are filtered through various levels of government bodies before reaching the citizens. Due to this the subsidies reach the citizens in a tempered manner. Develop a solution that inculcates Blockchain for the above problem.

A fullproof system where there can't be any tampering with subsidies is not present.

2. HR Management

In any organization, Human Resource (HR) management is an essential task. HR personnel have to pull off chores that comprise of hiring new candidates, attendance management, promotions, etc. Transparency in such undertakings is quite superficial. Develop a Blockchain and Smart Contract based system to ensure transparency, security and proof of work.

3. Defence Procurement

Defense and National security are the most critical for Integrity of the nation. Defense data integrity and communication security are paramount and pivotal for National strategies. Defence procurement is the process through which authorities in the field of defence acquire the various goods, services or works they need in order to perform their duties and missions. The Blockchain in Defense guarantees that the information cannot be changed or altered without the consent of the parties involved in the exchange. Develop Blockchain based system upon the mentioned guidelines.

4. Infrastructure Spending by the Government

Infrastructure is the term for the basic physical systems of a business or nation like transportation, communication, sewage, water, and electric systems. Spending on Infrastructure tend to be high-cost investments and are vital to a country's economic development and prosperity. As an investment, infrastructure tends to be less volatile than some other asset classes and is sometimes sought as an investment. Develop a Blockchain and Smart Contract based system to ensure transparent, secure, trustworthy, and optimized spending on such contracts by the government.

5. Indian Railway Management of Operations

The Indian Railways are one of the largest employers in the world having over 1.50 million employees. Handling such a huge employee base manually is a difficult task. Develop a system to cover major needs of the Railways including a management system for employees and the management of the operations. Use block chain data structure for transparency in all operations.

Social Causes:

The contemporary world is faced with unequal developments of geographies and skewed distribution of wealth among global citizens. The unequal world is an antidote for social disequilibrium and turbulence which are pulling down the progress of society at large. The conscientious citizens and world community are thinking aloud to confront these problems at hand and offering solutions to minimize the social drift and suffering of less fortunate people. It is realized that pervasive and ubiquitous ICT shall leverage as a force multiplier / resource multiplier in our endeavor for contributing to social causes. We are offering problems which should be addressed in terms of technological solutions which are enlisted as under:

6. Charity Aggregator

Life is a privilege for some and struggle for some others. It is imperative that we open our hearts and minds to the people in need of financial support.

Build an application that would enable a user to identify his area of interest and allow him to donate towards a cause of their choice and help them understand how important it is to give back to the society we live in. It needs to be transparent where they are able to see exactly how their donations were utilized.

7. Natural Calamity Alert

Natural calamities can affect people of different regions at a time. Make an application which will be helpful to the victims and volunteers. The volunteers will have real-time and updated news on the potential natural disaster in a region. Safe locations officially declared by the government should also be shown along with capacity and how occupied they are. Commuters can be shown maps with safe routes to desired destinations, free from floods, and other such affected areas.

8. Application for Fighting Fake News

The internet has enabled a whole new way to share information due to which it can be difficult to tell whether the news is credible or not. Develop a solution to check, verify and distinguish fake news from legitimate news on text, video and photos. It should be also able to cite the source and check whether it is trustworthy or not.

9. Fire Station

Major Fires in our city has been rising at an alarming rate and we must be prepared at any moment to tackle such situations and reduce the effect of damages as much as possible.

Come up with the idea for a website or an app where they can display important information pertaining to the safety of the general public regarding major fires. It can also track areas where a fire hazard has occurred so that they can alert people, fire station, etc. and provide them the location.

10. Waste Collection System

Design a smart waste collection system that allows citizens to segregate the various types of solid waste they want to dispose and the municipal authorities to efficiently collect the same.

The system should have interfaces for Citizens and Garbage Collector.

Citizen should have an option to schedule a waste pickup request, to see past history, to display the amount, categories and snap of garbage.

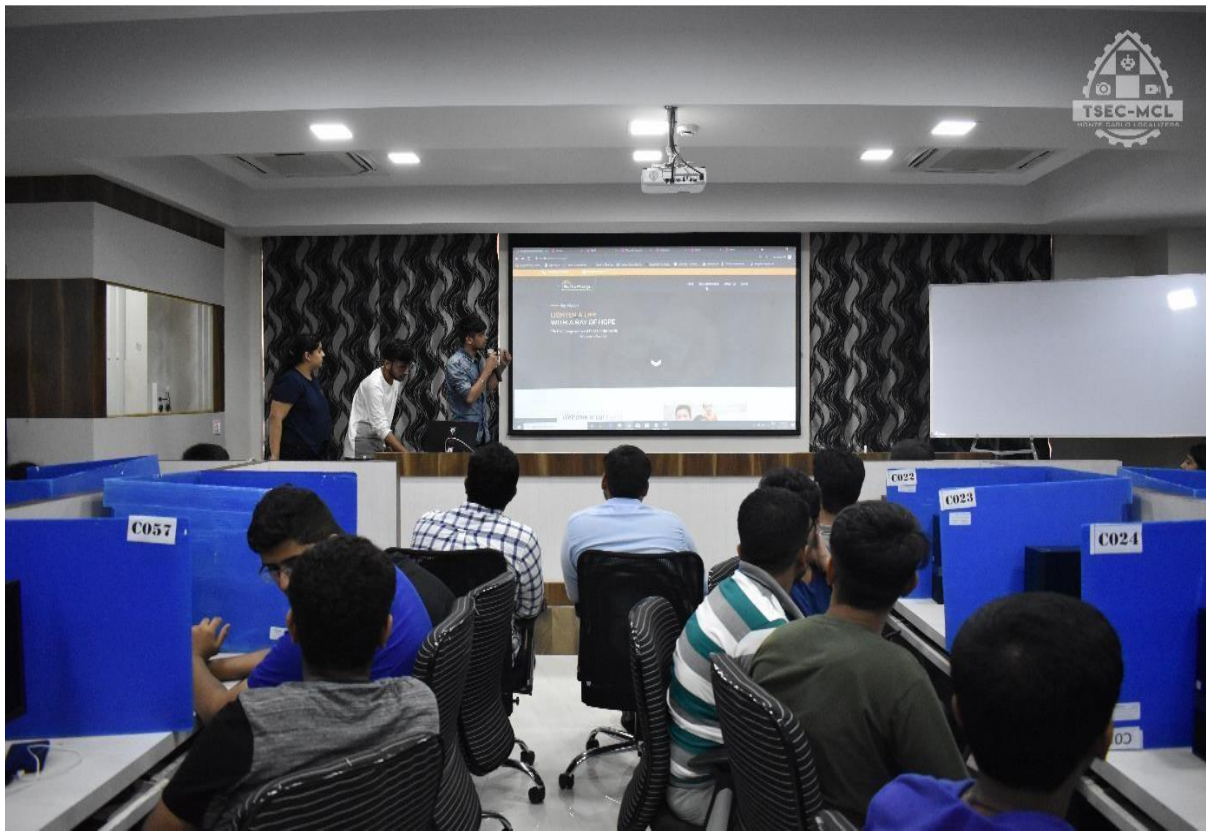
For Garbage collection you have to calculate the most optimal route for each truck as it is carrying a single type of garbage and must be GPS based, Garbage collector should be shown a list of all pickups to be made that day.

Types of Waste:

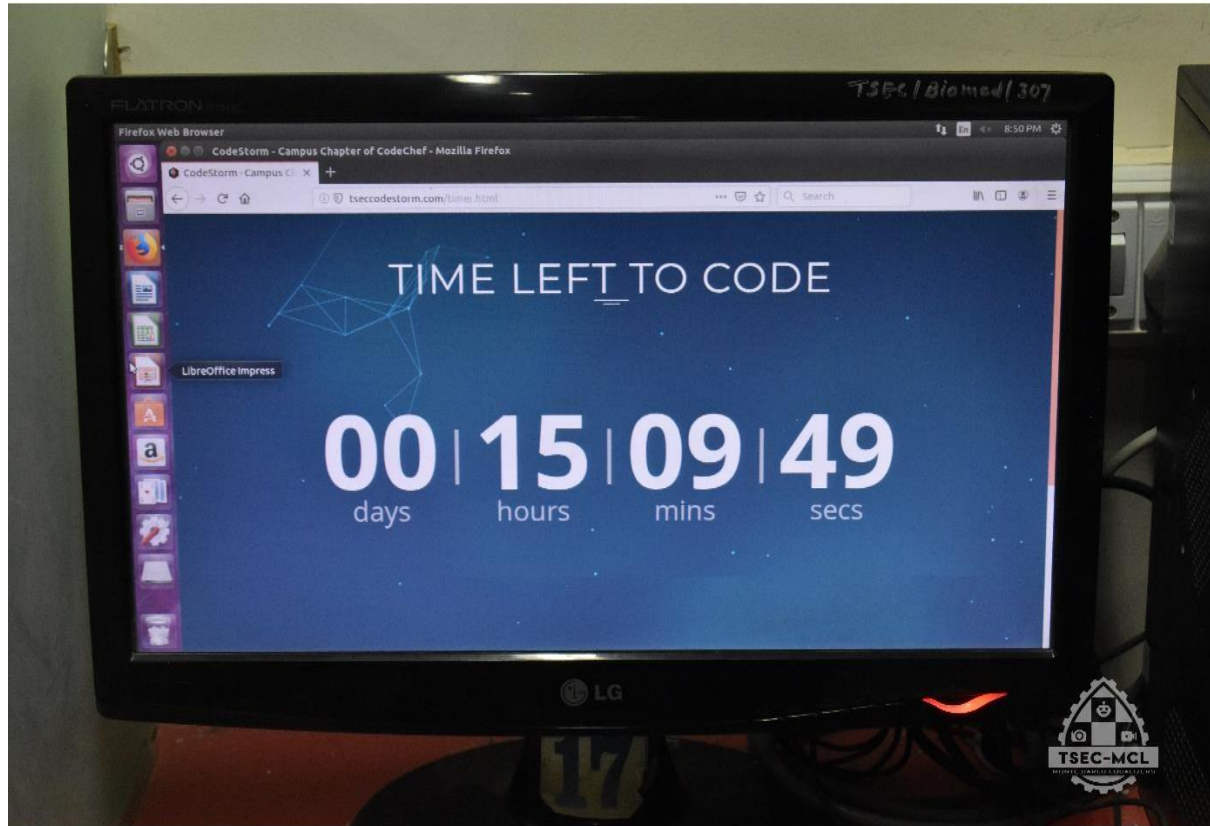
Organic waste, Recyclable waste, Toxic waste, Electronic waste, etc.

Glimpses of the Event:











Report Presented On
“TSEC TECHNOVATION 2020”



Information Technology Department

TSEC CodeStorm

Thadomal Shahani Engineering college

TECHNOVATION-2019

Event Name:	Technovation'20
Date:	2 nd March,2020
Venue:	TSEC Bandra, Mumbai-400050
Duration:	6 Hours (10am-4pm)
Number of Teams:	64
Mentor:	Dr. Madhuri Rao (H. O. D of I.T) Prof. Chetan Agarwal Prof. Sanober Sheikh
Challenge Tag:	#InnovationIsTechnology

Overview of TSEC CodeStorm

TSEC CodeStorm serves as a Campus Chapter of CodeChef and provides a proficient platform for coding and software development. The committee collocate various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. The goal is to expand and surge opportunities for aspiring coders through our events and workshops. A Hackathon is the major event organized by us. It is a gathering where programmers collaboratively code in an extreme manner over a duration of time. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards a glowing career.

Overview of TECHNOVATION'20

TSEC CodeStorm organized **Technovation'20**, which is basically a “Technical Exhibition” where students from all over the city from different colleges and different years display their projects and the prime three projects bagged the cash prize. It was organized within the college premises. The winning team was awarded a cash prize of 2,000 whereas the 1st Runner-up and the 2nd Runner-up were awarded a cash prize of 1500 and 1000 respectively along with certificate of participation which was given to all participants. The event was organized by CodeStorm which comprises of 16 seniors committee members and 7 junior committee members.

The Winning Teams are:

Winner → Topic: Parking Occupancy Detection and Reservation System in Private and Public Parking spaces using Deep Neural Networks
College: Vidyalkar Institute of Technology (VIT)
Team Members: Vignesh Dhuri, Afzal Khan, Yash Kamtekar

1st Runner-up → Topic: Smart Water Monitoring and Mentoring
College: Thadomal Shahani Engineering College
Team Members:

2nd Runner-up → Topic: Grace -The Health App
College:
Team Members: Rahul Gala,

Glimpses of the Event:



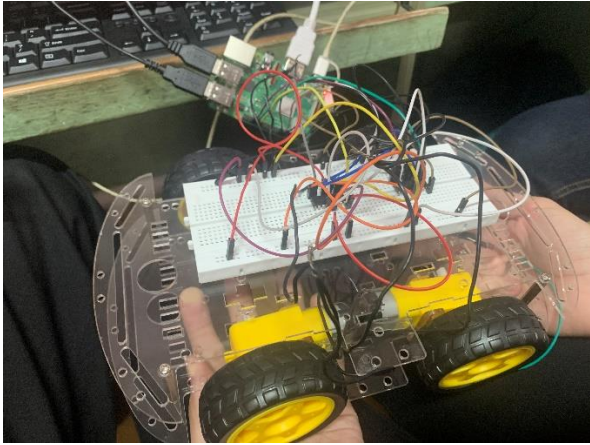
Faculty and Judges



Judging Round



Participants



Projects Presented by Participants



THE TEAM

TSEC CodeStorm Committee:

Senior Committee:

1. Kunal Israni
2. Ananya Arora
3. Sachi Bijlani
4. Dhyey Parikh
5. Harsh Harwani
6. Kushagra Shrivastava
7. Parth Mehta
8. Vinayak Mhatre
9. Kritika Makhija
10. Khushboo Galrani
11. Vaishnavi Udupa
12. Rachna Soundatti
13. Hariharan Pillai
14. Sarvesh Pande
15. Srishti Rajani
16. Dhruv Karve

Junior Committee:

1. Rachell Nihalani
2. Nidhi Hemrajani
3. Aditya Methil
4. Anushka Baghchandani
5. Madhu Damani
6. Darshan Deshpande
7. Harsh Navani

**Report Created By:
Miss. Madhu Damani**

Information Technology Department

*****_***_*****

Report Presented On
“Senior Committee Interview 2020”



Information Technology Department

TSEC CodeStorm

Thadomal Shahani Engineering College

Senior Committee Interview 2020

Event Name:	Senior Committee Interview 2020
Date:	29 th & 30 th April, 1 st , 2 nd & 4 th May, 2020
Venue:	-
Duration:	15 Hours
Number of Applicants:	30
Mentor:	Dr. Madhuri Rao (H. O. D of I.T)
Co-ordinators:	Prof. Sanober Shaikh Prof. Chetan Agarwal

TSEC HACKS 2020 Report

Date held: 05/02/2020 - 06/02/2020

Duration: 24 Hour Hackathon

Registration fee: Rs 210.16/- per team (all inclusive of taxes)

Registration statistics:

	Original	Shortlisted
Number of participants	776	189
Number of teams	211	59

Sponsors:

Organization Name	Task	Sponsorship amount
IIDE	Distributed pamphlets, 2 seminars	Rs 50,000 /-
IMFS	1 seminar	Rs 18,000 /-
IMS	2 seminars	Rs 8,000/-
HELL Energy	Publicity and banner in college	250 cans of energy drink
Dominos	Pizza stall in college	Rs 7,500 /-
Mojo-jojo	Publicity and banner in college	Free coconut water drink
Safarnama	Banner in college	Rs 1500 /-

Prize money (cash):

1st place - Rs 25,000/-

2nd place - Rs 15,000/-

3rd place - Rs 10,000/-

Winners:

- **1st place** - Syntax terror(TSEC)
- **2nd place** - Bits N Bytes (FCRCE)
- **3rd place** - Wanc Coders(AIKTC) **and** Reactive error(Rizvi)

Judges:

- Dr.V.K. Dhar, Senior Scientist, B.A.R.C
- Mr.Prateek Gupte, VP Product, Haptik
- Mr.Darshan Pania, Lead Android Engineer, CleverTap
- Mr.Bharat Tolani, Senior Consultant, Capgemini
- Dr. Irfan Siddaratam, HOD I.T., K.J. Somaiya
- Mr. Rohan Arora, Co-founder, Bloombench
- Mr.Shravan Agarwal, Co-founder, Rirev

Convener: Dr. G.T. Thampi

Co-conveners: Prof. Tasneem Mirza and Dr. Tanuja Sarode

Co-ordinators: Prof. Darakhshan Khan and Dr. Shilpa Verma

Problem Statements:

Machine Learning:

1) Movie Recommendation System.

The prototype should be able to solve the following problems.

a. Given a particular user_id, find the genre he is most likely will love watching.

b. Given a particular user_id, find the users he is most similar to

c. Given a particular movie_id, find the other movies which are the most similar to it.

Dataset: <https://grouplens.org/datasets/movielens/>

Use 'Recommended for education and development section' full dataset of 265 MB.

2) Topic Detection System

If-else is a popular topic in Computer Programming in the Java language.

1.Problem Statement: Create an application using NLP that detects whether a given statement is from If-Else chapter or not.

2.Dataset: Link for a few books is given below. Extract the data from the pdfs by scraping..

Example :

Input: "If - Else is a conditional statement."

Output: From the If-Else Chapter.

Input: "I will give a party if Sachin scores a century today."

Output: Not from the If-Else Chapter.

https://drive.google.com/drive/u/0/folders/1ScmXLB_pMKylTIQVYzcbdy4yMNM5hoXM

You can use this link to find other books - <https://libgen.is/>

Blockchain:

1) Blockchain based E-Voting system

Currently, voting in India is done using an Electronic Voting Machine (EVM), which has several problems, namely time-consuming nature, needs a human resource for counting votes/managing, can be tampered with, etc.

A Blockchain-based e-voting system can not only make the whole voting procedure, secured and tamperproof but also allows voters to vote from their smart devices, thus reducing the time consumed.

Counting votes would also be easier and will be subject to fewer inaccuracies and more transparency.

2) Blockchain in Healthcare

Healthcare is an industry where the ability to access information or any omission in a patient's record could be the difference between life and death.

Maintaining patients' previous records is an integral part of the Healthcare Industry. The current scenario puts the onus on the patients to retain physical copies of their medical history which pose inherent challenges like portability and accessibility.

A blockchain-based solution is required that allows patients to add their medical records to the blockchain securely.

This information should be encrypted and only accessible by authorized personnel, which is allowed by the patient.

Such a tamper-proof and secured system would easily bypass the drawbacks of the current paradigm, without sacrificing functionality.

Web/Android App

1) Ecommerce

According to [a recent report by Accenture](#), 91% of consumers are more likely to buy from companies who remember them and provide relevant offers. Further, 83% of them are also willing to share their data in exchange for a personalised experience.

Personalisation can change the current scenario in the Ecommerce Industry.

Make a personalised Ecommerce Website of your choice.

Suggestions :

1)The website should be able to track customers purchases and social media accounts and make a profile out of it.

2)Using this profile:

1. Personalised Home Page can be created; for example, a fitness enthusiast can be automatically redirected to the sports section. It could also have a 'pick up where you left off' section for incomplete orders.
2. Recommendations can be made based on the customers browsing history and purchases/inventory.
3. Further geotargeting can be used to make campaigns based on the user's location.
4. Unique campaigns can be made for the customer during special occasions, for example - 10% discount on cakes on birthdays.
5. Exit-intent campaigns can be used to encourage customers to complete transactions.

2) Social Cause

The Apprentice Project

Brief :

The Apprentice Project (TAP) team (alumni from IIM, TFI, and YIF) aims to build life skills in low-income kids by placing selected high-skilled volunteers in under-resourced schools for one year.

Currently, TAP works with 2500 students across 20+ schools with 200 facilitators.

Every Saturday for three hours the volunteers/facilitators mentor and teach in one of the following verticals based on their skills: Drama, Dance, Music, Public Speaking, Ultimate Frisbee, Electronics & Coding and Visual Arts.

Problem Statement:

1) Selection

The primary job of the TAP team is to select 250 facilitators from 2500 applications; for this, they currently use manual and excel based methods for sending emails and keeping information about the volunteer.

Create a volunteer management solution which can help the TAP team select the facilitators from the three-stage process so that all the emails are automated, and the serial numbers are generated automatically, etc.

The solution should make it easier for one person to manage everything, similar to CRM and ERP software.

2) Operation

For TAP's Operations team create a solution which can automate the communication with facilitators & provide a dashboard to the admin for facilitator management.

Currently, they use Google forms & sheets to collect data from facilitators, and admin staff manually do everything, including sending out Whatsapp messages.

Resources :

Refer "Selections" and "Operations" from TAP Processes PDF

https://drive.google.com/file/d/1-GqtA6AeHPTCKHWdNnxk63_P578SP06j/view

PS: This problem statement requires WhatsApp integration. Please attempt to utilize the relevant API queries.

Photos:



The poster features a central illustration of three people working together on a large screen, surrounded by gears and a crane. The background is a light purple gradient. At the top right, there are three logos: HSNC (Haryana State Nutrition Council), TSEC Engineering College (Thadomal Shahani Engineering College), and TSEC CodeCell. The main title 'TSEC Hacks' is prominently displayed in the center. Below the title, the event details are listed: 'Hackathon on 5th & 6th February' and 'Registrations open till 27th January'. Contact information for Rishab Saini and Ritika Talreja is provided. At the bottom, the convener and coordinators are listed, along with social media and website links.

HSNC
HARYANA STATE NUTRITION COUNCIL

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

TSEC
CodeCell

TSEC Codecell Presents
TSEC
Hacks

 Hackathon on 5th & 6th February.
 Registrations open till 27th January.

Contact:
Rishab Saini: 98204 87592
Ritika Talreja: 97699 62696

 **Cash Prizes upto ₹50,000 !**

CONVENER
Dr. G. T. Thampi

CO-ORDINATORS
Prof. Shilpa Verma

CO-CONVENER
Dr. Tanuja Sarode

CO-CONVENER
Prof. Tasneem Mirza

CO-ORDINATORS
Prof. Darakhshan Khan

 tseccodecell  Tsec Codecell  tseccodecell.com







Report Presented On
“TSEC ONLINE HACKATHON”



Information Technology Department

TSEC CodeStorm

Thadomal Shahani Engineering college

ONLINE HACKATHON

About Event:

Event Name:	72 Hour Online Hackathon
Date:	2 nd July – 5 th July, 2020
Mode of Conduction	Zoom App
Duration:	72 Hours
Number of Teams:	49
Mentor:	Dr. Madhuri Rao (H. O. D of I.T) Prof. Chetan Agarwal Prof. Sanober Sheikh
Challenge Tag:	#RaceToWin

Overview of TSEC CodeStorm

TSEC CodeStorm provides a proficient platform for coding and software development. Our mantra is “Opportunities don’t happen, you create them” and hence our objective as a team is to expand and surge opportunities for aspiring coders through our events and workshops. The committee collocate various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. A Hackathon is the major event organized by us. It is a gathering where programmers collaboratively code in an extreme manner over a duration of time. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards a glowing career.

Overview of Online Hackathon

TSEC CodeStorm organized **the first ever Online Hackathon** for 72 hours via the Zoom App. We aim to provide an opportunity to all the young talented engineers amidst the pandemic and hence we came up with the idea of Innovation at Home. There were 49 teams competing against each other to provide the best possible solution for the following domains:

1. AI/ML
2. Block Chain
3. Open Research
4. Web/App Development

The prizes for the Winning, 1st Runner Up and 2nd Runner-Up teams were 10,000, 5,000 and 3,000 respectively along with AI/ML course from one of our sponsors Let's Upgrade and internships opportunity to young talented engineers from Career Amaze. Apart from these, we had another company named SITH on board which provided selected courses to our top innovative students.

Not only this, one of our mentor Mr. Jay Shah has approached two of our teams for future collaborations and opportunity and Mr. Sumeet Rohra has joined hands with a student from our Hackathon to join his company and work with him.

The Hackathon was managed and planned by 12 members and 3 teachers over a period of a month.

The Winning Teams are:

Winner → Topic: Parking Occupancy Detection and Reservation System in Private and Public Parking spaces using Deep Neural Networks
College: Vidyalankar Institute of Technology (VIT)
Team Members: Vignesh Dhuri, Afzal Khan, Yash Kamtekar

1st Runner-up → Topic: Smart Water Monitoring and Mentoring
College: Thadomal Shahani Engineering College
Team Members:

2nd Runner-up → Topic: Grace -The Health App
College:
Team Members: Rahul Gala,

Glimpses of the Event:



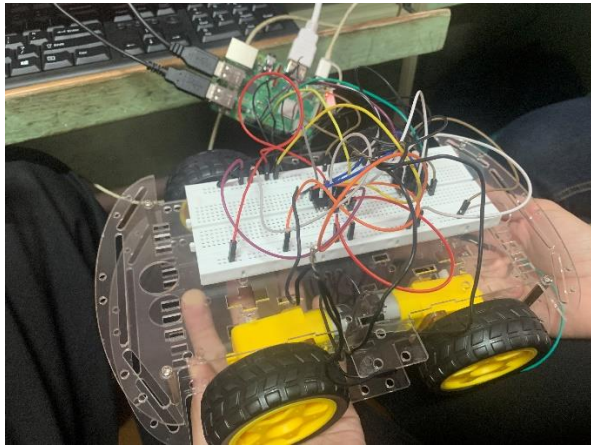
Faculty and Judges



Judging Round



Participants



Projects Presented by Participants

THE TEAM
TSEC CodeStorm Committee:

- Darshan Deshpande
- Heer Donda
- Moin Naik
- Yukta Sethi
- Madhu Damani
- Anushka Baghchandani
- Harsh Navani
- Vinayak Gurshaney
- Rachelle Nihalani
- Nidhi Hemrajani
- Aditya Methil
- Sahil Sedana

Report Created By:
Miss. Madhu Damani & Miss. Yukta Sethi
Information Technology Department

TSEC Hacks 2021 Report

Website : <http://www.tseccodecell.com/tsec-hacks/>

TSEC CodeCell, under the able guidance of Prof. Tasneem Mirza, hosted its annual flagship event **TSEC Hacks**, a **40 hour Online Hackathon**, that was conducted from the 26th of March to the 28th of March, 2021. The aim of this competition was to nurture innovation, motivate the participants to code, and foster healthy competition among the participants. The event had participants from different colleges, different streams and different undergraduate levels.

The 40 hour Hackathon was conducted as follows:

- **Day 1 (26th March)** - The Opening Ceremony began at 5 pm followed by the Problem Statement Explanation. The Coding Period for the participants began at 7 pm.
- **Day 2 (27th March)** - The Mentoring Sessions commenced at 10 am and went on till 8:30 pm where the students received guidance from the mentors as to how to improve upon their projects.
- **Day 3 (28th March)** - The Coding Round ended at 11 am, subsequently followed by the Phase 1 of judging. Phase 2 of Judging commenced at 3 pm, and after deliberation by the judges, the winners were announced at the Closing Ceremony.

The Hackathon being an online event was conducted on numerous platforms, particularly WhatsApp, Zoom and Discord. The teams consisted of 2-4 members, with each team having to pay a registration fee of ₹100 after getting shortlisted. The hackathon saw an overwhelming response with a total of 138 teams, consisting of aspiring students from 43 colleges, registering for the event. After much consideration and discussion, out of the 138 teams, 63 teams were shortlisted to compete in the hackathon.

The Publicity for the event was done on CodeCell social media handles (Instagram, LinkedIn, Facebook, Whatsapp), as well as on online event websites such as Dare2Compete. Information about the Hackathon was also circulated among various college groups, and the event was publicized by the CodeCell team in all classes of the Computer, IT, EXTC and BioMedical departments of TSEC.

The participants were required to upload their code to Github at the end of the Hackathon. To aid the participants who were unfamiliar with the framework, a 3-hour workshop on 'Git and Github' was conducted by Harsh Kapadia, a CodeCell committee

member, on the 21st of March. This workshop, attended by approximately 100 people, helped the participants unfamiliar with Git and Github gain a basic understanding of the frameworks and use it for collaboration during the course of the hackathon.

The Domains for the Hackathon were:

1. Web Development
2. App Development
3. Artificial Intelligence and Machine Learning
4. Blockchain
5. Social Cause

Besides the cash prizes the participants/winners were rewarded with other incentives such as:

1. Wolfram Award For Top 10 Teams (Worth \$375 Per User)
2. 90%-70% Discount Coupons For Any Coding Blocks Course
3. SITH Free Course
4. Pair A Dice Cafe Coupons
5. Internships And Mentorship Provided By CertifyMe And SITH

All participants also got access to:

1. Wolfram|One (\$25 For A Month)
2. Repl.it HackerPlan (\$21 For 3 Months)
3. Taskade Unlimited Plan (\$60 For 1 Year)
4. SashiDo Platform Credits
5. 65% Discount Coupons For Coding Blocks Courses

REGISTRATION STATISTICS

Domain	Number of Teams
Web/App Development	37
Artificial Intelligence and Machine Learning	15
Social Cause	9
Blockchain	2

PROBLEM STATEMENTS

Machine Learning

1. Video KYC Application

Analysis of Covid Vaccine

Earlier KYC verification was done in person, but due to COVID-19, banks are trying to implement a way to perform KYC virtually.

KYC: It means Know Your Customer, in which the organization makes some extra effort to verify the identity, suitability and risks involved with maintaining a professional relationship.

Your task is to create a web application in which the user will upload the government documents. The ML model will try to perform some type of verification and verify that the person uploading those documents is a legit user.

Optional Features:

What should happen if the model predicts a false negative?

Try to add any fraud detection system

Your solution will be judged on the basis of the uniqueness of your ML approach and different types of verification methods

2. Invoice Processing System

One major problem in the finance world is that invoice formats are not standard and structured. Extracting useful information from these documents is easy for humans but a challenging task for machines.

Your task is to create a platform where a user will

- upload their invoices in PDF/scanned image
- ML model will extract all of the required information
- Export the data into a JSON/CSV format

ML Model: You need to train a model from scratch on the given dataset or you may use your own data.

Dataset : <https://drive.google.com/drive/folders/1ShltNWXyiY1tFDM5W02bceHuJjyeeJI2>

Example of important information from Invoices:

- Invoice Number
- PO Number
- Invoice Date
- Due Date
- Terms
- Subtotal
- Tax
- Amount Due
- Currency
- Vendor Name
- Vendor Address
- Customer Name
- Other

Optional Features:

The user should have an option to review and validate the captured information from the model

Your solution will be judged heavily on the accuracy of your model.

Blockchain

1. Cryptocurrencies Problem Statement:

A cryptocurrency is a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Many cryptocurrencies are decentralized networks based on blockchain technology—a distributed ledger enforced by a disparate network of computers.

Your task is to create a **Cryptocurrency of your own** and demonstrate Cryptocurrency transactions using animations and dynamic visualisations (wherever applicable).

Your application should demonstrate the process of adding new blocks to the blockchain. The visualization of the block should contain:

1. Index of the Block: Block #1
2. Hash: #00001834d29f33...
3. Previous Hash: #000dc75...
4. Timestamp: Tue, 19 Dec 2017 ...
5. Data
6. Nonce: 1263

It should be capable of demonstrating 3 types of transactions:

1. Reward: Satoshi rewarded with 100 coins for mining a new block.
2. Regular: Satoshi paid Dean 5 coins with a change of 94 coins.
3. Fee: Mining fee of 1 for whoever mines the transaction (Satoshi in the example above).

It is necessary to address the following:

1. How is the value assigned?
2. How can people trust Cryptocurrency?

Reference: <https://coindemo.io/>

You can use:

1. Non-Linear Blockchain structures such as DAG
2. Consensus algorithms like BFT and EOS - dPoS

2. Fake Product Detection System:

There are many fake products that exist in the supply chain and to ensure the genuineness of the product, a system is needed. To check the genuineness of a product, the ownership history of the product needs to be maintained.

Every popular brand has fake manufacturers selling a counterfeited item at cheaper rates. Even the company experts may not be able to distinguish between fake ones and real ones.

Your task is to use Blockchain to find if a product is authentic or not.

The system should work as follows:

1. The manufacturer marks the goods with 2D barcode / QR Code and packs them.
2. At each stop along the supply chain, anyone handling the product will create a record on the blockchain before sending it along to the next link using the 2D Barcode / QR-code.
3. The customers can scan the item's 2D Barcode / QR-code to ensure their authenticity.
4. Once the item is sold, the blockchain should mark the particular product as "sold".

If the product is authentic the application should provide all the details about the product along with the manufacturer, location of the manufacturer, distributor, location of the warehouse,

transportation companies and retailers. The application should also notify the user if the product is fake.

Web/App Dev

1. On-demand car service application

Travelling by automobile has been the most widely used mode of transport. Often while travelling, passengers face the situation of a vehicular breakdown. Passengers are unaware of the car service centres available at remote places.

Create a web/mobile app that will help connect passengers and mechanics when in need.

Suggestions :

- The web/app should support all vehicles like cars, buses or trucks, etc.
- It should display the nearby service centres/mechanics to the passengers.
- Passengers should get the contact information and the scope of service the centres/mechanics provide (Cost charges should be mentioned).
- Once a mechanic is hired by the passenger, a confirmation receipt along with the arrival time should be displayed.
- In case of failure of any mechanical parts of the vehicle, the passengers should have an option to purchase mechanical parts from nearby centres.

2. Course Tracker Companion

Students usually do not have access to resources related to the session they attend. Student's might also miss the session due to technical difficulties.

Create a course tracker that tracks a series of recorded lectures and assists students.

Suggestions :

The course tracker should provide functionalities such as:

- a. Ability to upload recorded lectures.
- b. The teacher should be able to attach lecture notes and references.

The system should be able to crawl the internet for resources to supplement the lecture.

The resources can be:

- Book references
- Academic and/or professional papers
- Tutorials and any other beneficial information.

3. Job reviews for Students

Students don't have a lot of information about the companies that could provide them with job opportunities. Most of the time this information is scattered.

Develop a system for Students to create a Company profile & a score for Campus job opportunities from the following sources -

1. Company website
2. Company Social Media account
3. Posts from the company's officeholders
4. Reviews on Google My Business and Glassdoor

Suggestions -

- a. Students should be able to rate on parameters like
 - Work-Life balance
 - Types of projects
 - Work culture
 - Pay
- b. Students should be able to plan their preparation for placements according to the company
- c. Students should have the option to add company-specific questions to every company
- d. A dashboard for students that helps them track their preparation

4. Online IDE

Build a Real-Time Collaborative coding ide/text editor.

Feature Set:

1. Related to Coding:
 - A. Autocompletion
 - B. Linting
 - C. Syntax Highlighter
 - D. Snippets
 - E. Bracket Matching
2. Cross-Platform Support
3. File System Navigator
4. Language Server Protocol(LSP) Support(Client Implementation)

References:

[LSP Client Implementation](#)

(<https://blog.logrocket.com/how-to-use-the-language-server-protocol-to-extending-a-client-764da0e7863c/>)

Social Cause

1. Vatsalya Trust

Due to the pandemic school children need access to electronic devices like phones, laptops, desktops for their online lectures. Sometimes children could misuse these things by skipping the lectures and instead could access websites and social media platforms. This has resulted in an alarming increase in internet exposure to children.

Vatsalya Trust is looking for a solution that could help the guardians/parents/supervisors of children to get notified in case of any misuse detected. Considering the time constraints, you are expected to come up with a solution with the following features (feel free to add your own ideas):

1. Build a Web/Mobile app/extension where the parents could register a device along with some other contact information.
2. Everytime a browser is accessed from this device and in case of any social media page is accessed during online lectures (for simplicity you may consider Google Meet) or tab is switched, issue a warning to the user. If ignored, report it to the parent/guardian email/phone.
3. Create a log of all the browsing activity the child is doing during online lectures.
4. Disabling this control/tracing should require parents'/guardian's permission.

BONUS:

- Cross-platform integration (mobile and desktop)
- Digital wellbeing reminders

2. Aapka Sahara Foundation

Design a senior-friendly website/app where senior citizens can connect to an ASF volunteer via phone-call/physical meetup

There should be registration pages for both - senior citizen and volunteer along with verification for both using some document

The website/app should show the nearest volunteers(for physical meetup) and then they can schedule a meet-up with the volunteer.

Optional feature

Implement a chat system wherein a senior citizen can chat with other senior citizens (individually and/or in the group) with similar interests

The system should suggest people the senior citizen can/should chat with.

JUDGES

Web Development	AI/ML	Social Cause/Blockchain
Navnath Shinde	Darshan Solanki	Siddhartha Nigam
Rahul Saxena	Ali Mustafa Shaikh	Dr. Vijay Karna (Capgemini)
Neeral Mulchandani	Navnath Shinde (Capgemini)	
Himanshu Totla		

MENTORS

Web Development	AI/ML	Social Cause/Blockchain
Saurabh Daware	Rishit Dagli	Vaibhav Chellani
Vilva Athiban	Aanchal Mishra	
Tanisha Sabherwal		

SPONSORS

1. **CertifyMe - Education Partner**
2. **SITH - Education Partner**
3. **Pair a Dice Cafe - Gaming Partner**
4. **Wolfram Language - Technology Partner**
5. **Repl.it - Technology Partner**
6. **Taskade - Collaboration Partner**
7. **Give My Certificate - Certificate Partner**
8. **SashiDo - Technology Partner**
9. **Coding Blocks - Community Partner**

WINNERS

Position	Team Name	College Name	Members	Cash Prize
First	Team Gravity	Atharva College of Engineering	Raju Potharaju Mayuresh Surve Payal Pawar	Rs. 25,000
Second	Ctrl Alt Elite	Dwarkadas J. Sanghvi College of Engineering	Devanshu Shah Jinay Parekh Palka Dhirawani Vedant Gandhi	Rs. 10,000
Third	DROP TABLE TEAM	Fr. Conceicao Rodrigues Institute of Technology, Vashi	Aditya Unnikrishnan Abhishek Choudhary Gabriel Rajendran Gregory Biju	Rs. 2,500
Third	403_Forbidden	Thadomal Shahani Engineering College	Parth Sunil Cheulkar Varun Mamtora Chiraayu Meghnani Shyren More	Rs 2,500

FEEDBACK

Jury Feedback

https://docs.google.com/forms/u/2/d/19vVmQ5D9_AKOm_FUA-rwh1MahBi7JaBMOz3kYTHelpS/edit#responses

Participants Feedback

https://docs.google.com/forms/u/2/d/1V7UnTWmDGB6Sz_J-L4gu5nkeCOi6P7OH_4Xuq1G6eA/edit#responses

COMMITTEE MEMBERS

BE:

Amol Sawant
Chinmay Patil
Ishita Kotian
Kenil Shah
Malvika Rao
Rahul Gohil
Rishab Saini
Ritika Talreja

TE:

Aashna Shah
Archit Shinde
Aryan Nayak
Faizan Parabtani
Girish Kewalramani
Harsh Kapadia
Harshavardhan Abichandani
Ishita Deshmukh
Lavesh Tirthani
Monika Jha
Pooja Patel
Poornartha Sawant
Saurav Uppoor
Shlok Jethmalani
Shubham Chettiar
Vaish Devidasani

SE:

Arjun Balamwar
Dheeraj Lalwani
Gaurav Raj
Jash Makhija
Prithvi Rohira
Saket Thota
Sanskriti Yadav
Shubh Mehta

Tanay Kamath
Tushar Nankani

Report Presented On
“TECHNOVATION 2021”



Information Technology Department

TSEC CodeStorm

Thadomal Shahani Engineering College

Technovation'21

About the Event:

Event Name: Technovation

Date: Round 1: 20th March, 2021
Round 2: 27th March, 2021

Mode of Conduction: Zoom app

Duration: Round 1: 10:30 am – 02:00 pm
Round 2: 10:00 am – 03:00 pm

Number of Teams: 83

Mentors: Dr. Madhuri Rao (HOD of IT department)
Prof. Chetan Agarwal
Prof. Sanober Sheikh

Overview of TSEC CodeStorm

TSEC CodeStorm provides a proficient platform for coding and software development. Our mantra is “Opportunities don’t happen, you create them.” And hence our objective is to expand and surge opportunities for aspiring coders through our events and workshops. The committee collocates various events to monitor applicability of existing standards, codes and best practices. It offers technical expertise to other strategic initiatives. The committee prompts coding interests by updating people with new technologies and their corporate applications based on trending technical platforms and frameworks every week. The committee organizes various workshops and coding competitions to make students take a step ahead towards their glowing career.

Overview of Technovation'21

TSEC CodeStorm organized the biggest Virtual Project Exhibition of TSEC via the Zoom app. We aimed at providing an opportunity to all the talented and aspiring coders and software developers to put their knowledge into application, amidst the ongoing pandemic. Hence, we came up with an all-Mumbai level online project presentation to showcase the students' innovative and creative projects as well as provide them an opportunity to enhance their presentation skills.

There were 83 teams competing against each other to showcase their talent in the following domains:

- ML/AI
- Web/App/Game development
- Block Chain/ Big Data
- IOT, etc.

Out of the 83 teams, 13 teams were qualified for the final round.

The winners were given vouchers worth rupees 8000, as well as vouchers worth rupees 5000 given to the participants. Along with this, they were provided with internship opportunities from our sponsor, InternKhoj. Few of our other sponsors were CareerLabs, FamPay, CertifyMe, ScentBee Perfumes and Food Adda.

The Technovation event was managed and planned by 20 members and 3 teachers over a period of a month.

Winning Teams

Winner:

Domain: Block Chain

Project Name: Immunochain – A secure chain of immunisation and awareness

College: Thadomal Shahani Engineering College

Group Members: Girish Salunke, Janhavi Zarpkar, Oveshahmed Patel, Mohnish Nathani

1st Runner-Up:

Domain: ML/AI

Project Name: Modelling stock trading platforms leveraging predictive analysis using learning algorithms

College: Thadomal Shahani Engineering College

Group Members: Prithvi Punjabi, Priyanka Vaswani, Amogh Kubal

2nd Runner-Up:

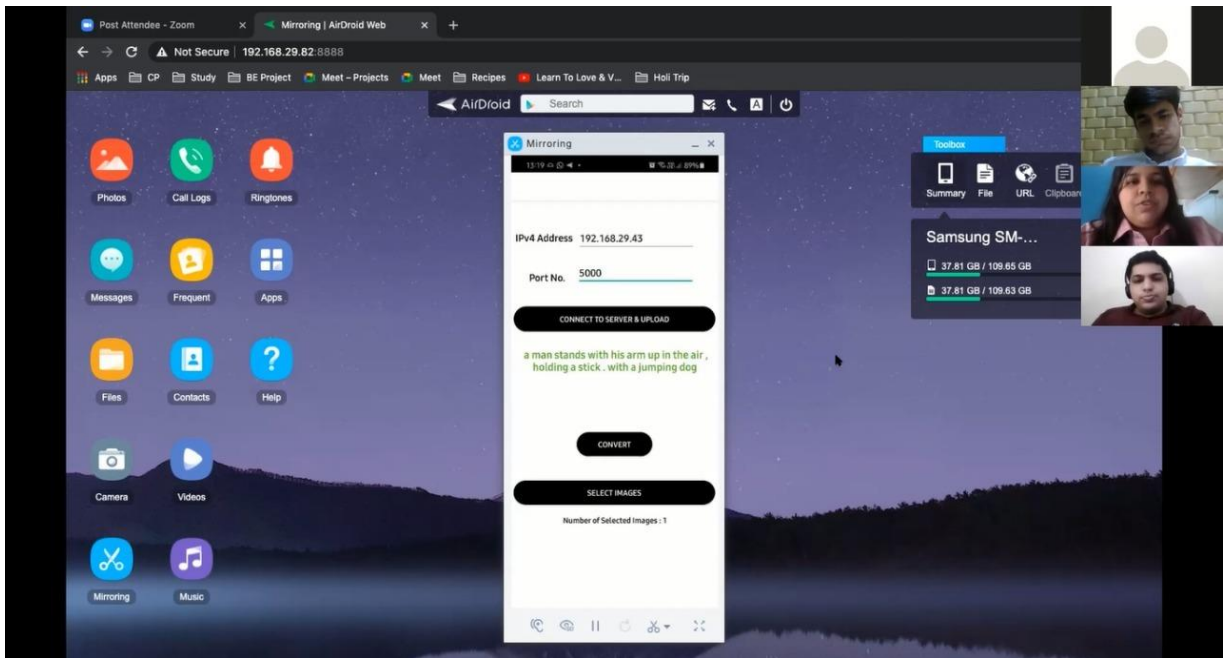
Domain: ML/AI

Project Name: Study of AI driven feature extraction technique for summarisation of video clips and data files

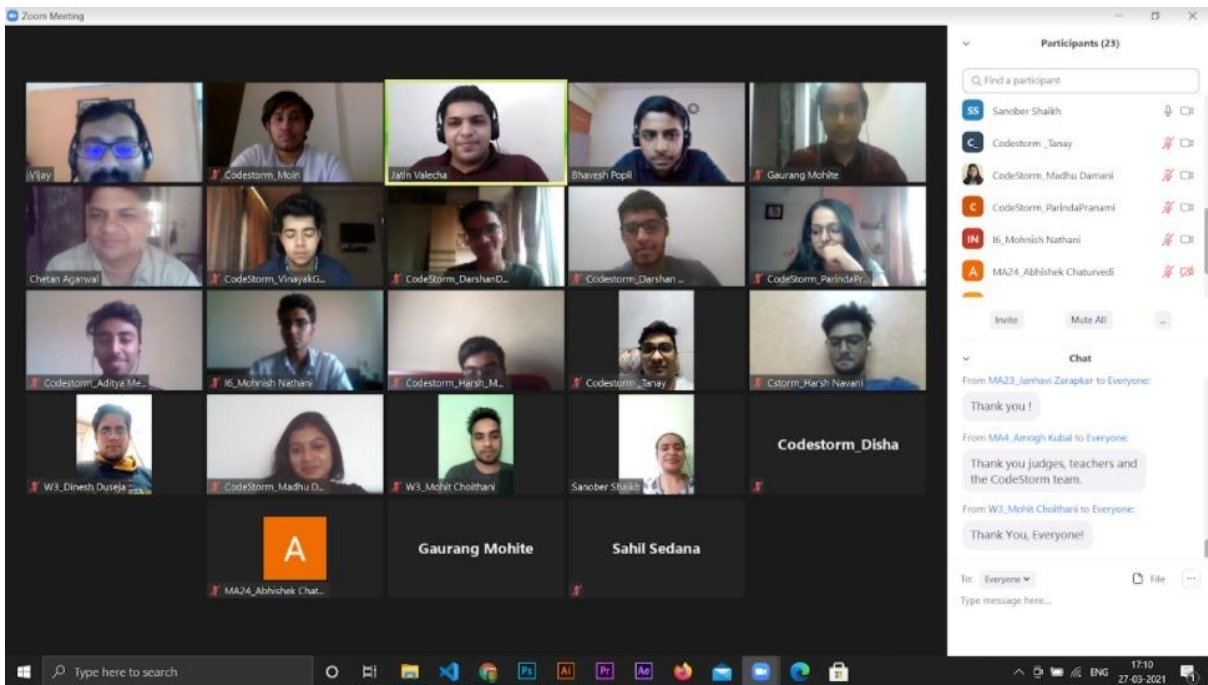
College: Thadomal Shahani Engineering College

Group Members: Oveshahmed Patel, Janhavi Zarpkar, Shloka Singh

Glimpses of the Event



Judging round



Team

An IChE-TSEC Publication



THE
CATALYST

CATALYZING EXCELLENCE



Executive Council - IIChE Mumbai Regional Centre (2015-16)

Mr. M P Jain	Chairman Head-Food Engineering Section Bhabha Atomic Research Centre, Mumbai
Dr. D. Mandal	Vice Chairman Head-Material Section, CheD Bhabha Atomic Research Centre, Mumbai
Mr. Pratik G Bhagat	Hon. Secretary Process Engineer GS Engineering & Construction Mumbai Pvt. Ltd.
Mr. V. Y. Sane	Hon Treasurer DGM – R&D Gharda Chemicals
Dr. Aparna Tamaskar	Hon. Jt Secretary Asso. Prof., Chem. Engg. Dwarkadas J. Sanghvi College of Engineering, Mumbai
Dr. Alpana Mahapatra	Immediate Past Chairman Prof and former Head Chem.Engg. Dwarkadas J. Sanghvi College of Engineering, Mumbai
Dr. T.L. Prasad	Immediate past Secretary Group leader Membrane Technology Section DD Bhabha Atomic Research Centre, Mumbai
Mr. Praveen Saxena	Member Managing Director Blast Carbo Blocks Pvt. Ltd.
Dr. Anita Kumari	Member Asso. Prof., Chem. Engg. Thadomal Shahani Engineering College, Mumbai
Mr. S. Chitanvis	Member Ex- Sr. GM - Technology Aker Solutions
Mr. Ravindra Joshi	Member Consultant
Dr. Parag Gogate	Member Prof., Chem. Engg. ICT, Mumbai
Dr. Sanjeev Katti	Member Sr. Vice President - R & D Reliance Technology Group
Mr. Lalit Vashishta	Member
Mr. Rajesh Jain	Member Consultant
Mr. Rohidas Bhoi	Member IIT Bombay

FROM THE HEAD OF DEPARTMENT



DR. SADHANA J. PUROHIT

Head of Chemical Engineering Department
Thadomal Shahani Engineering College

The IChE Students' chapter at TSEC has always been a staunch supporter of conceptual excellence rather than rote learning and ChEMERGENCE has been a great platform for students to showcase their skills. Keeping with the current scenario, this year's theme has been selected as Catalyzing Excellence. With this motto, the IChE-TSEC committee is trying to nurture the talents of students with the valuable insight of the people from the industry.

Being the Head of the Chemical Engineering Department of Thadomal Shahani Engineering College, I take a lot of pride in saying, each year Chemergence has made a statement by coming up with novel ideas. And having the pleasure of witnessing this monumental change, in the nature of viewing chemical engineering, has been one of the most fulfilling feelings for me as a Head of the department.

In conclusion, I would say that in this world of challenges and turmoil only technical excellence will effectively solve and prevent herculean issues like environmental instability, energy crisis and the rampant use of natural resources. Chemergence is currently at the acme of the technical festivals because of its unique and ubiquitous reach. I wish that Chemergence reaches even greater heights in the years to come and continue to excel all standards of excellence, each year.

FROM THE TEACHER CO-ORDINATOR



PROF. ELIZABETH JOSEPH

Associate Professor, Chemical Engineering Department
Thadomal Shahani Engineering College

Today, in this world of consistent development, excellence has become a top priority for each one of us. The crucial chemical engineering industry is also not an exception to the aforesaid fact. Excellence in process design and management and excellent operating practices have become the underlying principle of each entity involved in this field.

Every year, the annual technical symposium of the Chemical Engineering Department of TSEC, ChEMERGENCE amazes its audience with its charismatic aura. This year, ChEMERGENCE 2016 has arrived with an aim to catalyse excellence. To technically catalyse any reaction, the best way is to choose a vehicle which requires the least activation energy. The way ChEMERGENCE 2016 is crafted to catalyse excellence also is similar to the above example. A group of self motivated, diligent students who struck the iron when it was hot and appropriate conditions conducive to their growth together summed up this sojourn of organising ChEMERGENCE 2016 .

I won't say Team ChEMERGENCE 2016 has surprised me with this wondrous event because I had already foreseen the magnitude of ChEMERGENCE 2016, given the grit and determination this team was working with. And if this bears a testimonial to the calibre of the current generation to catalyse excellence, I can do nothing but gaze in awe and amazement to experience the excellence manifest.

Wishing them a journey of catalyzing excellence wherever God places them.

My Best Wishes to ChEMERGENCE'17

FROM THE DEPUTY TEACHER CO-ORDINATOR



PROF. SANGITA BORKAR

Assistant Professor, Chemical Engineering Department
Thadomal Shahani Engineering College

Today, I have both the pleasure and pride to be a part of ChEMERGENCE 2016, a national level technical symposium witnessing overwhelming response from the participants. The organising committee has worked very hard in making ChEMERGENCE 2016 happen.

I personally witnessed their team work, dedication and enthusiasm during the entire tenure. This bears testimonial to the fact that if given an opportunity coupled with proper guidance, the young generation can do wonders. I would like to thank the entire working committee from the bottom of my heart who played a pivotal role in organising ChEMERGENCE 2016.

Since I joined TSEC in 2009, I have seen ChEMERGENCE evolve like the crescent moon. ChEMERGENCE 2016 can be viewed as a reflection to the marvels the current generation can create. These kind of opportunities should always be harnessed to the fullest as they flaunt creativity and knowledge together on a common platform. I wish all the individuals involved with ChEMERGENCE 2016 all the best and I am confident that they will make a difference in the future. A special thanks to the HoD of Chemical Engineering Dept-TSEC, Dr. Sadhana Purohit, all the faculty members and the non-teaching staff for their continuous candid cooperation throughout ChEMERGENCE 2016.

Thank You for giving me this opportunity and I wish each one of you,
All the Very Best for all Your Future Endeavours...

FROM THE CHAIRPERSON'16



PRAPTI SHINDE
Chairperson,
IICHE-TSEC

To be honest, I have been attached to ChEMERGENCE, since the last year. That was the time, I came to know how it actually feels to be a part of a national level technical festival. ChEMERGENCE is not a mere word, it is a brand name which every TSECite (especially the Chemical Dept) looks forward to.

Since its establishment, every year, ChEMERGENCE has changed for better, with the introduction of many novel and noble concepts and competitions which helped students expand their horizon of knowledge.

This year, ChEMERGENCE 2016 has spread its reach to diploma colleges across the nation, granting them access to this vast pool of opportunities. With new initiatives like the Reactor Design Competition, ChEMERGENCE 2016 is set to be a sensation amongst every technocrat.

I would like to take this opportunity to thank the HoD of Chemical Engineering Department, Dr. Sadhana Purohit Ma'am and the entire teaching and non-teaching staff for encouraging me to pursue all my endeavours. I would like to express my gratitude to Prof. Elizabeth Joseph Ma'am and Prof. Sangita Borkar Ma'am for their consistent support in all matters.

I would also like to thank the former Chairperson, Mohit Surana, for guiding me throughout my journey.

The IICHE-MRC Committee too have always been appreciative towards all the endeavours we wish to undertake. Pratik Bhagat Sir has been an excellent guide, through the thick and the thin.

This journey was not easy. But, with my committee members always there to share the brunt, it turned out to be a mesmerizing experience. I would like to thank all the Committee Members, the Event Heads, the Volunteers and last but not the least, my Parents, without whom, this dream would have been far from reality.

THE DEPARTMENT OF CHEMICAL ENGINEERING



Dr. Sadhana Purohit
Head of Department



Mrs. Nita Mehta
Associate Professor



Mrs. Usha Nambiar
Associate Professor



Dr. Anita Kumari
Associate Professor



Mrs. Elizabeth Joseph
Associate Professor



Mr. Prasad Parulekar
Sr. Assistant Professor



Mr. Ravindra Joshi
Assistant Professor



Mrs. Sangita Borkar
Assistant Professor



Ms. Shradha Nadkarni
Assistant Professor, Ad-Hoc



Mr. Azam Khan
Assistant Professor, Ad-Hoc



Mr. Atish Kulkarni
Assistant Professor, Ad-Hoc



Mr. Shobha Singh
Lab Assistant



Mrs. Dipti Pol
Lab Assistant



Mr. Chhediram Tiwari
Lab Attendant



Mr. Ramashankar Dubey
Lab Attendant



Mr. Chandrabhan
Chaubey
Lab Attendant



Mr. Arjun Prasad Shukla
Lab Attendant



Ms. Vrushali Dabholkar
Lab Assistant

THE DEPARTMENT OF MECHANICAL ENGINEERING



Mrs. Mudita Dixit
Assistant Professor



Mr. Kiran Ghadyalji.
Assistant Professor

THE DEPARTMENT OF APPLIED CHEMISTRY



Dr. Anupama Sawant
Head of Department



Mrs. Vandana Kadam
Assistant Professor



Mrs. Anjali Kirkire
Assistant Professor



Pritam Raut
Lab Assistant

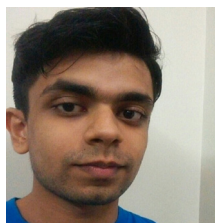


Mr. Uday Yadav
Lab Attendant

THE TEAM BEHIND ChEMEREGENCE'16



Prapti Shinde
Chairperson



Varun Advani
Vice-Chairperson



Ishpreet Kaur Sanghar
Secretary



Pranav Majgaonkar
Industry Envoy



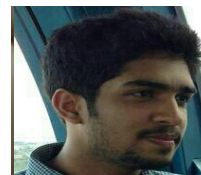
Akash Bhat
Project Club Advisor



Rajan Mishra
Project Club Advisor



Sumit Rotake
Marketing Head



Ashish Vazirani
Logistics Head



M. S. Nimish
Design Chief
(Magazine)



Vatshal Bhanusali
Project Club Head



Jainam Sheth
Treasurer



Saili Kulkarni
Marketing Head



Saransh Jain
Ambassador Relations
Officer



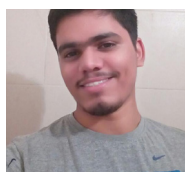
Jayendran Iyer
Ambassador Relations
Officer



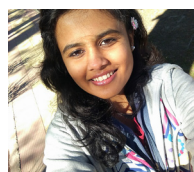
Pavan Nichani
Technical Head



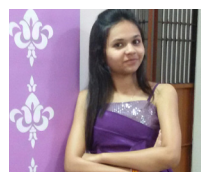
Aadil Khan
Publicity Head



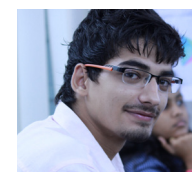
Nitish Upadhyay
Publicity Head



Akansha Salunkhe
Public Relation Officer



Shradha Joshi
Creative Head



Kapil Koul
Social Media Head



Harshvardhan Tandon
Events and Infrastructure
Head

EVENT HEADS

Kanchangauri Kulkarni
Hetal Panchal
Kshama Keswani
Diksha Mohite
Aditi Naik
Geetika Suroliya
Bilwa Khekhale

Ashish Paryani
Imad Sarguroh
Rahul Patel
Chintan Shah
Hardik Shah
Mihir Shah
Salman Patel

VOLUNTEERS

Akhila Nair
Shivsiddhi Tawde
Anita Mane
Amey Jadhav
Akshay Belvalkar
Kunal Patil
Suyash Purandare
Tejas Purkar



**GENERIC
EVENTS**

**DESIGN
EVENTS**

**GLIMPSES OF
CHEMERGENCE
2015**

INDEX

**FUN AND
LEARN
EVENTS**

**LECTURE
SERIES**

CATALYZING EXCELLENCE

“Excellence is never an accident; it is the result of high intention, sincere effort, intelligent direction, skillful execution and the vision to see obstacles as opportunities”

The life of every organism on this planet revolves around the attempt to attain excellence in their tasks at hand. This consistent effort to excel in every walk of life adds myriad colours to the otherwise mundane lifestyle of individuals. Engineers are born to excel; not because it adorns them with awards and accolades but because it turns out to be somebody else's comfort. They make living, easy and worth-while.

The evergreen chemical industry is evolving and truly stands as a testimonial to excellence. However, this industry is in earnest demand of individuals who can help catalyse its persistent effort to attain excellence, effectively and economically.

Activation Energy is pre-dominantly an important fundamental in catalysis. It sets a threshold limit to each entity. A self-driven molecule, however, is in no need of such stimulus. All it needs is a condition conducive to its growth and it makes hay when the sun shines.

A generation of skillful, self-motivated, energetic and efficient technocrats is preparing themselves to embark on this journey to strive for excellence. And the sole purpose of ChEMERGENCE 2016 is to showcase all these individuals and their traits on a common platform.

So, let's put our best foot forward to Catalyse Excellence at ChEMERGENCE 2016. Let us show the world that:

“Change We Must, Change We Can, The Power lies in Our Hands”



C A T A L Y Z I N G E X C E L L E N C E

Generic Events

Present the Unperceived The Technical Paper Presentation

Albert Einstein once said,
“Logic will get you from A to Z; Imagination will get you
Everywhere”

Chemergence 2016 at its event titled “Present the UnPerceived” gave an opportunity to all budding chemical engineers an opportunity to discover the undiscovered. Ranging from sustainability that will make the world a better place to live to innovation that will create luxuries, this event has witnessed it all.

The papers presented scrutinized in two stages:

ELIMINATIONS:

Dr. Anita Kumari
Prof. Prasad Parulekar
Prof. Atish Kulkarni
Prof. Azam Khan
Ms. Aditi Barge
Ms. Shivani Vedula

FINALS:

Dr. Godfree Fernandes

Canvas Carnival

The Poster Presentation Competition

The “Canvas Carnival” at “Chemergence 2016” is a tailor made event for participants who want to manifest their ideas on a creative canvas. The most intriguing creativity coupled with an technical edge over the others will be claimed as the winner by the esteemed panel of judges comprising of Dr. Sadhana Purohit, HoD-Chemical Dept and Mr. Pratik Bhagat, Process Engineer, GS Engineering Services.

FUN AND LEARN

CHEMICAL CRYPTICS

“Chemical Cryptics” at Chemergence 2016 posed mind boggling questions to participants upto their last grey cell. This event was customised to test the exemplary excellence of growing chemical engineers in their field of study. Those who could stand the trial of these witty questions being hurled at them at the speed of light by Quiz Master Dr.S.S Bhagwat and survived the test of time were crowned as the Ultimate Rulers of the Chemical Engineering Empire.

SALT ACT

The "Salt Act" at Chemergence 2016 tested its participants ability to decode the chem(y)stery of salts. Speed, Accuracy and Precision are the three ladders that helped the winners scale their road to victory. The participants were judged for their analytical skills by our own professor from the Applied Chemistry Department, Prof. Vandana Kadam



DESIGN

COOL IT
TO
WIN IT

THE
COOLING TOWER
DESIGN
COMPETITION

OF NUTS
AND
BOLTS

THE
PROJECT
EXHIBITION

With extreme operating conditions of temperature playing the most crucial place in any industry, the need to cool these "heated" sites is equally important. A Cooling Tower is therefore one of the most important and indispensable unit in any Chemical Industry.

ChEMERGENCE 2016 has given an opportunity to each of its participant to propose and design an unique yet practically feasible model of this Most Important Utility in any plant at "**Cool It to Win It**". The most efficient yet economically feasible will be crowned as the undisputed winner.

The panel of experts judging this event comprised of Prof. Ravindra Joshi and Prof. Swati Donde from Mukesh Patel School of Technology, Management and Engineering

To comply with an oft repeated quote which says knowledge is of no use, unless it is put in practice, ChEMERGENCE 2016 presented a tailor made opportunity to each individual to present his love for nuts and bolts to fuel his/her own aspirations.

Ranging from to explicit fuel cells to complicated reactors and ideas that will drive the world, this event encompassed every frontier that influences the Chemical Industry, only to make it bigger and better.

EVENTS

ChEMERGENCE 2016 gave a “one of its kind” opportunity to every budding chemical engineer to materialise his/her ideas in the world of Heat Transfer.

Participants were expected to get away with their-mundane theoretical calculations and design a working heat exchanger model that would leave the compatriots spellbound.

The panel comprised of Prof. Usha Nambiar and Prof. Azam Khan who have mastered the phenomenon of Heat Transfer to its core.

To quote Charles Hill, “One feature that distinguishes a chemical engineer from other genre of engineers is the exposure to basic concepts of Chemical Reaction Engineering.”

This year, ChEMERGENCE 2016 gave each of its participant an opportunity where they could actually determine the kinetics of a reaction and depict their potential to revolutionise the area of reaction kinetics.

The judges for this event were our very own teachers, Prof. Nita Mehta and Prof. Shardha Nadkarni.

HeatX

THE
HEAT EXCHANGER
DESIGN
COMPETITION

CRAVE
FOR
CONVERSION

THE
REACTOR DESIGN
COMPETITION

LECTURE SERIES

PREPIN - PREPARATION FOR THE INTERVIEW

ChEMERGENCE 2016, through its event titled PrepIn, aims to train its participants for a better future. This seminar boasted of people with excellent expertise helped the attendees get an edge over their other compatriots, in every walk of life. This exciting hour, guided by the torchbearer, Mr. Sushil Khitani (Senior Engineer, Proposal Division, Toyo Engineering Pvt.Ltd) is definitely going to make a difference in the life of the audience.

CHEMX LECTURE SERIES

ChEMERGENCE 2016 has strived to help its compatriots get an edge over their counterparts, by allowing them to interact with the finest individuals from the chemical industry. Eminent personalities from industry and academia alike are guided the audience to ensure that their walk in this intriguing field turns out to be a cake walk.

1. Mr. Ravi Raghvan
Editor Chemical Weekly

2. Mr. Lalit Vashishtha
Director, Diva Envitech
Head, Student Chapter, MRC.3.

REVIEWS

ChEMERGENCE 2015 gave me an opportunity to showcase my skills once again. ChEMERGENCE 2015 was an amazing event where I witnessed several brains with outstanding ideas, huge potentials and fierce competition.

The first day I gave my presentation and was selected for the finals along with the three other teams. The finals of TPP ended with me winning the first prize. It obviously was a surprise. The dream of winning ChEMERGENCE once before I pass out was fulfilled. This made us learn that there will be competition wherever you go. Such symposiums let you get an experience before you step out to face the world. I would like to thank the IChE Committee and the people behind the cameras for giving this opportunity to all of us. I hope the committee works hard and ChEMERGENCE continues with its legacy of being the most awaited symposium.

- Akash Bhat.

First Prize, Technical Paper Presentation

Participating in heat exchanger design competition was the journey from on-paper model to working prototype. Big task in this was searching required things in the "Bhoolbhulaiya Gullies" of South Mumbai markets and later fabricating and assembling them in such a way that model gave desired results. When the test run for model went smoothly, that was the remarkable moment for us and winning the competition was the icing on the cake. No doubt our guide professor and friends too had a share in this victory.

- Vedant Kadam,
Shashikant Jadhav,
Sumit Rotake

First Prize, Heat Exchanger Design

Salt Act has been a wonderful experience for me each and every year that I have participated. Everyone associated with the event, from the teachers to the members of the organising committee are very helpful and approachable. Also, the event is organised really well and all necessary arrangements are done well in advance which makes an event that can very easily become chaotic very smooth in its functioning. I wish everyone associated with ChEMERGENCE the very best for this new edition which I trust is only going to get bigger and better.

-Soumil Y. Joshi

First Prize, Salt Act

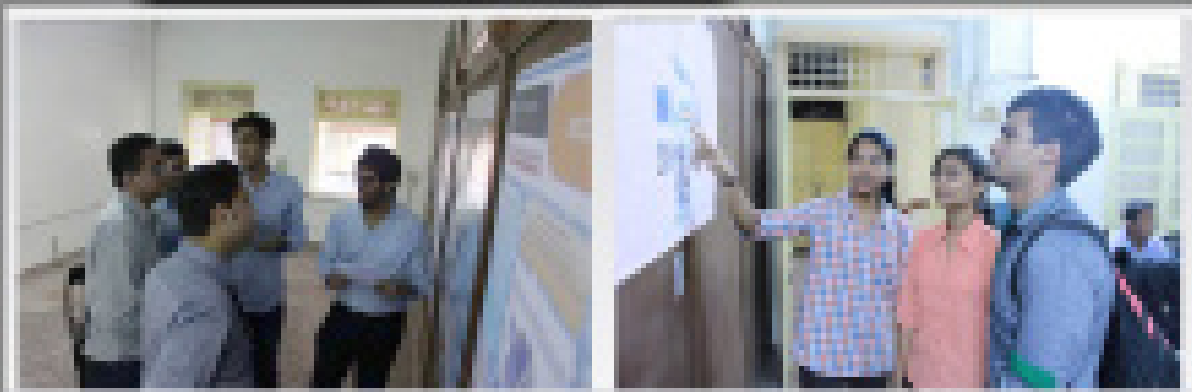
GLIMPSSES OF CH



TECHNICAL PAPER PRESENTATION



COOLING TOWER



POSTER PRESENTATION

EMERGENCE'15



HEAT EXCHANGER



CHEMICAL
QUIZ



SALT ACT



HTRI



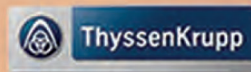
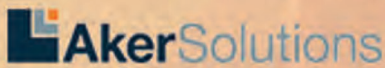
OUR PAST ASSOCIATIONS



Powered by



In association with



OUR CURRENT SPONSORS FOR



CATALYZING EXCELLENCE



ThyssenKrupp

ChemicalWeekly

spykar



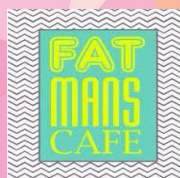
youth
incorporated
EDUCATE • ENTERTAIN




EdWISE
OVERSEAS EDUCATION CONSULTANTS



BUCKAROO
LEATHERWORKS



KNOWAFEST.COM

CAMPUS FESTIVALS IN INDIA

 **CHEMICAL INDUSTRY DIGEST**
India's leading chemical & engineering monthly

 **enlighten india**

AN ISO 9001 : 2008 CERTIFIED COMPANY

A Multi - Dimensional Informative Magazine Media Event Management Production House

festPav.com

A Souvenir by IICChE-TSEC

THE CATALYST



ABOUT THADOMAL SHAHANI ENGINEERING COLLEGE

Thadomal Shahani Engineering College

The Thadomal Shahani Engineering College (TSEC), was founded by the Hyderabad (Sind) National Collegiate Board in the year 1983. The college is amongst the first Engineering Colleges' to be affiliated to the University of Mumbai to start the following courses:

- Bachelor of Engineering in Computer**
- Information Technology**
- Electronics and Telecommunications**
- Biomedical, Biotechnology**
- Chemical Engineering**
- Along with, Master's course for Engineering in Computer.**

The campus encompasses two tributaries, namely the old and the new building.

The old building is a host to the departments of Chemical, Biotechnology and Biomedical Engineering, whereas the New Building covers up the remaining three streams.

The two buildings are well equipped with the requisite laboratories and classrooms and flawless infrastructure. Be it technical or managerial abilities, TSEC has set a benchmark for the years to come. The Institution has been fostering and moulding the young minds by forging them for a better tomorrow.

FROM THE CHEMICAL DEPARTMENT



TSEC is the home to one of the core branches of engineering namely Chemical Engineering, affiliated to the University of Mumbai. It is one of the few colleges to accustom this course and harbour it's technical brilliance for more than 30 years. The Chemical Engineering Department, established in 1983, has always produced and developed the crux of this core stream, elements which have driven the engineering mechanism forward. The alumni list with their achievements stands as a constant motivator to the current generation, setting a vision one should follow. The laboratories of this institution are well equipped and give a pilot test for all engineers in the bud to understand the functioning of the industrial scenario. Activities that boost the curiosity has always been undertaken by the staff by conducting various quiz competitions, workshops and industrial visits. The faculty itself is engaged in many futuristic research areas such as simulation and design, chemical kinetics, fermentations to name a few. The limelight and laurels brought to the department, mirrors the reach of TSEC, thereby standing to it's mission: To be a globally recognized chemical engineering program.

FROM THE HEAD OF DEPARTMENT



All these years, a bitter sweet feeling has always stayed back with me to see such beautiful minds ending their journey to reach another milestones. It's an honor to know that we have forged a platform for these young minds to reach these milestones. We have, through various programmes, given the students an exercise to become interpretative thinkers who produce merit worthy work, in gaining academic skills, content knowledge and well founded decision making. One of these efforts in this direction is ChEMERGENCE organised by the IChE Students chapter in association with the Chemical Department of TSEC, which has over the years fostered the aptitude and talents of young dreamers with the precious appreciation of experienced professionals who revolutionized the chemical industries and research academia. It has been eleven years, since it's inception and each year the students have strived to bring us tremendous happiness and pleasure with their efforts to build a sturdy base that will help them strive towards success and prosperity. To view the students everlasting dedication warms my heart.

I would encourage my beloved students to come forward, and be a part of this beautiful effort, to gain inestimable knowledge and experience to emphasize character education and practical knowledge to bring about colossal change in the functioning of this sector and to solve the problems of the hour. I would like to end this paraphrase by wishing ChEMERGENCE to "Emerge" and achieve remarkable milestones, as it has been doing year after year. My best wishes to all the students for their wonderful future!

Dr. Sadhana J. Purohit
Head of Chemical Engineering Department

FROM THE TEACHER CO-ORDINATOR



ChEMERGENCE.- Initiated in 2006 by our very own Department of Chemical Engineering, has completed 11 Successful years, and now this year, ChEMERGENCE- 17 comes to you, armed with a highly relevant theme: "Harnessing Exergy". Our brilliant team has worked day in and day out to make it one of the most exciting Technical festivals held in our country!

Human brain is the most outstanding compact machine in this world. Utilizing it effectively can produce wonders! A group of budding engineers, working with **DISCIPLINE, DEDICATION, and DETERMINATION**, tremendously increase the potential to achieve amazing results. This increase in potential, this ability to produce fantastic results, is **EXERGY!!** Let us use our Exergy to Learn, Improve, and Apply our skills for the betterment of the Indian industrial sector.

After all, our Department, like our College, vouches for "Higher Technology for National Development"!

Like every year, ChEMERGENCE- 17 has offered a huge platform for participants to exhibit their skills, in multiple specialized arenas such as Reaction Engineering, Mass Transfer, and Heat Transfer.

I assure you that the ChemLect Series by experts in our field will prove to be a "gift" to us and will encourage the Engineer in each one of us to strive toward expressing our gratitude to our domain of excellence, that is, Chemical Engineering.

I am glad to have had the opportunity to work with this enthusiastic team. I appreciate each and every one of the IChE-TSEC team for organizing such a successful symposium, ChEmergence - 17.

My best wishes to ChEMERGENCE- 18!



FROM THE EDITORIAL TEAM

From reading magazines to developing one, the journey itself has been quite a memorable experience. The efforts to put out an amalgamation of a concise yet conducive piece of art proved to be a challenging and a learning role. The path undertaken to reflect the upcoming vision of ChEMERGENCE'17 is what this edition of CATALYST encompasses. Catalyst is an annual magazine published occasionally around the technical symposium ChEMERGENCE. This edition reaches out to the alumini of TSEC serving as motivation, guidance, to contrive a boulevard and setting an example to follow in this labyrinth of Chemical Consortium. The Major highlight includes ChEMERGENCE, which witnessed a congregation of nine technical events. The theme, 'Harnessing Exergy' associated this tenure ignites the fire within each budding Chemical undergrad. The hardwork and the teams efforts put in to conduct the fest has been an unforgettable journey providing a new learning experience for each of it's contributors. The entire team of committee members, coordinators, volunteers, teaching and non-teaching staff has strived a lot to bring into reality a fest like ChEMERGENCE'17. The editorial team stands in debt to all people who made this endeavor a remembrance. A heartfelt thanks to our Teacher Coordinator, Prof Usha Nambiar who was a constant motivator and a perfect guide in this sojourn. Many thanks to our Chairperson, Ms Akanksha Salunkhe and the entire Chemical Engineering Department which stood as the foundation of ChEMERGENCE 2017!

THE DEPARTMENT OF CHEMICAL ENGINEERING



Dr. Sadhana Purohit
Head Of Department



Mrs. Nita Mehta
Associate Professor



Mrs. Usha Nambiar
Associate Professor



Dr. Anita Kumari
Associate Professor



Mrs. Elizabeth Joseph
Associate Professor



Mr. Prasad Parulekar
Sr. Associate Professor



Mrs. Sangita Borkar
Associate Professor



Mrs. Trupti Dharamrao
Assistant Professor



Mr. Ravindra Joshi
Associate Professor



Mr. Ramesh Bhande
Assistant Professor



Mrs. Karuna Saswani
Assistant Professor



Mr. Lakshya Girdhar
Assistant Professor

THE DEPARTMENT OF APPLIED CHEMISTRY



Dr. Anupama Sawant
Head Of Department



Mrs. Vandana Kadam
Assistant Professor



Mrs. Anjali Kirkire
Assistant Professor

THE DEPARTMENT OF CHEMICAL ENGINEERING



Mr. Shobha Singh
Lab Assistant



Mrs. Dipti Rol
Lab Assistant



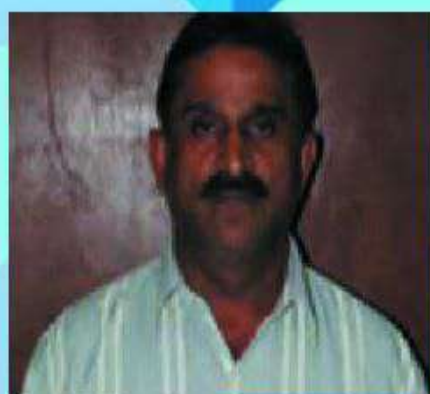
Mr. Chhhdiram Tiwari
Lab Attendant



Mr. Ramshankar Dubey
Lab Attendant



Mr. Chandrabhan Chaubey
Lab Attendant



Mr. Arjun Prasad Shukla
Lab Attendant



Ms. Vrushali Dabholkar
Lab Assistant



Mr. Pritam Raut
Lab Assistant



Mr. Uday Yadav
Lab Attendant

THE TEAM BEHIND ChEMERGENCE'17



AKANKSHA SALUNKHE
CHAIRPERSON



SHRADHA JOSHI
VICE-CHAIRPERSON



SAINI KULKARNI
SECRETARY



SARVESH SOVANI
TREASURER



KAPIL KOUL
CHIEF MARKETING AND
PUBLICITY HEAD



ABIZER SODAWALA
TECHNICAL EVENT
CO-ORDINATOR



SAAD POSHARKAR
EDITOR



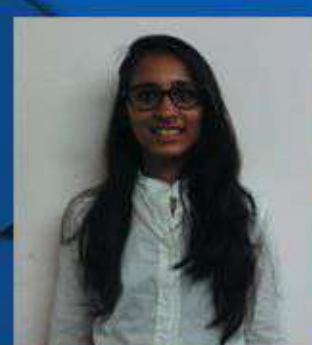
ABHISHEK PANDEY
MARKETING HEAD



PRANAV KUMBHAR
AMBASSADOR/RELATION
OFFICER



SUYASH SHINDE
CREATIVE HEAD



AAYUSHI KABRA
DESIGN HEAD
(MAGAZINE)

ABOUT CHEMERGENCE'17

In this plethora of everyday chaos, a sense of balance is what one wished for. But sometimes you have to rise above it to achieve more. It is the energy that we put after attaining our threshold that matters!

The above context is analogous to the thermodynamic concept of the term exergy. Exergy can be defined as the free energy available in the system. This year, charging forward with the idea to extract every individual's technical personification the theme titled harnessing exergy stood as a motivation and an inspiration to one and all. The confluence of all the efforts in raising the bar of expectations and innovations is what this year unfolded.

With various unit operations having their undisputed need, the analysis of feasibility in chemical engineering stands apart. The equilibrium conversion set to be achieved with minimal energy losses is what a Chemical Engineer engages in. The interpretation from exergy yields the location, magnitude and type of energy losses occurring in the system. The environment plays an important role in evaluating exergy. Creating an environment to harness exergy was what CHEMERGENCE'17 reflected. For many people the number 12 is just a two digit number. A committee of 12 was with what the 12th edition of Chemergence started. Though small in number, it did not affect the team's determination to make this symposium a success. Every member worked selflessly, in this journey, sacrificing a lot without complaining. Challenges were tough but so was the commitment of each and every member. Harnessing Exergy, the theme for the year 2017 was meant to be much more. It reflected the fact that the team captured every small resource and harnessed it to its core.

The efforts of the team could not be summed up better than these two lines :

**Don't Strive to be a Success
But
Rather to be of value!**

EVENT

ChemLect

Talk with people who make you see the world differently!

A stage set for students to witness wisdom up close from various pioneers of the chemical industry is what this event presented. The Echo of Experience heard in the room, gave everyone present a sense of integrity and a feeling of motivation. The enlightening exposure of the industrial practicalities by the keynote speakers was outstanding and was a great pleasure for team ChEMERGENCE'17 to have been acquainted with all of them.

Technical Paper Presentation

An idea is all what it takes to bring out a revolution. And an idea on paper, is just the emergence of it. Technical Paper Presentation gives the young minds a platform to showcase their ideas and welcome positive criticism right at the initial stage of development. TPP has helped finding specific strengths and flaws of many ideas that have been presented in the past years.

Poster Presentation

The secret of getting ahead is getting started!

ChEMERGENCE'17 gave a juncture to all the participants to concoct a picture perfect frame on a meter squared area. To Resonate with the spectrum of colors and stand out from the black and white. The idea to knit the Chemical Engineering knowledge from broad Paragraphs to bullet points having maintain an equilibrium between the technical and creative skills is what this event presented.

Cool It

To solve the pinching of the industry by the heated hotspots, the engineering mind soon to be in play in the industries were tested at ChEMERGENCE'17 in it's event Cool It. Participants had to design a miniature cooling tower model to keep the industrial sensitivity at par. By narrowing it down to the natural draft, harnessing of air, an utmost

DESCRIPTION

Enact to React

The role of kinetics is utmost important and builds the foundation of the Reactor Design. At ChEMERGENCE '17 we emphasized on the formulation of these foundations and made them stronger by having students predict, perform and present their understanding. Participants had to develop a theoretical model and support it with experimental evidence.

To load the reactive areas of the brain with concepts of Chemical Reaction know-how's and to engineer a Reactor by triggering the calculations and achieving the desired conversion, this event truly witnessed an ingenious mindset of all the participants associated with the event!

ChemQ

In youth we learn, with age we understand!

ChemQ at ChEMERGENCE'17 offered a perfect stand for participants from various Institutes to tackle the technicalities and emerge out as a Chem master. The event involves principles of Chemical Engineering and a test of wit and proficiency of competitions in this field. The combination of the strength of patience to elude the strain on the brain and respond as a quick reflex, this event titled with one winner!

Scratch Design

The beginning of all things are small. From some dimensions on a sheet to design on site, the journey from Reactants \rightarrow Products starts from a scratch.

Scratch Design, An incipient event in ChEMERGENCE'17 also tested the future minds on their knowledge of Process simulation. Mustering their skills of Material and Energy balances, participants had to help the product to travel to its Destiny.

HeatX

ChEMERGENCE'17 hosted one of the mind stupefying event wherein the participants had to market their design to the audience present. To spectate the participants aiming to bring down temperature, their out of box thinking to increase the residence Time flipped the coefficients of their mind. From its initial design on paper to its posterior, the hardwork of every participant beared fruit knowing now that they stand one step away from solving one of the major industrial problems.

Salt Act

The analytical portion of the brain will turn the picture of this game! ChEMERGENCE'17 following its tradition gave an entire laboratory wherein the minds and analytical skills are kept in vigilance and scrutinised on the result of deduction. The agility and the dynamic response spurred up the entire system keeping in check the quality and quantity of resources at hand. The spectating pleasure of this event was such one wouldn't want to miss.

GLIMPSES OF CHEMERGENCE'16



COOLING TOWER



LECTURE SERIES



SALT ACT



CHEMICAL QUIZ



PADMAVIBHUSHAN
PROF. M.M. SHARMA



THE TEAM BEHIND CHEMERGENCE'16



CRAVE FOR CONVERSION



POSTER PRESENTATION



INAUGURATION CEREMONY



TECHNICAL PAPER PRESENTATION



FELICITATING THE PRINCIPAL

ARTICLE
CATALOGUE

FROM THE ALUMNUS OF TSEC

Chemergence, a renowned National level Technical Symposium and a successful initiative by the Student Chapter of IChE in Thadomal Shahani Engineering College (TSEC) is celebrating its 12th edition on 7th October 2017 and it's my extreme pleasure to get associated with Team ChEMERGENCE for this year too.

While wishing a great success for ChEMERGENCE 2017, some vivid memories took me to year 2008. First time I volunteered for ChEMERGENCE '08, followed by an Event Coordinator for Industrial Defined Problem (IDP) event in ChEMERGENCE '09. Year by year ChEMERGENCE was gaining recognition from reputed academic sectors, industries and the Team ChEMERGENCE was toiling hard for its Excellence!

Today after 6 years of professional journey, when I recall my first successful campus placement in Aker Solutions, it feels that graduation isn't the end of tough journey but it is the beginning of beautiful one. In 2011, I started my career as Graduate Engineering Trainee in Process department of Aker Solutions. When I was surrounded in Aker by graduates from ICT, IITs and other experienced candidates, there was a deep conversation in mind whether I'll sustain with my limited knowledge of chemical engineering but soon I started realizing a fact that in any stream what matters is your attitude and approach, intelligence contributes little.

My professionalism and consistency in delivery became my strategies to excel. I started breathing process engineering and updating myself as years were rolling on. Soon I revisited my interest in IChE, which I left behind with student membership when I graduated.

Today IChE MRC is my weekend home which doesn't let me forget the essence of chemical engineering even though I wish to take a break on weekends.

Life sometimes catches sonic velocity, you just have to be sound with its mechanism. Today when I glance through those vivid memories, many of them motivates me to set a benchmark for upcoming generations of Chemical Engineers.

Journey starts with several national level tech-fest awards and nomination for TSEC Gold Medallist and continues till today being the youngest Honorary Regional Secretary of IChE. Aker Powergas Recognition Awards, publications in international journals, several technical talks on prestigious platforms are ensuring me on the right track.

My chemical engineering journey till date is too short to narrate and there are many milestones lined up in near future. However I truly enjoy when someone asks me to share same. I feel extremely grateful while coming to TSEC, interactions with student, assistance to technical matters and no doubt this always be indispensable part of this journey.

My sincere thanks and best wishes will always be there with the genius Team, who is consistently working towards prestige of ChEMERGENCE!"

"Everything you found easy, you once found hard. So dream big, begin small and start now.."

Pratik G Bhagat

Process Engineer at GS E & C Mumbai Pvt. Ltd.

Former Honorary Regional Secretary and Executive Committee Member – IChE MRC (2015-16) Alumnus – TSEC (B.E. Chemical Batch 2011)

FROM THE ALUMNUS OF TSEC

Looking down the memory lane, it fills my heart to pen down my thoughts in this edition of the departmental magazine, the Catalyst. It has been 23 years since I left back this esteemed Institution that has trained me to reach this propagated stature. To reach out back to the students gives me immense joy through this foreword.

My journey to being the Director of Sterling Auxiliaries has been one of the milestones of my life. Heading the company from it's foundations to employing hundreds of Chemical Engineers today, each step towards this milestone traces me back to the roots. All the principles on which Sterling Auxiliaries stands on, is due to my incipient experience.

Sterling Auxiliaries Private Limited (SAPL) is one of the most versatile specialties Chemicals.

SAPL incorporated in 1984, headquartered at Mumbai having its major manufacturing locations in Gujarat, Western India.

SAPL has established strong domestic and international presence as one of the preferred supplier of APEO free Surfactants, Ethylene & Propylene Oxide Condensates, EO-PO Block Co-Polymerization, Construction Chemicals & Cement Admixtures, Oil Field and Gas Treatment Plants.

SAPL also support formulations & provide technical support for applications like:

Home & Personal Care, Textile Processing, Pesticide Emulsifiers, Gas Treating.

SAPL is catering to renowned list of customers in domestic and international market.

I would like to encourage all my fellow engineer's to not restrict their thoughts by the scope of Chemical Engineering but rather than creating opportunities. The initiatives taken up the government of India like Make in India , I urge all engineer's to harness every opportunity available in the open.

-SANDEEP CHOKHANI, DIRECTOR, STERLING AUXILIARIES PRIVATE LIMITED,
ALUMNUS 1994 BATCH

FROM THE UNDERGRAD



The possible scarcity of oil and gas resources in the future is a major concern throughout the world. For this reason, there is a need for working on reducing the dependence on imported energy resources. Alternative energy resources such as bioethanol, biodiesel and biomass have gained prominence over the years in order to substitute petroleum-derived products. Bio-based lubricants have also gained importance as alternatives to conventional petroleum-based lubricants in various applications, especially the automotive industry. Despite the benefits of bio-based lubricants, these lubricants are still far from being practical substitutes

This is because, the most commonly used lubricants are substances having a 3-fold purpose. They help reduce friction, prevent wear and tear of the surfaces in mutual contact and provide a protective coating for corrosion resistance. Apart from these obvious functions, it may also serve as a medium for transmission of force, transporting foreign particles or heating or cooling of surfaces. In this study, use of bio-based lubricants, their advantages over synthetic lubricants and methods to increase their feasibility for use in industries is put forward.

Bio-lubricants, or bio-lubes are made from vegetable oils, primarily rapeseed, canola, sunflower, soybean and others. Bio-lubes have a lot of advantages over synthetic lubes, from providing a cleaner and toxic-free work environment to being biodegradable. They offer better safety due to higher flash point and lesser vapour emissions.

In order to use plant oil-based lubricants with special additives, chemical modifications, De novo synthesis, breeding, and/or biotechnology play an important role. These methods improve the performance and stability of base oils in lubricating formulations. They also provide a sufficient capacity of plant-based oil substrates for green engineering.

How are bio-lubes produced!?

There are several ways of synthesizing bio-based lubricants, one of the most common method, is the two stage transesterification method.

The first stage is the process of using methanol in the presence of sodium hydroxide to produce biodiesel. The second stage is the reaction of biodiesel with trimethylolpropane using sodium methoxide as catalyst to yield palm or Jatropha oil base trimethylolpropane esters (biolubricants). The basic raw material for this process is vegetable oil. Methanol, Sodium methoxide, Trimethylolpropane (TMP) and ethyl acetate, are used in the manufacturing process.

Palm oil is converted to fatty acid methyl esters (FAME) using methanol transesterification process. The obtained methyl palm biodiesel treated with silica gel after 30 minutes, removes soap. Palm oil based TMP esters can be prepared using transesterification reactions.

Trimethylolpropane (TMP) is initially dissolved into small amount of the obtained biodiesel with the aid of heating (70–90 °C) and stirring to melt the crystalline solid. A known amount of TMP is added with constant stirring and the mixture is heated to an operating temperature of 120–130 °C before addition of sodium methoxide catalyst

After the reaction is completed; which takes about four hours, the reaction mixture when cooled to room temperature ethyl acetate is added and filtered to remove the catalyst and solid materials. The final products i.e. biolubricants are analyzed for their lubrication properties. Empirical evidence and stoichiometric calculations suggests that used palm oil yields results fairly close to that of unused palm oil depending upon the extent to which the oil has been used, since amount of unoxidised fatty acids present in the oil varies from place to place. The inference drawn from the research was that used cooking oil, so abundantly available can be used in a very efficient way by converting

**-PRATIK KHARE
BE, CHEMICAL**



REVIEWS

1.Omkar Bhatavdekar Poster Presentation.

ChEMERGENCE has always been one of the events I have loved to go to. The event is always well organised and conducted in unison by the committee. The events are challenging and no matter if you win or lose, you end up with an enriching experience. I have participated in almost all events at ChEMERGENCE in 2 years and I strongly recommend every chemical engineering student to participate. I wish all the very best to the team 2017

2.Ashutosh Karkare Technical Paper Presentation.

My experience at ChEMERGENCE 2016 was unforgettable. It is always a pleasure to visit TSEC for such events since the organisation is so smooth. I was a participant in TPP and the level of competition was very high. This is good however, since it inspires and motivates me to improve myself! I appreciate the efforts taken by the organising committee for organising such events.
Thank You!

3.Ronak Chedda, HeatX

Participating in Chemergence was an eye opener for me. Not knowing the various challenges and difficulties that one would face in fabrication, I was confident. The experience humbled me. Now, I am much more appreciative and thanks to ChEMERGENCE, my knowledge has expanded considerably.

4.Yash Toshniwal Cool It to Win It

The cooling tower competition experience was a great one. We were competing with around 10 teams. The arrangements for the same were fantastic and proper conduct of event was ensured by the committee. There was no hustle-bustle and everyone got proper time to show their cooling tower to judges.

5.Husain Rasiwala Chemical Cryptics

The general aptitude round questions were good and at par with the general aptitude test of big MNCs. The event was managed very well. I luckily scraped through the preliminaries but the quarterfinal round was challenging due to the quality of questions and marking scheme. I got eliminated but enjoyed spectating the final round. Thank you team IICHe-TSEC for the



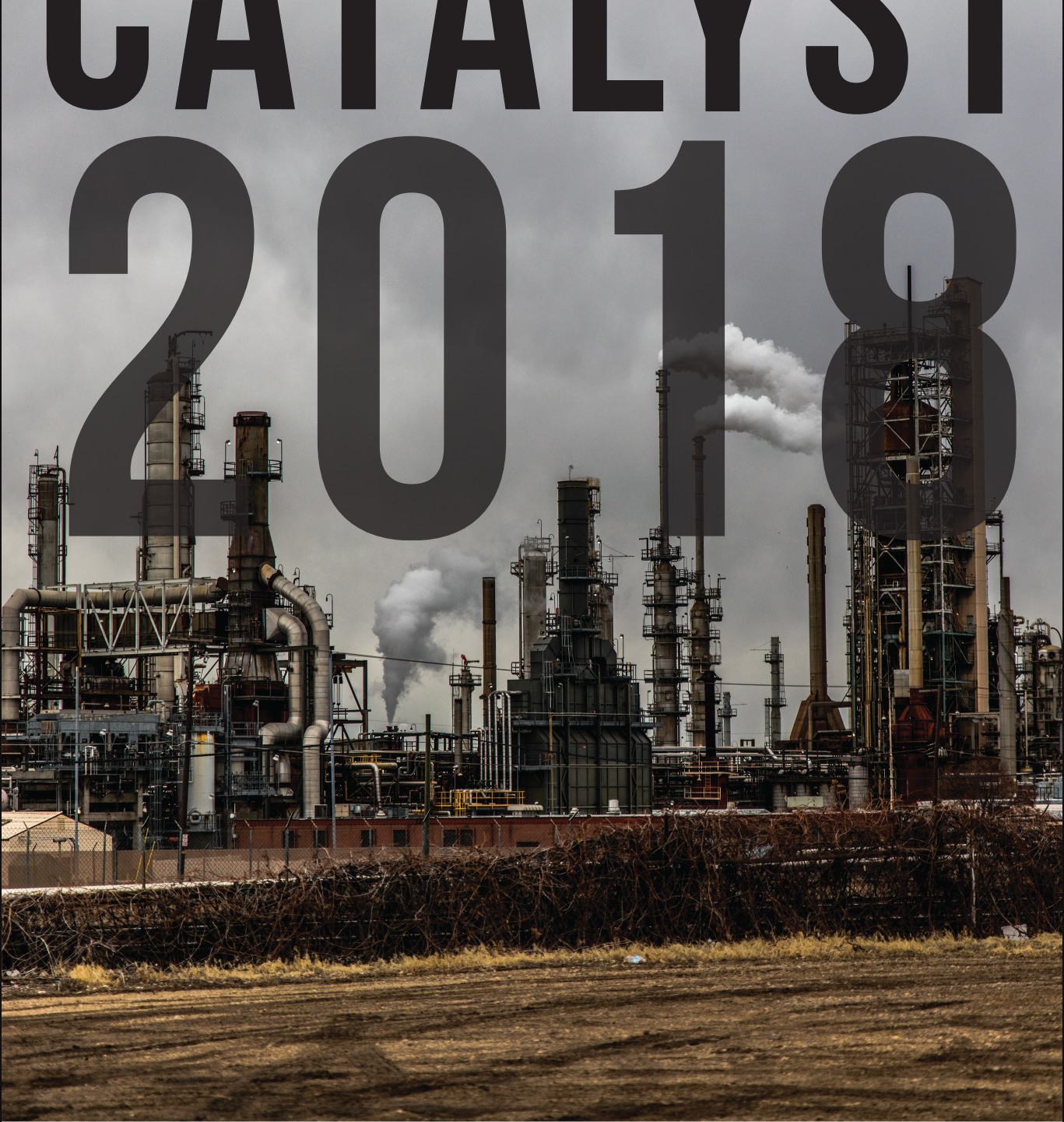
CHEMERGENCE 2017!

HARNESSING EXERGY



An IIChE-TSEC Publication

THE
CATALYST
CATALYST
2018

A photograph of an industrial refinery or chemical plant. The scene is filled with complex machinery, including tall distillation columns, pipes, and scaffolding. Several smokestacks are visible, with white plumes of smoke rising into a grey, overcast sky. In the foreground, there is a dry, brownish field with some sparse vegetation and a chain-link fence. The overall tone is industrial and somewhat somber due to the weather.

IIChE - TSEC

PUBLICATIONS

Celebrating



*Years of
Technology*

When technology takes shape before you, there is no way you get it wrong. Right from Artificial Intelligence, to the Internet of Things; Machine Learning to Software Integration in industries. We've seen it all and have been a part of them all.

1983 to 2018 is a long time, but when every day is a celebration 35 years is just a small benchmark of our monumental venture.

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE



FROM THE PRINCIPAL



Massive opportunities are unfolding in emission neutral processes and products. Indian professional education has been on the move to capture the need of society in the areas of energy and effluent treatment.

Independent of negativity prevailing in the perceptible level, great learning is happening in the realm of chemical engineering. We shall experience an inflection point in the fortunes of chemical industries and ICT driven Chemical process industries as Industry 4.0 sets in. Massive opportunities are unfolding in emission neutral processes and products. Indian professional education has been on the move to capture the need of society in the areas of energy and effluent treatment. Advances in the following areas of research bordering bio-technology shall be part of everyday discourse among chemical engineering academics and researchers:

- Bioreactors
- Design and scale up of external loop airlift bioreactors
- Continuous flow cell recycle fermentation biomass hydrolysates
- Scale up
- Plant and animal cell structure
- Plant cell as chemical factories and recovery of valuable products
- A Fluidized bed reactor for the cultivation of animal cells
- Biochemical Engineering
- Bio remediation and waste treatment
- Metabolite production, physiology and microbiology
- Enzyme engineering
- Enzyme reactance performance under thermal inactivation
- Downstream processing and bio separations



Chemical Engineering Department of our college celebrates and accentuates the essence of coming together of faculty and students through "ChEMERGENCE" as an annual event. I could see the energy and overflowing joy in the organizers, who left no stone unturned to live up to the expectations of all enthusiasts of past and present to make it a great success. I congratulate one and all who commits to the cause of Chemical Engineering Departments flag ship event of "ChEMERGENCE". I wish all concerned a professional success and a prosperously eventful year ahead.

Dr. G.T. Thampi
Professor and Principal
Thadomal Shahani Engineering College



FROM THE HEAD OF DEPARTMENT

“

It is these (ChEMERGENCE) rare opportunities that provide a platform for students to express themselves and develop their skills.

”

Dr. Anita Kumari
Head of Department
Department of Chemical Engineering

It gives me an immense pleasure to be associated with the activities of the thirteenth national level technical symposium, ChEMERGENCE'18, organized by the Department of Chemical in association with IChE-TSEC. The objective of this festival was to provide a platform for the students to have a one-on-one interaction with the students from different colleges in India and with the professionals of the Chemical industry and academia. It is these rare opportunities that provide a platform for students to express themselves and develop their skills. ChEMERGENCE initiates the exchange of ideas of substance, where students get a chance to demonstrate their conceptual knowledge and portray their vision of tomorrow's Chemical Engineering and its vital importance in the overall development of today's world. This year, we have introduced a new event- 'ChemDebate' in addition to popular events like Technical Paper Presentation, Poster Presentation, Cool IT, HeatX, etc. I can now say with pride that we received an overwhelming response from across India. I take this opportunity to acknowledge the valuable contributions of all the sponsors, without whom this event would not have been possible. I commend the working committee for their well-co-ordinated team work and dedicated efforts in planning and managing the entire festival of ChEMERGENCE '18; in making it a grand success and a memorable one at that. My words of appreciation also go to all the dignitaries, judges and the participants, who make the festival the wonderful mega-event that it proves to be. I once again like to express my sincere gratitude to all the sponsors, the Principal Dr. G.T. Thampi, the staff members of Chemical Engineering Department of TSEC, and last but not the least, all their participants for showing their immense interest and enthusiasm. I feel ChEMERGENCE, as a festival has always been a good learning experience for all the participants and the students of the Chemical Engineering Department of TSEC; and I intend it to do so in future too. I wish the following working committee much luck for ChEMERGENCE '19.



FROM THE TEACHER CO-ORDINATOR

“

In order to develop new enhanced products which will uplift the quality of life as well as fulfil changing consumer demands, continuous research and development is crucial even though it is time consuming and expensive.

”

It gives me immense pleasure to write few words about Chemergence 2018. It has been a long tradition to conduct Chemergence from year 2005. Chemergence is fully organized by the students of chemical Engg dept of TSEC. What started as a small function has now emerged as a national level event. With changing times, number of new activities such as Cooling tower design, Hex design, Chemical Quiz, Chemical Engg Debate, Chem. Lect series, Scratch a Design and many more have been evolved since it started. The enthusiasm of organizers and participants have made this program a success. The chemical industry is critical for the economic development of any country, providing products and enabling technical solutions in virtually all sectors of the economy. May be it commodity chemicals or speciality chemicals, have great importance in the modern world as almost everything used in human life for the human survival is made up of chemical products. However, in order to develop new enhanced products which will uplift the quality of life as well as fulfill changing consumer demands, continuous research and development is crucial even though it is time consuming and expensive. Chemical Industries and Chemical Engineers should focus on bulk production by utilizing the minimum raw material, energy and latest technology which will make less environmental loss, give priority to safety measure with reduction in capital expenditure. The first step in this process of R&D is to carry research work in laboratories of Institutes, Universities and Industries and then convert the successful research into realistic industrial processes and production. Further, it is a Herculean task for the chemical engineers to mimic the large scale process and achieve the desired output under controlled conditions with a higher yield at a suitable rate. The idea behind organizing Chemergence is to encourage innovative ideas of budding chemical engineers and provide the platform to put forth their ideas and ignite their enthusiasm to undertake further research work in future which will help in evolving new globally accepted chemical products and technologies solely for the welfare of the society. I wish all the best to organizing committee of Chemergence, 2018 to fulfill this purpose and achieve a grand success.

Prasad J. Parulekar
Assistant Professor (Sr.) &
I/c Chemergence'18

A portrait of Mr. Abhishek Pandey, a young man with dark, wavy hair and a beard, wearing a dark suit jacket over a white shirt. He is looking slightly to the right of the camera with a neutral expression. The background is dark and out of focus.

FROM THE CHAIRPERSON

My journey in TSEC began with volunteering in different and various types of Technical, Cultural and Literary events, right from my first year. Later on, after looking at my seniors working and succeeding in their own fields, brought me close to all the extra-curricular activities that took place in TSEC. Starting from a junior committee member of the TSEC Students' Council, to becoming the Chairperson of IChE-TSEC, is a journey worthy to remember and learn from. After faring well in the cultural committee of TSEC, my eagerness to do something for my branch got myself close to the Team of ChEMERGENCE last year! Being very new to any technical event, I came across various new opportunities that gave me lessons to my life. While being the 'Marketing Head' for the committee, I made my responsible contribution towards ChEMERGENCE'18. I would like to thank Mr. Rajeev Goel and Ms. Joan Dsouza from Hindustan Petroleum Corporation Ltd. for always having my back and helping me out with Internships, Projects and Associations, HPCL has been a very crucial part of ChEMERGENCE right from the year 2017. After preparing myself with the required knowledge of team building, technical events and leadership, I got the opportunity to lead the team of IChE-TSEC. This year, ChEMERGENCE'18 begins with the motive of "Igniting Innovations", giving rise to new initiatives, one of which being 'ChemDebate' that is brought to bring the speaking, presentation, listening and technical skills of our future aspiring chemical engineers. Lots of new praise worthy changes have been made this year with the kind help of our newly appointed Head of Department, Dr. Anita Kumari and our humble Teacher Co-ordinator Prof. Prasad Parulekar. Having to get the opportunity of being the Chairperson this year was a complete dream come true, this has chance has enhanced my leadership skills along with my decision making abilities under good pressure. ChEMERGENCE'18 is the result and hardwork of the entire team who were completely new to this experience. They have shown immense interest in learning the functioning of IChE-TSEC and ChEMERGENCE'18 in all which has helped us to bring up a successful event. I would like to thank Mr. Rudra Shirodkar, the Vice Chairperson and Mr. Nitesh Ratnani, the Secretary, for being a crucial part and taking collective decisions. I would also like to appreciate the efforts of my Third Year friends who have been very kind and helpful. The Chief Technical Officers Mr. Abhishek Shukla and Mr. Parth Sheth, have worked on the events commendably well. I am glad to have a laudable team including the Marketing Head, the PRO, the Ambassador Relation, the Associate CTOs and the team of Editors. I would like to thank the Teaching Staff and the Non-Teaching Staff for the help and co-operation at various stages. As one of my seniors very well mentioned that, it is not the destination that matters, but the journey that you travel. Coming close to the end of my Engineering education, this ChEMERGENCE would be my last event and is very close to my heart. This journey of my life will always be cherished.

**Mr. Abhishek Pandey,
Chairperson, IChE-TSEC**

FROM THE VICE-CHAIRPERSON



I think a lot of ongoing research and developments in the field of chemical engineering deserves to be recognised and championed for its worth and value to society, and used in multidisciplinary attempts to make the world a better place. Unfortunately, a lot of these are unable to reach out to the academically inclined personnel, simply due to a lack of platform. ChEMERGENCE provides such a platform, for undergraduate as well as postgraduate students from various fields of Chemical Engineering, to showcase their ideas, present their research, and speak their opinion. Hosting the pioneer edition of 'Chem Debate', ChEMERGNCE '18 strives to explore and exercise the soft skills of chemical engineers. Inculcation of the culture of public speaking is what the event is aimed at. As the saying goes, "It is not the destination that matters, but the journey", and this journey from the formation of the committee to organising of the biggest and sought for symposium, ChEMERGENCE '18 is all set to live up to its expectations.

-Rudra Shirodkar
Vice-Chairperson
IICHe-TSEC



FROM THE SECRETARY

"Strike all your hardships with exceptional Inspiration,
Walk your way through the journey, Igniting Innovations."

With the motto of 'Igniting Innovations', ChEMERGENCE'18 this year focuses towards pivoting new ideas bestowed for the Chemical Industry. Industrial pioneers, Mr. Samir Shah from Ciron Drugs and Pharmaceuticals, and Mr. Kevin Shah from Munters India, have been really humble and obliging towards the team, and I on a personal level have a lot of things left to learn from such influential personalities.

IICHe-TSEC this year has aimed at providing 'Profile Building' opportunities to the students that would be beneficial for their further ventures.

From contributing as a 'Volunteer', to working as the 'Secretary' for IICHe-TSEC has been quite a journey that I would cherish and learn from. I wish the students achieve all heights of success in their future endeavours.

Thank You

-Nitesh Ratnani
Secretary
IICHe-TSEC

**C
O
N
T
E
N
T
S**

1 **IIChE**

2 **Department of
Chemical
Engineering,
TSEC**

3 **IIChE - TSEC**

5 **ChEMERGENCE**

7 **Exploring Opportunities**

9 **Beyond the
fine lines**

18 **Leader of
all Seasons**

21 **Making it
Big**

24 **Associations**

IIChE

Indian Institute Of Chemical Engineers is a confluence of streams of professionals from academia, research institute and industry. It provides them the appropriate forum for joint endeavors, hand-in-hand, to work for human being through application of chemical engineering and allied sciences. If you are interested about, attached to or involved in chemical engineering related activities – whether as a student as a seasoned professional - you shall find the program of IICHE immensely beneficial, opening up doors of new possibilities and existing possibilities. Over the years the Institute has developed a distinct profile of its own. Even as the IICHE is always moulding itself and playing a proactive role to keep up with the ever changing needs of the society and the economy, the basic objectives remain largely unchanged since its inception. One may shortlist them as:

- To promote advancement of Chemical Engineering Science and draw up a code of ethics in the profession.
- To maintain and widen contacts with chemical engineering professionals in India and abroad ensure regular exchange of ideas with other national and international professional institutes in this field.
- To act as an authoritative body on matters pertaining to the teaching and the profession of chemical engineering.
- To conduct examinations and assist persons engaged in the industry to qualify as chemical engineer.
- To confer awards, diplomas and certificates to such persons as may be deemed fit.
- To undertake publication work, i.e., journal, monographs, proceedings of seminars/symposia/ workshops
- To conduct meetings and transact business on administrative, academic and technical matters relating to the profession.

Executive Council - IIChE - Mumbai Regional Centre (2017-2018-2019)

Sr No.	Name	Role in IIChE-MRC
1.	Mr. R.G. Rajan	Chairman
2	Dr. Aparna Tamaskar	Vice Chairman
3	Mr. V.Y. Sane	Hon. Secretary
4	Mr. Rajesh Jain	Hon. Jt. Secretary
5	Mr. Ravindra Joshi	Hon. Treasurer
6	Mr. M P Jain	Immediate Past Chairman
7	Mr. K Sahasranaman	Member
8	Mr. Pravin Saxena	Member
9	Dr. Anita Kumari	Member
10	Mr. S. Chitnavis	Member
11	Dr. T.L. Prasad	Member
12	Mr. Dhaval Saxena	Member
13	Dr. R. Pathak	Member
14	Dr. Rohidas Bhoi	Member
15	Dr. Parag Gogate	Member
16	Mr. Joy Shah	Member
17	Mr. Pratik G Bhagat	Ex-Officio Member

Department of Chemical Engineering, TSEC

Department of Chemical Engineering, TSEC was established in 1983. It has a long and distinguished history of successfully educating leaders for a wide variety of industries. Ever since its inception in 1983, the Institute has established itself as a premier institution engaged in imparting quality technological education.

The chemical engineering department strives to impart high quality technical education with a delicately struck balance of fundamental knowledge, practical exposure and novel concepts. We believe in providing our students with education that combines conceptual learning and the excitement of discovery with the support and intellectual stimulation of a diverse campus community. The department is committed to achieve excellence and evaluates the success and leadership of its programs using the highest standards of quality and innovation.

Continuous industry-institute interaction is going on by:

- Conducting Guest lectures / Alumni lectures in the department by industrial experts.
- Organizing national level conference on various recent developments.
- Industrial visits by staff and students of the department.
- Promoting Industrial training (internship) programs for the students of the department.

The topics are usually in subjects like modeling and simulation, unit operations, polymers, pollution control, and design of process industries. Many of the projects have led to Publication. The department have also received AICTE -MODROB grant for two consecutive years 2012-13 and 2013-14 amounting to ₹ 8 lakhs.

The department had produced university toppers with regular consistency. The department emphasizes on all round development of its students; proof of which are the numerous instances where the students have made the college proud by winning laurels in various competitive events. Today our alumni work in many revered organizations like Reliance, Aker Power Gas, Toyo Engineers, Tata Consulting Engineers ,SNC Lavalin to name a few, at responsible positions.

Sr. No.	Name	Designation
Department of Chemical Engineering		
1	Dr. Anita Kumari	Professor and Head of Department
2	Dr. Sadhana J. Purohit	Professor
3	Mrs. Nita Mehta	Associate Professor
4	Mrs. Usha Aravind Nambiar	Associate Professor
5	Mrs. Elizabeth Biju Joseph	Associate Professor
6	Dr. Ramesh S Bhande	Associate Professor
7	Mr. Prasad Parulekar	Assistant Professor (Sr. Scale)
8	Mr. R. R. Joshi	Assistant Professor
9	Mrs. Sangita Borkar	Assistant Professor
10	Dr. Trupti Parag Dharmarao	Assistant Professor
11	Ms Karuna Saswani	Assistant Professor
12	Mr. Lakshay Girdhar	Assistant Professor
Department of Chemistry		
1	Dr. Anupama Sawant	Lecturer (In-Charge) (Sr. Scale)
2	Ms. Anjali Kirkire	Assistant Professor
3	Ms. Vandana Kadam	Assistant Professor

IChE - TSEC

Abhishek Pandey
Chairperson

Rudra Shirodkar
Vice - Chairperson

Nitesh Ratnani
Secretary

Vivek Patel
Editor/ Industrial Envoy

Parth Sheth, Abhishek Shukla
Chief Technical Officer

Parth Sheth
Publicity Head

Mitesh Chauhan
Marketing Head

Sohail Khan
Art Director

Hasan Shahid
Associate Editor

Apurva Chaubal
Public Relations Officer

Hiral Parmar
Ambassador Relations Officer

Komal Kankani
Technical Officer

Prithveeraj Wavre
Technical Officer

IChE-TSEC is one of the biggest student chapter of IChE in one of its biggest regional center, IChE-MRC, namely Mumbai Regional Centre. Among its various features, the notable is that, it is the only student body exclusively for chemical engineers in TSEC. The students' chapter focusses on inculcating the ideology of providing practical industrial exposure in alignment with the theoretical concepts the students learn. We promote excellence, personal growth and exchange of relevant knowledge. The aim of this association is to stimulate collaborative efforts between industry and the students, universities, and professional societies. To meet the emerging trends, IChE-TSEC in collaboration with the Department of Chemical Engineering-TSEC, has resorted to revolutionary approach to affirm the needs of its students. The ChemLect lecture series, the latest venture by IChE-TSEC, are scheduled throughout the year. Recently, talks have been delivered by renowned personalities from the chemical engineering fraternity that allow students to explore new arena. IChE-TSEC has been pioneer in identifying and acknowledging young talents which is evident by the events organized and their participation in the annual symposium. The annual technical symposium ChEMERGENCE, provides a platform to compete with launching talents. The events provide excellent correlation of theoretical knowledge to their practical applications in chemical engineering and allied sciences. Through ChEMERGENCE we believe in facilitating public understanding of technical issues. ChEMERGENCE catalyzes in applying chemical engineering expertise in meeting societal needs.

The information provided here represent the views of IChE-TSEC which is separate entity not in congruence with IChE-MRC. The statistics presented express the probability of manipulation of the organic data for the purpose of representation. Graphics, quotes, and other data might be protected by copyrights, and their use in this outlet does not infer to their any infringement.



Abhishek Pandey
Chairperson



Rudra Shirodkar
Vice - Chairperson



Nitesh Ratnani
Secretary



Vivek Patel
Editor/ Industrial Envoy



Parth Sheth
Chief Technical Officer



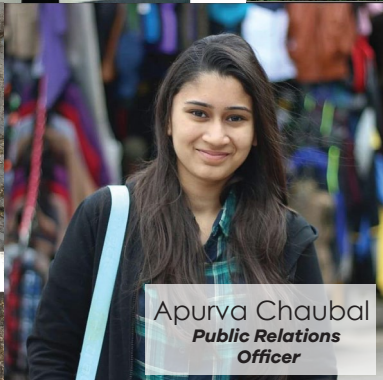
Abhishek Shukla
Chief Technical Officer



Mitesh Chauhan
Marketing Head



Sohail Khan
Art Director



Apurva Chaubal
Public Relations Officer



Komal Kankani
Technical Officer



Hiral Parmar
Ambassador Relations Officer



Prithveeraj Wavre
Technical Officer



Hasan Shahid
Associate Editor

Team ChEMERGENCE'18

ChEMERGENCE

ChEMERGENCE, since its inception, is accustomed to course of ever advancing technologies, harboring excellence. With the theme of 'Harnessing Exergy', ChEMERGENCE'17 extracted the exergy veiled in the energetic chemical engineers. It was a profusion of ripened innovations and raw ideas. A festival providing dais to broadcast the knowledge and ideas and foster a spirit of mutual advancement and collaboration among the chemical society. Thus, filling the gap between industry and students. The annual chemical consortium continued to strive towards new opportunities and undefined excellence. This joint endeavor was honored to have Mrs. Leja Hattiangadi, independent non-executive Director of Artson Engineering Ltd. as the Chief Guest. The thought provoking sessions by Mr. Deepak Pinjari, Professor at ICT and Mr. Ashwin rejuvenated the curious minds.



Salt Act

Testing the ability of participants to decode the chem(y)stery of salts, this event requires qualitative analysis of given salts and determination of the ions present in it. The event consist of two rounds. Preliminary round is a written test in which the basic knowledge of chemistry is tested. The final round incorporates the actual salt analysis. The event tests the love for analytical chemistry and their skillful approach for tackle the problems.

The Winners for Salt Act in ChEMERGENCE '18 were:

- 1st Prize: Venkat Subramanian, and Deepak
- 2nd Prize: Shweta Shinde, and Sankalp Sharma

ChemQ

A mind boggling array of questions ranging from basic chemistry to intricate details of mass transfer blended with practical and industrial aspects, this event tests the knowledge of teams' unto their last grey cell. The event has three rounds. The preliminary round is written while the other rounds are oral. It can be proudly proclaimed that this event has been attracting the maximum number of participants since the inception of ChEMERGENCE. Winner: Radhika Thanvi, and Pratik Mantri

HeatX

The heat exchanger is widely used industrial equipment. This event aims to design a working heat exchanger model incorporating core chemical engineering thermodynamics. The participants design a semi batch heat transfer equipment of provided size specifications. The model with the lowest final temperature is crowned best.

The event is a one of its kind opportunity to every budding chemical engineer to materialize ideas, implement theoretical knowledge and show case their economical skills.

- Winners: 1st Prize- Bhargav Pawar
2nd Prize- Nitesh Ratnani, Deepali Jain, and Parth Sheth



Cool It

One of the most important and indispensable unit in any chemical industry is a cooling tower.

ChEMERGENCE provides an opportunity to its participants to propose and design a unique practically feasible cooling tower model. The most efficient yet economically feasible will be adjudged the undisputed winner.

- Winners: 1st Prize-Rohit Gurav, Nitesh Pardeshi, and Atish Limbare
2nd Prize- Suyash Purandare, and Kunal Patil



ChemLECT

ChEMERGENCE, through this event, has strived to help its compatriots to excel in the quest of chemical engineering by providing interactions with finest and eminent personalities from industry and academia. The brief talk regarding various industrial aspects and prospects enlighten the audience and initiate their thought process towards ever expanding scopes of the industry.



Enact to React

This event provides an opportunity where the participants can actually determine the reaction kinetics and depict their potential to revolutionize the concept. The participants have to develop a theoretical model and support it with experimental evidence.

Winner: Divyam Mandalia, and Ronak Chheda

Technical Paper Presentation

ChEMERGENCE gives the platform to present the unperceived through this event. An opportunity to discover, suggest and innovate various industrial applications by diving into the ideas. The event consists of a presentation showcasing the literary, presentation and research skills. The objective is to promote and encourage the new talents and innovations in young engineers.

Winners: 1st Prize- Tejaswani Deshpande, and Bharat Hon-
mane

2nd Prize- Husain Rasiwala, and Abdul Mulla

Poster Presentation

Canvas the inner creative artistic face through this event. We wish to encourage expressing rainbow ideas by their skills different from regular mundane studies. Speaking without words, this event is not only fun to anticipate but a trigger to ideas and innovations.

Winners: 1st Prize- Akshata Barge, Vanlika Bhuta, and Kruti Goyal

2nd Prize- Akhila Nair, Prachee Prabhutem dolkar

3rd Prize- Swapnil Deshmukh, Kiran Dhangar, and Faizan Inamdar



Scratch Design

Before entering the industrial arena, ideas follow the process on sheets. This event tests the theoretical knowledge of process calculations and process flow diagrams of the participants.

Winner: Shivsiddhi Tavde, and Anita Mane

This year ChEMERGENCE'18 is staged with the theme, 'Igniting Innovations'. With an evolving year and ever-evolving technology, Team IICChE-TSEC continues with the streak of producing and celebrating jaw-dropping innovations. The quest for knowledge continues with the emergence of a new event- Chem Debate.

ChemDebate

You have a voice, you have the floor! ChEMERGENCE '18 hosts the pioneer edition of the very first of its kind, the ChemDebate. A classic knockout debate, exploring the domain of Chemical Engineering and current chemical and environmental affairs, ChemDebate provides a platform for speakers to speak, establish, and defend their opinions.

Participants in teams, will discuss and debate through various screening rounds, with one team rising above the rest.

ChEMERGENCE has been a trendsetter when it comes to technical symposium. What's ahead, Here's betting that the following year will be infinitely brighter with an unimaginably higher standards of technical aptitude that what we are experiencing today. And ChEMERGENCE, if guided by the spirit of its alumni, professors, and all the distinguished people that make it a mega-event, will be there to celebrate it.

Exploring Opportunities

The Chemical Engineering Department of Thadomal Shahani Engineering College is considered to be the finest in the city and reputed among the ones affiliated by the University of Mumbai. Since its inception in 1983, the department has been adaptable to furnish escalating needs with its quality and the same is reflected in the alumnus nexus that has flourished over the years.



Higher Education

Department of Chemical Engineering of TSEC has many of its students accepted in reputed institutes across India and abroad for higher studies. While many pursue higher technical qualifications there is healthy number that has opted for non-technical qualifications as well. It has been the trend of this institution that more than half of the students opt for masters' program in technology or management before they decide to launch their career. It is matter of pride that

almost all these aspirants secure places in the best programs across the globe of their choice. For over few years now, our students are mapping their presence in prominent campuses like IIT-B, IIT-K, NITs, & ICT, which are renowned for their master's programs throughout the world. Also, due to the diversified ambience in this college, students explore various options and have also stepped into more unconventional and trending arena of Management, Journalism, Publishing, State/Union Service Commissions, and Finance.

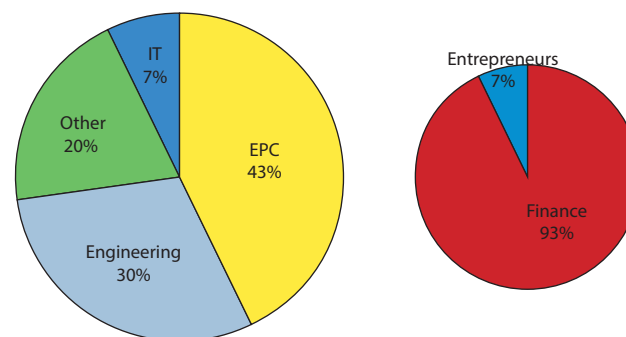
Placement Cell

The placement cell of TSEC is monitored by Ms. Mudita Dixit, and Mr. Sunil Gidwani. The college has a full-fledged placement cell that has been working incessantly towards providing employment opportunities to our students. The placement cell mediates this for the department by appointing 'Envoys' from the Chemical Department. As in previous years, a key focus of the Placement Office was to prepare the students for placement and internships. Number of preparatory activities were conducted this year for the graduating students, including refresher lectures on various technical subjects.

Talks with the alumni working in diverse sectors were also organized to orient the students to different job requirements. Preparatory sessions were organized by the Placement Office. Over the years, 'Talent Acquisition Team' of many organizations have collaborated with the placement cell to organize their Campus drives. The placement cell witnesses recruitment drive from a wide spectrum of industries however, most of it is dominated by sectors like Engineering procurement and Construction (EPCs), engineering and manufacturing, computer software, data analytics, management consulting, finance/banking, and FMCG. Most of these firms are world leaders in their respective domains. Today the alumni work in many revered organizations like Reliance, Aker Power Gas, Toyo Engineers, Tata Consulting Engineers, SNC



and McDonnell, KPMG, Dorf Ketal, Reliance, UHDE, etc. The successful campus placement session clearly demonstrates the demand of TSEC graduates among the top recruiters in various segments of the economy. A majority of our past recruiters held their faith in the abilities of our students and came to recruit in large numbers. This year, several new organizations visited the Institute for the first time, and the Institute looks forward to fostering long-term relationship with all these organizations in near future.



The figures indicated are the percentage of the total placed. They bear no co-relation to the absolute quantity of registered candidates

Alumni Outreach

The department had produced university toppers with regular consistency. The department emphasizes on all round development of its students; proof of which are the numerous instances where the students have made the college proud by winning laurels in various technical and non-technical competitive events in the face of tough competition. The Department of Chemical Engineering of TSEC and IChE-TSEC



in close association with E-Cell-TSEC organized an interactive talk session named- 'Startup Stories'. The main motive of this initiative was to motivate students to 'think-out-of-the-box' and be prepared for the career challenges. In its maiden attempt, E-Cell was successful to invite three prominent alumni namely Mr. Jayesh Tekchandaney (Director-Unique Mixers & Furnaces Pvt. Ltd.), Mr. Samir Shah (), Mr. Sohail Gupta (Director- First Step Corp.), and Mr. Rohit Shetty (Director- Sureflo). Today, alumni work in many revered organizations like Reliance, Aker Power Gas, Toyo Engineers, Tata Consulting Engineers, SNC Lavalin to name a few, at responsible positions. There are many other prominent alumni that have influenced students all the time and the department expresses gratitude for this. Co-curricular and Extra-curricular activities Due to the democracy in choices that TSEC offers, most of students regularly participate in various technical competitions held across the nation. These students have won accolades and prizes and behaved as the contingents for the department's ideologies and excellence. The list below indicates the honorable, not exhaustive list of the few students that have delivered outstanding performance. Students have consistently won prizes in coveted competitions like ChemTECH Student Outreach Program by Jasubhai Media, Vortex by Institute of Chemical Technology, AIChemE by IChE-DJ, RaScience by Bharti Vidyapeeth.

LESSONS
&
IDEAS

Beyond the fine lines

ChEMERGENCE is not an association. It is a movement. ChEMERGENCE defines the mood of the nation. A nation that is young, thriving, demanding, and constantly delivering. ChEMERGENCE is a threshold where conservatism spurts into a trend. And finally, ChEMERGENCE is a belief of igniting the flame of innovation by the torch of knowledge. The Catalyst met the legacy of TSEC- its professors, and asked them to pen down wisdom found nowhere printed. These are essays by the people that sculpt the future and churn out perceptions; on qualities that makes one a successful chemical engineer.



Agility



by Prof. (Dr.) Anupama Sawant

Agility is the ability to be graceful and quick. It helps to make the best decision possible in the heat of the moment. It is often the difference between success and failure. Agile leaders incorporate the sum of their experiences into today's challenges and integrate that learning to find new solutions. When you are agile, you are in a constantly evolving state. Good agility can translate into better performance and faster response, and can give one an edge over his competitors.

Balance



by Prof. Vandana Kadam

Who is a balanced person? The person who leads a peaceful and fulfilled life is a balanced person. How can we achieve this? Let us imagine life as game in which we are juggling with 5 balls. These 5 balls are work, family, health, friends and spirit. The ball called is made up of rubber and all others are made of glass. If the rubber ball falls down it will bounce back, but the others, they will never be same. Hence we should treat all these i.e family, spirit, health, friends and work with ease and respect they deserve and try to achieve a balance between these. Then only we can become a balanced person.

Civic Virtue



by Prof. Anjali Kirkire

Civic sense is nothing but social ethics or the unspoken norms of society. It is not just about keeping the roads, streets and public property clean but also has to do with abiding with law, respecting others point of view, maintaining decorum in public places. As a citizen of a country that is the largest exporter of engineers, the engineers are also the envoy that represent our nation across the globe. In these volatile times, when there is greater emphasis on switching to cleaner alternatives of fuels, initiatives for sustainable development and environmental friendly process have to be undertaken. These will ensure a greener planet and ensure that the future will be a better place to live in. However, these cannot be achieved overnight. Precautionary measures have to be executed such that efforts do not lose their momentum and take a backseat over time.

Curiosity



by Prof. Trupti Dharmarao

Curious people always ask questions and search for answers in their minds. It makes your mind observant of new ideas. Without curiosity, the ideas may pass right in front of you and yet you miss them because your mind is not prepared to recognize them. Yet it is the ideas and the active reaction to it that defines an engineer. Curiosity opens up new worlds of possibilities. It brings excitement into your life. One can easily culture curiosity by keeping an open mind towards all kind of results. Taking things for granted ends curiosity. Therefore, ask questions relentlessly. Don't label something as boring, there are infinite details that you still don't know about. Diversify your area of interest. This helps connecting things well.

Discipline



by Prof. Sangita Borkar

The world progresses continuously and expects us to keep up. Discipline is the bridge between a goal and achievement. Discipline brings stability and structure into a person's life. It teaches a person to be responsible and respectful. The observance of well-defined rules is the basis of society. If there were no discipline, people would do whatever they wanted and make mistakes without putting the consideration of others first and foremost. There is a rise in demand for sustainable fuels while overcoming the pollution problem where we need professionals having distinct knowledge about it, who also understand their role in the betterment of the society. Chemical Engineers must develop good working relations with people in production because their role is to apply scientific principles into practice in manufacturing industries.

Ethics



by Prof. (Dr.) Ramesh Bhande

Ethics are important because they help us to grow and develop. They help us to create the future we want to experience. They help us to direct the resources in the well-being of everyone. Every individual and every organization is involved in making hundreds of decisions every day and as chemical engineers our decisions have far reaching effects. The decisions we make are a reflection of our values and beliefs, and they are always directed towards a specific purpose. That purpose is the satisfaction of our individual or collective (organizational) needs. Thus, not only for engineers but for everyone ethics are important.

Foresight



by Prof. Karuna Saswani

Foresight can improve decision-making, implementation and the ability to cope with future challenges. Foresight improves the impact of decision-making. Foresight improves the capability of an innovation system. With proper planning one can have blueprint of upcoming ventures in operational stage. Foresight creates an increased awareness of possible risks, and hence a basis for more effective contingency planning, and the design and development of appropriate forms of resilience. In the competitive and fast-changing world of business, Foresight enhances the capacity to design and manage non-routine events. Foresight makes one capable to see how other fields of engineering are inter-related so that one can get basic knowledge based on requirement at the field. Briefly, Foresight improves strategic decisions, the impact of strategic decisions and the ability to react to future challenges..

Innovation



by Prof. Prasad Parulekar

Motivation is the defining factor that turns a good thought into immediate action. It is a muscle that needs to be constantly worked. Motivation to learn reinforces the active learning which is the key to success for the chemical engineering students. Active learning increases the speed of acquiring, integrating, and propagating information and knowledge with fun experimental learning. In today's technology-oriented society, students achieve problem solving, team building and analytical reasoning skills for the real life experience only if they have the inclination to learn through the asynchronous technology.

Ingenuity



by Prof. (Dr.) Anita Kumari

Ingenuity gives wings to progress. My sense is that competitive energy is turbocharged when innovation is fuelled by ingenuity. Ingenuity isn't a means, a practice or a goal. Ingenuity is, however, a post-facto assessment. It's a measurement of the result, or a measurement of the process. But to achieve ingenious results, I believe that you have to be unattached to having the right answer and, instead, being attached to finding the right answer. The best part about science is that- "What is true today might not be true tomorrow". Aspiring engineers, must strive for maximizing their output while minimizing operating cost. The people who have the greatest potential for ingenuity are those who have the greatest capacity for mastery, for fearlessly and adventurously learning new things, and for critical thinking.

Motivation



by Prof. Nita Mehta

Motivation is the defining factor that turns a good thought into immediate action. It is a muscle that needs to be constantly worked. Motivation to learn reinforces the active learning which is the key to success for the chemical engineering students. Active learning increases the speed of acquiring, integrating, and propagating information and knowledge with fun experimental learning. In today's technology-oriented society, students achieve problem solving, team building and analytical reasoning skills for the real life experience only if they have the inclination to learn through the asynchronous technology.

Questioning



by Prof. Lakshay Girdhar

Learning is a flip side of enquiring. The more you enquire, more will be the learning. The learning from one enquiry will take you to the next level of enquiry. Hence, starts the circle of immense knowledge. To enquire means to ask question. Questioning is important (at least in your thoughts, if not in the class). All the concepts, theories, subjects are built upon Questioning. The answer to a particular question could be right or wrong, however, not a single question is unscientific in nature. Understanding and acknowledging what you don't know is very much important. It is a first step towards learning. I advise all the students to take out sometime to reflect on their thoughts and actions. Self-knowledge boost confidence and it helps in discovering and achieving one's life's objectives.

Relevance



by Prof. (Dr.) Sadhana Purohit

Relevance is important because the solution of any problem requires the prior identification of the relevant elements from which a solution can be constructed. Knowledge remains a script till it's relevant. Relevance is one of the most important aspects of teaching and learning. I know that as a student, the content I found most relevant was the easiest to learn, so as a teacher, I believe it is my job to help students see the relevance in content they may not find inherently interesting. I know that if I do this, my students will be engaged in class and be motivated to work outside of class. The questions that one asks after reading the lessons as "where will I use them?" Or "why this is even taught?" all get answered when the task to be done is relevant.

Responsibility



by Prof. Elizabeth Joseph

A responsible person is one who can be trusted to act without needing strict supervision, because they are accountable for their own behaviour. Being trusted is a good feeling, this boosts a person's self-esteem and self-worth. A responsible person tackles the difficult tasks without blaming others for any set-backs or problems. Instead, they are responsible for its success or failure, and with the risk comes great rewards if they can pull it off. Responsibility means nothing if you constantly over and under-do it. A responsible person admits the real reasons why they haven't done something. If you borrow something from a friend, take good care of it. If a colleague tells you a secret, keep it to yourself. Responsibility is showered on the diligent. Diligence is enhanced by accountability. Acquiring and practicing knowledge helps in trouble shooting and efficiency of operation. A leader who is also a team player is truly the one who can take charge and run any project. Ability to accept mistakes and willingness to amend the path for the common benefit and achievement of goals is what one looks for in a responsible chemical engineer.



Solutions

by Prof. Usha Nambiar

The link between creativity and engineering is clear. Where new customer demands can be met by new technological solutions, we need engineers who are equipped – both technically and creatively – to generate those solutions. We need engineers who are able to find new possibilities and new markets to exploit these possibilities. There will always remain a place for the application of engineering knowledge to the solution of routine problems. However, as the pace of change accelerates in the 21st century, we will see a growth in new problems that require creative – in other words effective and novel – technological solutions. To meet the challenge of these changes, we need engineers equipped with the blend of technical knowledge and creativity.



Sustainability

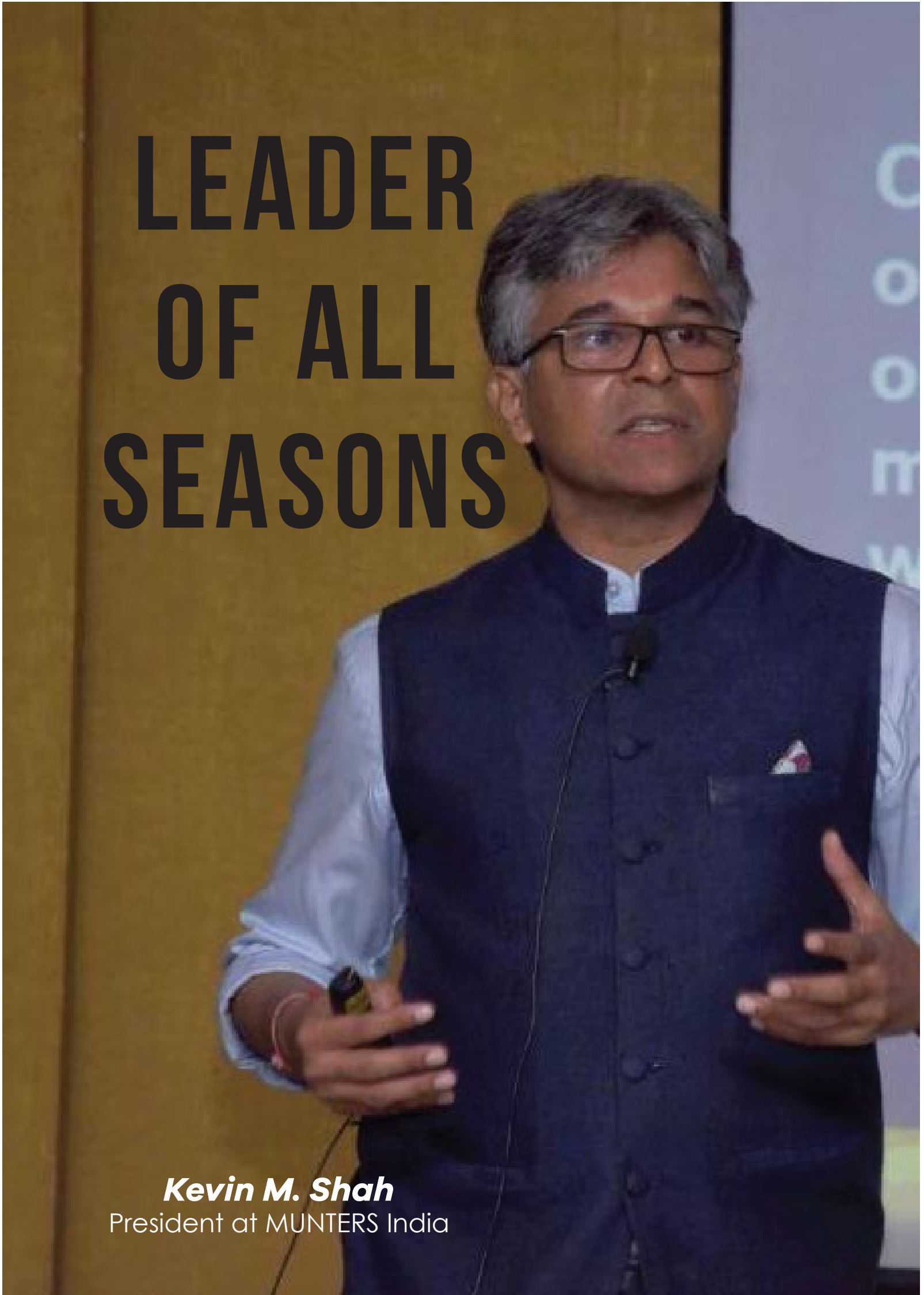
by Prof. Ravindra Joshi

Sustainability is the mutual existence of technology and natural systems. The utilization of natural resources by human race has been disproportionate with its ability to regenerate. Historically, civilizations have collapsed due to the destruction of ecology. Chemical engineers deal with the transformation of natural resources to useful products while balancing the fine line between competing for needs to move forward technologically and economically but also protecting the ecology. This fine act can be accomplished by using principles of green chemistry, process intensification, waste treatment, and pollution control. The new generation chemical engineers need to find a way to synthesize new chemicals that are environment-friendly, produce less harmful emissions and switch to renewable fuel sources thus, fulfilling the obligation to protect the health and the ecosystem.

LEADER OF ALL SEASONS

Kevin M. Shah

President at MUTERS India



While we are just used to three seasons in India, life has more to it. Rainy days or scorching heat; there is always one thing that remains constants for leaders- they rise and shine.

Mr. Kevin M. Shah is the Managing Director of KEVIN Enterprises Pvt Ltd & President of Munters. He is the director of PPMI since over 9 years and also been the recipient of the & Chairman's Award for outstanding contribution at PPMI. He has been a member of Confederation of Indian Industry where he served for The National Sub-Committee for Capital Goods. His interaction with academia has been noteworthy. He has addressed students at SP Jain Institute of Management Research, at Thadomal Shahani Engineering College & at the Bhagubhai Mafatlal Polytechnic to name a few. Mentoring young recruits & interacting with students is his passion.

How do you describe your transition from a student to being a top executive at your organization?

I joined my company as the youngest among the workforce, with only an engineering degree. I lost my father during my engineering days in the USA. My mother held the fort until I could complete my education and upon returning, I had no choice but to head the company in spite of having neither any work experience nor any exposure to the local rigid system pertaining to that era. All means of trade had to be learnt on my own, while investing extra efforts making sure that people took me seriously.

“ *I realized that everybody likes to guide a young person, so long as that person shows interest.* **”**

Did you ever feel the need for a mentor? Why?

I overcame my deep sense of inferiority complex by spending long hours reading, meeting people or discussing at length on business aspects while gaining insights. I realized that everybody likes to guide a young person, so long as that person shows interest. I consider myself lucky to have good advisors.

You are talking about a time, like two decades ago. What is one lesson that you learnt back then, that you would have not experienced otherwise?

In those times, we had a rather rigid workers' union. I would address older but notorious workers very respectfully- as one would address uncles, thereby playing a kid's role strategically. I could feel their sympathy for me, but were also afraid of my innocence concluding that I would soon ruin this business. Soon we came up with a voluntary retirement scheme and many of the bad elements left like rats leaving a sinking ship. The union collapsed and the remaining also settled. We hired a fresh lot and without any doubt, efficiency shot up as we could train them our way. For two decades since that day our staff felt no need of any union and I still maintain a good relation with those wearing blue collar.

How do you define 'victory'?

We once had a technical collaboration with a renowned American company . We were in the market on strength of their brand and technology. In 2002, when they sold out to their competitor and the new buyers were not as amenable, we decided to discontinue with our collaboration.

The world predicted that our days were numbered. But, this was a decade back; before digitalization took over, when it was not as much of email and web registration. Customers were very willing to meet vendors. One could simply walk up to the customers' office and meet the relevant person— things were pretty informal, so with aggressive marketing strategy and impressing upon the industry folks, we gained the confidence of our customers. Hence, far from answering the unasked question: Will you survive (?), we thrived!

In your entrepreneurial journey, did you ever feel the gravity of changing market dynamics ?

The global economy faced a super-boom from 2002 to 2009, unprecedented in the history of mankind & India too, recorded a double digit growth. However, while the economy was shining, it resulted into a 'freakonomic' issue - everywhere manpower was in huge demand and retention of team was becoming more difficult than ever before. We were forced to offer exorbitant salary revisions to all and even more to the talented employees. It was proving to be in vain.

What lessons did you learn from that crisis?

I soon realized that money as a tool for motivation or an incentive for staff to stay back has a short shelf life. I transformed myself into less of a managing director and more of a trainer, with focus on people and culture. The more you train to engage, the less they leave – that was my counter-intuitive discovery. Most of my key staff has been with me for approximately fourteen years. In my journey till the day I sold my business, my wonderful team remained my strongest asset & even today continues to be so!

“
Real world leadership is about just that – being a people's person & that demands having cutting edge insights into the human mind & behaviour.

good, bad & mad experiences will begin to unfold automatically, such that theoretical knowledge begins to ripen into wisdom. Real world leadership is about just that – being a people's person & that demands having cutting edge insights into the human mind & behaviour.

“
.....with aggressive marketing strategy and impressing upon the industry folks, we gained the confidence of our customers. Hence, far from answering the unasked question: Will you survive (?), we thrived!

One last question, what message would you like to address to the youth today?

Well, it's simple, at every opportunity – Organize, Organize, Organize and Decide, Decide, Decide. Do take lead to organize events at home, college, building society, picnics, festivals or wherever and get involved in every decision making from start to finish. In the process, interactions with people becomes unavoidable. The

Making it big....

There is a popular saying, "A hand that rocks the cradle rules the world" and when we have the success blooming out in the corridors of our college, there is hardly any scope to deny this fact. While the pace at which things evolve has risen manifold, the most sustainable form of learning should be to teach its pupils on how to think rather than what to think. Emphasis should be shifted on discovering new tools and to teach to use them efficiently and skillfully- and TSEC has been a pioneer to execute this theorem. This segment is initiated to introduce all the readers with the rich heritage of TSEC and manifest the department's philosophy of excavating and nurturing the best talent. While TSEC, and the Department of Chemical Engineering celebrates 35 years of technology, we have three distinguished alumni who have chosen to share their success with us.

Samir Shah Batch of 1994

As a student of Department of Chemical Engineering- TSEC from 1990 to 1994, Mr. Samir Shah describes it as a great experience. He was always fascinated with technology and so upon graduating in 1994, he decided to pursue Masters in Industrial and Systems Engineering from Auburn University, Alabama. His experience includes working as a Simulation Engineer on training programs for helicopters in Dalesville, Alabama. In 1997, Shah decided to relocate back to India and expressed his views to scale up his family business of pharmaceutical formulations- the pharma giant we know today as Ciron Drugs and Pharmaceuticals Pvt. Ltd. Samir is a true patriot and asserts that- "I have not regretted my decision to come back and work in motherland and work for own self." He mentions that he has mastered various aspects of running business from Production, Quality Control, Quality Assurance, Good Manufacturing Practices, HR, Accounts, etc. which would have never happen had he decided to stay back in USA.

While scaling and chasing success, Mr. Shah prescribes a few guidelines-

1. Believe in yourself.
2. Follow your Passion and listen your inner self. Have a purpose in life and live your life for the same.
3. Run after Learning and not money.
4. Various life based experiences are more important than bookish knowledge.
5. Find a Mentor who will guide you in life.
6. Share your knowledge with others and it will multiply.

Mr. Samir Shah shares that his vision is to provide value based education to future generations so that world will be a better place to live. He further states that- "My purpose in life is that in Ciron, we have started education program where we intend to provide value and experience based learning to our Ciron family to improve their quality of life. You all have whole life ahead of you. You have choice to select a right path. After 20 years you will be at stage where I am today in my life. You will have enough opportunities in your life. Make the best of them. Please remember that you are future of our country and world. Your choice today will dictate our future."



Jayesh Tekchandaney

Batch of 1998

Jayesh R. Tekchandaney graduated with a Bachelor's degree in Chemical Engineering, from Thadomal Shahani Engineering College, University of Mumbai, India in 1998, followed by Master of Science degree in Industrial Engineering from the Pennsylvania State University, USA in 2002, where he specialized in manufacturing and completed his research and thesis on Web Based Product Customization using the Internet.

He started his career in the Technical Services Cell, at Gharda Chemicals Ltd, from 1998-2000. He joined the family owned business of Design, Manufacture and Supply of Industrial Mixing equipment, at Unique Mixers, in 2003. In 2014, he augmented the Process Equipment manufacturing capabilities of Unique Mixers, by complete restructuring of the fabrication business

company, Unimix Equipments. He is currently the CEO, at Unimix Equipments and Technical Director at Unique Mixers & Furnaces Pvt. Ltd., India. Unique Mixers and Unimix Equipments are engaged in the design, manufacture and supply of industrial mixers for liquid, solid and viscous mixing applications.

Jayesh is a Chartered Engineer, He is the author of the chapter titled "Mixers" in a John Wiley publication titled "Process Plant Equipment Operation, Reliability and Control" and a contributor to the "Dictionary of Industrial Terms". He is an expert adviser in the field of Industrial Mixing, and has to his credit articles on mixing technology published on his technical blog www.mixing-expert.com and several publications. He has a personal blog, www.life-is-beautiful.in and a YouTube channel.

Jayesh Tekchandaney is a business owner by occupation, an engineer by profession, an author, speaker and coach at heart.



Rohit Shetty

Batch of 2013

Mr. Rohit Shetty graduated in Chemical Engineering from Thadomal Shahani Engineering College in the year 2013. Apart from this, he has been certified from Oracle (9i SQL + 9i PL/SQL), Sun (Core Java + Advanced Java + J2EE + J2ME), Cisco (CCNA (RnS) + CCNP (Network Security V4)), Hubspot (3 Certifications), and Google (8 Certification of Adwords).

With the passion of writing since childhood, Mr. Shetty always desired to be an author. Publishing his book was a dream and writing his hobby. In 2011 he extended his hobby into a profession after being

duped by a publisher. It was then he realized that there are many prolific writers who are victimized by publishing sharks. And thus First Step Publishing came into existence. In First Step Publishing provides a platform for new and budding writers who have a spark in them. It provides them with a global platform to showcase their writing talents at affordable prices.

First Step Publishing over the years have grown to the extent by publishing over 250 writers from 8 countries and now has a physical distribution setup across 34 countries. This all is achieved by constant and persistent efforts. Word of mouth promotion has helped First Step Publishing a lot to be established in the market wherein it's being ruled by giants like Rupa Publications, Penguin Publication and many more.

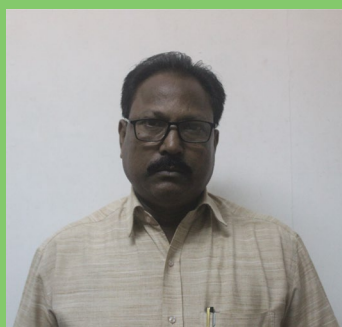
First Step Publishing provided writers with end to end book creating and marketing services but it felt the need of marketing for writers in Digital Space as well. This led to the birth of TranzDigi. TranzDigi stands for Transforming your Digital Space which provides digital marketing services to boost one's digital presence by creating a website to start off and with community building activities across any social media platform.

"My advice for budding entrepreneurs would be to be persistent in your work and to follow in what you believe in; Success will definitely come to you. As rightly said, what you seek is seeking you. You just need to be positive and work towards achieving it. It's not a crime to fall in life but a sin to not to rise again."



The Non-Teaching Staff

LAB ASSISTANT



Mr. Shobha Singh



Mr. Dipti Paul



***Mr. Vrushali
Dhabolkar***

LAB ATTENDANT



***Mr. Chandrabhan
Chaubey***



***Mr. Chhediram
Tiwari***



***Mr. Arjun Prasad
Shukla***



***Mr. Ramshankar
Dubey***

Applied Chemistry Department



Mr. Uday Yadav
LAB ATTENDANT



Mr. Pritam Raut
LAB ASSISTANT

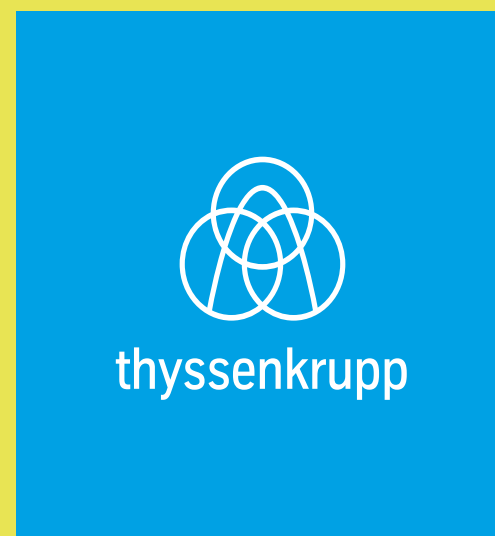
Our Associations



energising lives

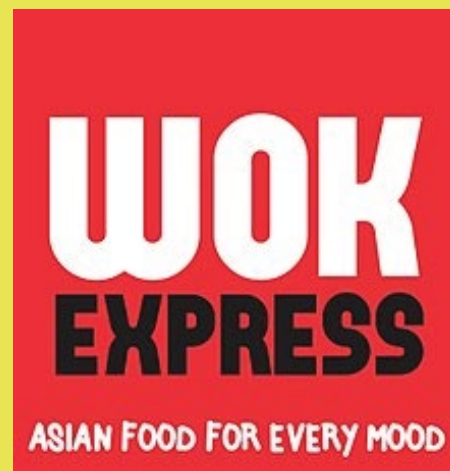


 **CHEMICAL INDUSTRY DIGEST**





blogadda.comTM



Special Thanks!

Principal (Dr.). G. T. Thampi

Mr. (Dr.) Kranti Kumar

Prof. (Mrs.) Mudita Dixit

Prof. (Mr.) Sunil Gidwani

Mr. Rajeev Goel

Mr. Sandeep Chokani

Mr. Kevin Shah

Mr. Samir Shah

Mr. Pratik Bhagat

IICHe-MRC

The E-Cell Team

Department of Chemical Engineering, TSEC

Department of Applied Chemistry, TSEC

Judges and Participants

The Non-Teaching staff

Lab Assistants

Shobha Singh

Vrushali Dabholkar

Dipti Paul

Lab Attendants

Chediram Tiwari

Chandrabhan Chaubey

Arjunprasad Shukla

Ramashankar Dubey

Ex-Officio (IICHe-TSEC)

Abizer Sodawala

Shraddha Joshi

Volunteers

Disha Dhadd

Nachiket Tatke

Shraddha Ramani

Akshay Jain

Tiithi Panchal

Aditya Kadam

Vishesh Jain

Parth Shah

Eshwar Manjeri

Esha Sharma

Pratik Singh

Prajakta Bomma

Divya Thingore

Kashmira Salgaonkar

Aayush Parab

Sankalp Sharma

Radhika Bhadbade

Sakshi Lingayat

Sriram Suresh

Deepa Bhairwani

Arthata Harvande

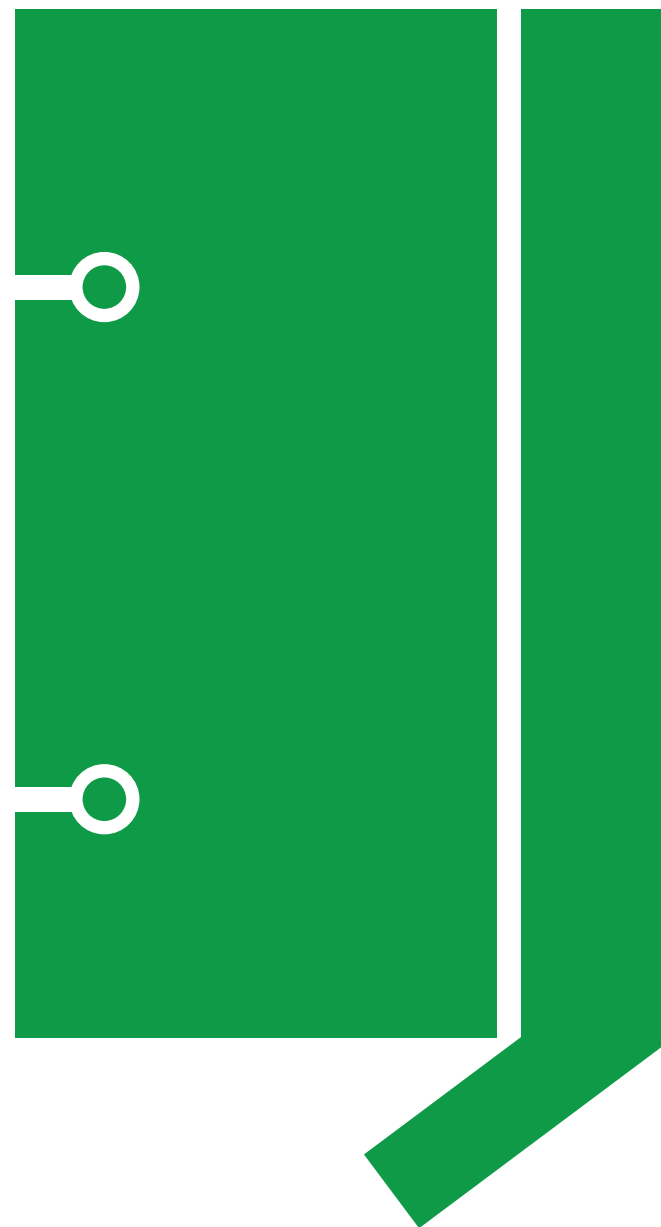
Tanushi Mehta

Raveena Nichani



FROM
“HAVING CHEMICAL
ENGINEERING AS A
CHOICE.”

TO
“CHEMICAL
ENGINEERING WAS
THE BEST CHOICE I
EVER MADE.”



Changing Perceptions

ChEMERGENCE'18
Igniting Innovations





THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE



The Indian Institute of Chemical Engineers – TSEC

ChEMERGENCE'19

Resonating Revolution

20th & 21st September 2019

At: Thadomal Shahani Engineering College
Bandra (West), Mumbai



ChEMERGENCE'19
Resonating Revolution



hEMERGENCE'19

Resonating Revolution

SCHEDULE

Day 1: 20th September 2019

Sr. No	Event	Time	Venue
1	Inauguration Ceremony	10:00 am	OB Seminar Hall
2	Tea & Breakfast	10:45 am	OB 506
3	Panel Discussion	11:00 am	OB Seminar Hall
4	Lunch	01:00 – 02:30 pm	OB 105
5	Poster Presentation	01:30 – 05:30 pm	OB 605
6	HAZOP Round 1	01:00 – 01:30 pm	OB 507
	HAZOP Round 2	02:30 – 04:00 pm	OB 507
7	HeatX	01:00 – 04:00 pm	OB 107
8	Day 1 Prize Distribution	04:30 – 05:00 pm	OB Seminar Hall

Day 2: 21st September 2019

Sr. No	Event	Time	Venue
1	ChemDebate	10:00 am	OB Seminar Hall
2	CoolIT	11:00 am	OB 109
3	Lunch	01:00 – 02:30 pm	OB 105
4	ChemQuiz Round 1	01:00 – 02:00 pm	OB 505, OB 506
	ChemQuiz Round 2	02:30 – 03:00 pm	OB 605
	ChemQuiz Round 3	03:30 – 04:00 pm	OB 605
	ChemQuiz Round 4	04:15 – 04:45 pm	OB 605
5	Closing Ceremony	04:45 – 05:30 pm	OB Seminar Hall

ChEMERGENCE'19

The Students Chapter of Indian Institute of Chemical Engineers of Thadomal Shahani Engineering College successfully conducted the 14th edition of their annual technical symposium, ChEMERGENCE'19, on 20th and 21st of September.

This year, ChEMERGENCE witnessed an outstanding participation from the students of ten colleges across Mumbai and Pune.

Keeping up with the promise of IChE-TSEC to bridge the gap between the students and the industries, the college invited multiple dignitaries to interact with the students and guide them.

The Inauguration ceremony took place at 10:00am on 20th September with Dr. G. T. Thampi, Principal of Thadomal Shahani Engineering College enlightening the students. The Chief Guest was Mr. B. S. Nagarkoti, Deputy General Manager of Research and Development, Hindustan Petroleum Corporation Limited.

The Guest of Honor was Mr. Praveen Saxena, Director, Blast Carboblocks Pvt. Ltd.

The first day of ChEMERGENCE'19 was filled with excitement as the students awaited in anticipation of the Panel Discussion.

The topic of Panel Discussion was 'Whether the Chemical Engineering Industry needs an image makeover?'

The Panelists were:

1. Mr. V. K. Joshi, Senior General Manager and Head of Business Development, thyssenkrupp Industrial Solutions (India) Pvt. Ltd.
2. Mrs. Aparna Khurana, Managing Director, Azelis India Pvt. Ltd.
3. Mr. Dhawal Saxena, Associate Director, Blast Carboblocks Pvt. Ltd.
4. Mr. Goutam, Chief Scientific Officer F, Heavy Water Board
5. Mrs. Satyashwini, Chief Scientific Officer E, Heavy Water Board

The Discussion was moderated by Mr. Praveen Saxena.



There was a Technical Poster Presentation competition where undergraduate students of chemical engineering presented their research on a 1x1 metre poster. This event was judged by:

1. Dr. Anita Kumari
2. Dr. Elizabeth Joseph
3. Dr. Trupti Dharmarao
4. Prof. Sangeeta Gaikwad



The winners of Poster Presentation were:

- 1st Prize: Ms. Prajakta Gavane (DJSCE)
- 2nd Prize: Mr. Prithveeraj Wavre & Mr. Hasan Shahid (TSEC)
- 3rd Prize: Mr. Shubham Patil, Mr. Ninad Pathare & Mr. Nishant Pokharkar (BVCE)



The Heat Exchanger prototype making competition, HeatX, took place on the first day with total seven teams. The students designed and fabricated their own heat exchangers and were judged on the basis of their efficiency.

HeatX was judged by:

1. Dr. Ramesh Bhande
2. Dr. Sadhana Purohit
3. Mrs. Satyashwini

The winners of HeatX were:

- 1st Prize: Ms. Anjali Reddy, Ms. Pooja Satam & Ms. Aovi Deshpande (SSJCE)
- 2nd Prize: Mr. Khushank Parmar & Mr. Chinmay Joshi (TSEC)
- Consolation Prize for Innovative Design: Mr. Shreyash Badrike, Mr. Umesh Chaurasiya & Mr. Sanket Agre (DMCE)



IChE TSEC conducted a HAZOP analysis competition for the first time in ChEMERGENCE'19.



The judges were:

1. Prof. Usha Nambiar
2. Prof. Mannat Khanwani

The winners of HAZOP were:

- 1st Prize: Mr. Prithveeraj Wavre & Mr. Vignesh Vishwanathan (TSEC)
- 2nd Prize: Mr. Uday Mhapsekar & Mr. Sanjay Rej
- Consolation Prize: Mr. Jeet Thakur & Mr. Akshay Bhuran (SBMP)

The first day concluded with the prize distribution ceremony for the winners of Day 1 competitions.

There was a Debate competition, ChemDebate, on 21st September. There were 12 teams competing from four different colleges.

The topics were related to environment, laws and chemical industry.

The Debate was judged by:

1. Prof. Rita Sharma, Head of Department of Humanities
2. Dr. Elizabeth Joseph
3. Dr. Claire Komives, University of Pittsburgh
4. Prof. Prasad Parulekar



The winners of ChemDebate were:

- 1st Prize: Mr. Neil D'Costa & Mr. Reevan D'Souza (TSEC)
2nd Prize: Mr. Prithveeraj Wavre & Mr. Vighnesh Vishwanathan (TSEC)

The ChemQuiz competition is a flagship event of ChEMERGENCE and this year it was conducted by Mr. Anansh Prasad, Founder and Managing Director of Skillsphere Education Pvt. Ltd.



The winners of ChemQuiz were:

- 1st Prize: Mr. Uday Mhapsekar & Mr. Sanjay Rej (TSEC)
2nd Prize: Mr. Rudra Yadav & Mr. Anup
Consolation Prize: Mr. Aravind Iyer & Mr. Sankalp Sharma



The Cooling Tower prototype making competition, CoolIT, challenged the students to design and fabricate a cooling tower satisfying the problem statement given to them. There were total nine teams competing.

The event was judged by:

1. Dr. Anita Kumari
2. Prof. R. R. Joshi

The winners of CoolIt were:

1st Prize: Mr. Lokesh Gawali, Ms. Urvashi Das & Mr. Abhishek Bhagat (BVCE)

2nd Prize: Ms. Shrutika Patil, Mr. Shoeb Khan & Ms. Mahek Khan (BVCE)

Consolation Prize: Mr. Gaurav Khandelwal, Ms. Sanyukta Shinde & Ms. Saloni Tatkane (TSEC)



ChEMERGENCE'19 proved to be of great help for the students of chemical engineering. It was a platform for the students to interact with the professionals from different industries.



List of Guests & Judges:

1. **Chief Guest:** Mr. B. S. Nagarkoti, Deputy General Manager of Research & Development, Hindustan Petroleum Corporation Limited
2. **Guest of Honor:** Mr. Praveen Saxena, Director & CEO, Blast Carboblocks Pvt. Ltd.

Sr. No	Event	Name	Position	Institution
1	Panel Discussion	Mr. V. K. Joshi	Senior General Manager & Head of Business Development	Thyssenkrupp Industrial Solutions (India) Pvt. Ltd.
		Mrs. Aparna Khurana	Managing Director	Azelis India Pvt. Ltd.
		Mr. Dhawal Saxena	Associate Director	Blast Carboblocks Pvt. Ltd.
		Mrs. Satyashwini	Chief Scientific Officer E	Heavy Water Board
		Mr. Goutam	Chief Scientific Officer F	Heavy Water Board
2	Poster Presentation	Dr. Anita Kumari	Head of Department of Chemical Engineering	Thadomal Shahani Engineering College
		Dr. Elizabeth Joseph	Associate Professor	Thadomal Shahani Engineering College
		Dr. Trupti Dharmarao	Assistant Professor	Thadomal Shahani Engineering College
		Prof. Sangeeta Gaikwad	Assistant Professor	Thadomal Shahani Engineering College
3	HeatX	Dr. Sadhana Purohit	Professor	Thadomal Shahani Engineering College
		Dr. Ramesh Bhande	Associate Professor	Thadomal Shahani Engineering College
		Mrs. Satyashwini	Chief Scientific Officer E	Heavy Water Board
4	HAZOP	Prof. Usha Nambiar	Associate Professor	Thadomal Shahani Engineering College
		Prof. Mannat Khanwani	Assistant Professor	Thadomal Shahani Engineering College

Sr. No	Event	Name	Position	Institution
5	ChemDebate	Dr. Rita Sharma	Head of Department of Humanities	Thadomal Shahani Engineering College
		Dr. Elizabeth Joseph	Associate Professor	Thadomal Shahani Engineering College
6	ChemQuiz	Mr. Anansh Prasad	Founder & Managing Director	Skillsphere Education Pvt. Ltd.
7	CoolIT	Dr. Anita Kumari	Head of Department of Chemical Engineering	Thadomal Shahani Engineering College
		Prof. Ravindra Joshi	Assistant Professor	Thadomal Shahani Engineering College

List of Participating Educational Institutions:

1. Thadomal Shahani Engineering College, Mumbai
2. Dwarkadas J. Sanghavi College of Engineering, Mumbai
3. Institute of Chemical Technology, Mumbai
4. Shivajirao S. Jondhale College of Engineering, Mumbai
5. D. Y. Patil Institute of Technology, Pune
6. Datta Meghe College of Engineering, Mumbai
7. Mahatma Gandhi Mission's College of Engineering and Technology, Mumbai
8. Bharti Vidyapeeth College of Engineering, Mumbai
9. Smt. Bhagubai Mafatlal Polytechnic, Mumbai
10. Vivekanand Education Society's College of Science, Mumbai

**The Indian Institute of Chemical Engineers – Student Chapter of Thadomal
Shahani Engineering College Annual Report (AY 2020-2021)**

List of Committee activities from 2020-2021:

1. Webinar on ‘Career Opportunities in Process Engineering and Piping industry’.
2. Webinar on ‘Green Technology – An Industrial Perspective’.
3. Webinar on ‘Use of Membranes in Treatment of Wastewater’.
4. Chemical Engineering Quiz Competition – in association with Attempt to Succeed (GATE coaching institute)
5. Webinar on ‘Prospects of Studying Abroad’
6. Chem Triathlon – a Series of Online Competitions.
 - a) ChemQ – a Chemical Engineering Quiz
 - b) What Went Wrong – An event designed for HAZOP analysis
 - c) Minds in Motion – A unique challenge to develop a product to use for the treatment of COVID 19.

List of Guest Speakers and Judges with Event Dates:

Sr.no	Date	Event	Name of Guest Speaker/ Judge	Position	Institution
1.	19/06/2020	Webinar on ‘Career Opportunities in Process Engineering and Piping industry’.	Hemant Sadafale	CEO	Asian Academy of Professional Development, Pune.
2.	20/06/2020	Webinar on ‘Green Technology – An Industrial Perspective’.	Dr. Karan D Dewoolkar	Deputy Manager	Gharda Chemicals Ltd.
3.	27/06/2020	Webinar on ‘Use of Membranes in Treatment of Wastewater’.	Mr. G. L. Gonsolves	Associate General Manager	ROCHEM Separations System
4.	8/07/2020	Chemical Engineering Quiz Competition	Mr. Pratik Bhagat	Senior Process Manager	G.S Engineering and Construction Pvt. Ltd.
5.	27/07/2020	Webinar on ‘Prospects of Studying Abroad’	Mr. K.P Singh	Faculty Leader	IMFS India
6.	12/08/2020	Chem Triathlon a) ChemQ	-	-	-

		b) What Went Wrong	-	-	-
		c) Minds In Motion	Dr. Anita Kumari Mr. Pratik Bhagat	Head of Department Senior Process Manager	TSEC G.S Engineering and Construction

Event Description and Details:

- 1. Webinar on ‘Career Opportunities in Process Engineering and Piping industry’:**
The webinar was organized in association with Asian Academy Pune and focused on the various career opportunities in the process engineering industry. Over 100+ students from Mumbai and Pune attended this virtual session.
- 2. Webinar on ‘Green Technology – An Industrial Perspective’.**
This webinar was hosted by Dr. Karan D Dewoolkar and inaugurated by Dr. G.T. Thampi. Sustainability is a global phenomenon and the webinar did encourage students to imbibe principles of Green Technology. The session witnessed a participation of more than 120 students from various colleges in India.
- 3. Webinar on ‘Use of Membranes in Treatment of Wastewater’.**
This webinar was held to proactively encourage students to maximise efficiency of industries while adhering to environmental standards by Mr. G. L. Gonsalves. The session was inaugurated by our principal Dr. G . T. Thampi and more than 100 students joined this informative session from over 10 colleges. The session was concluded by IChE TSEC Teacher coordinator, Dr. R. K. Pathak.
- 4. Chemical Engineering Quiz Competition – in association with Attempt to Succeed (GATE coaching institute)**
IChE-TSEC with the assistance of “Attempt to Succeed” a GATE initiative for Chemical Engineers by Mr. Pratik Bhagat, held an online quiz based upon the fundamentals of Chemical Engineering. 106 students registered for the same.
Winner: 1. Rima Sawant (TE, Chemical Engineering, TSEC)
- 5. Webinar on ‘Prospects of Studying Abroad’**
Various seminars for studies abroad, along with specific information on exams to be given were also held in order to keep students up to date in order to keep them alert about the shift in trends and opportunities with respect to the pandemic.

6. Chem Triathlon – A series of Online Competitions

The Chem-Triathlon witnessed exceptional participation from colleges all over India. There were 3 events that were a part of the Triathlon, Chem Q- A quiz based on the fundamentals of Chemistry and core subjects of Chemical Engineering, What Went Wrong-A unique event to identify potential workplace hazard at chemical manufacturing plants using the concepts of industrial safety and HAZOP analysis and the last event, Minds in Motion- A mind boggling challenge to create a cost efficient product for the treatment of Covid-19 incorporating the knowledge of chemical engineering and technology.

We witnessed participation of 28 teams and 77 participants from some of the most prominent institutes of India.

Winners of the event:

1st Place: Ms. Priyanka Ghuge, Mr. Narayanan Madathil & Mr. Shubham Pagdhare.
College: Thadomal Shahani Engineering College, Mumbai.

2nd Place: Mr. Anuj Gupta, Mr. Harshit Rathi & Mr. Rahul Manchala.
College: National Institute of Technology, Trichy.

3rd Place: Mr. Harsh Wadhvani, Mr. Devarsh Shah and Mr. Ankur Upadhyay.
College: Institute of Chemical Technology, Mumbai.

List of Participating Educational Institutions:

1. Thadomal Shahani Engineering College, Mumbai.
2. Dwarkadas J. Sanghavi College of Engineering, Mumbai.
3. Institute of Chemical Technology, Mumbai.
4. D. Y. Patil Institute of Technology, Pune.
5. Datta Meghe College of Engineering, Mumbai.
6. National Institute of Technology, Trichy.
7. Haldia Institute of Technology (WBUT), West Bengal.
8. Laxminarayan Institute of Technology, Nagpur.

Associations for Chem Triathlon:

1. Education Partner: Unschool.in
2. Gifting Partner: Slate Hash
3. Gifting Partner: Craftika

List of students in organizing committee:

Ms. Esha Sharma (Chairperson)
Mr. Anuj Shah (Vice Chairperson)
Ms. Radhika Bhadbhade (Secretary)
Mr. Jason Dsouza
Mr. Eswar Manjeri
Ms. Divya Thingore
Mr. Sriram Suresh
Ms. Arpita Ghosh
Mr. Judewin Noronha
Mr. Ashish Jaiswal
Mr. Salil Modak
Mr. Reevan Dsouza
Ms. Akshita Jain
Mr. Neil Dcosta
Ms. Kashish Dungar
Ms. Radha Sawant
Mr. Givinder Singh
Ms. Megha Gohil
Mr. Aryan Musale
Mr. Piyush Patil



IIChE-TSEC PRESENTS

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

USE OF MEMBRANES IN TREATMENT OF WASTEWATER




- GREEN TECHNOLOGY
- MEMBRANE TECHNOLOGY
- WASTE TREATMENT
- PROCESS APPLICATION

SPEAKER




Mr. G.L. Gonsolves

B.E. Biotechnology, TSEC
M.Tech Green Technology, ICT
Associate General Manager,
ROCHEM Separations System

 Saturday, 27th June 2020

 11am-12pm

Registration Link :
<https://forms.gle/ctqXKDuajNuzk7qH6>

 iichetsec2020@gmail.com

 [iiche.tsec](https://www.instagram.com/iiche.tsec)

 [CHEMERGENCE](https://www.facebook.com/CHEMERGENCE)

W
E
B
I
N
A
R



Gharda Chemicals Ltd.

in association with

IIChe-TSEC

Presents

CHEMICAL
ENGINEERING
DEPARTMENT

WEBINAR

GREEN TECHNOLOGY



SPEAKER

Dr. Karan D. Dewoolkar

B.E , Mtech, PhD(Tech)
Deputy Manager
Gharda Chemicals Ltd.

An industrial perspective
Eco-friendly technology
Sustainability
Agrochemicals

NO REGISTRATION FEE!

Registration Link:

<https://forms.gle/bPLimvUfyjuYeQFv8>

Saturday, 20 June 2020

11:00 am -12:00 pm

 iichetsec@gmail.com

 Chemergence20

 ChEMERGENCE



THADOMAL SHAHANI ENGINEERING COLLEGE

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

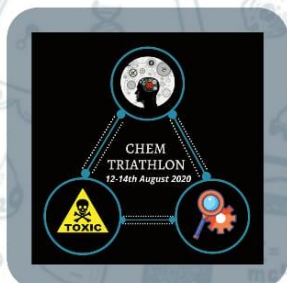
IIChe-TSEC

PRESENTS



CHEM-TRIATHLON

12th to 14th August



REGISTRATION FEE:
RS.300
(MAX 3 PEOPLE PER TEAM)



12
AUG

CHEMQ



13
AUG

WHAT WENT WRONG



14
AUG

MINDS IN MOTION



PAYMENT OPTIONS:



Pay **paytm**
CONTACT: 7738360202
(NEFT ACCEPTED)

iiche.tsec
 CHEMERGENCE
 iichetsec2020@gmail.com

REGISTER NOW !

AKSHITA JAIN: 7715875751
GIVINDER SINGH: 7045050621



CHEM-TRIATHLON WINNERS



1

TEAM 2

- Priyanka Ghuge
- Narayanan Madathil
- Shubham Paghdhare

Thadomal Shahani
Engineering College,
Mumbai

2

TEAM 26

- Anuj Gupta
- Harshit Rathi
- Manchala Rahul

National Institute Of
Technology, Trichy

3

TEAM 1

- Harsh Wadhvani
- Devarsh Shah
- Ankur Upadhyay

Institute Of Chemical
Technology, Mumbai

CONGRATULATIONS TO OUR WINNERS!



CHEM-TRIATHLON

12th, 13th and 14th AUGUST 2020

IICHE-TSEC TAKES GREAT PRIDE IN INTRODUCING THE FIRST OF IT'S KIND, CHEM-TRIATHLON WHICH, LIKE IT'S NAME SUGGESTS, WILL INCLUDE A REMARKABLE MIXTURE OF 3 DIFFERENT TECHNICAL ROUNDS FOR ALL THE CHEMICAL ENGINEERS WHO ARE EAGER TO DISCOVER AND EXPLORE IT'S ANALYTICAL SIDE THROUGH INNOVATIVE LEARNING!

THERE ARE THREE NOTEWORTHY EVENTS THAT CHEM-TRIATHLON IS INCULCATING INTO IT'S INTERACTIONS.



THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

CONTACT US

Judewin Noronha
+91 8657425272

Akshita Jain
+91 7715875751

Givinder Singh
+91 7045050621



EVENTS

CHEMQ



12th AUGUST

Genesis of a modern competition, woven into an intellectually stimulating quiz. Explore a diverse range of brain tickling questions from the world of Chemical Engineering

EVENT DETAILS:



- Registration fee- Rs 300 per team.
- Each Team can have upto 3 members.
- Each team will be provided with a unique team number.
- Results will be evaluated and released, on 17th August.

WHAT WENT WRONG



13th AUGUST

Help Establish workplace safety by being a virtual detective and finding out potential workplace hazards in the industry!

A solution a day can keep the dangers at bay!

PAYMENT OPTIONS:



G Pay

paytm

PhonePe



Contact No: 7738360202

For NEFT/RTGS payment contact us

MINDS IN MOTION



14th AUGUST

A mind boggling challenge for you to solve! Analyse to create a holistic report for a sustainable and cost-effective product as a solution for a problem statement that will be provided to every team, which will be judged by a panel consisting of renowned individuals from the industry.

Wishing a Good Luck to all the participants

iiche.tsec

CHEMERGENCE

iichetsec2020@gmail.com