

CHEMICAL ENGINEERING



NEWSLETTER

Oct – Nov 2019

Newsletter Highlights

Research Projects

Invited Expert Talk

Workshop/Seminar

**UG/PG/PhD
Achievements**

Other Activities



EDITORIAL TEAM

Dr. Abhishek Yadav (Coordinator)

Dr. Swapnil Dharaskar (Co-coordinator)



From the Director's desk



Prof. Sunil Khanna
Director, SOT, PDPU

Dear Colleagues and Students:

The advent of circular economy in Chemical systems is leading to the development of an economic system aimed at minimizing waste and making the most of resources. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models. The drivers of the circular economy would be the advances in computational modelling, data analytics, optimization tools, and next-generation and bio-based catalysts to produce fuels and chemicals at scale with lower emissions.

As we @ PDPU embark on this journey of circular economy in Chemical Engineering, I am Happy to Introduce the next issue of the Newsletter which not only share with all its readers the latest news and developments in the Department of Chemical Engineering but would also be sensitizing all of us on the latest trends and developments in the adoption of the circular economy.

The limitless power of technology to do good and the conviction of my faculty colleagues and students that the golden age is ahead of us - and not behind us – brings about the best in all of us which is reflected in their achievements.

Compliments to the editorial team for their passion for perfection and unbound creativity which makes me always look forward to the next edition of the Newsletter.

From the HOD's desk



Dr. Swapnil Dharaskar
HOD, Chemical Engineering

It gives me immense pleasure to share newsletter of the Chemical Engineering Dept., June-July 2019. The Department of Chemical Engineering at PDPU, Gandhinagar is one of the premier departments that provides a unique educational and research environment. We have a major emphasis on interdisciplinary and industrial collaborations. Our primary missions are to educate undergraduate and graduate students, and to discover and disseminate knowledge through research. The Department is committed to achieving excellence in these activities, and evaluates the success and leadership of its programs using the highest standards of quality, innovation, & visibility, while at the same time providing a friendly and supportive atmosphere.

FACULTY ZONE: PUBLICATIONS/PROJECTS

Publications:-

- Dr. Pravin Kodgire and co-workers published a journal publication titled “*Low temperature oxidation of carbon monoxide for heat recuperation: A green approach for energy production and a catalytic review.*” Journal of Cleaner Production, 118838, Corrected proof. (Accepted on: 10 Oct 2019).
- Dr. Swapnil Dharaskar and co-workers published a journal publication titled “Effect of Fin configuration parameters on performance of solar still: A review”. Ground Water Sustainable Development, 10 (2020) 100289.

Projects:-

- Dr. Swapnil Dharaskar (PI) and Dr. Ashish Unnarkat (CO-PI) submitted a project proposal entitled on “*Selective Removal of Cationic and Anionic Heavy Metals from Contaminated/Industrial Water Using Nanoparticles*” to DST under Indo-Srilanka research Scheme.
- Dr. Manish Kumar Sinha and Dr Surendra Sasi kumar Jampa submitted a project proposal titled “*Tuning the flexibility of Metal Organic Framework based mixed matrix membranes in efficient removal of CO₂ containing feed streams*” to DST under Thematic Areas Nano for Energy and Environment.
- Dr. Abhishek Kumar Gupta and Dr. Abhishek Yadav submitted a project proposal titled “*Development of ultrafast rechargeable Aluminium-ion battery using novel cathode and non-corrosive ionic liquid electrolytes*” to SERB-DST under the scheme “SUPRA” on 29th Oct, 2019.

FACULTY ZONE

Workshop on Computer Aided Process Equipment Design

➤ Dr. Sukanta Dash, Dr. Dadi Suriapparao and Dr. Lubhani Mishra organised an interactive workshop on ‘*Computer Aided Process Equipment Design*’ on 10th October, 2019. The workshop was inaugurated by the Director SOT, Prof. Sunil Khanna and Sr. Mentor Dr. Anurag Gupta.



(Director SoT with Dignitaries)



(Talk by Mr. Pratush Naik)



(Talk by Mr. Tulsidas Solanki)



(Talk by Dr. Kanubhai Parmar)

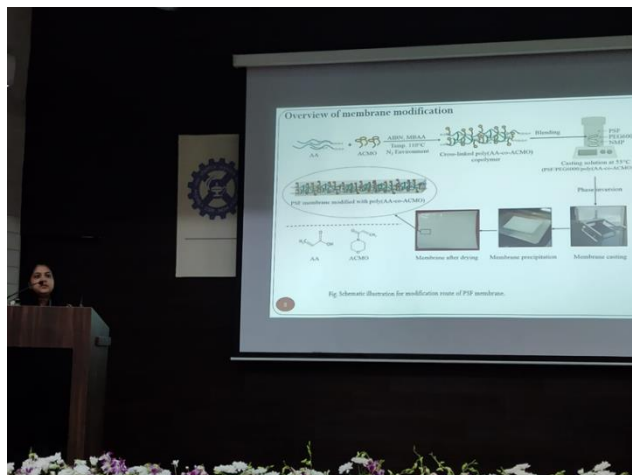
➤ Mr. Tulsidas Solanki (Ex-Asst Vice president, Reliance Industries Limited, Vadodara) emphasized on the “*Role of safety in industry*” .

➤ Mr. Pratush Naik (Sr. General Manager, Reliance Industries Limited, Vadodara) delivered an expert talk on “*Design of the shell and tube heat exchangers*” .

➤ Dr. Kanubhai Parmar (Asst. Vice resident, Reliance Industries Limited, Vadodara) delivered an expert lecture on “*Computer Aided design of Distillation and Absorption Columns*”.

FACULTY ZONE

Conferences/Workshop/Seminar/Research Visits



Ms. Bharti Saini delivered an oral presentation on “*Effective Treatment of Oily Wastewater Using Polymeric Ultrafiltration Membrane Modified with Cross-Linked Copolymer*” at International Conference on Sustainable Energy and Environmental Challenges (SEEC-2019) 27th – 29th November, 2019 at CSIR-NEERI, Nagpur India.



Dr. Pravin Kodgire chaired the technical session “*SHOWCASE - The Technical Paper and Poster presentation competition*” at PDPU SPE Fest'19 between 18th-19th Oct 2019 at PDPU Campus



Dr. Manish Kumar Sinha visited Infocity Junior Science College, Gandhinagar, for “*PDPU awareness Program*”.

FACULTY ZONE

Conferences/Workshop/Seminar/Research Visits



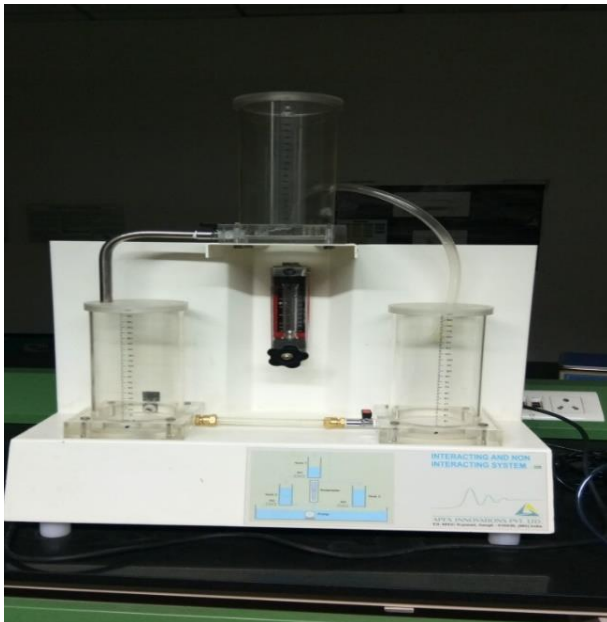
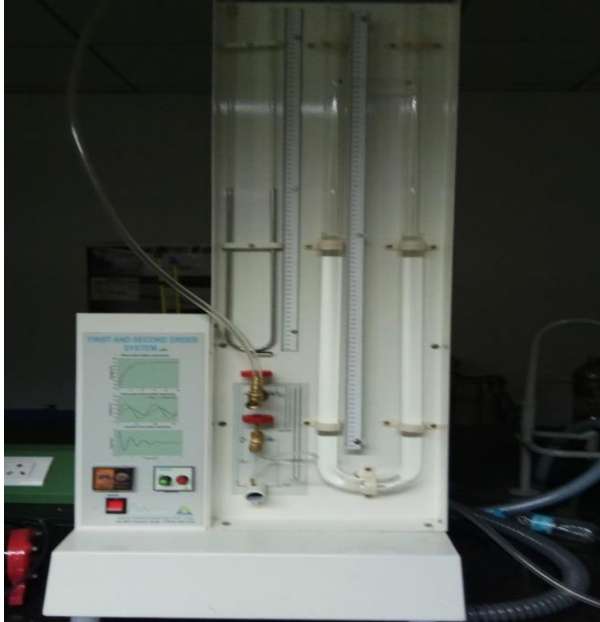
Mr. Anirban Dey was awarded the “**Best Oral Presentation award**” at 4th International Conference on “**Sustainable Energy and Environmental Challenges (SEEC-2019)**”, for his talk on “**Elucidating the effect of addition of 1-(2-aminoethyl) piperazine as an activator on the CO₂ solubility of aqueous n-methyldiethanolamine**” CSIR-NEERI Nagpur, 27-29th Nov 2019.



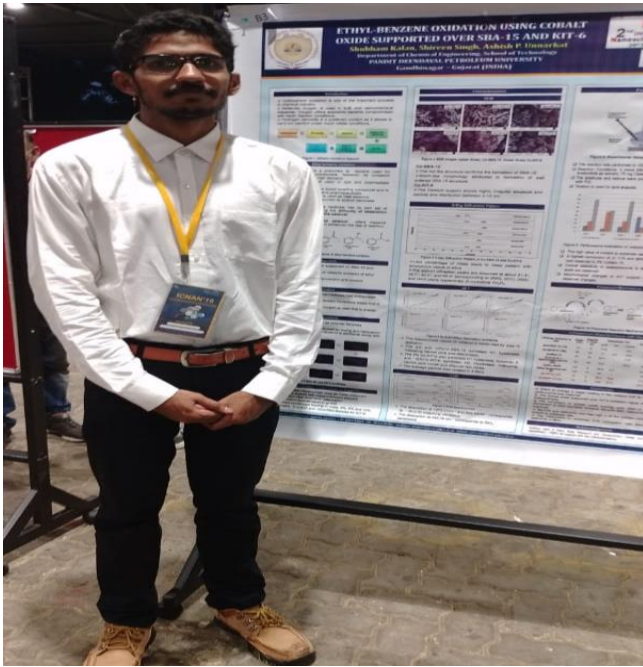
Mr. Anirban Dey and Dr. Swapnil Dharaskar (Co-ordinators, IICHE student Chapter, PDPU) along with IICHE Student Team organized **CHEMFUGE 3.0 (Inter College Chemical Engineering Quiz and Poster Competition)** on 15th November 2019.

FACULTY ZONE: New Lab Setup

Dr. Surendra Sasikumar, Dr. Swapnil Dharaskar and Dr. Abhishek Yadav established a new Process Dynamics and Control lab.



STUDENTS' ZONE



Mr Shubham Kalan (Mtech 2nd year) presented a poster on "*Ethylbenzene oxidation using cobalt oxide supported over sba-15 and kit-6*" at 2nd International Conference on "Nanoscience and Nanotechnology (ICNAN-2)" at VIT Vellore. The work is supervised by **Dr Ashish Unnarkat**.

Avani Makhesana, Prachi Shah, Kaushik Jain and Mumtaz Alizara participated in "Smart Gujarat for New India Hackathon 2019-20 under the challenge of Developing Insulator Brick or Layer for Kiln of Ceramic Industries"

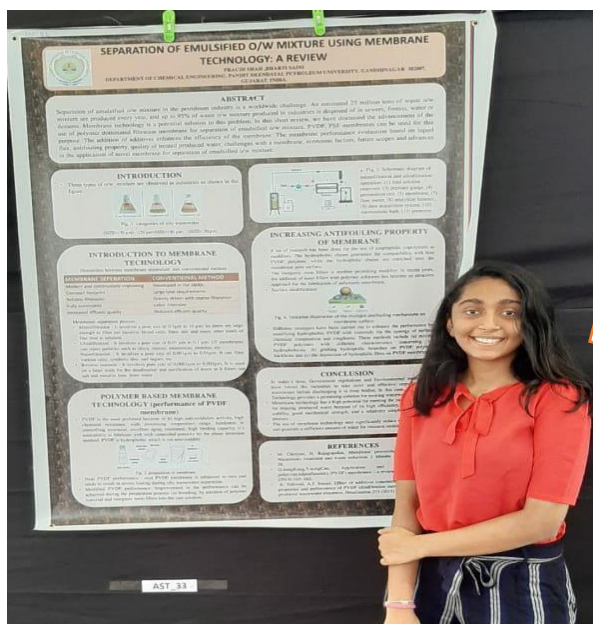


Chirag K. Mehta and Mayank P. Makwana attended a conference on "*Industrial Catalysis - ICAT 2019*" on 23 Nov 2019. It was held in Maharaja Sayajirao University of Baroda.

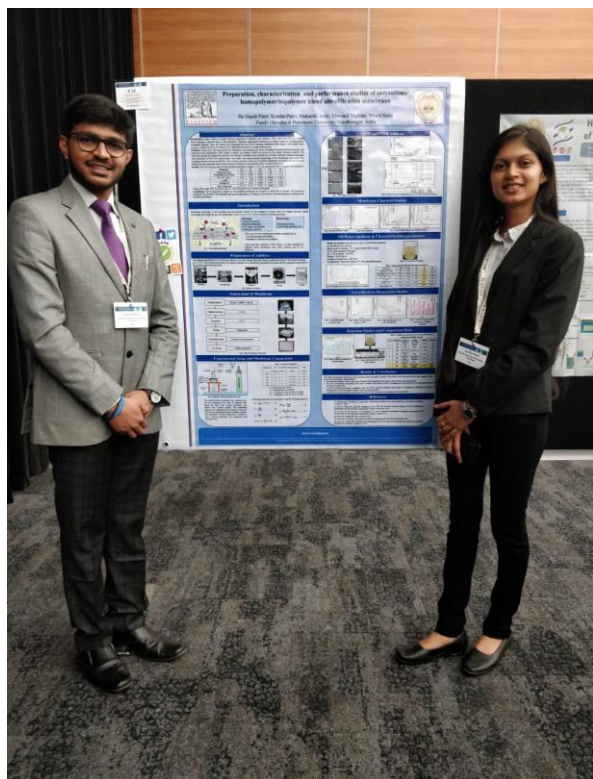
Comprehensive Projects (CP):

Ms. Medhavi Pandya is selected for "*Research Internship Awards 2019-20*" at IIT Bombay with 10K Fellowship for CP. She will be working with **Prof. Partha S. Goswami** in Chemical Engineering Department for her Internship. **Dr. Ashish Unnarkat** has guided her through the process.

Students' ZONE



Ms. Prachi Shah working under Ms. Bharti Saini, received Best Poster presentation award in "Students' Chemical Engineering Congress (SCHEMCON-2019)" during 17-18 October 2019 organized by Shroff S R Rotary Institute of Chemical Technology.

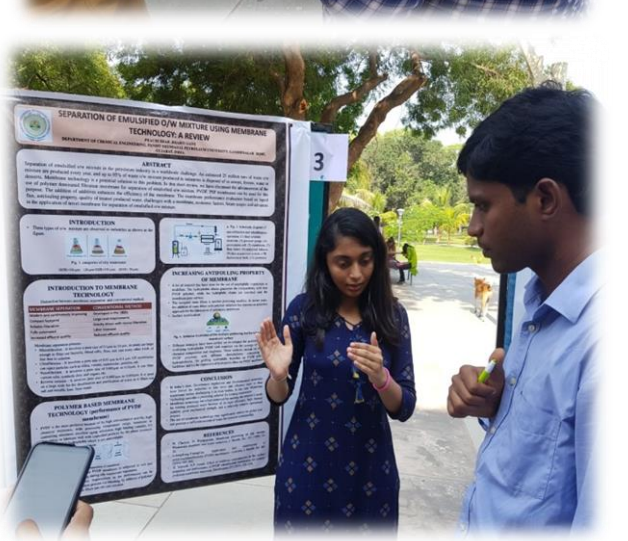
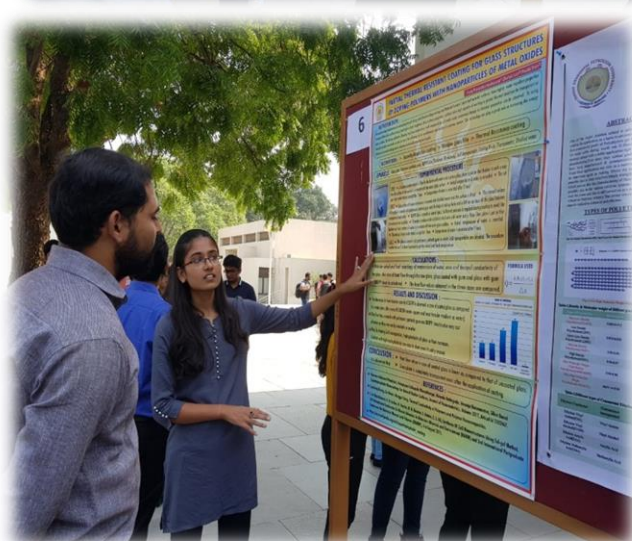
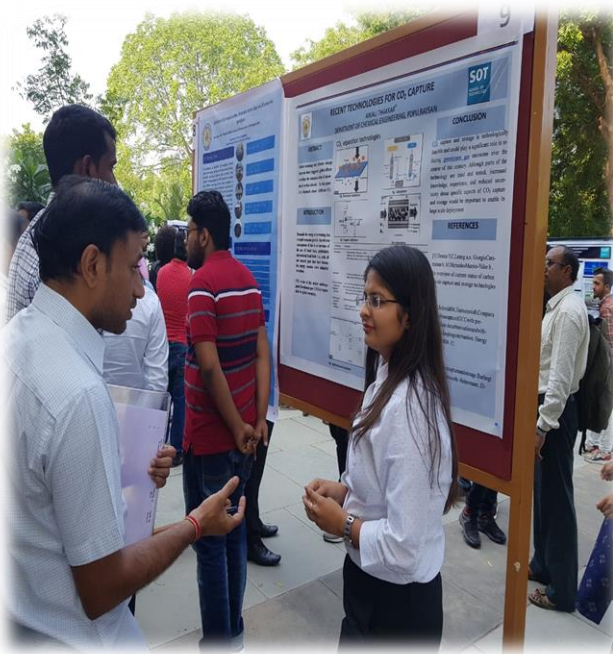


Mr. Dhwanil Vaghani, Mr. Arpit Patel and Mr. Raj Pindoria working under Ms. Bharti Saini, received Best Poster presentation award in "Students' Chemical Engineering Congress (SCHEMCON-2019)" during 17-18 October 2019 organized by Shroff S R Rotary Institute of Chemical Technology.

Students of Chemical Engineering presented poster/paper in International Conference at Perth Australia.

*Mr. Jainish Shah and Medhavi Pandya, Final Year Chemical Engineering Students Conducted "CHEM-O-PHILLA" A National Level Chemical Engineering Quiz at Pandit Deendayal Petroleum University during 21st November 2019.

Students of Chemical Engineering showcase their research idea in ChemFuge Poster Presentation Event organized by Chemical Engg. PDPU.





*Mrs. Parwathi Pillai (3rd Year PhD Student) under Dr. Swapnil Dharaskar, presented Oral Paper in International Conference (IMMT-19) at **BITs, Dubai** in **Nov.2019***

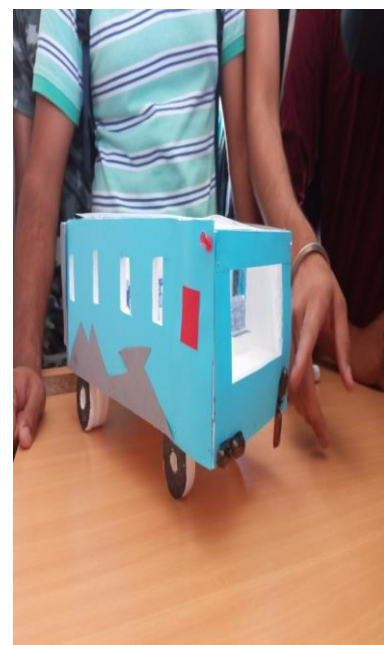


Mr. Tushar Patil Joined as Junior Research Fellow under Dr. Swapnil Dharskar and Dr. Manish Sinha on DST Sponsored Project.

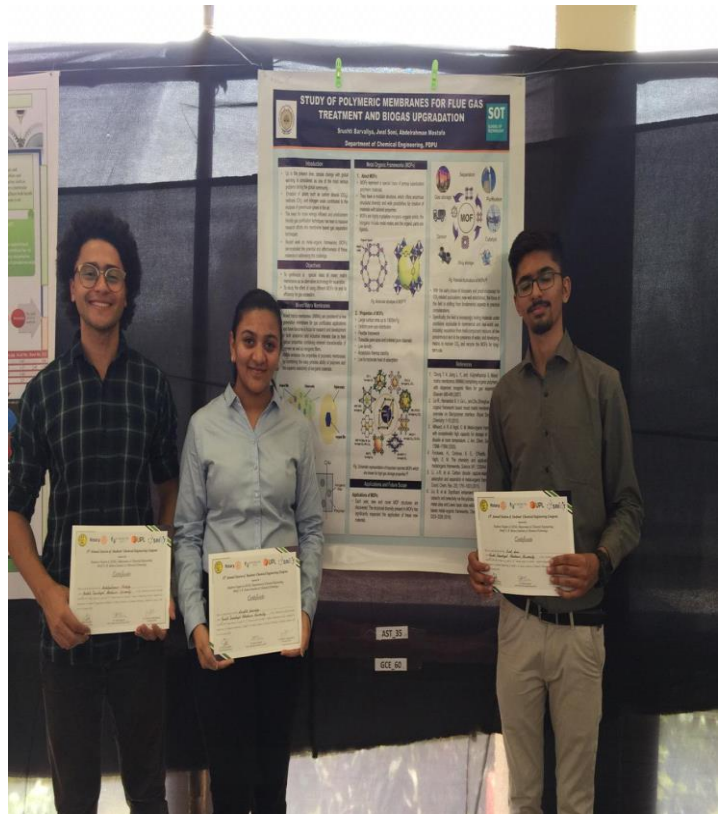


Mrs. Komal Desai (2nd Year PhD Student) under Dr. Swapnil Dharaskar, presented Oral Paper in **International Conference (IMMT-19) at **BITs, Dubai** in **Nov.2019****

Dr. Dadisuriapparao organized the Model/Design Based Competitions for 3rd Chemical Engineering Students



Mr. Abdul Raheman (Cairo University, Egypt) International Intern in Chemical Engineering



Placements

The students of Chemical Engineering are on high tide with plenty offers at hand and many companies with different profiles are lined up for recruitment. Chemical Engineering Department Congratulates all the selected students and thanks **Dr Ashish Unnarkat** and **Ms Sweta Balchandani** (Department Coordinators) who are working in sync with the CD cell for grooming and extending full support to students.

List of students placed in the current session (2019-2020):

Baldha Jay Harsukhbhai	Atul Limited
Patel Harshkumar Bankimbhai	Atul Limited
Sonani Jaimish Gordhanbhai	Atul Limited
Rajyaguru Daivat Sanjaybhai	Atul Limited
Shivani Agarwal	Evosys
Unnati Khaturia	Honeywell
Vaibhav Shrikant Bhandari	Honeywell
Pathan Shahdab Mohammad Imranbhai	Honeywell
Bambharoliya Hemangkumar Dilipbhai	Infosys
Devrishi Dilipbhai Rathod	Infosys
Patel Mohil Alkesh	Infosys
Patel Pamirkumar Vasantbhai	Infosys
Shah Jainam Nipeshkumar	Infosys
Sojitra Siddhant Himmatbhai	Infosys
Kapadiya Khanjankumar Vipulbhai	L&T Technology Services
Hrishikesh Saikia	Nayara Energy
Vaddamani Saumya Yogananda Reddy	Nayara Energy
Nishant Harshdrai Gajjar	Nayara Energy
Manvar Kevin Chandulal	Nayara Energy / Infosys
Kotadiya Darshankumar Vajubhai	Reliance Industries
Kriti Bhatia	Reliance Industries
Parth Rajesh Bhatia	Reliance Industries
Patel Meetkumar Dineshbhai	Reliance Industries
Pindoria Raj Khimjibhai	Reliance Industries
Shah Utkarsh	Reliance Industries
Vaghani Dhwanil Pravinbhai	Reliance Industries
Damaraju Naga Surya Hari Vivek	Torreced.
Desai Avirat Apurva	Unschool
Hiteshree Sanjaybhai Parmar	Worley Parsons / Infosys