

**BHARTIYA VIDYA BHAVAN'S
SARDAR PATEL COLLEGE OF ENGINEERING'S**

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The word 'Renaissance' means revival of something that has been long dormant. It finds its origins in the period of history called the 'Renaissance', which saw the revival of classical art and literature in Europe in the 14th-16th centuries. But each of us see in our own lives, a renaissance of interests, passions and most importantly, the will to overcome obstacles.

A classical poem titled 'Renaissance' by Edna St. Vincent Millay, talks about the poet's discovery of what happens when the stifling limits of her spirit, are removed and she is thrown into a scenario without limits, which she ultimately cannot handle. Here she asks God for a rebirth, to start again, with the knowledge and the experience she lacked the last time. This rebirth is a spiritual one, not a physical one, where she sees the world from a new, wiser perspective. Which is something we all need, after our limits are surpassed.

As per folklore, the Phoenix is a creature that regenerates itself periodically, from its own ashes. Apart from its powerful radiant colours, its ability to be reborn from the ashes of its predecessor, is what makes it different from other birds. While its stories are only mythical, the way a Phoenix has captivated human imagination throughout history, be it in religion, popular culture or literature, is very much real. We look in awe as the bird bursts into flames every now and then, but still emerges equally vibrant, from its own ashes.

The theme of the magazine 'Renaissance: Rising from the Ashes', seeks to capture a combination of these two and search for it in our society and history. In our lives, every now and then, our efforts and hopes are reduced to ashes. On those days, we crave the inspiration to start from scratch and still soar to heights. And for those days, we hope to be that stimulation, and that your spirit experiences a renaissance of its aspirations.

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BHARATIYA VIDYA BHAVAN'S

SARDAR PATEL



COLLEGE OF ENGINEERING

presents

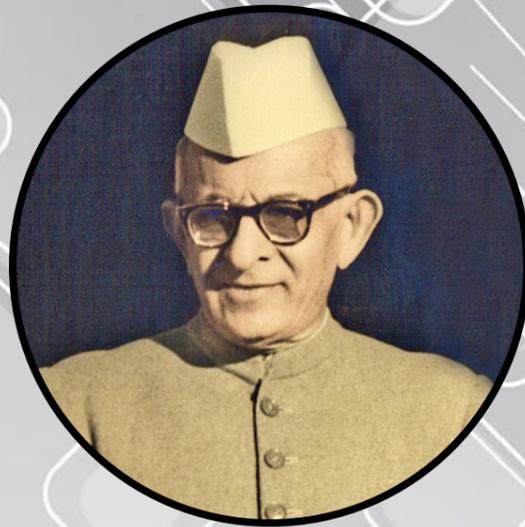


RENAISSANCE

Disclaimer: All the views expressed in the articles and poems in the magazine are the opinions of their individual writers and not of the institution. The institution does not hold any responsibility regarding any matter written by the students.



Shri Sardar Vallabhbhai Patel



Kulpati Shri Dr. K. M. Munshi

VISION

Sardar Patel College of Engineering (SPCE) aspires to be an institution of national repute that will create professionals with competence and motivate research for the progress of the nation.

MISSION

- To impart quality education through time relevant curriculum in academic programs.
- To enhance career opportunities for students through industry institute interactions and value added courses.
- To promote excellence by encouraging innovative ideas and lateral thinking.
- To inculcate a sense of discipline and responsibility towards society.

FOREWORD

“And let it direct your passion with reason, that your passion may live through its own daily resurrection, and like the phoenix rises above its own ashes.”

– Khalil Gibran

With immense joy and pride, we present to you DISHA 2020. Staying true to its name, DISHA hopes to give direction to the creative aspirations of our gifted student body. Giving you a peek into the world of SPCE, DISHA showcases our diligent student committees, vibrant fests and our exceptionally talented faculty members and students.

To stretch our imagination beyond the confines of technical education, our magazine is a compass that guides you through years at SPCE, taking the creative route. Within its pages, you'll find stories, poems, writings, illustrations and of course, pictures of memories we all treasure.

DISHA returns in its 39th edition, paying an ode to the human spirit of fighting odds and the mythical creature phoenix, with the central theme for the year 'Renaissance: rising from the ashes'. The word 'Renaissance' means revival of something dormant, like how a phoenix reincarnates from its own ashes, at the end of its life cycle. With this central theme captured in the centrefold, we celebrate stories of comebacks and rising up again after crashes. Stories where obstacles made people stumble, but their own power made them rise back stronger. **We wish to tell our readers that a major portion of this magazine was created, during the lockdown of March-July 2020 in light of the Covid-19 pandemic.** While humanity at large was brought to a screeching halt, we worked to make it the masterpiece we had dreamt of since the beginning of the academic year. We make this in the hope that when this pandemic subsides, we will as a society, witness the renaissance of our efforts and ambitions.

We are extremely thankful to our respected Principal Sir. Our utmost gratitude to Dr. Shyamlee Solanki, Chairperson, Student's Welfare Committee, and all the members, for being constant pillars of support and encouragement. We express our sincere thanks to the magazine committee for their diligent efforts throughout the year, and our friends, without whose expertise, this magazine would be merely a bundle of drafts.

The process of creating and observing art, often brings in a renaissance of forgotten ideas, talents and stories hiding beneath us. So, without further ado, we present to you DISHA 2020, and submerge you into this tide of creativity and craftsmanship.



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From the Principal's Desk

Sardar Patel College of Engineering (SPCE) under the management of Bharatiya Vidya Bhavan's, was established in 1962 to meet the growing demand for engineering talent. SPCE became autonomous in 2010 and achieved several more milestones since then.

SPCE has held up to its high standard of self-improvement as is evident by the accreditation received by the Civil Engineering Undergraduate and Mechanical Engineering Undergraduate programme from National Board of Accreditation (NBA) for upto June 2021. The institute has also maintained its standing amongst elite institutes receiving an NIRF rank in the last few years.

The college is one of the 192 institutes in India and 17 institutes in Maharashtra, selected for Technical Education Quality Improvement Programme (TEQIP) I, II and III for transformation of the talented education system. Due to outstanding performance in implementation of TEQIP, the college has also been selected under TEQIP III.

The college has established 'Center for Continuing Education' under TEQIP to transform teaching and learning process by conducting various courses and workshops for faculty, support staff and students. Through implementation of these programs, the institute has emerged as one of the top colleges in India, evolving the education system. Acknowledging the efforts of the college, SPCE is a mentor institute for developing other weak institutes from other states of the country under TEQIP III.

Entering its 9th year of autonomy given by the UCG, SPCE has successfully managed the completion of the 2019-20 via online teaching mediums.

The college looks forward to continuing implementing innovative teaching methods to proceed with the academic year 2020-21 despite the Covid-19 pandemic.

SPCE boasts of a stellar lineup of professors, with 27 professors out of a total of 42, holding a Ph.D. degree. Several professors also seek to broaden their scope of knowledge by attending international conferences and engaging in research projects. The supporting staff engage in several developmental courses and endeavor to implement better practices amongst students and professors alike.

SPCE has always focused on the overall and holistic development of students. Our students have achieved academic excellence while bagging prizes in national level competitions. Students also display their talents in organizing various technical and social events such as SPECTRA, SPACE, SPCE Annual Debate Competition, SPIRIT etc. Students are also playing a vital role in various government schemes such as Unnat Bharat Abhiyan (UBA), and Unnat Maharashtra Abhiyan (UMA) acting as enablers to execute project objectives.

This page has deliberately been left blank in solidarity with all those who have lost their loved ones and/or their livelihood, with essential service employees working non stop, with teachers ensuring a smooth virtual education and with students missing their best days and professional opportunities, due to the Covid-19 pandemic. The DISHA Magazine Committee 2019-20 sends strength and good wishes for all our readers in these trying times.

Annual Report

We are pleased to present the 58th Annual Report of our institute. Started in 1962, we completed 58 years. We were granted autonomous status by UGC (Universal Grants Commission) in June 2010. This report presents a summary of activities conducted at SPCE during the previous year (i.e. AY 2019-20).

I. Academic Achievements:

Students' Result Analysis: The results of final year UG students in 2018-19 are very encouraging with a 94.44% in Mechanical Engineering (B.Tech.) and 89.61% in Electrical Engineering (B.Tech.). The second-year PG Students' results in 2018-19 are also very encouraging with a 100% pass percentage in Electrical Engineering (M.Tech.).

Special Achievement: Mr. Yashodeep M. Patil, final year B.Tech. (Civil Engineering- 2020 batch) student has cleared Combined Defense Services Exam - 2019 Permanent Commission in flying branch of Indian Air Force.

II. Students' Placements:

The UG students' placement record for the year 2018-19 is very impressive. More than sixty percent students are placed at various companies like L&T, Siemens, Jacob Engineering, Lodha Group, TATA Power, Reliance Industries etc. The highest salary offered is Rs. 11 Lakhs per annum. The PG students' placement record for the year 2018-19 is also very impressive. The highest salary offered is Rs. 6.3 Lakhs per annum.

III. Students' achievements

Civil Engineering Department:

- Mr. Yashodeep M. Patil, final year B.Tech. (Civil Engineering- 2020 batch) student has cleared Combined Defense Services Exam - 2019 Permanent Commission in flying branch of Indian Air Force.
- Shubham Bhaisare (B. Tech. Civil 2016) secured UPSC-2019 AIR # 749.
- Mr. Pratap Rajesh Pawar (Alumnus of Civil Engineering Department -2016 Batch) has been awarded a University International Award (UPIA) from Term 1, Year 2020 for study towards PhD. at the University of New South Wales (UNSW), Canberra campus, Australia. He will get a scholarship of about 1.4 Cr (INR) during his Ph.D. Programme. UNSW is ranked No.1 University in Australia.
- Dakshata Suresh Patil of Second Year Civil Engineering (2019-20) has secured 800 m winner (VJTI), 400 m runner-up (VJTI), 400 m runner-up (SPIT), served as a team manager of Raigad women's Kho Kho team playing in the 56th Men and Women championship and selection trials held at Solapur.

Mechanical Engineering Department:

- Nimish Patil (B. Tech. Mechanical Engineering 2015) secured UPSC-2019 AIR # 389 and Akash Koli (B. Tech. Mechanical Engineering 2015) secured UPSC-2018 AIR # 677.
- Students who have secured admission in M.S. programs:
 - Het Padachh (North Carolina State University), Suparno Ghosh (Virginia Polytechnic University, Texas A&M University), Mrunal Chavan (University of Illinois, University of California, Purdue University), Vaidehi Patil (Carnegie Mellon University) and Jay Paramjit Saini (Clemson University, Kettering University).
- ISHRAE Student Members Anjali Verma and Rashmi Mahajan have got the best Technical Paper Award (Student Technical Fest) at Jamboree 7th 'Annual Student Fest of ISHRAE Mumbai Chapter' in 2019-20.
- Sharayu Patil student of T.Y. Mechanical Engineering has secured Gold in 50mts breaststroke, in the swimming competition held by VJTI (Enthusia) in 2019-20.
- Team SPCE Racing participated in Formula Bharat 2020. The team has secured an overall rank of 6th out of the 52 teams.
- Team SPCE WAVE participated in the SAEISS Aero Design Challenge 2020 in Coimbatore. The team has

secured the following achievements in A.Y. 2019-20 :

SAEISS ADC 2019, Chennai - AIR 11 out of 65 teams

SAEISS ADC 2020, Coimbatore - AIR 8 out of 76 teams

- Team SPCE Robocon participated in DD Robocon India 2019. Here, the team achieved an overall rank of AIR 9 in the final stage, with AIR 1 in stage 1 and 2, and the Best Idea Solution Award.

Electrical Engineering Department:

- Swapnil Pawar (B. Tech. Electrical Engineering Batch 2014 Alumnus) secured UPSC-2019 AIR # 448.
- Students who have secured admission in M.S. programs:
 - Manish Sainani (Carnegie Mellon University, University of Michigan, University of Illinois), Shubham Adsul (Arizona State University), Rishabh Mani (University of California) and Sagnik Mukhopadhyay (TU Delft, Carnegie Mellon University, TU Munich).
- The following students of T.Y. B.Tech. Electrical Engineering Department have won prizes at an essay competition organized by Western Regional Load Despatch Centre (WRLDC), Power System Operation Corporation (POSOCO) as a part of Vigilance Awareness Week 2019:
 - I. Aarushi Dave (Rank 1st)
 - II. Krutika Kamathe (Rank 3rd)
 - III. Anuja Raut (Cons. 2nd)
- Team SPCE Robocon participated in DD Robocon India 2019. Here, the team achieved an overall rank of AIR 9 in the final stage, with AIR 1 in stage 1 and 2, and the Best Idea Solution Award.

IV. Electrical Engineering Department:

Department Activities:

• Guest Lectures:

The following guest lectures were arranged for students and faculty during AY 2019-2020. These lectures were delivered by experts from industry and reputed academic institutes to update students with the advances in technology:

16 and 32 bit Microprocessors

Health wellness Literacy (Faculty)

Power System oscillations monitoring using WAMS

Advances in Switchgear and protection

• Industry visits arranged:

POSOCO for B. Tech. Students.

• Workshop for students:

The department has organized the following workshops in the AY 2019-2020 with the help of industry experts.

Essentials for NX designers on 29/07/2019-02/08/2019

Android application development on 13/10/2019-15/10/2019

Advanced Processors on 06/10/2019

Value Added courses run by Industry (Siemens):

Our SY and TY B. Tech. students completed the following value added courses offered by Industry (Siemens)

1. Basic Automation

2. Basic LV switchgear and Motor

• Faculty Achievements:

Number of STTP/Workshops attended = 08

Number of research conferences/seminars attended = 10

Number of guest lectures arranged = 04

Number of industrial visits organised = 01

Number of technical publications in international conferences = 10

Number of new courses offered in 2019-2020 = Regular: 02 Professional Electives: 01

Number of ICC constituted for courses taught by faculty = 14 UG 04 PG

Number of faculty completed for SWAYAM/NPTEL portal for certification course = 3

V. Mechanical Engineering Department:

- **Dr. Sudhakar Umale:**

Working as a Head of Mechanical Engineering Department from 15 January 2020.

Appointed as an Academic Expert for Departmental Advisory Board of Department of Automobile Engineering for academic year 2019-20 in Pillai HOC College of Engineering and Technology, Rasayani (Panvel).

Worked as a Design Judge at Formula Bharat 2020 Competition at Kari Motor Speedway in Coimbatore during 22 to 26 January, 2020.

Attended as a Chief Guest and Keynote Speaker for one Week MSBTE sponsored Faculty Development Program on “Emerging Trends in Automotive Technology” Organized and Conducted by Mechanical Engineering Department, VJTI Mumbai on Jan. 13, 2020.

- **Dr. Rajesh Buktar:**

Delivered Expert Talk on “INDUSTRY 4.0” at Mechanical Engineering Department, M.G.M’S College of Engineering, Nanded on 16/10/2019.

- **Dr. Nilesh Raykar:**

Successfully Completed his tenure of Head of Department of Mechanical Engineering

Delivery of Expert Talk in FDP, Workshop and STTP: Conducted 2-day online training on “Design by Analysis as per ASME BVPC” on 27-28 May 2020 for 120 engineers of L&T.

- **Dr. Kiran S. Bhole:**

Started working as a Dean R&D from January 2020.

Completed sponsored research project worth Rs. 19.92 Lakhs of Science and Engineering Research Board.

- **Dr. R. S. Maurya:**

Received a grant for Rs. 15.34 Lakhs for research project from RGSTC, Govt. of Maharashtra. The project will be executed in collaboration with Central Institute of Fisheries Education (CIFE), Mumbai.

- **Dr. Santosh B. Rane:**

Received one patent on “Smart Forging Machine” on 19 Feb. 2020.

Patent has been applied for three areas on “A System and A Method For Performing Forging Operation”, “Smart Gear Testing Machine”, “Methods And Systems For Identifying A Defected Work-Piece”.

- **Prof. Parag Muley:**

Received grant of Rs. 2,16,000/- for In-house Development of Experimental Set-ups for Thermodynamics Laboratory under TEQIP-III. The academic work assigned to TESA-SPCE students was in progress. (Delayed due to COVID-19 and lockdown)

- **Shri. Kunal Bhavsar:**

Received ISHRAE Society Service Award as Youth Chair and Student Activity Chair of ISHRAE MUMBAI CHAPTER.

- **Dr. B. N. Bhasme:**

Conducted an expert talk in a 2-day workshop on “Advances in Mechanical Engineering” at Mechanical Engineering Department Government college of Engineering Rewa September 2019.

- **Prof. Haseen Shaikh:**

Selected for Ph.D. in IIT Bombay under the QIP program. Successfully completed his contact program.

12-week NPTEL certified FDP course on Fundamental of manufacturing process completed with TOPPER-Elite Gold medal.

- **Dr. Vijayalaxmi Sonkamble:**

Accomplished Ph.D. from Indian Institute of Technology Bombay (IITB).

Faculty Achievement Summary:

No. of workshops conducted by faculty members = 2

No. of international paper conferences = 17

No. of workshops participated in = 9

No. of journal papers published = 9

No. of patents = 1

No. of journals reviewed = 5

VI. Supporting Staff Development:

Number of training programs were organized for supporting staff in the Institute. Three Days Workshop on “Enhancement of Work Productivity” for Non-teaching Staff On 14th to 16th November, 2019 at Keshav Srushti, Esselworld Road, Uttan Village, Bhayander (West), Thane 401 106, Maharashtra Under TEQIP-III.

VII. TEQIP-III:

- Activities such as GATE training and placement training for students of T.Y.B.Tech and B.Tech, and induction programme for F.Y.B.Tech students, were conducted as a part of TEQIP-III.

- The following workshops were conducted in collaboration with our mentee institute, Rewa Engineering College, Madhya Pradesh.

1. 5-day Workshop on “Fluid Mechanics and Application of Advanced Surveying Instruments” (16th to 20th September 2019).

2. One Day Workshop on Advanced Structural Nonlinear Analysis On Friday, 18th October 2019 By Shirsh Techno Solutions, Mumbai ANSYS Authorized Training Centre.

3. National Research Symposium 2020 on Recent Trends in Engineering and Industry 4.0, 27th -28th April 2020, in Association with Indian Institution for Industrial Engineering (IIIE).

4. Training Program on “Interpersonal Effectiveness & Team Building” An Industry Readiness Program for REC, Rewa Students (16th to 18th Dec 2019).

- One day workshop on ‘Non- Destructive Testing’ was conducted on 27th September 2019, by Mr. Chetan Somani ASNT NDT Level-III (UT, RT,VT and MT).

The Performance Audit of TEQIP III project for the academic year 2018-19, was conducted on August 26th - 27th, 2019. NPIU has communicated the result of this Performance Audit. We have achieved an overall score of 1.20 and a twinning score of 1.00 in this Performance Audit. This grading is on a 3 point scale (1 to 3), where score of 1 (lowest score) means best performance.

VIII. Accreditation:

SPCE has held up to its high standard of self-improvement as is evident by the accreditation received by the Civil Engineering Undergraduate and Mechanical Engineering Undergraduate programme from National Board of Accreditation (NBA) for upto June 2021. The institute has applied for accreditation for all 3 UG programs and 4 PG Programs. The institute has also been NAAC accredited.

IX. Autonomy:

University of Mumbai has extended the autonomy to the institute up to 2021. UGC has extended the autonomy to the institute up to 2022.

X. Participation in National Institute ranking framework:

The National Institutional Ranking Framework (NIRF) has been formed and accepted by MHRD.

In 2019, SPCE received NIRF rank - 180, considering engineering colleges across the country.

XI. Infrastructure development:

IT Infrastructure Modernization: Digital Smart Boards have been installed in all classrooms. Reading room has been created as an extension of the SPCE library. New PCs have been installed in all the labs. Hostel renovation has been successfully completed.

General Secretary's Address

The academic year 2019-20 was a year full of activities, events, festivals and most importantly learning. The year started with the formation of the Students' Council of which I was privileged to be the General Secretary. I could write pages about the activities that followed, but I'll try to summarise this fantastic year in a few words.



On 8th August 2019, our Students' Council was formed. And I was elected as the GS for the academic year 2019-20 of this prestigious college.

For building a rapport with the students, the council was named Aapli Council. We actively worked towards the execution of students' welfare activities. We ambitiously established five new clubs – the drama club (SPICE), the fashion club (SPARKLE), the sports club (SPIKE), the Rotaract Club, and the dance club (SPLASH). Speakers' Club was revived this year to make 'SPCE speak again' by organizing regular workshops and ensuring participation in MUNs and English debates.

We began our endeavor of organizing events with 'Independence Day' on 15th August with group song and dance performances. Then came 'Parambh' for our beloved first-year students to enthusiastically display their talents on 27th Sep-

tember, with celebrity judges and DJ night. Just a week later, 'Garba Night' was arranged with all decked in traditional attire. Following the legacy of SPCE, the Annual Debate was organized on 4th and 5th October. Students from the Speakers' Club organized and participated enthusiastically with an excellent response from all over Mumbai.

SPCE worked harmoniously with our sister colleges SPIT and SPJIMR during our tenure. We initiated a fight against cancer with the 'Stem Cell Donor Drive' recording a magical figure of 380+ blood donors, the highest amongst all the engineering colleges in Mumbai. Our Ladies' Representatives worked for the welfare of women, starting the Girls' Club, setting up sanitary machines in girls' common room and extending the time limit at the girls' hostel. We strove to strengthen UG – PG student relations and student - alumni relations by actively involving them.

From January 1, 2020, we took to launching our annual technical fest SPECTRA to greater heights. We promoted technical workshops, organized school exhibitions, mock placements and big technical events. We welcomed students all over Mumbai from 31st January to 1st February with the motto 'World Unites Here'. SPIRIT was organized independently for the second time and marked historic participation of more than 100+ colleges, with 2000+ students for 10+ sports events at SPCE from 13th February to 25th February. Our next focus was the most awaited annual cultural fest SPACE, in its 32nd edition from 28th February to 1st March. This time, SPACE was organized in association with NGO Rangoonwala Foundation Trust for spreading awareness on critical liver disorder. With the motto of 'Unleash Your Colors', SPACE was a grand success for us, added with the presence of many celebrities, artists, performers and participants.

Hostel committee worked enthusiastically for student welfare, organizing successful events during our festivals like Ganesh Chaturthi, Shiv Jayanti and Holi. Our SPCE Start-Up cell was restarted aiming to promote entrepreneurial culture. Our prestigious Alumni Meet was organized on 7th March with the aim of sharing experience, knowledge and preserving the relations with our alumni.

In the end, I would like to thank SPCE for giving me this opportunity, accepting me as their general secretary and for giving me the best memories of my time here. I learnt from my mistakes and I set up my journey from scratch towards excellence with everyone's guidance and support. I extend my gratitude by thanking our Principal sir, Vice Principal sir, our Chairperson ma'am, faculty members who supported us in our endeavors, my fellow council members and the students for making this academic year memorable. It was a grand success for all of us.

-Akhilesh Mohod

Cultural Secretary's Address

Being a part of the Student Council for the year 2019-2020 was an unforgettable experience. We were entrusted with the responsibility of promoting our culture. We started with our first responsibility of organising Independence Day, 2019.

September gave way to the first mega event of the year, 'Parambh', a night dedicated to welcome freshers. We saw talented juniors fighting for the trophy, which was won by the Mechanical Engineering Branch. Soon, it was time for the festival of dance and devotion, Navratri! The students of SPCE relished the night filled with lights, music and dance. We distributed prizes for the Best Dancers and the Best Dressed. With Republic Day, 2020 came the celebration of our nation. The cultural dances and songs elicited feelings of patriotism within the spectators.

Then came the most awaited event of the year, 'SPACE 2020 - Unleash your colours'. It was a remarkable experience organising such a significant event of SPCE. It would not have been possible without the efforts of the Student Council, the core members, the organisers and the coordinators who worked relentlessly for days together and made this event a huge success.

SPACE 2020 was a star-studded carnival, inaugurated by the famous chef Gautam Mehrishi. A motivational talk by Chitralkha Patil followed. The fest was blessed with the presence of artists ranging from Naveen Prabhakar, a leading comedian, to Praveen Pandita, one of the best female singers in India.

We thank all the students who gave their best to make SPACE 2020 a mega event. Our sincere gratitude to the Principal, Dr M.M Murudi, the Chairperson of the Student Welfare Committee, Dr Shyamlee Solanki, and the members, for having faith in us throughout the year and helping us at each step.

-Rutuja Bhosale

-Rahul Bhojwani

Technical Secretary's Address

Our experience as Technical Secretaries has been exceptional. A 'Technical Fest' is the face of an engineering college and it should be as grand as possible! So, we aimed to make SPECTRA 2020 a grand success, uniting students across disciplines to take part in our national level competitions. Thus, the planning for 'SPECTRA - World Unites Here' started.

SPECTRA was held on 31st January and 1st February, 2020. We are proud to say that we could achieve at least 95% of our expectations because "Alone we can do so little, together we can do so much". We knew that if we wanted to achieve greatness, we would have to work relentlessly.

There were a lot of obstacles faced by us as the Technical Secretaries we had to manage all such hurdles. But that's where we learn a lot. The skills you develop with time and ofcourse, the fun with colleagues is what makes this journey memorable.

To close this address, we would like to acknowledge the persistent efforts taken by all the students of our college, the Students' Council, Chairperson of the Student Welfare Committee Dr. Shyamlee Solanki and other members, the faculty, the supporting staff and our Principal Sir. Thus, I look forward to the successive Students' Council to build up on what we have achieved and reach greater heights.

-Sanskruiti Takalkhede

-Mayank Bhalerao

-Vivek Dhande

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**DR. M. M. MURUDI
VICE PRINCIPAL
HOD, CIVIL**

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**DR. SUDHAKAR UMALE
HOD, MEHCANICAL**



**DR. ANUPA SABNIS
HOD, ELECTRICAL**

FACULTY

CIVIL



ELECTRICAL



MECHANICAL



FIRST YEAR



STUDENTS' WELFARE COMMITTEE

DR SHYAMLEE SOLANKI



CHAIRPERSON

MS DIVYA T A



DR JAYRAM V GHOLAVE



DR NANDKISHOR W KINHEKAR



DR B N BHASME



GENERAL SECRETARY CULTURAL SECRETARY TECHNICAL SECRETARY

Akhilesh Mohod

Rahul Bhojwani
Rutuja Bhosale

Mayank Bhalerao
Vivek Dhande
Sanskriti Takalkhede

MAGAZINE SECRETARY SPORTS SECRETARY FINANCE SECRETARY

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Ayushi Kadam
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MAGAZINE & CREATIVES**

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Yashashri Bhadane

Rudray Gorane



SARDAR PATEL COLLEGE OF ENGINEERING

SUMMARY OF CAMPUS PLACEMENT : ACADEMIC YEAR 2018-19 MTECH

Sr. No.	Company Name	Date	Criteria	Total Placed	Construction Management	Machine Design	PEPS	Structurs	Thermal	Salary in Rs. Lac. per annum
1	Jacobs Engineering	01-08-18	7 CPI in all Semester + No Live KT	0	NA	NA	0	0	NA	30,000/- Per month Stipend for 1st Yr
2	Infosys (Non Core)	2/10/2018 & 3/10/2018	6CPI + No LKT	9	1	2	4	NA	2	3.60
	Infosys (Core)			3	NA	2	NA	NA	1	
3	Cognizant	4/10/2018 & 5/10/2018	60% in X, XII, Diploma, UG & PG	3	NA	NA	3	NA	NA	3.30
4	L&T Construction	25/10/2018 & 26/10/2018	6 CPI + No LKT	2	0	0	0	2	0	6.30
5	PRS Permacel Pvt. Ltd.	07.12.2018	CV Based Shortlisting	0	NA	0	NA	NA	0	5.00
6	Thornton Tomasetti	11-12-18	6CPI +No LKT	1	NA	NA	NA	1	NA	6.00
7	JW CONSULTANTS	19-12-18	6 CPI + No LKT	0	NA	NA	NA	0	NA	3.85
8	Arup India	20-12-18	7 CPI + No LKT	2	NA	NA	1	1	NA	6.00
9	VMS Consultants Pvt. Ltd	21-12-18	CV Based Shortlisting	0	NA	NA	NA	0	NA	4.00
10	Aker Solutions	24-12-18	6 CPI + No LKT	0	NA	NA	NA	0	NA	6.00
11	Reliance Industries	27-12-18		4	NA	1	0	NA	4	5.50 (Rs.50,000/- Performance Linked Incentive)
12	Spectrum Techno Consultants Pvt. Ltd	11-01-19	6CPI + No LKT	0	NA	NA	NA	-	NA	30,000/- Per month Stipend for 1st Yr
13	Prof. D.D. Desai	25-01-19	CV Based Shortlisting	1	NA	NA	NA	1	NA	4.20
13	A Eberle	25-01-19	Overall 60% + No LKT	0	NA	NA	0	NA	NA	2.40
14	Sterling Consultants	01-02-19	CV Based Shortlisting	1	NA	NA	NA	1	NA	3.75
15	Tech Tangent Solutions Pvt. Ltd	10-03-19	Shortlisted by Company	1	NA	NA	NA	1	NA	3.75
16	L&T Electrical and Automation	22-03-19	6 CPI + No LKT	0	NA	NA	0	NA	NA	6.25
17	ETAP	13-03-19	-	0	NA	NA	0	NA	NA	3.00
18	Ador Welding	15-03-19	Overall 60% + No LKT	0	NA	NA	0	NA	NA	5.50
19	Nayak PS Ltd.	27-03-19	-	0	NA	NA	0	NA	NA	6.00
20	Shirish Patel and Associates Consultants Pvt. Ltd	28-03-19	CV Based Shortlisting	1	NA	NA	NA	1	NA	4.52
21	KPM Engineering	13-03-19	CV Based Shortlisting	1	NA	NA	NA	1	NA	2.80
22	Sapura Engineering & Construction India Pvt. Ltd.	11.03.2019	Overall 60% + No LKT	0	0	0	0	0	0	5.50
23	Raj Infra Engineers	25.03.2019	Overall 60% + No LKT	0	0	NA	NA	0	NA	4.50
24	Grindwell Norton (Saint-Gobain Group Company)	03.04.2019	Overall 60% + No LKT	0	NA	0	0	NA	0	5.61
25	Petrofac Engineering India Pvt.Ltd	16-05-19	CV Based Shortlisting	1	NA	NA	NA	1	NA	4.20
26	Afcons Infrastructure Pvt Ltd.	17-06-19	Overall 60% + No LKT	7	7	NA	NA	NA	NA	6.00
27	NPCC Engineering Pvt. Ltd.	24.06.2019	Overall 60% + No LKT	0	0	NA	NA	0	NA	6.00 (1st Yr.) 7.00 (2nd Yr.) 8.00 (3rd Yr.)
28	AECOM	10.07.2019	Overall 60% + No LKT	1	0	0	0	1	0	5.50
29	KEC International	06.08.2019	Overall 60% + No LKT	0	0	0	0	0	0	6.00
30	S-Tech Engineering	23.08.2019	CV Based Shortlisting	0	NA	0	NA	NA	NA	4.50
30	Furnace Fabrica India Ltd.	24.08.2019	Overall 60% + No LKT	0	0	NA	NA	NA	NA	5.00
31	Unique Group Dubai	13.11.2019	Overall 60% + No LKT	1	NA	0	1	NA	0	6.00
32	RA Global Tech Solutions LLP	19.11.2019	Overall 60% + No LKT	0	NA	0	NA	NA	NA	3.60
33	Sujan Industries	22.11.2019	CV Based Shortlisting	0	NA	0	NA	NA	0	4.50
Total offers				39	8	5	8	11	7	

STUDENTS' COUNCIL

SARDAR PATEL COLLEGE OF ENGINEERING

SUMMARY OF CAMPUS PLACEMENT : ACADEMIC YEAR 2018-19 (BTECH)

Sr. No.	Company	Date	Criteria	Total Placed	Civil	Mechanical	Electrical	Salary in Rs. Lac. per annum
1	L & T Engineering	09/07/2019	6.75 C.P.I. + 65% aggregate in 10th & 12th/ Diploma. No year gap.02 Dead K.T.s allowed	4	NA	2	2	6.00
2	Axxella Advisory Services	24/7/2018	6 C.P.I. + No LKT	1	1	0	0	11.00 (8.60 Fixed +2.40 Performance Based)
3	Siemens	20/8/2018	60% or 6.4 C.P.I. + No Backlogs	5	NA	2	3	5.00
4	TVS Motors	23/8/2018	PPO	2	NA	2	0	4.80
5	Mu Sigma	24/8/2018	60% and above 10th, 12th/ Diploma, Degree.	1	1	0	0	21.00 (Aggregate over 3 yrs)
6	L&T Technology Services	30/8/2018	7 C.P.I.+ No Live KT +04 Dead K.T.s allowed	7	NA	7	NA	4.00
7	Lodha Group	31/8/2018	6.5 C.P.I. + No LKT, DKT + SSC & HSC/Diploma 85%	7	3	3	1	5.10
8	Jacobs Engineering India Pvt. Ltd.	09/08/2019	7 CPI in all Semester+No Live KT	8	4	2	2	3.60 (Stipend for 1 yr)
9	Burns & McDonnell	27/8/2018	6CPI +No LKT	3	2		1	3.83
10	The Math Company	27/9/2018	6CPI +No LKT	1	NA	0	1	4.50
11	LeanBox Logistics Solutions Pvt. Ltd.	28/9/2018	6CPI +No LKT	3	2	1	0	3.00
12	Kotak Life	23/8/2018	6CPI +No LKT	0	0	0	0	11.00 (8.60 +2.40 Performance Based)
13	Deutsche Bank	29/9/2018	6CPI +No LKT	0	0	0	0	10.00
14	Infosys (Non Core)	2/10/2018 & 3/10/2018	6CPI +No LKT	29	1	6	21	3.60
15	Cognizant Technologoy Solutions	4/10/2018 & 5/10/2018	60% Throughout	12	1	0	11	3.30
16	Investment Bulls	11/10/2018	6CPI +No LKT	0	0	0	0	4.00
17	Hindusthan Unilever Ltd. (HUL)	12/10/2018	6CPI +No LKT	2	NA	0	2	7.00
18	Timeline Insurance Surveyors & Loss Assessors Pvt. Ltd.	10/08/2018	6CPI +No LKT	3	NA	1	2	2.70
18	Tata Motors	15/10/2018 & 16/10/2018	6CPI +No LKT	6	NA	3	3	6.00
19	L & T Construction	25/10/2018 & 26/10/2018	6CPI +No LKT	3		NA	3	6.30
20	Tata Power	23/10/18 & 12/12/18	6CPI +No LKT	4	NA	1	2	6.00
21	Selec Controls Pvt. Ltd.	28/11/218	6CPI +No LKT	0	NA	0	0	5.50
22	VA Tech Wabag Ltd.	29/11/2018 & 30/11/2018	6.5 CPI + No LKT	6	2	1	3	4.16
23	JSW Steel	07/12/2018	6 CPI +No LKT	6	NA	6	0	5.50
24	Grindwell Nortan Ltd.	17/12/2018	7 CPI +NO KT	0	NA	0	NA	4.68
25	Raycon Infrastructure Pvt. Ltd.	19/12/2019 & 20/12/2019	6 CPI +No LKT	1	0	1	0	3.60
26	Pyramid Consulting Engineers Pvt. Ltd.	21/12/2019	7 CPI +No LKT	3	2	1	0	3.50
27	Aker Solutions	24/12/2019	8 CPI +No LKT	4	2	1	1	4.50
28	Reliance Industries Ltd.	27/12/2019	9 CPI +No LKT	3	3	0	0	4.50
29	Spectrum Techno Consultants Pvt. Ltd.	28/01/2019	7 CPI +NO KT	0	0	NA	NA	4.50
30	Cybermarine Knowledge Systems Pvt. Ltd.	25/01/2019	65% +No LKT	1	NA	1	NA	4.56
31	Ambuja Cement	29/01/2019	6CPI +No LKT	9		5	4	5.50
32	Armstrong World Industries India Pvt. Ltd.	01/02/2019	6CPI +No LKT	3	2	0	1	6.50
33	Toyo Engineering India Pvt. Ltd.	05/02/2019	6CPI +No LKT	2	2	0	0	3.60 (Stipend: 1st yr) 5.50 (After confirmation)
34	Techint India Pvt. Ltd.	06/02/2019	6CPI +No LKT	2	1	2	1	3.60
35	Torrent Power Ltd.	07/02/2019	6CPI +No LKT	0	0	0	0	3.60

Sr. No.	Company	Date	Criteria	Total Placed	Civil	Mechanical	Electrical	Salary in Rs. Lac. per annum
36	SNC Lavalin Group. Inc.	08/02/2019	7 CPI +NO KT					3.60
37	ETAP Automation Pvt. Ltd.	13/03/2019	6 CPI +No LKT	1	NA	NA	1	3.50
38	Nayak Power Systems Pvt. Ltd.	27/03/2019	6 CPI +No LKT	0	NA	NA	0	5.10
39	Vertiv Energy Pvt. Ltd.	09/04/2019	6 CPI +No LKT	0	NA	0	0	4.00
40	Afcons Infrastructure Ltd.	10/04/2019	6.75 + No KT	1	1	NA	NA	3.90
41	Marine Electricals India Pvt. Ltd.	24/04/2019	6 CPI +No LKT	0	NA	NA	0	3.50
42	Sterling & Wilson Pvt. Ltd.	26/04/2019	6.5CPI +No LKT	4	NA	2	2	4.20
43	Gandhi Automations Pvt. Ltd.	23/05/2019	6.5CPI +No LKT	0	NA	0	0	4.00
44	BuroHappold Engineering	23/05/2019	6 CPI +No LKT	0	NA	0	0	5.00
45	GMV India Pvt. Ltd.	21/05/2019	6 CPI +No LKT	0	NA	0	0	3.50
46	AkzoNobel India Ltd.	20/05/2019	8 CPI + No LKT + 10th 85%+12th 85%	0	NA	0	0	7.50 (Additional joining bonus of 50,000/-)
47	Mahindra & Mahindra	18/05/2019	6.75 + No KT	0	NA	0	0	3.00 (Apprenticeship for 1 yr)
48	Kotak Life Insurance	13/05/2019	6 CPI +No LKT	0	0	0	0	4.50 (1.00 Bonus after completion of 1 yr)
49	Ideas91	11/03/2019	6 CPI +No LKT	0	0	0	0	Performance Based
50	Asahi India Glass Ltd.	02/06/2019	6 CPI +No LKT	0	NA	0	0	No applications
51	Philips India Ltd.	03/06/2019	6.5 CPI + No LKT	0	NA	0	0	3.60 (Training: 6 months) 5.50 (After confirmation)
52	The Trident and The Oberoi Hotels Group	30/04/2019	6 CPI +No LKT	0	0	0	0	2.40
53	Amadeus Software Labs India Pvt. Ltd.	20/06/2019	6 CPI +No LKT	0	NA	NA	0	4.00
54	Bluestar India Ltd.	10/01/2019	60% and above 10th, 12th/ Diploma, Degree	0	NA	0	0	5.40
55	BrowserStack	11/07/2019	6 CPI +No LKT	0	NA	0	0	6.00
56	Coffee Day Beverages	04/03/2019	6 CPI +No LKT	0	NA	0	0	3.50
57	GEP Worldwide	18/06/2019	6 CPI +No LKT	0	0	0	0	7.50
58	Godrej & Boyce Mfg. Co. Ltd.	10/12/2018	60% and above 10th, 12th/ Diploma, Degree	0	NA	0	NA	4.50
59	Hyderabad Industries Ltd.	17/12/2018	60% and above 10th, 12th/ Diploma, Degree	0	NA	0	0	4.50 (1.00 Bonus after completion of 1 yr)
60	IDCIL	30/04/2019	6 CPI +No LKT	0	0	NA	NA	3.00
61	IndiaMART InterMESH Ltd.	06/12/2018	6 CPI +No LKT	0	0	0	0	3.00
62	Jubilant FoodWorks Ltd.	12/08/2019	6 CPI +No LKT	0	NA	0	0	4.00
63	Legrant India Pvt. Ltd.	08/06/2019	6 CPI +No LKT	0	NA	0	0	4.00
64	MT Educare Ltd.	10/05/2019	6 CPI +No LKT	0	NA	0	0	3.00
65	Ritika Enterprises Pvt. Ltd.	20/04/2019	6 CPI +No LKT	0	NA	0	0	4.00
66	RSM Astute Consulting Pvt. Ltd.	12/10/2018	6 CPI +No LKT	0	NA	0	0	5.00
67	S-Tech Engineering	12/08/2019	6 CPI +No LKT	0	NA	0	0	4.00
68	Sapura Engineering & Construction India Pvt. Ltd.	11/03/2019	6 CPI +No LKT	0	NA	0	0	4.00
69	Tecnimont Pvt. LTd.	16/01/2019	6 CPI +No LKT	0	0	0	NA	4.00
70	VMS Consultants	19/03/2019	6 CPI +No LKT	0	0	NA	NA	4.00
71	Voltas Ltd.	25/07/2019	60% and above 10th, 12th/ Diploma, Degree	0	NA	0	0	4.00
Total				148	30	51	67	15



ALUMNI



Mr. Sohrab Mistri is working on his PhD at the Department of Aerospace Engineering, Indian Institute of Technology Bombay (IITB). He is a mentor and advisor for aeronautics teams from SPCE, VJTI, KJSCOE and DJSOCOE. He is the founder of AVA avionics and has worked on defense level robotics projects with the Paramilitary forces. He has judged aeronautics competitions around the country including Techfest, IIT Bombay and has participated as an RC aeroplane pilot/creator in competitions worldwide. Sohrab obtained his Master's degree in Machine Design from Sardar Patel College of Engineering and his Bachelor's degree in Mechanical Engineering from K. J. Somaiya College of Engineering.

1. What are you currently pursuing?

Currently, I'm pursuing my PhD in the Department of Aerospace Engineering – IIT Bombay. Simultaneously, I also run a hobby level start-up called Ava Avionics.

2. What motivated you to carry on your PhD in aerospace engineering?

As a student, we always have a natural disposition towards certain fields may it be art, music, engineering etc. I started aeromodelling in 6th standard under the guidance of Mr. Puneet Manaktala and my enthusiasm still runs on the border of obsession. Growing up, I've always looked up to my father as he had pursued his PhD in Biology too.

3. How did you acquire such great piloting skills while pursuing engineering?

My mentors Mr. Wasi Ansari and

Mr. Puneet Manaktala, were the primary contributors in my journey, these gentlemen not only wanted to train students at par but wanted them to excel and achieve even further. Although flying seems a lot of fun, strict discipline and safety allows you to expedite growth.

By the end of it, I would always attribute it to great mentors, parents, and finding the discipline required within the madness of aerobatic flying.

4. You have taken up a great initiative to mentor the aero teams in various colleges in Mumbai. What motivated you to do this?

As a student, I've been in the same shoes as you. So I strongly believe in passing on knowledge to younger generations so they can grow and aspire to be even better than me. I have been exposed to the industry and different aspects of life that you will still be striding into. Hence, you might not realise it now but practical engineering through projects is the bridge between your textbooks, practical knowledge and soft skills. Overall, it is a very impactful experience for you as students.

I was fortunate enough to have someone guide me through my journey and request you to do the same with aspiring students when they find themselves ready to mentor.

INTERVIEW

5. What are your views on the current scenario on aeromodelling in our country?

Firstly aeromodelling is a hobby and aeronautics is the discipline. I think aeromodelling right from childhood is the gateway to aeronautics as you grow. Naturally aeronautics is a growing field in India and a fast growing industry too.

6. What is your advice to the budding aerospace enthusiasts among the students?

1. You're creating the bridge between textbook theory and practicality. A good engineer cannot survive without either.

2. You'll be learning a lot of soft skills like team management, networking, negotiating, finance, etc. Embrace it even if it feels like it's not an engineer's profile.

3. Your studies are important and no matter what you've been told, it's much easier if you have the best of both in the long run. Keep in mind that your grades shortlist you for an interview round and it's during that interview that you and your knowledge will be tested!

4. Are engineers supposed to know everything today in the world of Google and free internet? Mostly yes, know the possibilities in everything. So, be an expert in one but jack of all.

5. Invent, but wisely- not for the sake of inventing but for the sake of improving the current scenario. There will be someone with an old school of thought who might oppose or not give in easily or may have a negative approach but these are our best friends! They're helping us with their knowledge and the problems that they faced earlier.

So do pay heed to what they say!

7. What are some of your favourite memories from SPCE?

Professors like Mr. Raykar were a breeze of fresh air. They knew their expertise and most importantly how to impart the knowledge onto others such as me; who made me think out of the box and not just the textbook.

I owe a lot to all my professors and Sardar Patel College of Engineering for providing us with opportunities and a strong learning foundation.

On the 4th and 5th of October 2019, Sardar Patel College of Engineering held its flagship debate competition, 'SPCE Annual Debate 2019'. This is the 7th edition of SPCE AD and the theme for this year was 'A Plethora of Perspectives'. The inspiration for the theme was the many perspectives that are exchanged amongst participants in a debate. And that a good debater is one who hears all perspectives, but effectively defends their stance.

SPCE AD - 2020 : Plethora of Perspectives



SPCE AD 2019 saw participation from premier institutions from all over Mumbai. The debates were in Oxford style, with two member teams competing in each match. The first day of the event consisted of the league rounds, while the knock-out rounds were held on day two. With each round, the difficulty levels rose but each match was a battle of wits. Day two saw the top eight teams lock horns in the quarterfinals, followed by the semi-finals and ultimately the final round.

The winners of SPCE AD 2019 were the students of Rajiv Gandhi Institute of Technology. The students of Fr. Conceicao Rodrigues College of Engineering took the Runner's Up position. We would like to thank our adjudicators Mr. Harsh Dave, Mr. Manav Doshi, Mr. Azain Jaffer, Mr. Mohammed Anas Khan and Mr. Shivam Jain Kakadia for their presence and guidance.

We thank the student organizing committee and coordinators for their effort and Dr. Shyamlee Solanki, Chairperson of the Student Welfare Committee, faculty members and our respected Principal Sir, for their constant guidance and support. We now pass the baton the next batch to carry the legacy of SPCE AD to greater heights!



On 22nd August 2019, a stem cell donor registration drive was conducted in SPCE by Marrow Donor Registry India (MDRI). The MDRI carries out these drives to search for potential blood donors, who's stem cells can be used to fight rare blood diseases like blood cancer, thalassemia etc.

Each donor who volunteered had a 4ml sample of blood collected by the team of doctors. These samples will be stored in their registry and if a donor matches with a patient of a rare blood disease, they will receive a call to make a blood donation. This way, they can save the life of a patient by helping them regenerate their stem cells. This event was coordinated smoothly with the sincere efforts of the Student Council and the student volunteers from SPCE, who ensured timely assistance to the doctors of MDRI. Our special thanks to Dr. Praveen Clement, for helping us educate our students about the process of stem cell donations and being the bridge between MDRI and SPCE.

We're grateful to the students and faculty members of SPCE, SPIT and Bhavan's College who came forward to give their blood sample to needy patients. Thanks to this generous gesture, 387 donors have been successfully registered to the MDRI. Hopefully, on making a successful match, a precious life will be saved.



STEM CELL DONOR DRIVE

ROTARACT

The Rotaract club of Sardar Patel College of Engineering was inaugurated on 27th August 2019 in SPCE in the presence of our respected Principal Sir and Dr. Shyamlee Solanki, the faculty advisor of Rotaract Club of SPCE. It comes under District 3141, of Bombay Mahakali Caves. Its motto is "Service before self". Mayank Bhalerao was elected as the President and Akhilesh Mohod as the Secretary. The badges of office were invested on Vice President Riya Mete, Sergeant at Arms Rutuja Bhosale, Joint Secretary Anmol Phirse, Treasurer Aditi Modak, Administrator Vaishnavi Kharat, Director of Literacy Neha Ingle, Director of Road Safety Anush Channawar, Director of Environment Kshitika Gala and Director of Pollution Avinash Kichloo. As soon as the club was inaugurated, we commenced work to make a difference in the society.

A team was constituted and saw active participation of students. This reflected their spirit and enthusiasm. Our intention is to fulfill our duty towards society. We started our work by organising a free medical camp for the financially weak, enabling them to get themselves checked and get free medicines from doctors. We organised a Diwali Bazaar where clothes, utensils, toys, footwear were sold at just Rs 10/- or Rs 20/-, which allowed many families to celebrate their Diwali better. The smiles on their faces were priceless! We ran a plastic collection drive, where in our first batch a full truck load of plastic was collected. Later that plastic was taken to a NGO and in return we got fertilizer which was distributed among tribal farmers of Wada, Thane.

We are grateful Dr. Shyamlee Solanki for her constant guidance and endless support to the club. We would also like to thank all the student committee members for showing their active support in all the activities.



CLUB

ATHEIST

I've always been a curious child,
Always asking 'hows' and 'whys'.
Getting me to believe something,
I never made it an easy task.
Sometimes my parents also gave up alas,
But I never stopped.

But I never stopped,
Even when they introduced me to the concept of God.
Being who never believed a thing over what science taught,
I started looking into this person who people claimed, brought floods as well as droughts.

Slowly walking down this path, of exploration and belief,
Sometimes stumbling upon which seemed to be true and sometimes just blind belief.
Asking them for the proof,
The proof of his whole existence or a mere signature on one of his books.
And when they told me it's all just on faith and belief,
Then finally I claimed, "you know what I'm gonna be an atheist".

But sooner than a butterfly flaps its wings, I realized it's no easy job being an atheist,
In a place where even every other phrase has 'heaven' and 'hell' in it.
But still, I tried, I tried and tried and tried to stick to what I believe,
And to prove that science is a real thing and not like the thing these theists believe.
But people around me never agreed,
Over and over they asked me, what's the Big Bang and why is that life's only here,
They called it a miracle that God had it planned, but I believed that would give science
some time and all will be clear.

Gradually, I realized that though science is in what I believe I couldn't deny being a
little theist,
The answers to my questions about the soul, and the unaccountable feelings that we still
feel.
The coincidences and the luck that we can't deny, there ought to be something that
governs our mind,
But still when I see these theists some fighting and while some with blind belief,
I say to myself, thank God I'm an Atheist.

MANAV MEPANI
S.Y. MECHANICAL

OSHOISM

While travelling today to Kathgodam by the morning Shatabdi, I read an article in 'The Speaking Tree' written by Osho, the gist of which was that securities lead to boredom. Love is insecure which leads to the unknown and we become childlike again. The article made so much sense in today's world. Every other person is going through separation and the major reason is knowledge about the partner and boredom.

As the journey continued towards Kathgodam, the lush green mustard fields with yellow flowers passed by as I listened to melodies of Prateek Kuhad. When we reached our final destination in Bhimtal, I was ecstatic and my mind started churning out one-liners like Osho which went from being hilarious to super serious.

"The nothingness around me fills me with curiosity".

"It is okay to get zoned out to be with oneself".

My host was an amazing person Gopal Ji who kept adding to these sayings on the lunch table. One that he added was, "Happy me and then happy you... You can't be a part of other's happiness if you are not happy..."

"Never allow anyone to cross the line and try to change you. You are what you are and if a person can accept you as you are, then he or she can be your friend."

"If you are a married guy never ask for money or material things from your wife...Or else you will be indebted to her for your life..."

"Respect the freedom of your children but see to it that their freedom does not affect others in a wrong way. They should keep a loving attitude towards everyone and should keep honor and respect of their own."

Lastly, a very sweet gesture was that he took the pains to be with my friend and me when he was super busy with his work. He promptly said, "I would have lost my credibility if I would have not kept my promise." To this, my friend prompted - friends are meant to understand and we would have understood.

So, today's day in all was full of Oshoism. I think that is what friends are for, giving tiny knacks for fulfilment in life...

DR HANSA JESWANI (PH. D, IIT BOMBAY)
ASSOCIATE PROFESSOR
CIVIL ENGINEERING DEPARTMENT

मेरी कहानी

लखूंगा नई कहानी
दास्तानों से भरी
काल का नाही कोई अफसोस होगा
नाही आने वाले कल की कोई चिंता
आज मैं ही जीना होगा
जकिंगा अपनी शर्तों पर ।

हर रात पुरानी होगी
हर सुबह नयी होगी
आएगी रोज नयी संकल्प लेकर
फरि नयी उमंगों से भरी
फैसला है ए आज मेरा खुदसे
जीत आऊंगा हर उन मुकामों को
हर नयी मुश्किलों को ।

कभी ना छोड़ पाऊंगा अपनों को
जन्होंने देखा था मुझे
अपनी उन उम्मीदों सी भारी नगिाहों से
भूलूंगा नाही उनकी मेहनत को
गर्व करवाऊंगा उन्हें भी अपनी सफलता से ।

इस धरती पर जन्म लिया हूँ
इसका कर्ज चुका के रहूंगा
जभी खुद को देखूंगा
देखूंगा नज़र उठा कर
तभी होगी मेरी मंजलि सफल ।

गुम ना हो जाये ए आवाज़ मेरी
थम ना जाए साँसे मेरी
जो होना है होगा
पर इस बात का कोई अफसोस ना होगा
क्योंकि मेरी कहानी होगी अमर ॥

SIDDHARTH JHA
F.Y. ELECTRICAL

के दिल अभी भरा नहीं..

स्कूल पार करने पर लगता है की पढाई से पीछा छूटा है कहीं ॥
फिर कॉलेज फुदक फुदकर कहता है की ज्ञान पूरा अभी तुम्हे मिला नहीं ॥

यू तो लगता है की हमारे दोस्त है कई...
फिर दोस्ती की परिभाषा चिल्लाकर कहती सच्ची दोस्ती तुमने अभी जीती नहीं ॥

ताजमहल को देखकर लगा की सुंदरता की मिसाल है यही,
फिर चांद तारो ने टिमटिमाकर बोला की सच्ची खुबसूरती तुमने अभी पहचानी नहीं ॥

शीशे में अपना नृत्य देख हरसाई हूँ अभी,
फिर शीशे ने टूटकर कहा की नृत्य करना तुमने अभी सीखा नहीं ॥

मुसीबतों की हवा से में टकराई जभी,
परेशानीयां बोली संकटों की आंधियों से मुलाकात तुम्हारी अभी हुई नहीं ॥

दुनिया की रेस में जब दौड रही हूँ अभी,
तब शुभचतिक बोले की सावधान चलना तुमने अभी सीखा नहीं ॥

आस्मान से मुलाकात हुई जभी ,
तब धरती बोली संभालकर मेरी दोस्त पंख तुम्हे अभी लगे नहीं ॥

कामयाबी कदम चूम रही थी जभी,
तब कामयाब लोग बोले ज्यादा खुश मत होना लाल किले पर झंडा तुमने अभी गाडा नहीं ॥

जब जीना सीख रही हूँ कहीं,
तब जिंदगी बोली समय खत्म हुआ है अभी ॥

मन तो करता है की यमराज जी को टाइम प्लीज कहकर रुक जाने को कहूँ अभी,
क्योंकी ये जीना भी क्या जीना है, जिंदगी से दिल अभी भरा नहीं ॥

ALISHA DHAWDE
F.Y. MECHANICAL

ISHRAE COMMITTEE

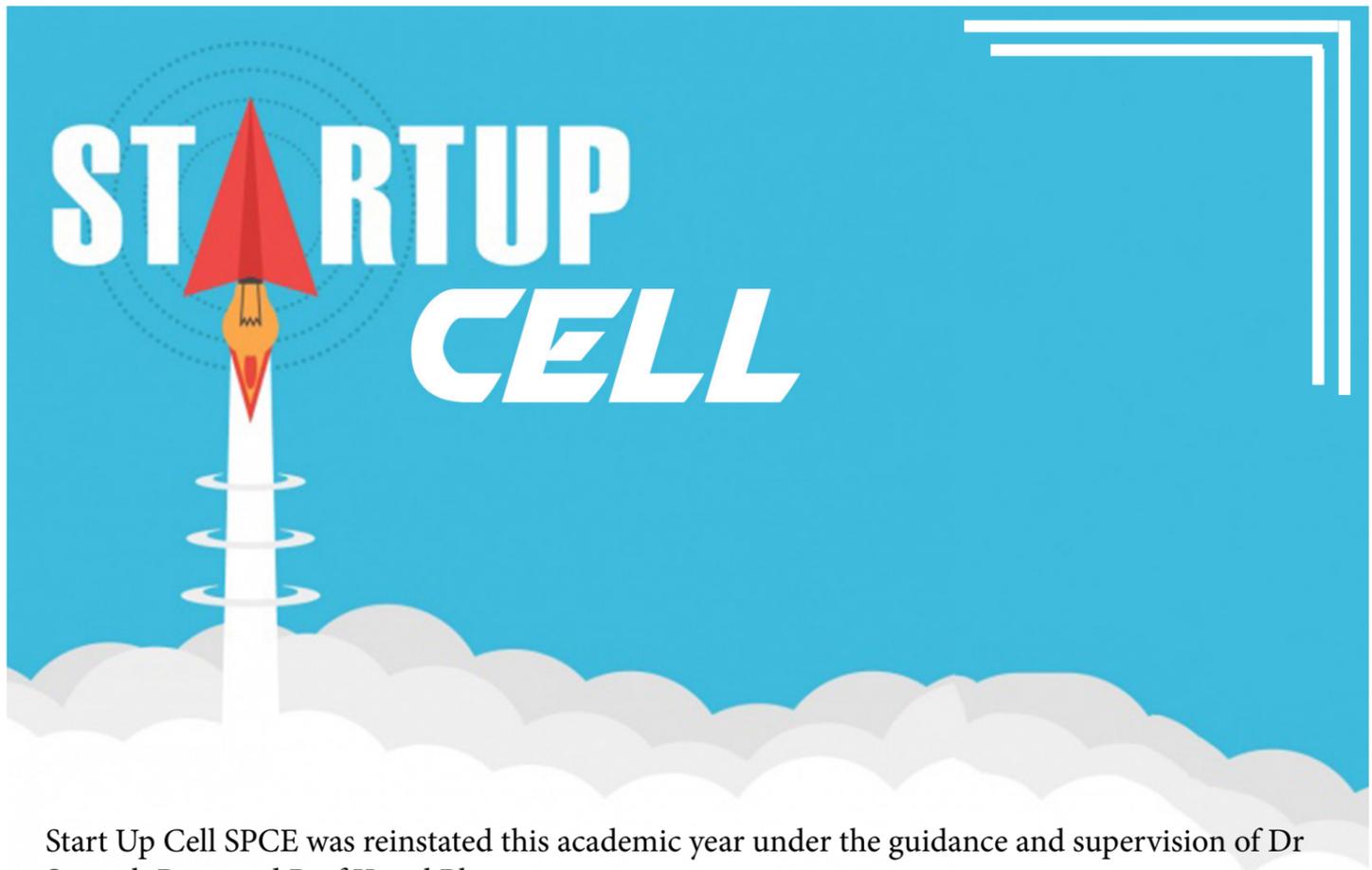
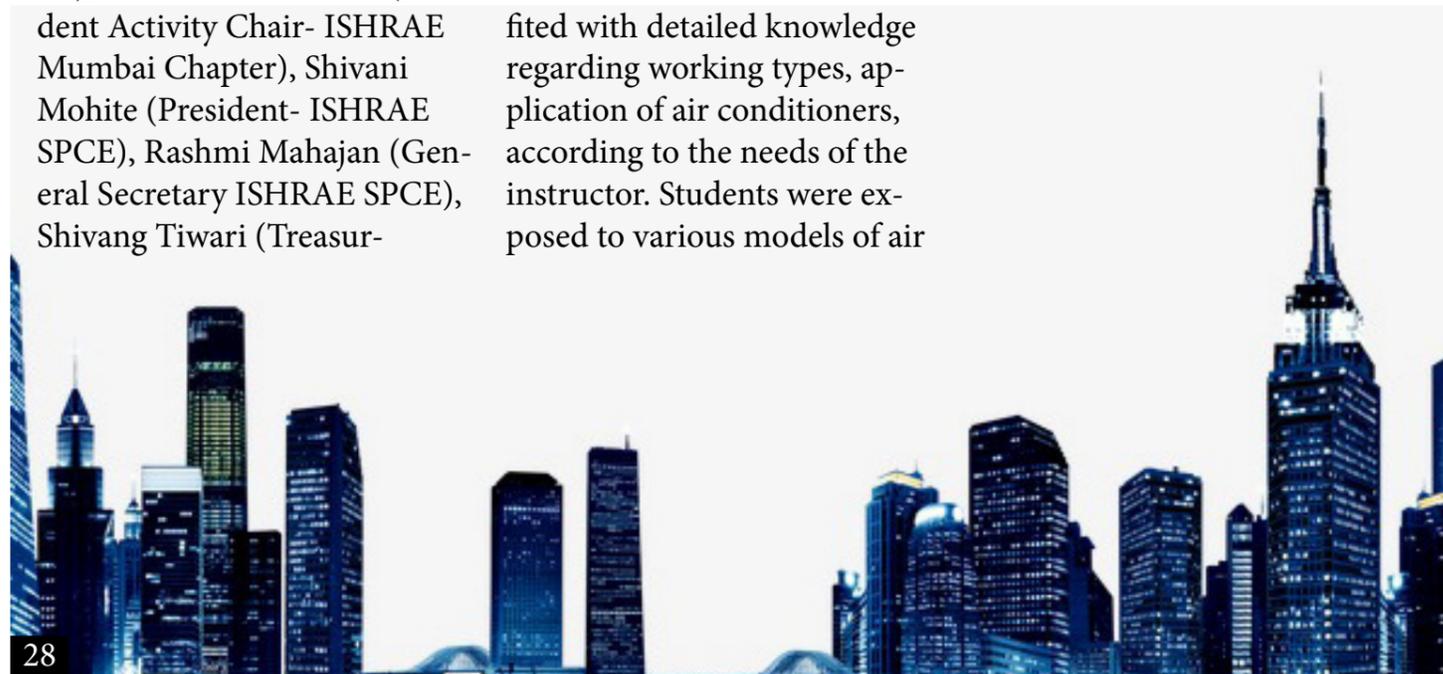


THE UNIVERSE
OF HVAC & R
COMES HERE.

ISHRAE is an authorized Student Chapter of the Indian Society of Heating, Refrigerating and Air Conditioning Engineers sponsored by the ISHRAE Mumbai Chapter. The inaugural function of ISHRAE SPCE was conducted on 23 August 2019. Key dignitaries present at the inaugural were Mr. Mihir Sanghavi (President-ISHRAE Mumbai Chapter), Mr. R N Joshi (President Elect-ISHRAE Mumbai Chapter), Prof. Kunal Bhavsar (Student Activity Chair- ISHRAE Mumbai Chapter), Shivani Mohite (President- ISHRAE SPCE), Rashmi Mahajan (General Secretary ISHRAE SPCE), Shivang Tiwari (Treasur-

er-ISHRAE SPCE) and students from 42 different colleges all across Mumbai. A QUEST Preliminary Round Mumbai Chapter Level was conducted on 1st November 2019. Students from the western zone were present for the competition. In all, participants from 16 teams were present. An Industrial Visit to MIT-SUBISHI ELECTRIC AIR CONDITIONERS- Mumbai, was conducted on the 15th October 2019. Students benefited with detailed knowledge regarding working types, application of air conditioners, according to the needs of the instructor. Students were exposed to various models of air

conditioners. Miss Rashmi Mahajan and Miss Anjali Verma from Third Year B.Tech Mechanical Engineering Department were winners of Technical Paper Presentation at Jamboree 7th 'Annual Student Fest of ISHRAE Mumbai Chapter' held on 25th January 2020.



Start Up Cell SPCE was reinstated this academic year under the guidance and supervision of Dr Santosh Rane and Prof Kunal Bhavsar.

Start Up Cell aims at promoting ideas and innovation amongst the students of SPCE. The Cell aims to help students build leadership, creativity and interpersonal skills as well as improve their understanding of technology. This is so that they can create their own unique products or services by implementing technology. They can thus be empowered with the understanding of businesses, marketing and planning, so they develop an entrepreneurial spirit.

Start Up Cell also organized a Business Planning cum Sales Pitching Event called 'Insane Pitchers.' Respecting the lockdown announced by the government due to COVID-19, initial rounds of the competition were online which tested the business acumen as well as persuasive ability of the budding entrepreneurs of the college.

Start Up Cell currently constitutes of 45 members with a dedicated core of 10.

Creative Head	Public Relations	Technical Head	Non -Tech Head	Marketing Head	Event Head
Anand Khurd Siddharth Jha	Manav Kaul Sarvesh Andhale	Siddharth Mahajan	Akshit Sanghvi	Gayatri Patil Mayur Nare	Aniket Rane Prasad Chettiar



SPECTRA 2020 WORLD UNITES HERE

As per the culture of Sardar Patel College of Engineering, the Student Council organises the Annual Technical Festival -SPECTRA, for aspiring technocrats to participate in various competitions in a highly competitive atmosphere and showcase their talents.

It is organised annually with the objective of providing a platform for students to bridge their academic knowledge with practical applications. This year, the event was successful enough to attract a large audience to participate as well as to enjoy the events and other fun activities.

Students from various colleges across Maharashtra actively participated in all the events and presented their work. The fest included 15 technical events sub-categorised into Mechanical Engineering, Electrical Engineering and Civil Engineering Departments. The types of events to be included in the fest were decided by the Technical Secretaries and the Head of Events. They kept the interests and the needs of engineering students into consideration, with emphasis on fun events to attract crowds and to not miss out on the element of fun.

The fest commenced with inaugural speeches from our Principal Dr.P.H.Sawant, and our chief guest, Mr. Ashok Kularia, alumni of 2004 batch and director of ANJ group, with the presence of faculty members. It was followed by a ribbon cutting ceremony at the college entrance. 'Contraption', our inaugural event marked it's return this year, and was initiated by the chief guest. Thus, began the much awaited Annual Technical Fest - SPECTRA 2020.

School students from across Mumbai were invited to exhibit their projects and participate in this newly introduced competition, SPECTRA's Science Spectacle. Fun games, stalls were all arranged at the entrance which kept the general audience occupied. The school students also enjoyed participating in various events. Technical Paper Presentation was conducted at the national level this time, receiving excellent response, with fresh ideas brought in by the participants. Prior to the event, the papers were scrutinized. Thus, the best papers were shortlisted and presented before the judges. On the second day, an 'Auto Expo' was arranged by Team Falcon. The collection of rare bikes invoked jaw dropping reactions from the crowd and everyone was rushing to pose with them.

Just when everyone thought that SPECTRA was over, there was a surprise for all! The fest concluded with the band 'Western Ghats' performing in the SPCE Quad-angle, mesmerizing everyone. That was followed by another surprise, DJ Dastan who made the audience dance sway to beats. Everyone enjoyed their performance and left home with a little more knowledge and a lot of happy memories.

The Student Council, the student core committee members and organisers, were truly influential in making SPECTRA 2020 a gigantic success. Thus setting a higher bar for the upcoming editions. Team SPECTRA 2020 heartily thanks our Principal, Dean Academics Dr. Rane, Chairperson Student Welfare Committee Dr. Shyamlee Solanki, and all the faculty members for their valuable support, precious time and wise guidance throughout SPECTRA 2020.

RENAISSANCE – TO RISE FROM THE ASHES

"Which came first, the Phoenix or the flame?" "...I think the answer is that a circle has no beginning." "Well reasoned." – J. K. Rowling

Everyone loves a good comeback story; one where the protagonist meets challenges and still wins. They get knocked down yes, but still emerge up, with an ameliorated performance. What draws us to these? The reassuring feeling that they impart; one where we in course of the story, step into the shoes of the lead character and overcome whatever comes our way. But what about the stories around us, the real-world examples in history, society and perhaps our own lives? The feeling of knowing you've levelled up and grown, or your close ones complimenting you about the same. This, my friends, is one of the best feelings you'll ever experience. After all, our lives aren't shaped by what we couldn't do, but what we did by overcoming what we couldn't.

Within the centrefold of this magazine lie examples from history, individuals and groups of people, that rose from the ashes. Who stood up, from the darkest pits of their lives, and achieved glory. With grit, persistence, guts, courage and toil, they turned the tables

in their favour, so much so that there was no further doubt. We hope that in the days of despair, when all hope seems lost and we find it onerous to move ahead, these pages serve as a fuel of inspiration. Remember, these events have left an impression on the pages of history not for instantaneous and elementary success, but because it's hard earned after obstacles. So that in the stories of you own life, you can power yourself to turn predicaments into triumphs. And that you too, like a phoenix, spread your wings and rise from the ashes.

P.S.: - Dear reader, this is to remind you that this magazine was conceptualised, composed, edited and designed during the Covid-19 pandemic lockdown. In the years that have gone, this is the first pandemic, that threw all of us apart but together. With the internet of course. We sincerely hope that you and your family were minimally affected, and that you look back at this life altering period recollecting the many lessons it has to offer. And like a phoenix, we're able to rise back, ushering in a renaissance of human connectivity.

ARUNIMA SINHA

“Though I have leaped over the seas, well, the entire sky is still remaining to fly”

Indian volleyball player who suffered a train accident in 2011, losing a leg. She became the world's first female amputee to scale Mount Everest, Mount Kilimanjaro and many others.



LEGO

“only the best is good enough”

From 1932 to 1998, Danish toy maker Lego never posted losses, but was \$800 million in debt in 2003. One of the best corporate comebacks ever, they adapted with changing times, and as of 2019, their yearly sales were at \$5.7 billion.



DUTEE CHAND

“Pull me down, I will come back stronger.”

An Indian athlete from a family of weavers, she was a national and Asia level champion, but dropped from the Indian contingent due to hyperandrogenism in 2014. She persisted and made a return to win medals at Asian Games and 2019 Summer Unniversaide.



YUVRAJ SINGH

1995. 2000. 2002. 2007. 2011. 2017.
6. 6. 6. 6. 6. 6.

Indian cricketer who had overcome recent poor form to win ‘Man of the Tournament’ at ICC CWC 2011. Later that year, he survived lung cancer to make a career comeback and set more records.



SANDEEP SINGH

“When I had an accident in 2006, no one believed that I will return to the ground, but I did.”

A top scorer in international matches for the Indian national hockey team, he was accidentally injured by a gun-shot in 2006, leaving him wheelchair bound. But he made a comeback to win the Sultan Azlan Shah Cup in 2009 and compete at the 2012 Olympics as captain.



ROBERT DOWNEY JR.

“Remember that just because you hit bottom doesn't mean you have to stay there”

An American actor who was a rising star in the 1980s, fell into substance abuse. He overcame it to make a comeback in Hollywood as Marvel's Ironman.



JAPAN

“ Fall seven times, stand up eight” - a Japanese proverb

As a country, Japan has suffered everything from nuclear tragedies to natural disasters. Still they stand-up again as a technology leader, ethical role model and pop-culture capital.



SHIRIN EBADI

“It's not just about hope and ideas. It's about action.”

One of the first female judges in Iran, she was forced to become a clerk after the Iranian Revolution (1979). She retired, obtained a private practice license, took up human rights activism and became the first Muslim woman and first Iranian to win a Nobel Prize (Peace 2003).



MALALA YOUSAFSAI

“With guns you can kill terrorists, with education you can kill terrorism”

A young Pakistani education activist, she was shot by a Taliban gunman at the age of 15. She survived this attack, became the youngest Nobel Prize laureate (Peace 2014) and is still fighting for the rights of young girls.



GEORGE RR MARTIN

“Once you've accepted your flaws, no one can use them against you.”

In 1983, the American author had written 3 hit novels and won 3 Hugo awards. His 4th novel flopped, subsequently tanking the 5th and throwing him into financial losses. But he didn't give up and published ‘A Game of Thrones’ in 1996.



In the last few decades, humans seem to have made more progress compared to even the last few centuries. We looked like we either had a solution for everything, or were working on one. But one pandemic changed it all. Will we bounce back?

NELSON MANDELA

“A winner is a dreamer who never gives up.”

A South African activist and lawyer, he spent 27 years in jail for leading resistance movements against apartheid. He spent his time educating the other prisoners about politics, and after release in 1990, he became the first black President of free South Africa. He also won a Nobel Prize for Peace in 1993.



What If...?

Success is perhaps the most desired feeling that all of us want to experience in the pursuit of achieving our goals and also in our day to day lives. A very powerful word, many of us run behind it wanting to conquer it. But what if we don't achieve success? Very few people think about that.. Everyone dreams highly about their passions and goals, we try our best to achieve them. Yet sometimes ultimately, we fail. We end up with a lot of stress and depression.

Today's world is too volatile in terms of knowledge and competition. The level of competitive exams is getting tougher day by day. In order to compete and succeed in this challenging world, we should have enough courage and perseverance along with hard work. Most students have these qualities and they successfully prepare their strategy. But very few of them think about plan B, the plan after failure.

This backup plan has certain characteristics:

Accept your failure: Men mark when they hit and never mark when they miss. But failure is also an experience. Hence, we should accept our failures in a positive way and then we can accept defeat like a brave person.

Believe yourself: You think that you can't do that thing because of fear of failing again. Former President of the United States of America, Abraham Lincoln, failed in business, politics and personal life. He lost everything, but in the end he became the President because he believed in himself and in his hard work. Aspire to learn from his personality. Nothing is impossible for you if you first believe that you can definitely do it.

Appreciate your hard work: People consider themselves a loser after failure, but they should remember that the definition of a winner relates to hard work more than ranks.

Figure out why you failed: Many people don't think about their mistakes that occurred during failure. They again start from zero and possibly worsen it by making those same mistakes again. It's very important to understand your mistakes and the ways by which you can improve them.

Plan your new approach: Any successful business is preceded by a well-organized management plan. You should have a complete idea about difficulties and solutions that you are going to face on this path.

Time management: Time is the crucial factor in any process. One has to remember that time doesn't stop for anyone. It's a challenge for us to win over it. One can achieve this by well-organized time management.

Track it: It's quite tough to know how good you're doing unless you have benchmarks to know if you're progressing. These are nothing but your expected results for every task.

Be honest and develop your personality: No matter how high you are aiming, you should always be honest and have a down-to-earth personality, because the world always appreciates your humility.

It's not true that successful people are cleverer than you. It's not true that we suffer from failure because of lack of knowledge or personal disability. We should have a perfect plan and self-confidence to achieve it. Success in life calls for constant efforts.

"Success is walking from failure to failure with no loss of enthusiasm."

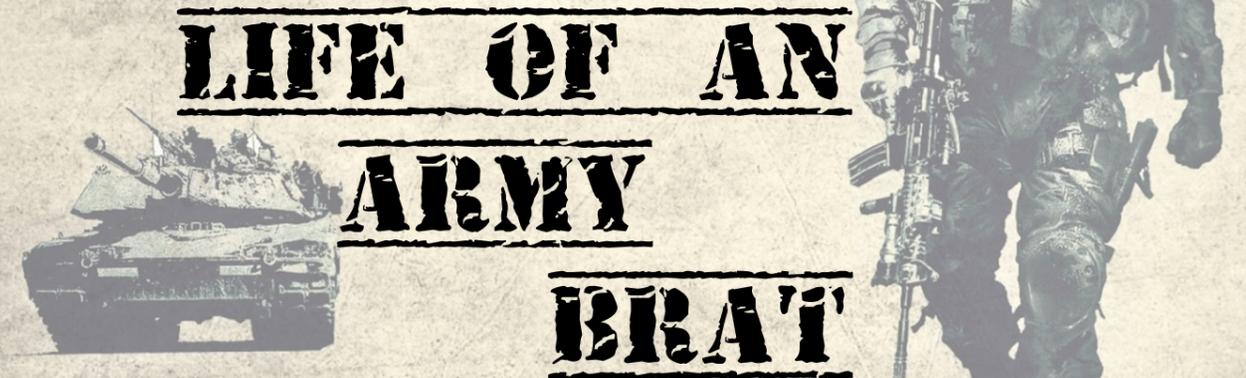
-Winston Churchill

CHINMAY DABHOLKAR
S.Y. MECHANICAL

I am an army brat and BRAT stands for Born, Raised And Transformed! My father has been in the army since before I was born. He has worn all kinds of camouflages and uniforms, but as soon as I go out and tell this to anyone the first question they ask is, "Does your father have a gun?" or "Has he killed anyone?". It's hard to explain that life in an army is beyond that.

We army brats have donned many, many hats. Changing schools, stations every two years, switching languages according to our peers. We wouldn't go to school in a bus or a van...No! Shaktiman - That's what they call the big army truck! "Aree yaar, army me to tumhein sab free mein milta hai" - Never ever say that to me because there are no free lunches! I would be the coolest kid in the school when my dad would come to pick me up in his olive green uniform with my classmates standing around in a swarm, looking like they have been hit by a storm! An army brat's life is one of a kind. We have lived in so many different locations, places where people would be scared to go even on a vacation. But I am not complaining, it's so much fun! Army parties with retro songs, great food and Dhai ton.

Which by the way is more famous than the "Dhai kilo ka haath"! For me, canteen means CSD, furniture means MES and home is always the army cantonment. My international experiences have always been very different. Dad would take us to the border and teach us the order. That side is theirs and this is ours! As a kid I was shocked that the camels walked in the same way in both India and



Pakistan But it hasn't been all rosy and honestly I must admit - missing my birthdays and annual days were crimes my dad would often commit.

And those times when your heart just refuses to tally, your father is posted in the most insurgent valley!

The news flashes - 'An army officer killed in an encounter.' 'Defense personnel reduced to ashes.' You can't help but think about the worst that could have happened. There is a sudden sense of peace later on, when you thank god that it was not your father. And yet it feels so bad for the martyrs, their kids and families.

The army is of a completely different race. High altitudes, encounters, separation. Why take all that tension? They retire and fight for one rank, one pension! But if not for these selfless men guarding our borders, we would all probably be listening to another country's orders!

I want to take a moment and salute you dad, you and your army brigade. The people we remember only during a war or a parade. You are out there putting your life at stake for our sake. We sleep peacefully because you are awake!

PRANITA MAHAJAN
F.Y. ELECTRICAL

आज तुम्ही हवे होता

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
मोकाट सुटलेल्या बलात्कारी नराधमांचे शीर छाटण्यासाठी आज तुम्ही हवे होता ।
स्त्रीकडे वाकड्या नजरेने बघणाऱ्यांचे डोळे काढण्यासाठी आज तुम्ही हवे होता ॥

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
जगाचा पोशिंदा असणाऱ्या शेतकऱ्यांच्या आत्महत्या थांबवण्यासाठी तुम्ही हवे होता ।
तुमच्या नावाने राजकारण करणाऱ्यांना स्वराज्य काय होते हे सांगण्यासाठी तुम्ही हवे होता ।
भ्रष्टाचार करून गोरगरिबांना लुटणाऱ्यांना धडा शिकवण्यासाठी आज तुम्ही हवे होता ॥

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
पाक, चीन सारख्या परकीयांवर जबर बसवण्यासाठी आज तुम्ही हवे होता ।
तुमच्याच स्वराज्यात येऊन हिंसा पसरवणाऱ्या दहशतवाद्यांना गनिमीकाव्याचा हिंसका
दाखवण्यासाठी आज तुम्ही हवे होता ॥

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
व्यसनाधीन, भरकटलेल्या तरुणाईला मार्ग दाखवण्यासाठी आज तुम्ही हवे होता ।
पाश्चिमात्य संस्कृतीकडे ओढ असणाऱ्या पिढीला महाराष्ट्रीयन संस्कृतीचे महत्व पटवून
देण्यासाठी आज तुम्ही हवे होता ॥

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
आई-वडिलांना सोडून देणाऱ्या मुलांना तुमच्या आयुष्यातील जिजाऊंचे आणि
शहाजीराजांचे महत्व सांगण्यासाठी आज तुम्ही हवे होता ॥
तुम्हीच बांधलेल्या गडकोटांवर दारू पिऊन धिंगाणा घालणाऱ्यांना, स्वराज्य स्थापनेतील
गड-किल्ल्यांचे महत्त्व सांगण्यासाठी आज तुम्ही हवे होता ॥

हवे होता महाराज, खरंच आज तुम्ही हवे होता ।
संपूर्ण विश्वावरती स्वराज्याचा भगवा फडकवून भारताला महासत्ता बनवण्यासाठी आज
तुम्ही हवे होता ॥

~ ओंकार विजयकुमार चोपडे

आयुष्य आणि अस्तित्व....!

शाळेत असताना आयुष्याची फार सुंदर व्याख्या कानावर पडली. अर्थातच ती आमच्या सरांनी सांगितली असल्यामुळे पटली सुद्धा. “आयुष्य म्हणजे जीवन आणि मृत्यू यांमधला संघर्ष”. जन्म झाला म्हणजे आयुष्य सुरु झाले किंबहुना आईच्या गर्भातच आयुष्य सुरु झालेलं असत आणि नकळतच आपली आपल्या अस्तित्वाशी लढाई सुरु होते. विचार केला तर लक्षात येत की आपण लहान असताना आपले अस्तित्व तर फक्त आपल्या कुटुंबातील सदस्यांपुरतं मर्यादित असत किंवा फक्त आपल्या आई-वडिलांपुरतं. जसं आपण मोठे व्हायला लागतो तसा आपला समाजाशी संपर्क वाढतो. पुढे हाच समाज आपले अस्तित्व ठरवणार असतो. आपला आपल्या अस्तित्वाशी खरा संघर्ष तेव्हाच सुरु होतो.

आयुष्य जगत असताना आपले अस्तित्व फार महत्वाचे ठरते. कारण प्रत्येक व्यक्ती ही समाजात आपली ओळख व अस्तित्व निर्माण करण्यासाठीच जगत असते. पण आपण बांधील असतो आपल्या समाजव्यवस्थेला. आपल्या आयुष्यात आपण कोणती गोष्ट करावी आणि कोणती टाळावी हे आपण आपल्या अस्तित्वावरून किंवा ओळखीवरून ठरवतो. स्पष्ट शब्दात सांगायचं झाल्यास आपल्या मनात नेहमी फक्त एक विचार असतो की आपण केलेल्या कृत्याचा समाजावर कसा परिणाम होईल किंवा लोक काय म्हणतील. यावरूनच आपण आपली जीवनशैली ठरवतो. काही लोक या विरोधात वागतात व आपला संघर्ष यशस्वीपणे संपवतात. समाजाशी बांधील राहून यशस्वी झालेली माणसं फार कमी बघायला मिळतात.

जेव्हा आपण एखाद मोठं ध्येय गाठलेल नसत तेव्हा आपले अस्तित्व फार कमी लोकांपुरतं मर्यादित असत आणि आपल्या अपयशाचे कारणही हीच मंडळी असतात कारण आपण नेहमी त्या क्षुल्लक टोळीचा विचार करत असतो. आपण संपूर्ण समाजात आपले अस्तित्व निर्माण करण्याचा प्रयत्न कधी केलेलाच नसतो. काही लोक प्रयत्न करतात आणि अपयशी होऊन मार्ग बदलतात किंवा घरी परतात. परंतु आयुष्याचा शेवटचा श्वास घेत असताना त्यांच्या मनात विचार येतो की एक प्रयत्न अजून केला असता तर जीवन काही वेगळं असलं असत. आपली समाजातील ओळख, आपले अस्तित्व काही वेगळं असलं असत.

विधानसभा उपाध्यक्षपदी निवड झाल्यानंतर मा. नरहरी झिरवाळ यांनी भाषणात फार हृदयस्पर्शी विचार मांडला. ते सांगतात..

यश हे अंतिम नसत. अपयश हे घातक नसत.

या दोन्हीची मजा लुटायला धैर्य लागतं...

म्हणून आयुष्यात ठरवलेलं ध्येय गाठण्यासाठी आणि वेगळं अस्तित्व निर्माण करण्यासाठी धैर्य आणि संयम फार महत्वाचा आहे. जीवन आणि मृत्यू यांमधला संघर्ष म्हणजे आपला आपल्या अस्तित्वाशी असलेला संघर्ष आहे.

काही लोकांचं आयुष्य फक्त सोशल मीडिया वरती पोस्ट आणि स्टोरी टाकण्यापर्यंतच मर्यादित आहे आणि म्हणूनच त्यांचं अस्तित्व हे फक्त त्यांची पोस्ट आणि स्टोरी बघणाऱ्यांचा पलीकडे नाही. जेव्हा आपले अस्तित्व हे समाजातील प्रत्येक व्यक्ती साठी महत्वाचं असेल आणि आपल्या असण्या-नसण्याचा त्यांना फरक पडेल तेव्हा हा संघर्ष आपण जिंकलो असे समजण्यात काही हरकत नाही

म्हणून शेवट पर्यंत प्रयत्न करणे फार महत्वाचे आहे. शेवटी डार्विनचा नैसर्गिक निवडीचा सिद्धांत सांगूनच गेला आहे की जो टिकतो तोच जिंकतो.. !

त्यामुळे जिंकायला शिकण्याआधी लढायला आणि स्पर्धेत टीकायला शिकणे आवश्यक आहे.

प्रणव दिनकरराव जोशी
प्रथम वर्ष अभियांत्रिकी सिव्हिल



SPIRIT 2020 REFUSE TO LOSE

Gold medals really aren't made of gold, they are made of sweat, determination and a hard to find alloy, guts!

Presenting here the most exciting fest of Sardar Patel College of Engineering, Mumbai- SPIRIT 2020! From organisers and volunteers to the participants and cheerleaders, the fest had the best people all along leading it to great heights! Being the 2nd annual sports fest of SPCE, the sports secretaries ensured much progress compared to last year and reached a wider audience.

With more than 100 participants from all over Maharashtra in the 9 sports held in SPIRIT 2020, the fest saw great enthusiasm and sportsmanship. The vigour with which the sports were conducted and played was quite inspiring!

Marking the opening of the fest on 13th February 2020 and declaring it closed on 29th February 2020 was a long journey. Outdoor sports like season cricket, tennis cricket, volleyball, throwball, kho-kho, football, athletics and kabaddi managed to gather huge crowds not only as participants but also as audience. Our indoor sports, carrom and chess also attracted a huge number of participants, much higher than that achieved last year!

Overall, it was a memorable and thrilling experience which was made possible by the tireless efforts of the entire SPIRIT 2020 student organizing committee, volunteers, the Student Council and the motivation of our faculty members and respected Principal sir. We hope that SPCE's sports fest SPIRIT reaches even greater heights in the years to come!

ALUMNI



Mr. Bhavya Shah is an MBA in Operations and Supply Chain Management with minors in Analytics from S. P. Jain Institute of Management and Research and an alumnus of Eli Broad College of Business, Michigan State University. He is incoming for the supply chain role at Landmark Group in GCC. Bhavya holds the Kulapati's Gold Medalist for Civil Engineering from Sardar Patel College of Engineering. His key interests lie in the supply chain specialization and analytics domain. Diligence and conscientiousness are the two ideas that he highly resonates with.

1. What are you currently pursuing? Where are you located?

I just completed my MBA in Operations and Supply Chain Management from SPJIMR and I am currently in Mumbai. I will be joining Landmark Group in Dubai for the supply chain role.

2. What inspired you to apply for an MBA after completing your graduation? How was it different from mainstream engineering?

Well, I realised in my final year of B.Tech that I want to pursue management as a career and not restrict myself to technical work. I chose to take some work experience before going for an MBA (although I believe to strike the ground at the earliest). My work experience at Shapoorji-Pallonji was more of project management which made me curious about the management side of work. Although construction management was always an option to explore, I wanted to be domain agnostic and hence went on to do an MBA. And, this was completely a personal choice. I have my batchmates pursuing construction

management and are doing exceptionally well in their field. Reason for choosing 'Operations and Supply Chain' was to leverage on my learnings and also supply chain being a booming domain in the 21st century. Unlike mainstream engineering based majorly on textbook concepts and binary approach to a problem, an MBA course has more case study discussions for which there is no single solution and this is what makes it all the more challenging as well as interesting.

3. In what sense has your background in civil engineering helped you in business school? How did your work experience in this field shape you?

While there were no direct applications of civil engineering, there were softer aspects that I gained during my engineering. Engineering surely developed an analytical bent of mind and has helped me enhance my quantitative skills that are a must-have when we talk about data being the new oil. I was glad that my work experience was more into the project management domain where I interacted with clients as well as the planning team. This gave me a macro-level understanding of the requirements of business and the effective utilisation of manpower, material, and money. This knowledge fostered and I was able to connect the dots during my MBA classes when I was able to relate the classroom learning with my work experience. Overall, I was able to fit in my concepts and try to simulate the various processes in my workplace.

INTERVIEW

4. How has your experience studying at SPJIMR, a premier business school, been? Tell us about the academic environment, peers, internships, placements, extra-curricular activities, or any other noteworthy events.

I would like to define my experience at SPJIMR to be the best two years of my life. It has had endless challenges. An important role was played by the culture that nurtures anyone and everyone who is engaged with the SPJIMR family. Although an MBA life is supposed to keep one on their toes, the constant companionship of the peer group helps one. Right from late-night academic submissions to corporate competitions, all the activities are planned usually with a group of people and that is where we ensured that the ideas are shared and the peer-to-peer learning happens. Well, internships are one of the most critical elements of a B-school and when everyone is fully geared up for the most anticipated autumn internship placements, we at SPJIMR never saw things go below the belt in terms of competition. The entire batch stood together until the last student was placed, ensuring that everyone is in good shape during the tough times of converts and rejections. The entire journey is such that it surely prepares one for life and the batch of 239 is the best asset we've got by our side.

5. Any advice for budding civil engineers? Could you give us some insight as to how students can be better equipped to transition to professionals?

For all my fellow juniors out there aspiring to go well in their professional front, one key advice I would like to give is that never restrict yourself to the resources available to you on your plate. Rather, keep on exploring new things being developed daily across the globe. We often tend to ignore the developments not linked to our domain, but one would never know how a recent breakthrough is going to impact him/her. It is also very important to do things right in whatever endeavours they take up. That is what defines a professional, someone who is specialized in their skill and knowledge. Although there will be a transition from student to working professional, the learning curve of an individual is expected to remain steep given the pace of transformation of everything around us. So, it is always good to be versatile and learn new things.

6. Please share with us some fond memories of your student life in SPCE. How did these years shape you?

The time I spent at SPCE holds a very special place in my memories. I am glad that I could serve a few positions of responsibility like being the class representative for all 4 years as well as being a student representative for Bentley Systems. While serving for these PORs, I had enriching interactions with our esteemed faculty, as well as my fellow batchmates and seniors. Apart from this, rigorous academics instilled a sense of persistence and developed my ability to be consistent in my endeavours. I was really lucky that I had a wonderful peer group around me that ensured a constant process of learning and buttressed a sense of companionship. One of my major learnings came with my B.Tech project where I along with my fellow teammates went on to do a project under the guidance of our alumni at LERA. My key takeaway from this engagement was understanding the timeline of the deliverables and ensuring that we are prepped enough to the deliverables committed. This surely helped me with client engagements at the workplace and MBA internship, getting better thereafter.

7. As a youngster studying at one of the best management institutes in this country, could you share some preparation insights with students aspiring to pursue an MBA.

I think one very important aspect of doing an MBA from a B-school is about building a profile that can help one sail through the various challenges right from applying to a B-school to getting through and applying for various managerial positions in companies. It becomes essential to do well in whatever is given. Other than that, it is also very important to gear up the preparation for acing the entrance exam alongside and not take any break just for preparing for these entrance tests. I would suggest that one must enjoy the preparatory phase as it brings with it a lot of takeaways. Having said that, it is always good to have clarity on the reason to pursue an MBA. Given the competitive environment, such clarity will help himself or herself put across clearly during interviews where there's very little time with the panel to know the candidate.

INTERVIEWED BY VEDANT SINGH



SPACE 2020 UNLEASH YOUR COLOURS

According to the tradition of Sardar Patel College of Engineering, every academic year, the Student Council organises the Annual Cultural Festival - SPACE. It hosts aspiring artists in various fields to participate in a highly competitive atmosphere and showcase their talents. This year's edition of SPACE took place from 28th February to 1st March 2020, widely attended by crowds from across Maharashtra. There were 13 events, sub-categorized into Performing Arts, Literary Arts and Informal Events. The events were decided by the Cultural Secretaries and the Head of Events, considering the needs and interests of young engineers, with a balance of fun

SPACE 2020 started with inaugural speeches from our Principal, our faculty members and our chief guest, Chef Gautum Mehrishi, one of India's most reputed chefs, known for globalising Indian cuisine. A ribbon cutting ceremony took place at the entrance. The first event of SPACE 2020 was 'Nukkad' - a street play event highlighting hidden issues of our society. Then there was, 'Swaranjali', a singing contest uniting melodious singing talents, was judged by Trishita Maitra, from 'Pehchan Music'. Next was another vocal event called 'Beatboxing', judged by D-Cypher and BeatRAW - two premier beatboxers of India, a battle of vocal strength and beats. The English debate and Marathi debate, seeing immense participation, with diplomatic speakers presenting their intellectual opinions and arguments on diverse topics.

Day two started with 'Rhyme and Reason' - an open mic event for writers to recite their amazing poetry, shayaris and stories. The judge Krishna Iyer, is a TEDx speaker and founder of 'Pencified Events'. Next up was a beauty pageant styled contest 'Mr. and Miss SPACE', for participants from various colleges. It was judged by Marathi actress Amrita Deshmukh. Then our fest's fabulous event, 'Vogue Fashion Show' for fashionistas with vibrant outfits and themes. The judges were Riya Kishanchandani, a fashion model, dancer and actor, and Mayur Saroj Rajput, a Myntra Fashion Superstar showcased at the New York Fashion Week 2018.

The third day began with 'Vyakhyanmala', our guest lecture series, organised celebrating Women's Day. Mrs. Chitralkha Patil, our speaker, is the President of Raigad District Women Cell (PWP), a corporator in the Alibag Municipality, the secretary of the PNP Education Society, the President of RDCC Bank Women Self Help Group and the managing director of 'Nagesh Publishers Pvt. Ltd.'. Simultaneously we hosted 'Spell Bee', a spelling competition, for school students. 'Life Experiences' as the name suggests was a platform to share interesting experiences from one's life. 'Comedy Hunt' where participants delivered amateur standup comedy performances. The big dance event 'Step Up' received wide participation. Loved by SPCEians - DJ night, was an energetic conclusion of SPACE 2020. Some celebrity performances we hosted this year included Shambhoo Rapper - a well known Marathi rapper, Praveen Pandita - an illusionist, mentalist and escape artist and Gaurav Gambhir aka D-Cypher - an exceptionally skilled beat-boxer. We were honoured to support NGOs through SPACE, by providing them a platform to promote their cause. 'Rangoonwala Foundation' set up a stall to spread awareness about chronic kidney disorder. We also partnered with Godrej Mangrove Conservation Trust.

The Student Council, all the core committee members and organizers were significant in making SPACE 2020 a success, laying an excellent platform for the upcoming editions. We are thankful to our Principal, Dean Academics Dr. Rane, Chairperson of Student Welfare Committee Dr. Shyamalee Solanki, and all faculty members for their constant support.

جو راہ چلنا ہے خود ہی چن لو

جو راہ چلنا ہے خود ہی چن لو یہاں کوئی راہبر نہیں ہے
یہی حقیقت ہے بات مانو تمہیں ابھی کچھ خبر نہیں ہے

کسی کو سادہ دلی کا بدلہ ملا ہی کب ہے جو اب ملے گا
وفا بھی دنیا میں ایک شے ہے مگر وہ اب معتبر نہیں ہے
جو چاہتے ہیں جہن کو بائیں وہ کیسے بائیں گے فصل گلشن
بہے گا غنچوں کا خون کتنا انہیں تو اس کا بھی ڈر نہیں ہے

جو پشت پہ وار کر رہے ہیں کہو کہ اب سامنے سے آئیں
جسے وہ غافل سمجھ رہے ہیں وہ اس قدر بے خبر نہیں ہے

نہ کامیابی ملے گی تم کو ہمیں مٹانے کی کوششوں میں
جھکے گا جو ظالموں کے آگے وہ حق پرستوں کا سر نہیں ہے

جو بانٹتے ہیں متاع ہستی انہیں یہ رافد ذرا بتا دو
جو میں نے مانگا ہے حق ہے میرا مجھے یہ کہنے میں ڈر نہیں ہے

رافد -



دن گزرتے گئے زخم عبرتے گئے
کہا وہ پرندہ کہا وہ غمغسار
ہاتھوں میں یہ زنجیرے
پاؤں میں یہ بھیڑیا
کہا وہ شہباز، کہا وہ قلندر
گرچہ وہ زہرا مشتاق بہار ہے
تو بے شاہیں تلاش چمن می
تو شاہین ہے گزر جا
اونچے ٹیلوں سے، بہرور سے
یہ ریاستے، یہ سریدے
نہیں بنی تیرے لئے
تو آزاد ہے آزاد تیری سونچ
قیام تیری فطرت نہیں
لرزنا تیری صحبت نہیں
تو عقاب ہے ڈونڈ جا
منزل اپنی آسمانوں میں

جہاں کی سازش

جہاں کی سازش میں، ہم بدنام ہو گئے
قصور کسی اور کا، سوار تم بے ہو گئے
اس سنسان گلی سے، جسے تم گزرے
اس رات کے نشے میں، وہ حاضر ہو گئے
وہ آنسو کی بوندین، وہ لبو سے بہتا خون
وہ پکارتیں چیخیں، وہ ان جانوروں کا جنون
کچھ لمحوں کے بعد، کیا ہو کیا پتا
تو ان کو پوچھتا ہے، جن لوگوں کو کچھ نہیں پتا

رُحَاب -



CEA COMMITTEE 2019-20

Civil Engineering Students' Association (CEA)

Civil Engineering Association (CEA) is a committee consisting of Third Year students, supported by a Coordinator Team from the Second Year students and Faculty Members of the Civil Engineering Department. We work with a vision for the welfare of students. The committee works hard to fulfill the co-curricular requirements of students throughout their academics with the help of CEA committee advisor and Ex-officio Prof. S. J. KUMBHAR and under the guidance of Dr. M. M. MURUDI, Head of Department.

It involves organizing various activities which enhance the knowledge of students. It also helps in improving the technical, communication, management and soft skills, apart from the curriculum and academics of the college. It also supported the Student's Welfare Council and the Core-SPECTRA team with Annual Technical Fest SPECTRA-2020. Many events based on knowledge of stream of Civil Engineering were organized, with participants from Maharashtra and several other states.

The various activities and events organized by CEA for the year 2019-2020 are as follows:

1. AAGAZ - Introduction session for the first year and direct second year students.
2. NISARGVEDH - Trekking to KARNALA FORT.
3. TREASURE HUNT- Fun activity, organized by 2nd year students.
4. VISIT - Bombay Exhibition Center under the guidance of Prof. S. J. KUMBHAR and Indian Meteorological Department under the guidance of Dr. P. G. GAIKWAD SIR.
5. BLOOD DONATION CAMP - To make students aware about its importance. This year organized in collaboration with the EESA and MESA committee.
6. SPCE CUP - Annual Sports Fest in association with EESA and MESA committee.
7. CEA IV -To make students aware about the Basic Operation and Manufacturing techniques and to refresh students after academic activities.
8. SPECTRA 2020 – Annual Technical Fest of SPCE organized in association with Students' Welfare Council, EESA and MESA committee.
9. "What after Engineering?" Career Guidance lecture by Prof. NAGRALE SIR.
10. INDUSTRIAL VISIT - For the students of 3rd and 4th year students of course SUSTAINABLE DEVELOPMENT and WASTE MANAGEMENT to Effluent Treatment plant of ANAR CHEMICAL SOLUTION and AMUL under the guidance of Dr. RESHMA RASKAR-PHULE and Prof. HANSA.
11. CEA CUP - Annual Sports Fest of Civil Engineering Department.

The committee has and will look forward to serving for the betterment of students by putting all its efforts and coming up with more events and activities to enrich the years that students spend at SPCE. We hope to provide students an enhanced knowledge of what they study and a humble platform to apply it.



EESA COMMITTEE 2019-20

Electrical Engineering Students' Association (EESA)

Electrical Engineering Students Association (EESA) comprises T.Y.BTech students of the Electrical Engineering Department, under its faculty members. They are supported by a Coordinator Team from S.Y.BTech. Envisioning improvement of cultural as well as co-curricular life of students, the committee strives towards the same, facilitated by member faculties and under the guidance of the Head of the Department, Dr. Anupa Sabnis.

It involves organizing various activities, designed to enhance the required skill set of the students, improving their technical, communication and management skills, apart from the academic curriculum. The committee not only organizes various workshops (technical and non-technical), seminars, guest lectures and industrial visits to improve students' understanding of the core curriculum. But it also organizes fun events and activities which inculcate team building and team working as networking and communication skills.

Events and activities conducted by the EESA Committee, 2019-20 are as below:

Technical Activities

1. Grading and Pointer Calculation Workshop
3. Scientific Calculator Workshop
4. SPECTRA'20- Annual Technical Fest 2020 (In association with other committees)
5. Workshops on basic electrical equipment
6. Workshops on Python
7. Workshops on App Development

Non-Technical Activities

1. Farewell to ex-committee members
2. Trek to Kothaligad
3. Blood Donation Camp in association with National blood transfusion council (NBTC)
4. Treasure Hunt
5. 10 days tour to Himachal Pradesh
6. SPADE- Sardar Patel Asian Parliamentary Debate Extravaganza
7. Farewell to BTech Electrical Engineering Batch of 2020
8. Sports Activities
9. SPCE Cup (in association with other respective department committees)
10. EESA Cup

The EESA Library hosts a plethora of useful books on all the courses offered under Electrical Engineering. The committee is thankful to all associated faculty and students. It looks forward to serve for the betterment of students by carrying on all its efforts, coming up with newer events and activities, with a view to keep enriching the life that students spend at SPCE.



MESA COMMITTEE 2019-20

Mechanical Engineering Students' Association (MESA)

Mechanical Engineering Students Association is a students' committee comprising students and faculty members of the mechanical engineering department for the complete development and guidance for students of the mechanical engineering department, to make their journey fruitful. The committee members and faculty, under the guidance of Prof. Megha Janbandhu (Faculty Head, MESA) and Dr. Sudhakar Umale (Head of Department, Mechanical) are keen to fulfill students' co-curricular requirements and guide them throughout their professional career.

The committee provides a balanced environment to the students through workshops, seminars, technical and industrial interactions with fun and interactive activities. This particular year 2019-20, MESA has conducted our activities on a far bigger scale than before, all thanks to encouraging faculties and enthusiastic juniors.

The various activities and events organized by MESA for year 2019-2020 were as follows:

1. Calculator workshop: Organized by the committee to make students familiar with the scientific calculator. Workshop was open for students of all departments.
2. Blood donation camp: Legacy of donating blood was continued to make the students aware about its importance.
3. Trek: An adventurous activity amidst busy college schedule as a part of fun activities on 22nd Sept 2019 at Sondai fort.
4. SPCE Cup: In coordination with SPCE Student Council, EESA committee and CEA committee, an inter-class cup was organized in the first week of October, open for all departments. It was a great platform for students to showcase their excellence in sports.
5. Industrial Visit to IDEMI: One Day Visit to IDEMI, to make students aware about different manufacturing processes.
6. Industrial Visit to Milestone Gears (Chandigarh): After all the semester activities, an IV cum holiday trip was arranged to make students aware about the Basic Operation and Manufacturing techniques, and to refresh students after academic activities.

The committee has and will always work for the betterment of the Mechanical Engineering Department and complete development of its students and make their journey in SPCE fruitful and worth remembering.

Thermal Engineering Students' Association (TESA)



Industry visit to Reliance Dahanu Thermal Power Station, Participants: 38, 10 Apr. 2018.

Expert Lectures *Management for Engineers*, Prof. Rao, SJMSOM, IIT Bombay, Participants: 65, 18 April 2018.



One Week Industry Internship at Reliance Dahanu Thermal Power Station, Participants: 30, 9-14 July 2018.

Expert Lecture *Mathematics* by Bhaskaracharya Speaker: Mr. Ujjwal Rane, Participants: 58, 12 Oct. 2018.



TESA-SPCE Students Tasneem & Priti : Winners of Technical paper presentation in ABHIYANTRIKI 2018, KJSCoE, Vidyavihar, 5-6 Oct. 2018.

Expert Lectures: *Power Plant Engineering & Management* by Mr. Pawan Sharma, Asst. V.P. (Opn.), ADANI DTPS, Participants: 40, 8 May 2019.



One Week Industry Internship at ADANI Dahanu Thermal Power Station, Participants: 26, 24-29 June 2019.

Expert Lecture: *Swami Vivekanand* by Mr. Belapurkar, Vivekanand Kendra, Mumbai Participants: 69, 24 Sep. 2019.



Industry visit to CrTD, BARC, Mumbai, Participants: 20, 30 Sept. 2019.

Two days AutoCAD Workshop for F.Y.(C/M/E) students. Participants: 27, 12 & 19 Oct. 2019.



TESA-SPCE Students Mandar & Jay: Participated in One Week AICTE STTP Modern 3-D Modelling & Printing Techniques at SPIT, Mumbai, 2-7 Dec. 2019.

Expert Lecture: *Ethical Management Practices & Leadership* by Mr. Dara Byramjee, Retd. V.P., Godrej & Boyce, Mumbai Participants: 33, 23 Jan. 2020.

THE COVID-19 - OUTBREAK

When the absolute source of this 'disease' was blamed on the Chinese wet markets or the "dirty" lifestyle of the Chinese consuming food other than that deemed 'normal', a whole lot of people fail to realize the reason behind this 'karma' they are facing.

The Great Famine in China started around 1958. While some communities didn't face the consequences, others were decimated. The fault wasn't insufficient agriculture or population, but the government policies that resulted in starvation. Yet, some extreme communist supporters would believe it was an outcome of a natural disaster over the country. To say, it was a result of those policies accompanied with the capricious weather.

Another 'totalitarian' cause was when the government took an incentive to industrialize rapidly as a part of the plan, the 'Great Leap Forward', intending to revolutionize the entire Chinese economy. To overcome the loss caused by this and to meet the supply of grains, the desperation caused the government to take over private farming and its reorganization to meet the demands of their people. The small-scale village farmers were not in for the supplies hence could eat only what they did not have to sell. This hunger made scavenging and cannibalism one of the last resorts. This further affected the birth rate and the deaths were estimated up to 50 million in a span of two years.

The small farmers started catching and raising wild animals as a sustenance measure that was further supported by the Chinese Government. This was looked upon as a way to get the peasants out of poverty and hence was widely fueled. Furthermore, in the 'Wildlife Protection Law', the wildlife was stated to be a resource owned by the state, to help better exercise over wildlife trade. This further encouraged the breeding, domestication and utilization of the wildlife for human benefits. This helped turn those same small-scale farmers to fabricate an entire industry known as 'The Wildlife Industry'. To increase the profit, these animals were sold and consumed in the wet markets. The SARS outbreak was too, traced in one of these wet markets. As the diversity and population of these animals increase, so does the sources of incurred viruses. This outbreak was rooted in civet cats, thus causing a temporary ban over the wildlife farming. This ban could not be permanent as this industry contributed fairly to the economy and thus, had been allowed to grow by the government. The industry came up with numerous reasons and tactics that promoted the consumption of these animals causing a well backed growth and an increased contribution to China's massive GDP.

After the coronavirus outbreak, the government put a temporary ban over the wildlife farming market again and are trying to rephrase the law that encouraged it. Thus, the wildlife consumption was initially not a choice but a survival measure.

TRISHA PAWAR
F.Y. MECHANICAL

THE FASCINATING DISORDER

"Entropy is defined as randomness or disorder in a process". This is the definition given by our textbooks. We probably have gone through this definition as well as solved a number of numericals based on entropy or the second law of thermodynamics. But this term remained ignored as it is just 'disorder'. Anything that is disordered, how can it be fascinating? We wonder at the great patterns and designs, so we don't bother about disorder/randomness, right?

Then let us remember one experiment, Young's double slit experiment. Take a double slit, put a screen behind it, throw particles randomly on it, and you will get a diffraction pattern on screen.

Isn't it fascinating? Randomly thrown particles create a geometrical pattern!

Entropy fascinates with its very basic question, why this disorder or randomness is so important to study, that a special branch or study is introduced in physics? For this, let us go through the equations given by second law of thermodynamics,

For an isolated system,

$$\Delta S=0 \text{ (for reversible system)}$$

$$\Delta S>0 \text{ (for irreversible system)}$$

All natural processes in our phenomenal world are irreversible. Whenever there is irreversibility, means there is unidirectionality, and where there is unidirectionality, information is stored. Eg: A diode conducts current only when it is connected in forward bias. That means it knows when to conduct the current. It represents 1 bit of information, thus we use diodes and transistors in computers.

To attain this unidirectionality with the proper control for developing the self-computing calculators or modern-day computers, scientists developed the vacuum tubes to today's transistors and also the organic liquid polymers. The conclusion is: entropy is the root of information.

This entropy leads to the intelligence not only of our mankind but the whole universe

Even our existence is due to entropy! By the birth of our universe the amount of matter and antimatter in our universe is unequal and thus it led to our irreversible existence. Otherwise the antimatter and matter would have cancelled each other and as the universe was born, it would be reversibly dead. But this is not so due to entropy, as entropy of the universe is always increasing. So, definitely the earlier universe was in more a ordered form but also the today's universe carries more intelligence than earlier, growing at every instant.

This also answers that there are more physics supported theories for moving through time but in the future. No theory explained travel in the past as any of our actions will increase the entropy of the universe. So, we can't enter our past i.e. less disordered form.

Thermodynamics tells us that whenever there is heat transfer, there is entropy change. But actually, entropy does its job whenever energy changes its form. Magnetic hysteresis, directional current carrying property of diodes and working of transistors are all forms of entropy. This entropy developed the intelligent machines right from the Enigma computer to today's AI, including human intelligence.

These are the wonders of entropy. This 'Disorder' today even introduced a whole new theory called Information Theory.

"Entropy leads to irreversibility, irreversibility leads to unidirectionality and unidirectionality leads to intelligence."

So, this is the beauty of the concept 'Entropy' that amazed me a lot." WE EXIST BECAUSE THINGS DON'T WORK PERFECTLY", because of entropy. Funny but Fascinating, isn't it?

SHREESWARAJ V. PANCHAL
B.TECH. MECHANICAL

SPCE RACING

SPCE Racing is a student-level team of enthusiastic and passionate engineers from Sardar Patel College of Engineering, Mumbai. Our primary goal is to design and fabricate Formula Student race cars, that can withstand the challenges posed by various Formula Student Competitions held at national and international levels.



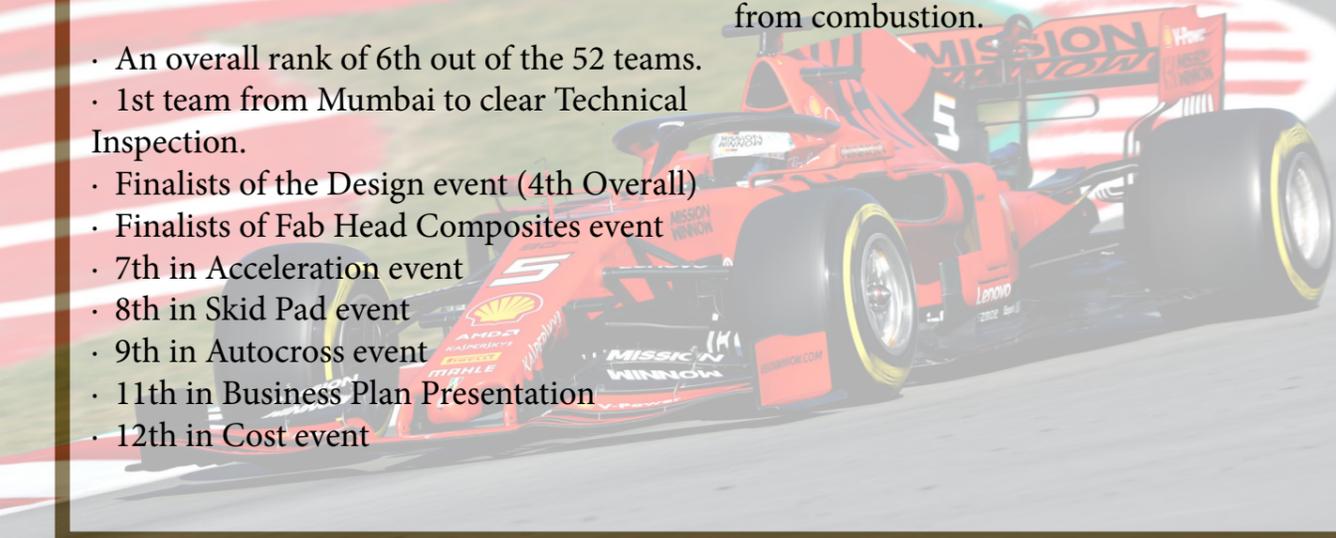
FORMULA BHARAT 2020

The team has been participating in Formula Bharat competition since the last 2 years and is coming back stronger each year. The team rank came up from 19 to 11 and then finally to 6. The last season, the team participated in Formula Bharat 2020 which was from 22nd to 26th January, 2020. The highlights of Formula Bharat 2020 competition are :

- An overall rank of 6th out of the 52 teams.
- 1st team from Mumbai to clear Technical Inspection.
- Finalists of the Design event (4th Overall)
- Finalists of Fab Head Composites event
- 7th in Acceleration event
- 8th in Skid Pad event
- 9th in Autocross event
- 11th in Business Plan Presentation
- 12th in Cost event

Formula Bharat was an incredible experience for the team. We had qualified for International competitions as well like Formula Student East .

The team now has bigger goals. We aim to participate in Formula Bharat next season as well but in the Electric category. Since electric is not the future, it is now, our team has taken the step and is shifting to electric from combustion.



THE JOURNEY OF ROBOCON 2019

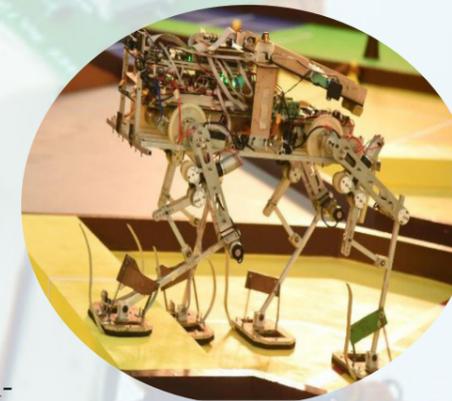
SPCE Robocon is an undergraduate robotics team under Sardar Patel Automation and Robotics K'lub (SPARK). The team consists of Electrical and Mechanical engineers working in unison. The aim of our team is to make inexpensive, ingenious, intelligent and innovative robots.

The academic year 2018-19 ended with the final stage of DD Robocon India 2019 held at IIT Delhi on 16th March 2019. We developed a four-legged autonomous robot, complying with the theme depicting Mongolian culture. We aim to represent India in the ABU Robocon. It has two phases: national level (Robocon India) and international level (ABU Robocon). From 2019 Robocon India is held in 3 stages with elimination at each stage. It involves developing two robots viz. manually operated and other is either automated/semi-automated/manual depending on the theme. Here, our team achieved an overall rank of AIR 9 in the final stage, with AIR 1 in stage 1 and 2, and the Best Idea Solution Award.

The academic year started with summer training organized to recruit new members. The training was

divided into three branches: circuitry, manufacturing and programming. Softwares like Catia, Eagle and Arduino IDE was taught. The team also participated in other competitions which include:

Meshmerize at Techfest, IITB – December 2019
Cosmo Clench at Techfest, IITB – December 2019
VJTI Robotics Challenge (VRC) at Technovanza, VJTI – December 2019



Sardar Patel Robotics Challenge and Meshmerize at SPECTRA (Technical Festival, SPCE) – January 2020.

The team came up with flying colours in VRC and SPRC securing 1st and 2nd position maintaining its winning streak since 2014. F.Y.BTech and S.Y.BTech students trained by SPARK marked their presence

in quarterfinals of these competitions. We secured 1st rank in Meshmerize at SPECTRA 2020.

SPARK conducted its annual workshop in October 2019 for newly enrolled SPARK including first and second-year engineering students. It was a 'Build A Bot' workshop. They developed a 'Radiofrequency Controlled Projectile Throwing Robot' and were taught the basics of robotics. The team even tested new mechanisms for more efficient functionality and speed of our robots. We are aiming to employ industry-grade sensors to enhance our overall performance in Robocon 2020.

This year's host country being Fiji, the theme depicts their national game - Rugby. The ABU Robocon 2020 Suva contest involves playing a Rugby 7's game using two robots and five obstacles as defending players. The team is developing its robots according to this theme. Also, the team has cleared Stage 1 for Robocon 2020 scoring 99 out of 100 points.

The team thanks to our faculty - Dr Nilesh Raykar, Dr Anupa Sabnis and Prof. D. N. Jadhav for their constant support and valuable advice.



SPCE WAVE



The official aeronautics and aviation club of SPCE – W.A.V.E is a society of aeronautics and aviation lovers. This year the club participated in the SAEISS Aero Design Challenge 2020 in Coimbatore. This was the club's third year in the running at the SAE Aero Design Challenge. The club has seen a steady ascend –

SAEISS ADC 2018, Chennai - AIR 12 out of 52 teams

SAEISS ADC 2019, Chennai - AIR 11 out of 65 teams

SAEISS ADC 2020, Coimbatore - AIR 8 out of 76 teams

This year, the club participated in the Boeing Aeromodelling Challenge at IIT Bombay with teams consisting of first year students. One of the teams qualified in the top 30 for this competition. The club aims for more such achievements in the upcoming year. Apart from this, the club is also involved in conducting and attending workshops for the benefit of its members. This year, as a part of the competition, several newly recruited team members attended the preliminary workshop on design, manufacturing and piloting of model aircrafts. The club also conducted an introductory workshop on AutoCAD for first year engineering students at the beginning of the academic year. The club actively arranges seminars and workshops on drones and model remote-controlled aircrafts for all the students interested in learning more about aeronautics-related fields. We aim to become one of the finest platforms for all the aeronautics, aerospace and aviation lovers in Mumbai, and in the country.



SPEAKERS' CLUB

Speakers' Club has been responsible for giving Sardar Patel College of Engineering its best orators and leaders over the past many years.

The Club was formed with the vision to help students develop leadership, interpersonal and communication skills and to cultivate extremely skilled orators.

Speakers' Club is set to cover a wide range of activities. From helping the students overcome their fear of public speaking and improve their vocational delivery, to participation in MUNs, building cases in debates and 'Dos and Don'ts' of group discussions. This shall empower the students to become more confident and skilled individuals.

This Club is an initiative formed due to the persistence, hard work, planning, scheduling and vision of the college Literary Secretary Riya Mete and the Club's President Manav Kaul.

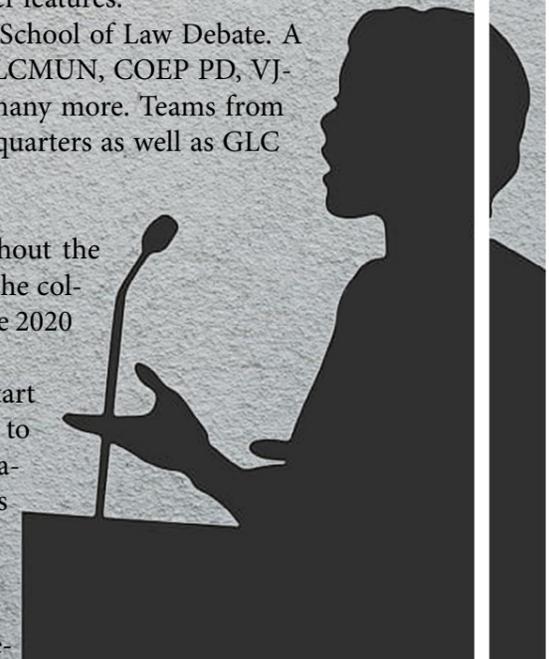
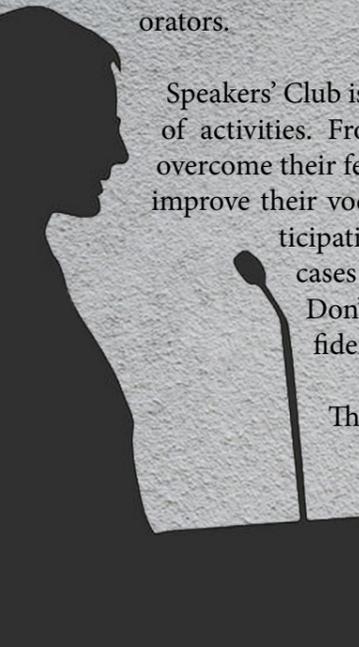
Speakers' Club has also launched its own Android app which acted as a tool for the betterment of students. They can create their own account, get endless access to books and videos for self-improvement, and will be provided with personalized feedback about their session performance privately along with multiple other features.

SPCE is the reigning champion of the VIT Debate and Fr. Agnel School of Law Debate. A delegation of SPCE also participated in TWMUN IIT Bombay, GLCMUN, COEP PD, VJ-MUN VJTI, BITS MUN, NCMCMUN, IRMUN, UDAMUN and many more. Teams from SPCE Speakers' Club broke through the CRMD National Debate quarters as well as GLC Parliamentary Debate novice finals in this academic year.

Apart from participation in various intercollegiate events throughout the nation, teams from Speakers' Club showed heavy participation in the college's own literary events like SPCE AD 2019, SPACE English Debate 2020 and so on.

SPCE Speakers' Club also aims to start an inter-branch debate competition to be conducted annually in collaboration with college student committees called SPADE (Sardar Patel Asian Parliamentary Extravaganza) to give students an exposure of debating within the frame of a healthy competition

Speakers' Club is all set for the next academic year as it pushes its agenda forward to be able to fund for the registrations for all students who wish to participate in oratory events from the coming academic year.



ALUMNI



Mr. Kalpesh Chaudhari is working as 'Researcher III: EV Grid Integration and Advance Control' at the National Renewable Energy Laboratory (NREL), Colorado. He holds a PhD from Nanyang Technological University, Singapore with his thesis titled 'Agent-Based Modelling Of Electric Vehicle Charging For Optimized Charging Station Operation'. Prior to this, he worked at Jacobs Engineering India for 1.5 years as a Design Engineer in the Oil & Gas sector. He has completed his Bachelor's degree in Electrical Engineering from Sardar Patel College of Engineering.

1. Where are you currently based and at what post are you working?

I am currently working as a 'Researcher III: EV Grid Integration and Advance Control' at National Renewable Energy Laboratory (NREL) in Denver, Colorado, USA.

2. What fields are you researching at NREL? What do you enjoy most in your work environment and profession?

I am working on developing scalable techniques for monitoring and controlling millions of devices in real-time applications while maintaining stable system operations. These fundamental concepts will lead to Autonomous Energy Grids (AEGs), Autonomous Grid-connected Vehicles (AGVs), and other Grid interactive Efficient Building (GEB) applications.

The most interesting part of researching at NREL is the freedom to develop our own research ideas. Scientists here at NREL are very cooperative. They'd help you in their best capacity to overcome the obstacles in your research. This collaborative approach is what I enjoy most here.

3. From the wealth of your knowledge, tell us about the scope of clean energy technology in the near future.

Clean energy has tremendous scope in the near future. The PV, wind farms and other renewable energy sources have seen significant technological advancements in the last decade. Now the focus is shifting towards energy storage technologies, which are now challenging compared to generation of electricity. These energy storage systems feature quick energy injection into a grid and quick surplus energy storage from a grid, in applications like frequency regulation. In the field of transportation, the automotive industry is racing towards electrification. It aims to raise the energy capacity of units while reducing size and weight of the system. With widespread applications, I feel this decade would mainly focus on transport electrification using energy storage systems.

4. What motivated you to take up a career in this domain?

While automotive companies are researching batteries and grid operators focus at creating stable grid systems, I felt the interface in between them would be crucial and needs investigation. We see completely fine working systems available around but seamless integration is mostly missing. Hence, I decided to work on optimal control of electric vehicle (EV) charging rates and energy management of charging stations, the interface between EVs and distribution grids.

INTERVIEW

5. You pursued your PhD at NTU Singapore, one of the finest universities in the world. Share with us your experience as a student there and the research you undertook.

Yes, NTU Singapore is one of the best universities for research in various fields including electrical engineering.

When I enrolled at NTU, I was nervous whether I would be at par with other researchers. But once I entered the lab, I found that they had a buddy program where year 2 or year 3 students were assigned to each fresher. They help us in settling down, getting accustomed to lab procedures. The research facilities play a huge role in your research outcomes. NTU has numerous resources to assist you. I was fortunate to access and use them all.

At NTU, I worked towards my doctoral thesis 'Agent-Based Modelling Of Electric Vehicle Charging For Optimized Charging Station Operation'. It includes modelling of commercial EV charging scenarios, simulation and analysis of electric power demand for charging stations using MATLAB and NetLogo software, formulation of strategies for optimization of multiple charging stations deployment in an existing grid system of Singapore and development of the road-map for charging station deployment for commercial EVs.

6. Could you impart some advice to budding engineering students wishing to pursue careers in fields like electric vehicle technology and energy storage?

1. Get yourself aware of the latest research advancements in the fields of EV technologies. Practice reading research papers. Follow industry updates. During the student phase we don't usually follow industry updates regarding their latest products. News articles or company ads are greatly informative about ongoing market demands. This'll let you decide which technologies are worth investigating in the near future.
2. Approach seniors working in the industry and explore what as per them will be in demand. See what skills you might need to develop to fill that gap if you

wish to pursue a certain field.

3. Let university know about the job requirements in EV technologies. For example, most jobs now require Python skills. Similarly, request or opt for electives of machine learning, artificial intelligence and big data analytics. These skills can fetch jobs to graduates and have an edge. If the university does not have such a provision, I would strongly advise students to learn it on their own by taking online courses.

To conclude, students must be familiarized with the requirements of their dream job and start acquiring skills from year 2. We can't suddenly get them in year 4 during the placement season. Preparing consistently from year 2 is the key.

7. Please share with us some fond memories of your time in SPCE, and how your years here have shaped you.

The 4 years of SPCE were memorable and life-shaping. I learned many new things during college time apart from engineering like how to set apart your differences, understand various perspectives and respect others' point of views.

I still miss the time during our lunch-breaks where we shared our lunch-boxes with each other. I remember how we gathered before exams to discuss doubts. Placement season was the most stressful. On one side we used to prepare for interviews, on the other side assignments. Overall, the 4 years at SPCE taught me one most important thing 'how to perform under stressful conditions'.

I guess apart from engineering knowledge this is the most practical skill I learned which I can't put in a resume but helps every day in career and personal life.

CIVIL



**1ST
YEAR**



**2ND
YEAR**

**3RD
YEAR**



**4TH
YEAR**



ELECTRICAL



**1ST
YEAR**

**2ND
YEAR**



**3RD
YEAR**



**4TH
YEAR**



MECHANICAL



**1ST
YEAR**



**2ND
YEAR**

**3RD
YEAR**



**4TH
YEAR**



MAGAZINE COMMITTEE

2019-20

AMAN KUNDRA
MAGAZINE SECRETARY



AARUSHI DAVE
MAGAZINE SECRETARY



RUDRAY GORANE



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&
CREATIVES**



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ENGLISH EDITOR



AVINASH KICHLOO
ADMIN / HINDI EDITOR



VEDANT SINGH
ASST ENGLISH EDITOR



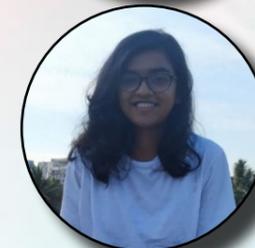
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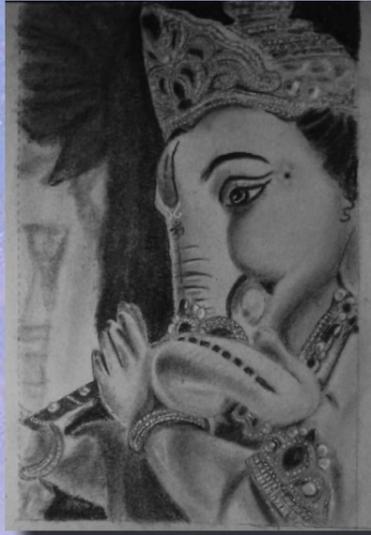


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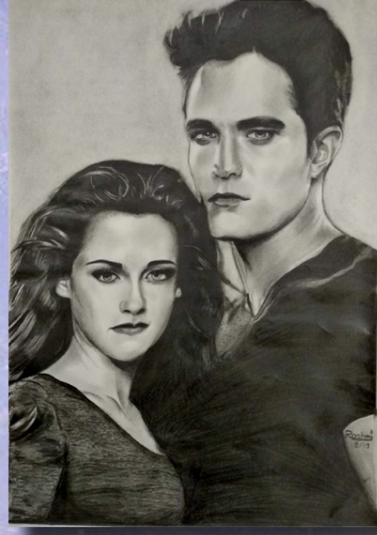


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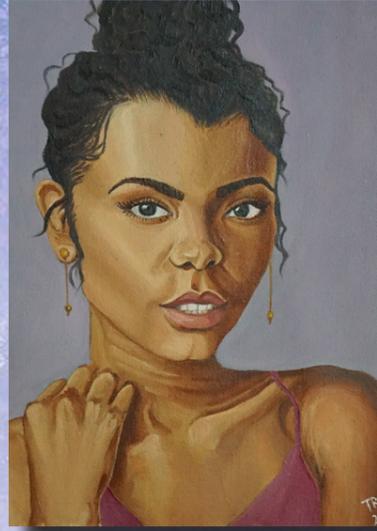
ARIT



RUSHIKESH UGHADÉ



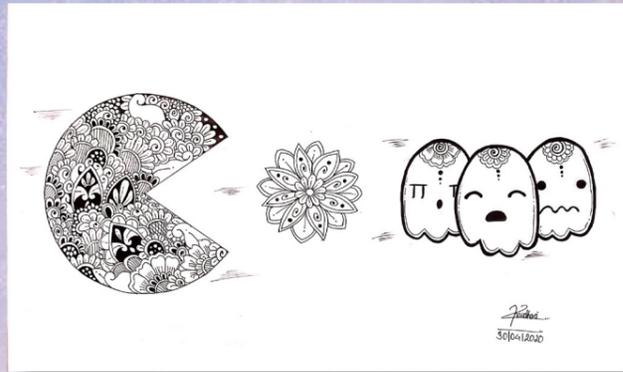
RASHMI MAHAJAN



TRISHA PAWAR



NEHA JNGALE



YOGINI CHAUDHARI



DEEPAK PUGAONKAR



RIDDHI LACHURJYA



ANJKE WADJA

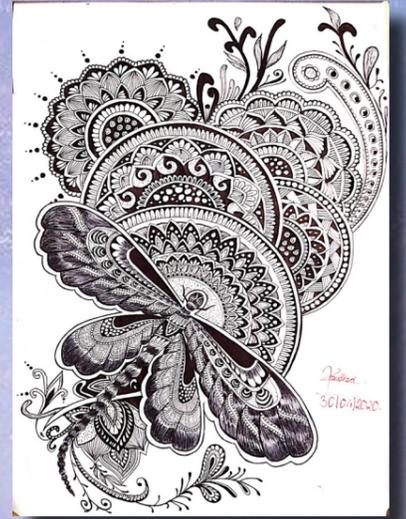
GALLERY



ANJKE BENDALE



AMAN KUNDRÁ



YOGINI CHAUDHARI



DEEPAK PUGAONKAR



TRISHA PAWAR



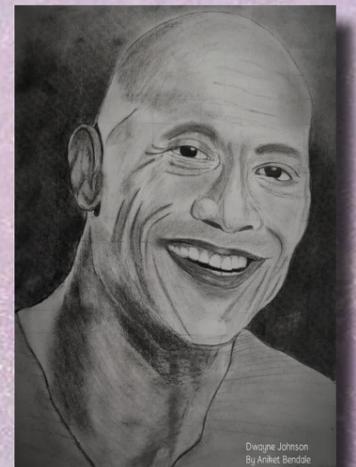
SAMIKSHA TUPE



NEHA JNGALE



ANJKE WADJA



ANJKE BENDALE

