

The background of the entire page is a photograph of an offshore oil rig. The rig's complex steel structure, including cranes and pipes, is silhouetted against a vibrant sunset sky that transitions from a deep blue at the top to a warm orange and yellow near the horizon. The rig is situated over a body of water, with the sun's reflection visible on the surface. In the distance, a range of mountains is visible under the twilight sky.

FIPI

FEDERATION OF INDIAN PETROLEUM INDUSTRY
PANDIT DEENDAYAL PETROLEUM UNIVERSITY

FIPI PDEU ANNUAL REPORT 2020-21

ENERGY
ENTHUSIASM
XCELLENCE

Enlightening the youth to
proceed towards
sustainable energy
development with
Principle, integrity and
experience.

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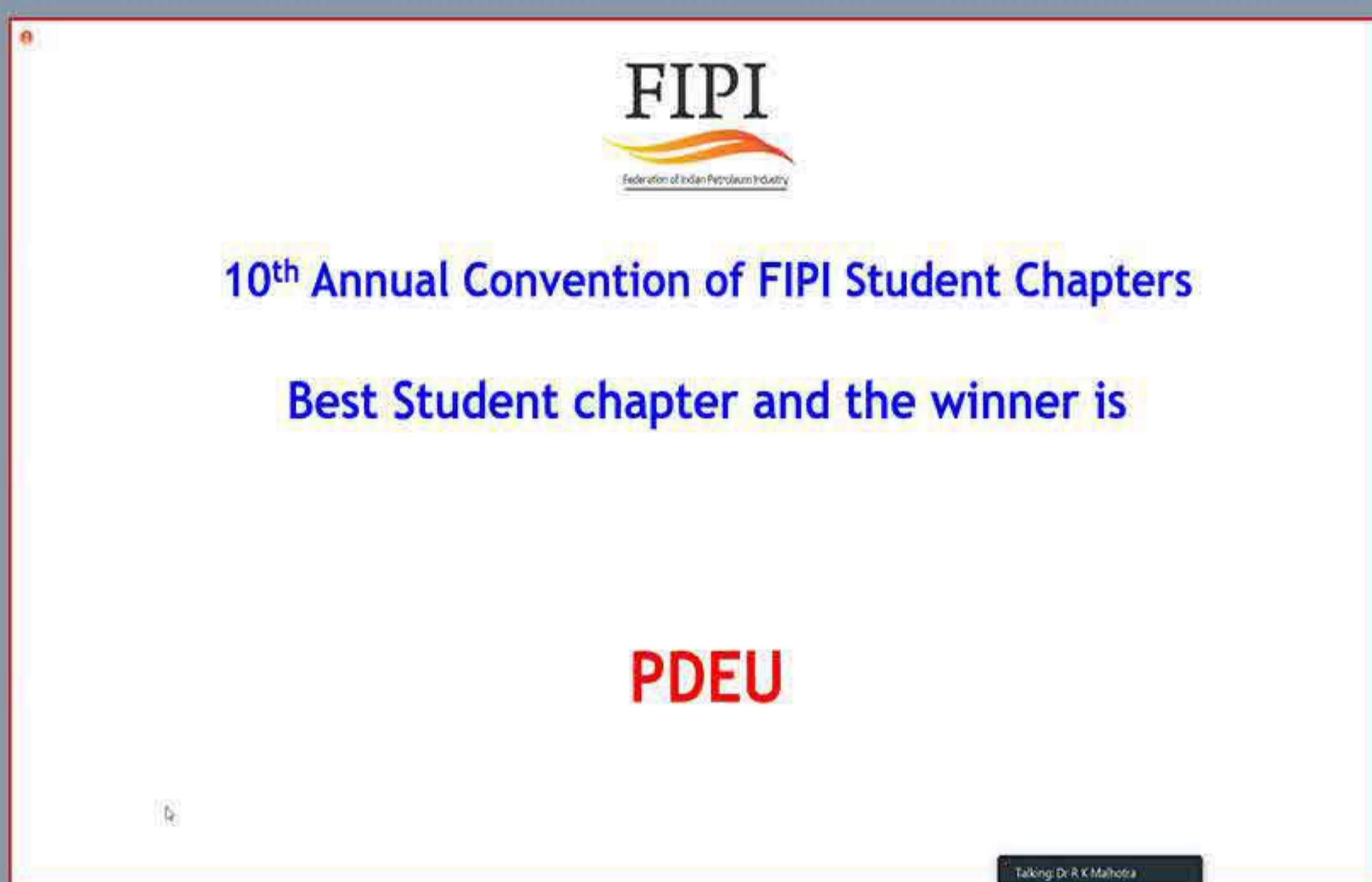
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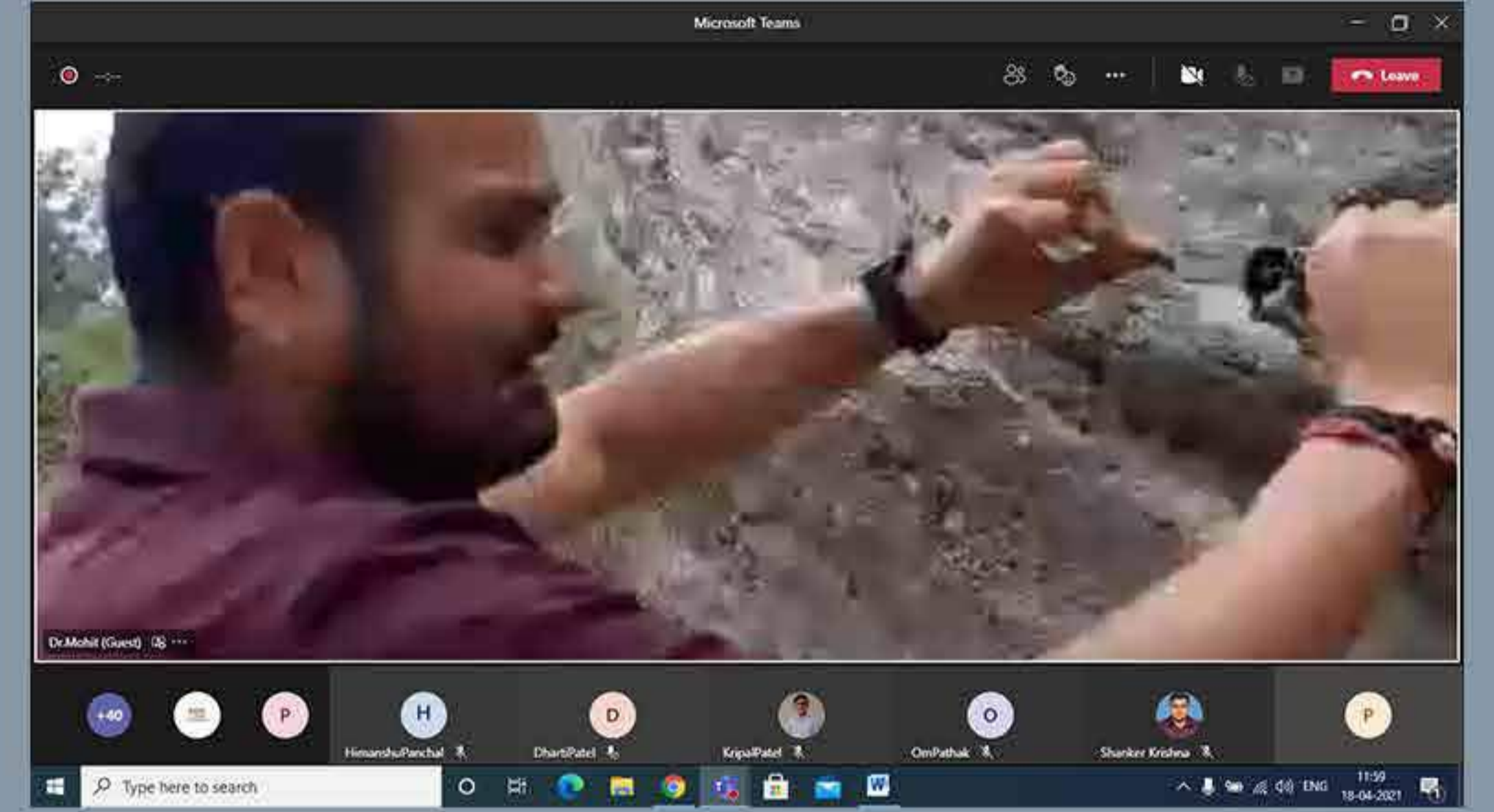
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ABOUT

PANDIT DEENDAYAL ENERGY UNIVERSITY

PDEU is 1st place in Gujarat and 55th in India by National Institute Ranking Framework (NIRF), Ministry of Human Resource Development, Government of India. Pandit Deendayal Energy University (PDEU) has been established by GERMI as a Private University through the State Act enacted on 4th April 2007, The University offers programs for the needs of trained human resources in the domains of Science, Technology, Management and Humanities. It intends to learn the opportunities for students and professionals to develop core subject knowledge, which is a complement to leadership training interventions, thereby helping students to make a mark in the global arena. This objective is getting more addressed through several specialized and well-planned undergraduate, postgraduate and doctoral programs as well as intensive research projects.



ABOUT SCHOOL OF PETROLEUM TECHNOLOGY

School of Petroleum Technology (SPT) started in the year 2007 at the University. The School caters to the academics and industries by creating budding Petroleum Engineers. The School is strategically located in the oil and gas capital of India. Interaction and knowledge sharing from the industry benefit the students a lot. SPT faculties have a rich industrial as well as academic experience. Students and faculties are engaged in practical research and many papers are documented in reputed peer-reviewed journals and conference proceedings. This not only helps in the overall development of students as well as faculty members but also makes the students aware of the industry expectations, which in turn helps in making them not only employable but deployable as well.



About

FIPI PDEU

Student Chapter

FIPI PDEU SC (erstwhile Petrotech PDPU SC) was formed as a result of the amalgamation of Petrotech India and Petrofed into one, namely FIPI India. The chapter is aimed to bridge the gap between academia and industry. At FIPI PDEU SC, we believe hydrocarbon as the fuel towards better & brighter tomorrows' and hence we help building young professionals who are knowledgeable, skilled & equipped -capable of working with professionals, cross-border in a global setup. FIPI PDEU SC (e Exposure of our members to events like conferences & competitive examinations, both at national and international levels, keep them live, energetic and growing. We ensure their overall development through proper provision and utilisation of opportunities & resources that moulds & transforms them far better. We target providing additional knowledge to students that helps them fit in this highly volatile Oil & Gas Sector and thus keeping them



passionate about the work, there further. This is achieved by means of guest lectures, conferences, technical fests and many more which manifest the student to become an accomplished engineer for the industry. We also put great efforts in providing exposure for our members to the various work ethics of an organization that in turn develop their soft skills which could surely help them in their professional lives.



“**E n e r g y**
E n t h u s i a s m
E x c e l l e n c e”

Message from the Director's Desk



Dr Rakesh Kumar Vij
Director SPT, PDEU

School of Petroleum Technology at PDEU is continuously striving to impart knowledge to the young minds and develop capable resources to be offered to the oil and gas industry. . Being an integral of SPT, FIPI PDEU SC has provided an excellent platform to ignite the young minds of students and extract the best out of them. FIPI PDEU SC, being highly dedicated to achieving excellence has organized seminars, fests, convention and several other competitions where students can come up and showcase their talents. It is because of their industrious and sincere efforts that they are trusted and eulogized extensively as an important component of the SPT. I have seen a spark of confidence and self-belief to make things happen. I envisage FIPI PDEU committee to flare knowledge and enthusiasm among ignited petrobrians. The committee worked hard to make this academic year a successful one, wish them best for achieving new heights in the coming year, and make a school proud.

Message from the Faculty Mentor's Desk

Dr Vivek Ramalingam
Assistant Prof. SPT, PDEU



FIPI PDEU student chapter is an excellent portal that ensures experiential learning which is inline with the vision and mission of SPT. The chapter act as an exquisite platform for students to sharpen their technical and managerial skills, as well as ones role in sustainable development of the society. The chapter has been enthusiastic in organizing technical events like distinguished lecture series, seminars, software training program and workshops in cutting edge technologies and industrial practices. The chapter has been adaptive to the new normal and extremely active through variety of online events. I feel glad to be a part of the rewarded student governed society in PDEU.

Message from the President's Desk

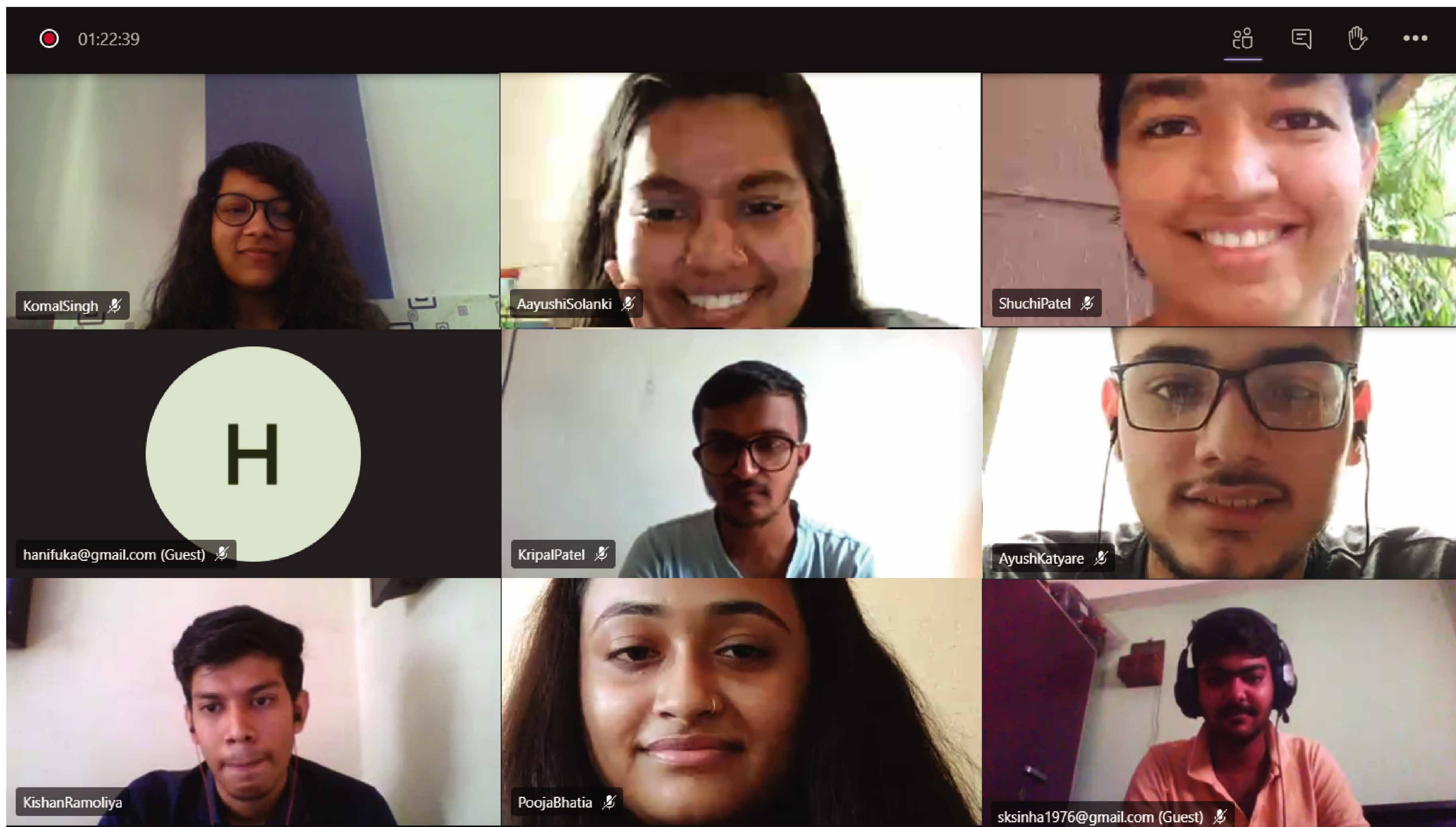


Mr. Kishan Ramoliya President FIPI PDEU SC

Nowadays, when everyone is talking about revolution in the energy industry for sustainable growth and securing the energy future, it is necessary to link academia with the industry to make students understand about what exactly industry requires from the forthcoming energy soldiers. It is where FIPI PDEU Student chapter is actively working for the last few years. With the theme of “Emanating the young professionals today to amend them into self-resilient energy enthusiast tomorrow”, FIPI PDEU Student Chapter has organized an ample number of events in the year of 2020-21, to improve technical knowledge, analytic thinking, communication, and interpersonal skills of participating young petro-minds who are going to be the leaders of tomorrow. We too have worked as per the requirements of the society in the difficult time of COVID-19 through various CSR activities. Having accomplished a phenomenal year of 2020-21, with winning of second consecutive “Best Student Chapter Award” across the nation in 2021, it is better to have well-documented work of the chapter activities together with some add-on knowledge & techno-informative content before switching over to its next endeavours. I would like to present the Annual Report of FIPI PDEU SC for the year 2020-21 to enlighten you about journey of the chapter throughout the year.

As we end this academic year, I am confident enough on the upcoming leaders of committee that they are well aware of mission and vision of the chapter that FIPI PDEU possesses from the beginning. They will certainly be putting all efforts to achieve newer heights of this chapter. I assure you on behalf of our team of FIPI PDEU that the committee is bound to bridge the gap between industry and academia to explore new horizons for students in the Oil & Gas industry.

Introductory Session



The session was conducted with the BTech students of petroleum branch was delivered by the committee members of FIPI PDEU Student Chapter. The session was conducted with the branch of Petroleum Engineering Bachelor Students. The main motive of this introductory session was to create awareness on the function of FIPI Student Chapter and their benefits. We motivated the students to join FIPI PDEU STUDENT CHAPTER so that they can get a great exposure which can help them in

future. The entire session was very interactive and interesting as the students took active participation in giving their introduction. We urged them to meet and greet everyone and make a cordial relationship with all. We also asked them to be enthusiastic and participative in every event to come and try to be extraordinary in every case to stand out and shine your way out. We also wished them best of luck for the future on this journey of education and success.

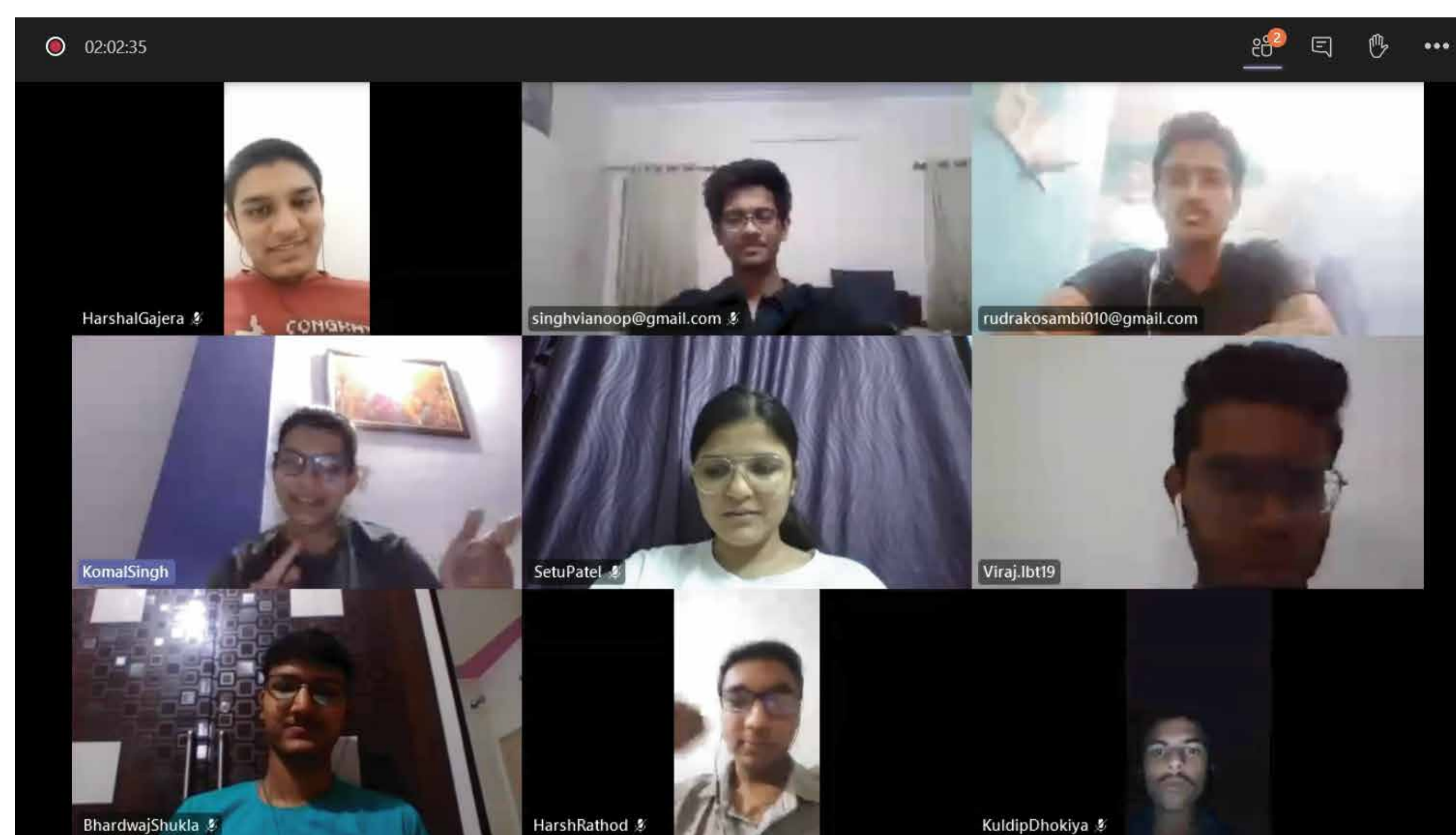
ABCD

Any Body Can Discuss

The stylemark event of the Chapter named ABCD- Any Body Can Discuss was formulated to give perception into Oil and Gas Industry. FIPI PDEU STUDENT CHAPTER discussed on the topic of Major Price Fluctuations in Oil and Gas Industry where we told the students to take several minutes to write down everything they know about the topic of the discussion. This would prime them for the discussion.

We motivated every student to have an opportunity to speak. The main motive of this session was to enhance debate discussion to construct reasoned arguments that address the material and

consider the arguments of the other side. At the end of the discussion, we allowed students to write down any conclusions or lingering questions they had. We also asked them how the discussion affected their views on a topic or their understanding of a concept.



Intern talk

With the collaboration of all the Student Chapters of SPT and support of our seniors, An 'Intern Talk' was organized for guiding and mentoring the students. The main purpose of this event was to guide the juniors towards the Internship in this pandemic and how can they get the Internships. The seniors advised us to keep

connections with the Industry people and talked about how to get an Internship in any company. They mentioned to the juniors that in two ways we can get the internship. Fill the Internship form and other is through the connections. The seniors helped the students by providing important information about how to choose the right Internship and why Internships are very important? They also mentored the students on how they should choose their Internships as they play a very crucial role in preparing a CV and this also reflects in the interviews. The session was very informative and interesting. Some notable interns who talked during the session included:-Mr. Anish Singhi (IRS lab work), Mr. Yashpalsinh Dayma (IRS field development), Mr. Smit Prajapti (WSS), Ms. Jhanvi Desai (RIL), Mr. Suraj Chauhan (WSS), Mr.

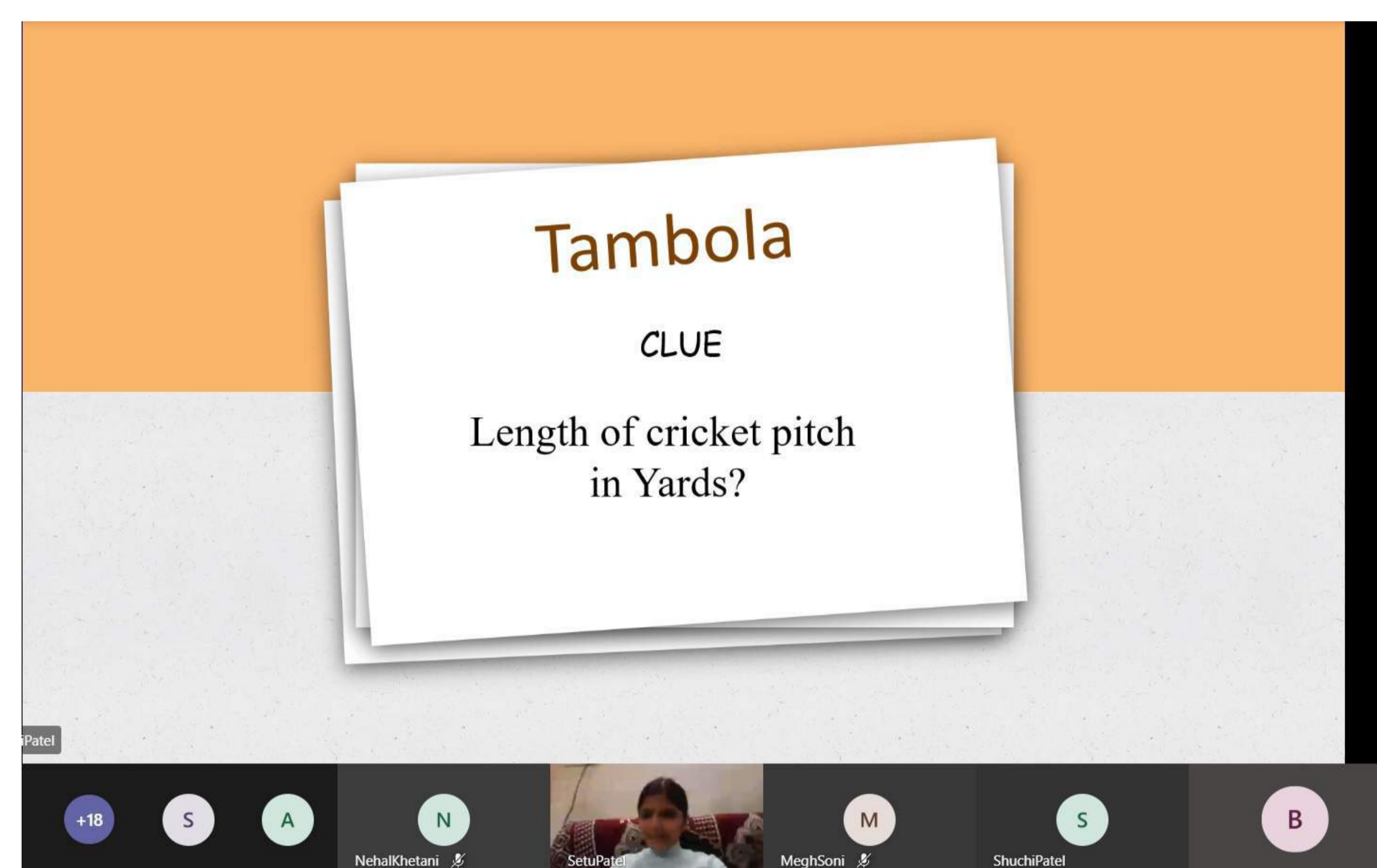
Kaushalkumar Dudhat (ONGC Asset Subsurface), Mr. Brijesh Gondaliya (RIL E&P), Mr. Parag Bhoraniya (ESSAR), MR. Jigar Galsar (IOCL), Ms. Dharti Patel (Caliche), Mr. Kripalkumar Pate (Sabarmati Gas + GERMI), Mr. Hardik Parmar (GAIL & ONGC), Mr. Jenishgiri Goswami (GAIL & ONGC). The sharing of life experiences are valuable to guide the students right from finding the area of interest to the planning of internships and finally getting a job in a reputed company. Really it was very helpful to all students.

Tambola

Online Board Game Competition

The first year students will miss out on a lot of if they won't know how College goes. It is essential for freshers to know the seniors

and their behaviour and to check-out the fun-filled side of genuine seniors where they do all the hard work and preparation to make juniors feel protective and comfortable. So, to welcome the new students in the friendly atmosphere of the



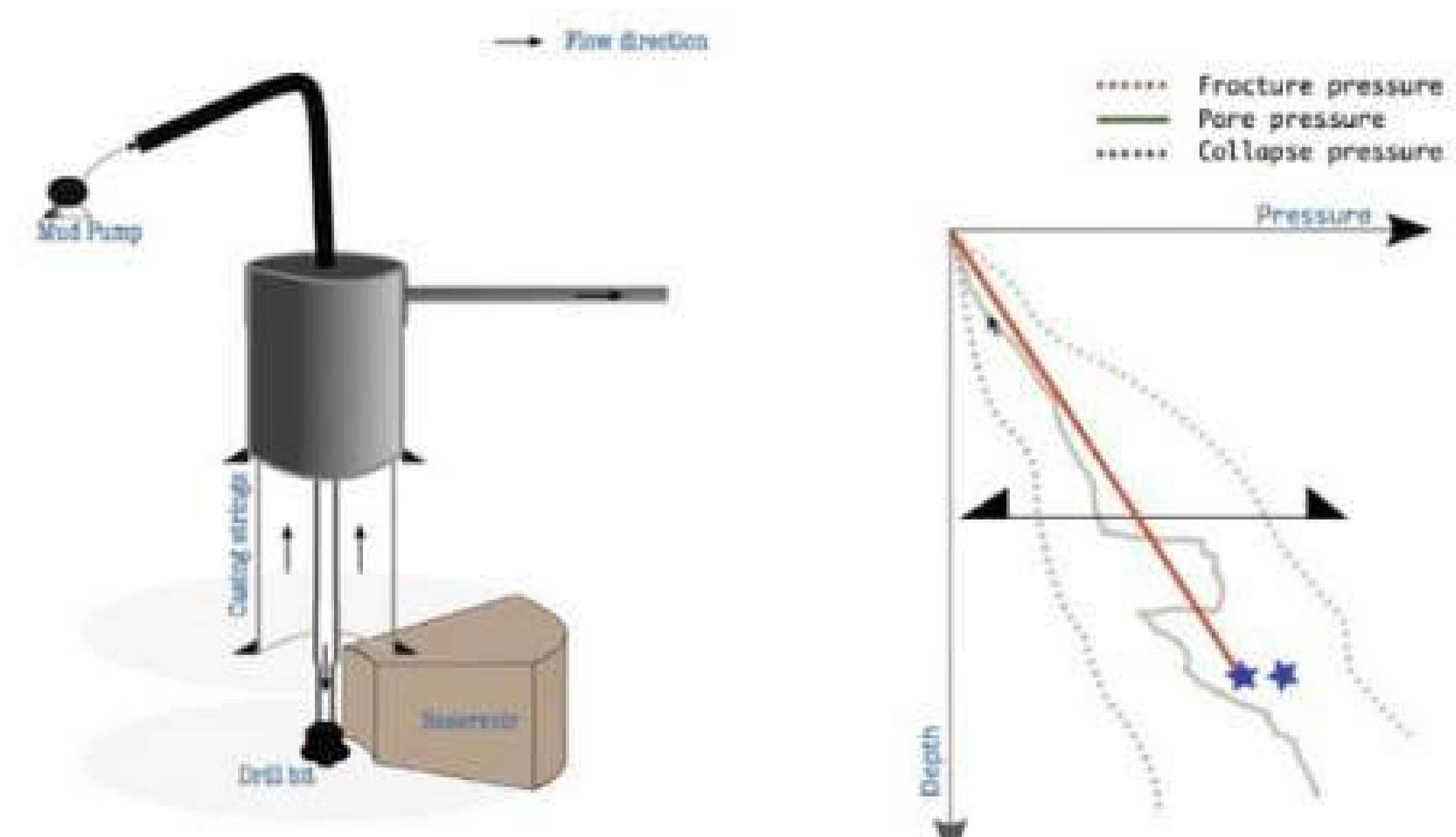
college and to encourage their creative impulses, FIPI PDEU SC organized a fun, interactive event named 'Tambola'. Basically, Tambola is played with numbers (1-90) being called out one at a time and players striking out those numbers on their tickets. But we had added twist to the game that instead of giving them direct number we gave them clues to solve the numbers.

Prior to the game we had provided drive link to

the students so that the participants can get the Tambola tickets. Every participant had their own unique Tambola tickets. There were 90 clues based on 1-90 numbers. We displayed them in sequence through Power Point Presentation and they scratched the numbers in their tickets and based on full house, Row 1-2, Row 2-3, Row 1-3 and 1st seven completion they could withdraw tickets to cash prizes. The students enjoyed a lot during the entire game.

WORKSHOPS WEBINARS

Drilling Conventional



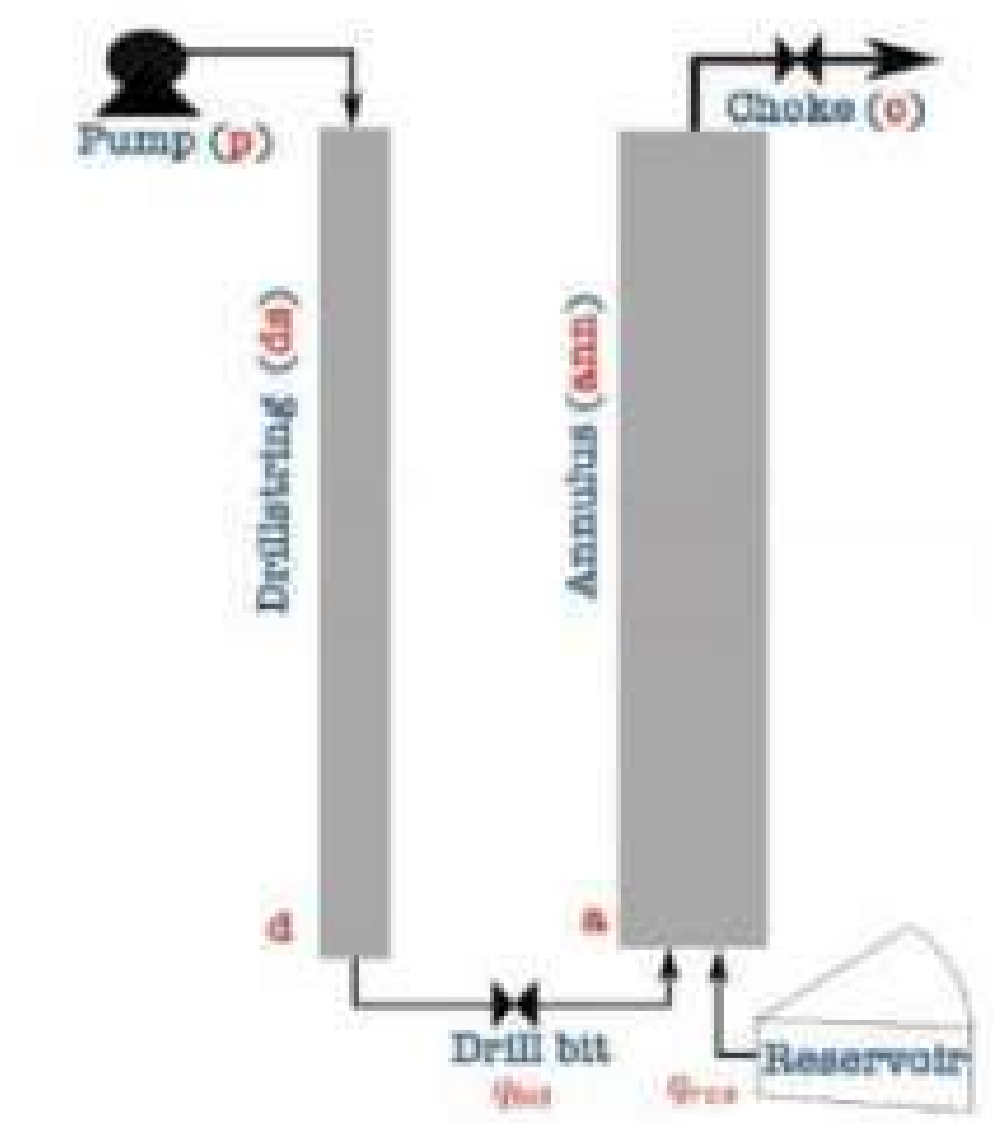
$$\left(\frac{V_{ds}}{\beta_{ds}}\right) \dot{p}_p = q_p - q_d$$
$$\left(\frac{V_{ann}}{\beta_{ann}}\right) \dot{p}_c = q_a - q_c$$

Flow continuity is given by,

$$q_a = q_d + q_{res}$$

Choke flow:

$$q_c = K_c Z_c(t) \sqrt{\frac{2}{\rho_0} (p_c - p_0)}$$



Participants

- Type a name
- Presenters (2)
 - JayHirpa Organizer
 - Naveen Guest
- Attendees (47)
 - Aayush
 - 18MH1A Outside y...
 - Anika Gu Guest
 - Anjan Ch
 - Anubhav Guest
 - ArchitJai
 - AtharvPa
 - AyushKa

Gas Well De-liquification Techniques

By
Mr. Alphonse Lalnuntluanga
(Assistant executive engineer, ONGC)

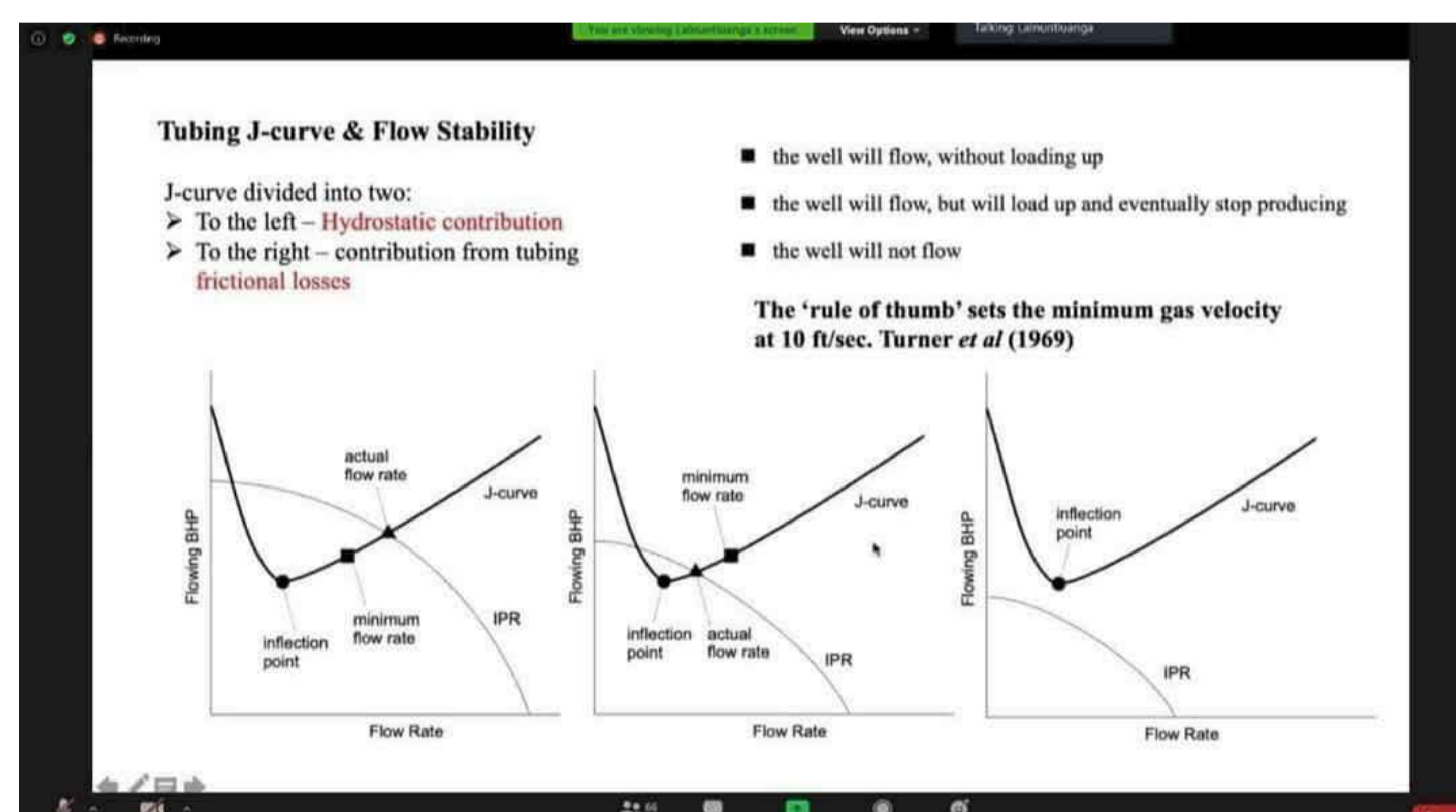
Foremost workshop was conducted for two days on "Gas Well De-liquification Techniques: Solution to Gas Well Liquid Loading Problems" by Mr Alphonse Lalnuntluanga, assistant executive engineer, ONGC. The session started with a brief introduction about the basic production system and analysis where students acquired knowledge on the methods used in industry to create goods and services from various resources such as labour, capital (for machinery and equipment, materials, etc.), and space (land, buildings, etc.) to effect a change. He introduced the participants with the ways to identify and predict liquid loading phenomenon. He covered a plethora of topics like gas well de-liquification techniques, nodal analysis, echometer software, Artificial lift mode of De-liquification, and how to install, monitor &

troubleshooting. He taught us how Liquid loading can reduce production and shorten the lifecycle of a well costing a company millions in revenue. He explained all these topics in a zestful and exuberant manner while answering the doubts of the inquisitive minds. Two online quizzes were also conducted on both the days based on the topics that were discussed. Students found the workshop to be very enlightening and worthwhile.

Data and its various aspects in Industry

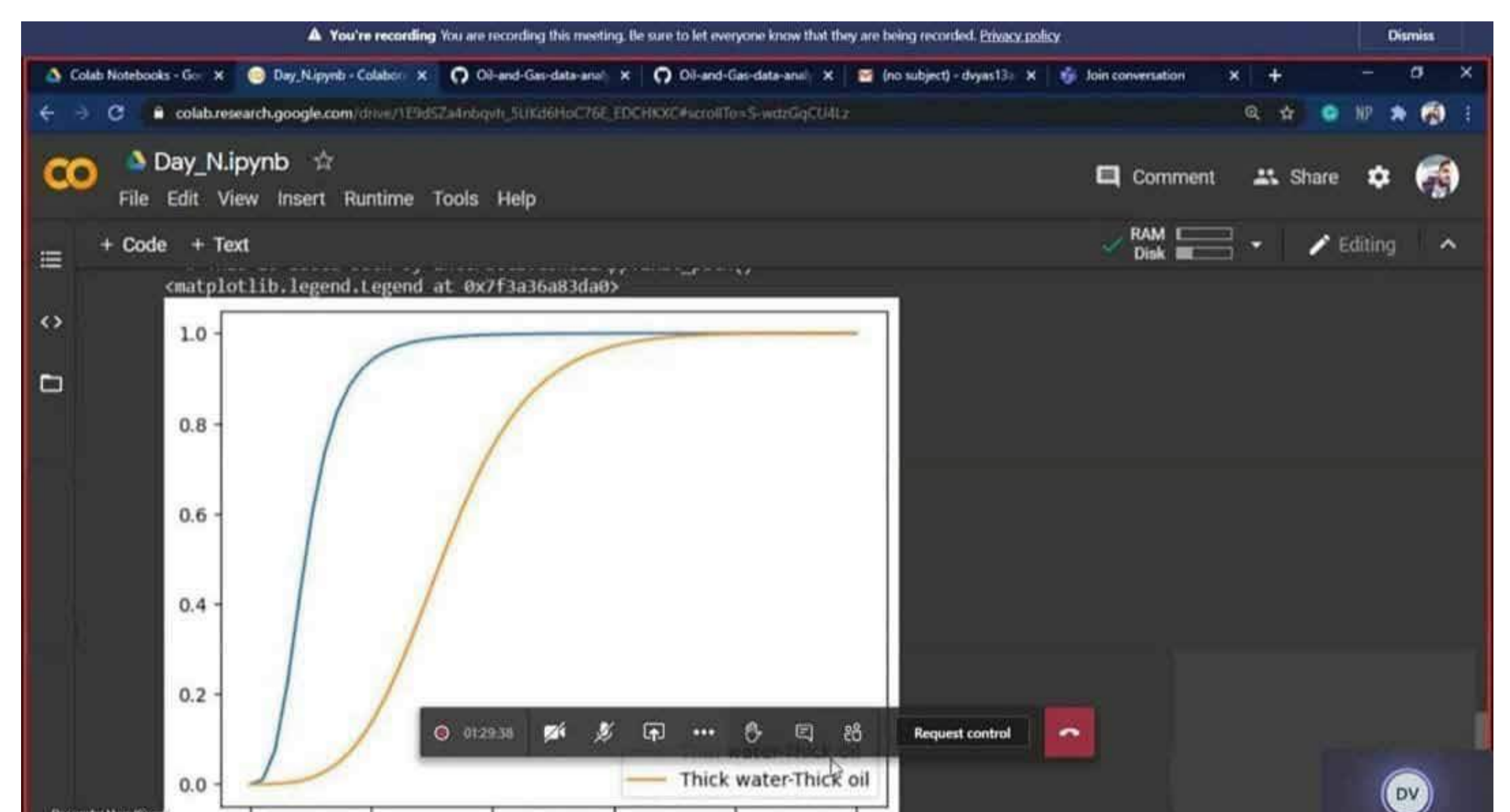
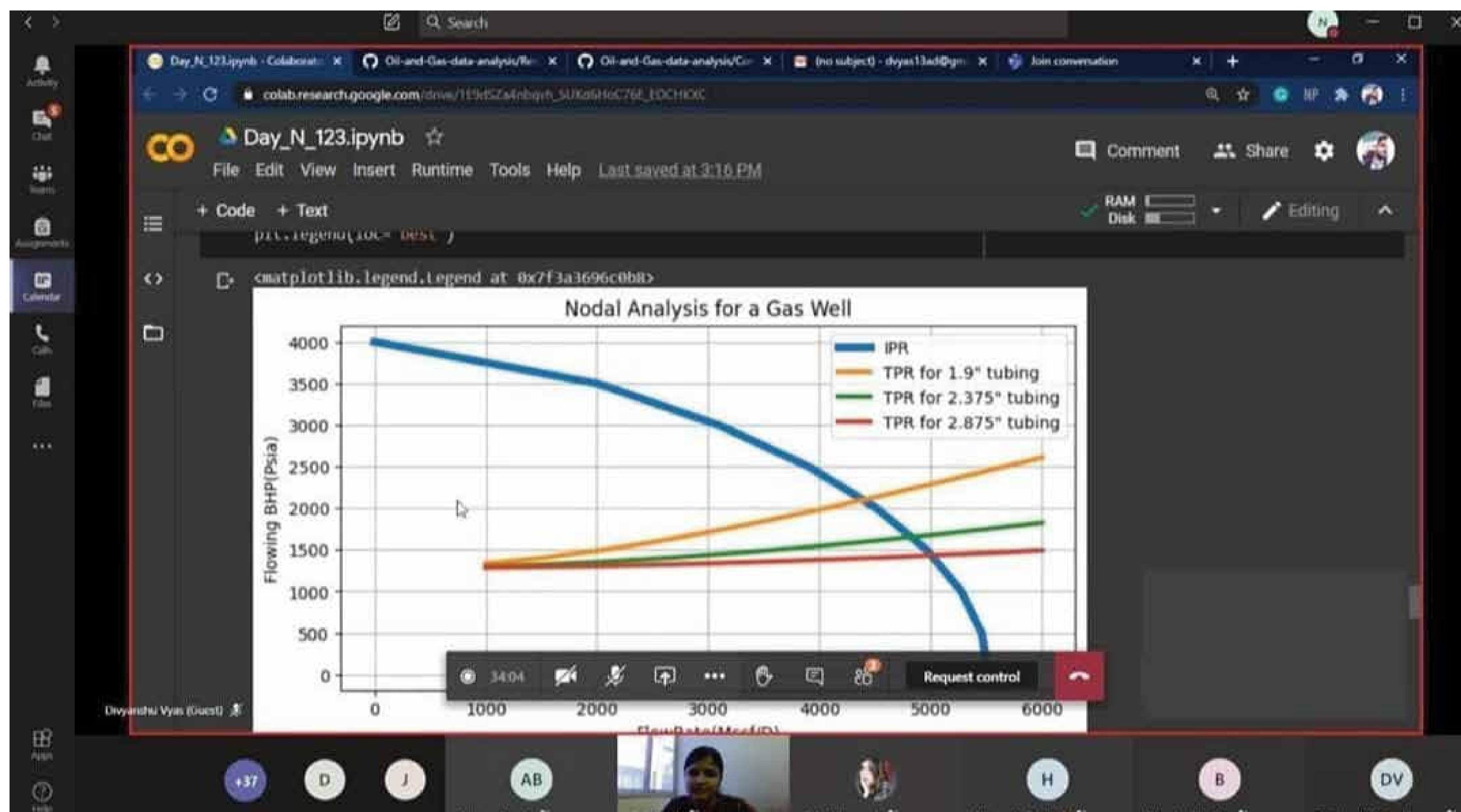
By Mr. Dhaval Patel
(Team lead, wells RAR & CSR, Shell)

Data science has proven to be a very important technology in the upstream oil and gas industry. An overwhelming majority of petroleum engineering professionals and geoscientists are currently interested in learning technologies associated with data science, including artificial intelligence and machine learning. With the intension of this, a webinar was hosted on "Data and its various aspects in Petroleum Industry" by Mr. Dhaval



Patel who is Team Lead, Wells RAR and CRS at Royal Dutch Shell). He talked about What is data and information systems and what are the procedures which should be done with data so it can be significantly useful in oil & gas industry. He also talked about data visualization from the basic to advance level, data analysis, dashboard creation and hands on the data input, processing and visualization development. The webinar was followed by Exercise wherein he discussed about various questions and techniques to solve them quickly with various tools of Excel. With the help of Excel, he solved many problems of students. The workshop was very interesting and very useful in oil and gas industry.

intelligence-based technologies in the oil and gas industry has grown immensely. So with the intension of this, 3-day workshop was organized on “Reservoir Simulation using Python and Machine learning in Petroleum Industry” by Mr. Divyanshu Vyas, Founder of Petroleum from scratch and Reservoir simulation intern at Rezlytix. He talked about importance of Reservoir Simulation and Python from scratch, various aspects of computer programming, Visualization, NumPy in which he talked about how can we visualize



Reservoir Simulation using Python

By Mr. Divyanshu Vyas
(Reservoir Simulation Intern of Rezlytix)

The use of machine learning, predictive analytics, and other artificial

the data using Python and how can we produce different graphs related to oil and gas domain using Python and its functions. With the help of Workshop, Stidents understood about the work flow rather than worrying about calculation. It was a very unique and informative workshop.

Data Visualization Masterclass

By Mr. Dhaval Patel
(Team Lead, wells
RAR & CSR, Shell)

We were enraptured about yet another 2 day workshop on "Data visualisation Masterclass" by Mr. Dhaval Patel, Team Lead, Wells RAR and CSR, Royal Dutch Shell. Throughout the workshop he covered data visualization from basics to advance level, data analysis, dashboard creation and hands on with data input, processing and visualization development. He explained about the goal of Data Visualization which is to communicate information clearly and efficiently to users through graphical means and how In the world of Big Data, data visualization tools and technologies are essential to analyze massive amounts of information and make data-driven decisions.

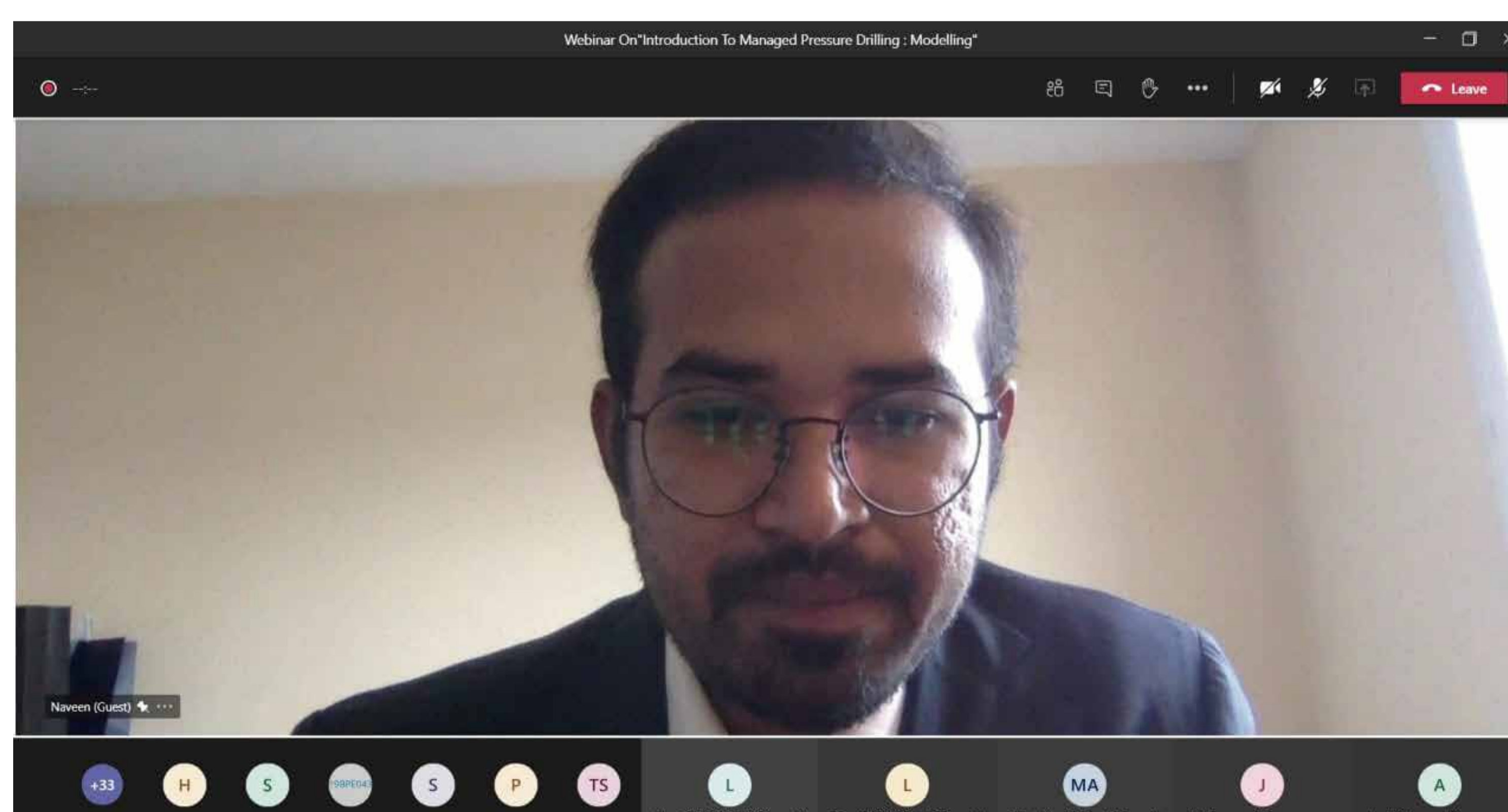
The workshop was directed with real efficiency and yet, in the space of that relatively short time, he managed to achieve a warm and genuine relationship with each student, making them feel relaxed about

airing problems and helped them to arrive at possible solutions.

Managed Pressure Drilling : Modelling

By Dr. Naveen Velmurugan
(MINES Paris Tech, France)

FIPI PDPU SC hosted a webinar on "Introduction to Managed Pressure Drilling: Modelling" by Dr. Naveen Velmurugan(Mathematics and Control, MINES Paris Tech, France). Managed Pressure Drilling (MPD) is a new technology to mitigate drilling limitation by controlling BHCP and better control of pressure variation while drilling. The plenary began with an introduction about the



basics of Drilling. He expounded the participants about "How liquid use drilling mud to maintain a particular pressure at the

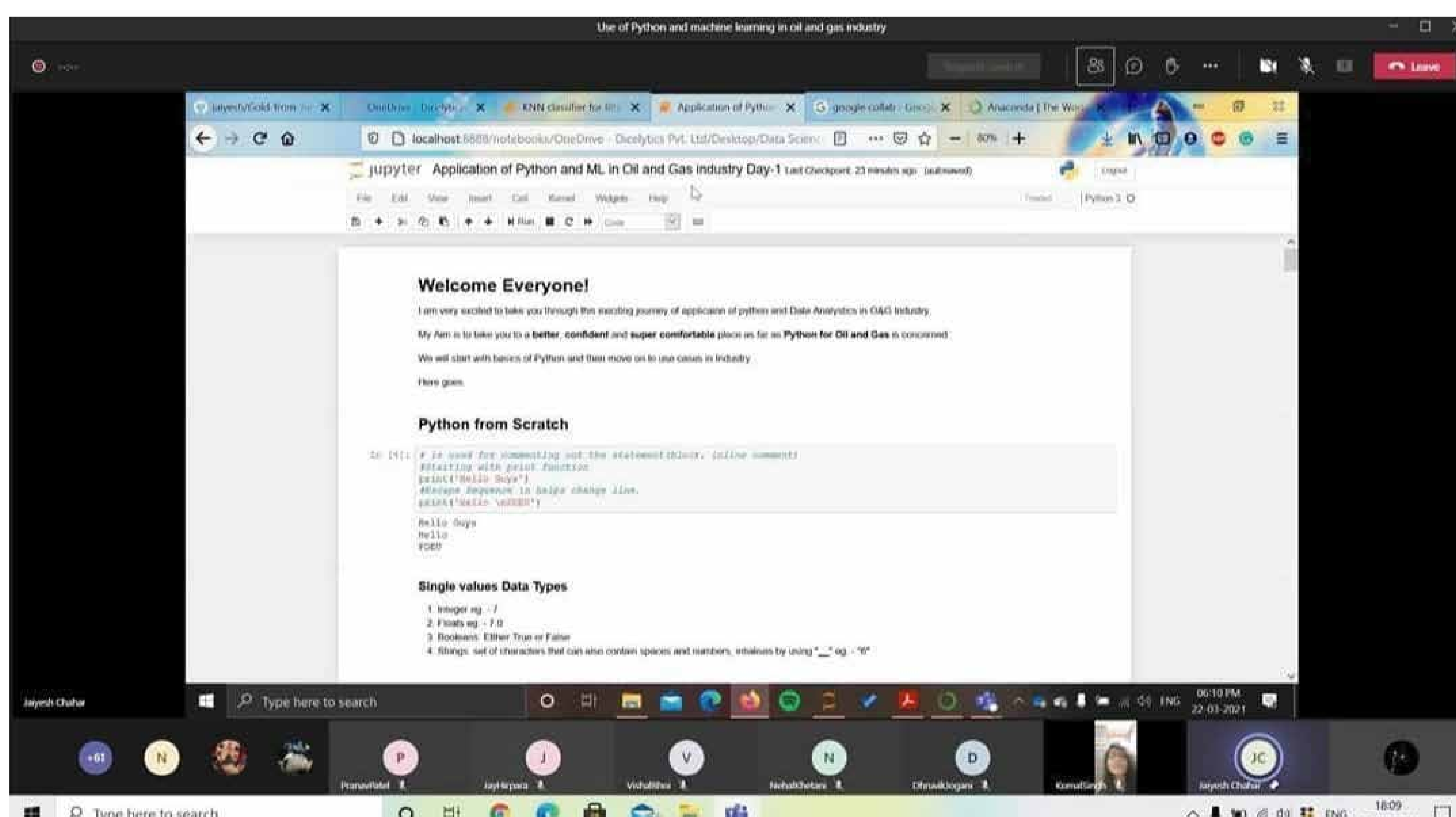
boredom of the wellbore?" He covered a plethora of topics like Managed pressure drilling operation and how to model such systems, Industrial problems in which he briefly explained the tighter pressure control, kick detection and handling, and

reservoir characterization, Derivation of Kaasa model, Comparison between lumped and distributed dynamics for industrial scenarios, Introduction to distributed models for wellbore and reservoir. He explained all these topics in a dynamic and exuberant manner while answering the doubts of the inquisitive minds. The enthusiasm shown by students kept the session thought-provoking.

The workshop was appreciated by the students and they also found it to be very interesting and informative.

Use of Python in Oil & Gas Industry

By Mr. Jayesh Chahar
(Reservoir Engineer,
Dicelytics)



Python is a general purpose and high-level programming language that's the foremost well known programming language for data science and specifically for data analytics. Python has demonstrated to be the foremost valuable stage for profoundly modern Petroleum Information Analytics tools. By looking importance of python in oil and gas industry, FIPI PDEU SC organized a very Illuminating 3 day workshop on "Use of Python and Machine Learning in Oil and Gas Industry" by Mr Jayesh Chahar, Reservoir Engineer (data analyst) at Dicelytics.

The session started with a brief introduction about the basics of Python in the oil and gas sector. He introduced the participants with the concepts of computer programming and machine learning required for implementing the algorithms used. He covered a plethora of topics like basic operators, Loops: For, while, nested for, nested while, python libraries like Numpy and much more. He explained all these topics very ebulliently while answering the doubts of the

inquisitive minds. He moreover examined a few solutions of real life problems and featured understudies to his project work. Indeed, it was a bewitching session enjoyed by everyone and the enthusiasm shown by them kept the session thought-provoking.

Financial Planning for Young Professionals

By Ms. Nidhi Kothari
(Financial Coach,
Hermoneytalks)

The screenshot shows a Zoom meeting interface. At the top, it says "Recording" and "You are viewing Nidhi K's screen". The main content is a slide titled "Primary vs Secondary Markets". The slide contains a table comparing the two market types. To the right of the slide is a video feed of Ms. Nidhi Kothari. At the bottom of the Zoom window, there are controls for Unmute, Start Video, Participants (134), Chat, Share Screen, Record, Reactions, and a Leave button.

Features	Primary Market	Secondary Market
Definition	Securities issued first time to public	Trading of already issued and listed securities
Also called as	New Issue market	Post Issue market
Price determination	By Issuer Company in consultation with Merchant Bankers	By supply and demand forces of the market
Key intermediaries	Merchant Bankers and RTAs	Stock Brokers and DPs
Purpose	- Raise capital for expansion, diversification, etc	- Trading of securities - Providing liquidity to investors - Raising further capital for expansion

Finance is a system that involves the exchange of funds between the borrowers and the lenders and investors. It operates at various levels from firms to global to national levels. FIPI PDEU Student Chapter had organised a workshop on “Financial Literacy for Students” by Ms. Nidhi Kothari. Students from different Universities attended the workshop to gain knowledge about the Finance. The main motive of this workshop was to explain the students about the attempt

to reduce the cost of finance and ensuring sufficient availability of funds and also, dealing with the planning, organizing, and controlling of financial activities like the procurement and utilization of funds. The Workshop also provided the information regarding investment of money in mutual funds, stock market and PPF. Participants enthusiastically participated in the workshop and also asked their queries and the queries were solved by Ms. Nidhi Kothari.

COALESCE

3.0

Lecture Series on Importance Of Geology In Petroleum Engineering

by Dr. Ashish Sarkar (M.Sc. & B.Sc. from IIT Kharagpur)

F IPI PDEU SC hosted a 3 days lecture series on Importance of Geology in Petroleum Engineering by Dr. Ashish Sarkar, M.Sc. (Applied Physics) and Ph.D. (both from IIT, Kharagpur).

He started his lecture with the brief Introduction to Geology and made the session alive. He emphasized the Geological Survey of India (1851), First well in Digboi (1866), First petroleum engineering department opened in ISM Dhanbad (1957). He covered plethora of topics, spoke about the Role of Geology in petroleum engineering, Geological Time Scale, Clastic Sedimentology, Grade Scales in which he explained about the Udden-Wentworth Grade

The screenshot shows a Zoom meeting interface with a slide titled "Formation of oil and gas accumulations: schematic presentation of primary and secondary migration in the initial (I) and advanced (II) stage of basin evolution". The slide contains the following text:

A **Petroleum System** consists of

1. Source Rock
2. Reservoir Rock
3. Migration Path
4. Trap

Apart from these, various geo-physico-chemical conditions need to be fulfilled for the generation of petroleum

The slide also features two geological diagrams. Diagram (I) shows "PRIMARY MIGRATION" and "SECONDARY MIGRATION" in a basin with "carrier rock" and "source rock" layers. Diagram (II) shows "ACCUMULATION" of "GAS" and "OIL" in a trap, with "PRIMARY MIGRATION" and "SECONDARY MIGRATION" paths. The diagrams are labeled "SEA-LEVEL" at the top.

At the bottom of the Zoom window, there are controls for Unmute, Start Video, Security, Participants (35), Chat, Share Screen, and Pause/Stop Recording.

scale, then Shepherd's classification system, Dot's classification. He explained all these topics in a zestful manner.

The next day of the lecture series started with the Introduction of Petroleum System. He explained about the Continental Shelf Platform, Principles of Stratigraphic, Branches of Geology, the Sedimentary

Ecoscribe 2.0

Online Blogging Competition

As a part of Coalesce 3.0, an exemplary event was organized by FIPI PDEU SC in collaboration with Envirofreaks: The environmental club of PDEU named 'ECOSCRIBE 2.0' - an online blog writing competition with the belief of spreading environmental awareness, where the participants penned down their thoughts and ideas on the theme "Impact of net zero carbon challenge". We brought this competition to help the participants improve their research skills and scope on Environmental safety and thereby attain finesse. As we transition to a more socially- and environmentally-conscious society, many consumers have begun to scrutinize their daily habits and make changes. Ecoscribe aimed to raise awareness among ordinary people and encourage more ecologically-responsible behavior.

All the entries were posted on the social media handles of both the clubs (I.e Instagram, Facebook and LinkedIn). Entries were evaluated based on the quality and creativity of the content along with likes and shares. The winners were awarded with prize money worth Rs 1500 and a shoutout on the social media handles of both the clubs. It was indeed a very splendid event. The true efforts and enthusiasm shown by the participants made 'Ecoscribe' a great success.



Rocks, anticline and syncline, types of sand, Factors controlling Porosity. He also shared his field experience with us. The lecture was appreciated by the students and they also found it very informative.

Paheli

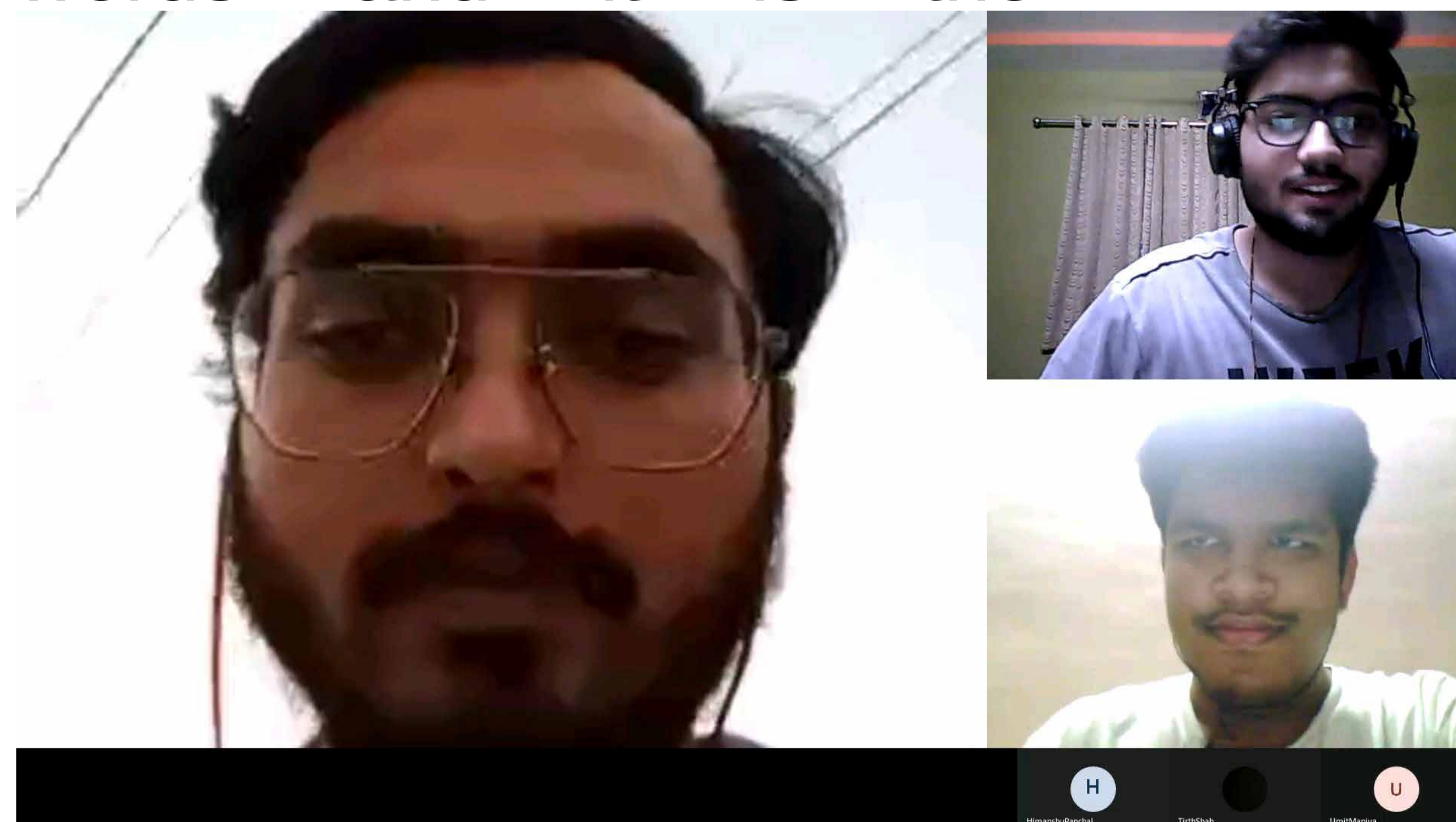
Code-decoding Competition

The Organization of the Petroleum Exporting Countries (OPEC) is an intergovernmental organization of 13 countries namely Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia United Arab Emirates and Venezuela founded in 1960. Baghdad OPEC objective is to co-ordinate and unify petroleum policies among member countries, to secure fair and stable prices for petroleum producers and supply of petroleum to consuming nations.

To keep the enthusiasm of COALESCE 3.0, FIPI PDEU SC organised an amazing event that is a Coding Decoding Competition where the participants were divided in team of 2 and the vast information were provided

about the different countries (1 country per team) to read in the given interval. It consisted of two rounds each of them with a twisted question from decoding to rapid fire quiz round based on the decoded topic. The students found the event to be fun and very informative, and was praised by everyone.

Coding Decoding is an important part of logical reasoning section in all aptitude related examination. It is essential to reading, it allows students to figure out most words and it is the



foundation of reading instructions like fluency, vocabulary, reading comprehension, phonics, and phonemic to words. It helps the students to give

knowledge of letter-sound relationships, and successfully recognize familiar words quickly and figure out words.

Petrospect

Technical Quiz Competition

Quizzes are not only fun for students, they are also a sneaky form of learning. FIPI PDEU SC organised an interesting and informative event named PETROSPECT- A Technical Quiz Competition as a part of COALESCE 3.0. Wherein the participants were examined with technical questions related to Oil and Gas Industry. The event was carried out in 2 rounds, round 1 at 11 AM and the selected participants

got the chance to take part in round 2.

The students participated enthusiastically and showcased their brilliance

by rapidly answering the questions. Some of the questions were tricky, the students tried their best with confidence. They found this competition very informative and knowledge enriching.

Taking online quizzes is becoming a huge success. Engage your audience in a unique and fun way and connect them to your brand or learning material. Another plus benefit of online quizzes is getting immediate results from your participants. Not only does the creator get the results, the participant itself is also possible to get his/her results. This makes it for the creator easy to identify the gaps in knowledge. The participants are able to view on what kind of section they have to improve themselves.

Aptacon

Aptitude Test

FIPI PDEU SC organized a commendable competition as a part of COALESCE 3.0 that is 'Aptacon' - An aptitude test along with a seminar on "set your sights on doing masters abroad" in association with Renaissance.

It was a preeminent occasion for young minds to



interrelate with the guest speaker, Mr Jayesh Patel, in a vast assortment of career areas to gain a broader insight on doing masters in the foreign countries into their chosen area of study along with valuable analytical capabilities. They also acquired the knowledge of what it takes to be successful in the world of work in general. It was indeed an amazing session, everything was explained in a dynamic manner and candidates were

introduced with an understanding of the international context. It motivated the new minds and ushered them for their future in respective fields. The aptitude test was conducted after the seminar with the purpose to analyze an individual's strengths and weaknesses, along with their ability to perform in areas such as problem-solving, logical reasoning, verbal comprehension and the knack for decision-making. Its uses also involved gaining predictive insights into future job performance, specific abilities and areas in which an individual is likely to excel. It was a golden opportunity for the students to measure their abilities and their level of expertise, which was a valuable way to monitor their success.

The whole event was appreciated by the students and they found it to be very fruitful and worthwhile.

TEACHING SCHOOL KIDS



The world is in a stage of continuous flux where terms like socio-economic strata, nationalism, me, and mine are being replaced by one country and one universe. FIPI PDEU Student Chapter visited Aarti Public School to guide the students of class IXth and Xth standard regarding what streams we have after class X and what happens after class XII. It also includes Career Orientation, General Knowledge Quiz, Importance of English Reading and Importance of News and GK in our daily life, and the Motivational Stories for such virtuous and zealous students. We were ecstatic to see the response of the students indicating that they liked the session and got to learn a lot from it and hoped to have more of these.

TREE PLANTATION



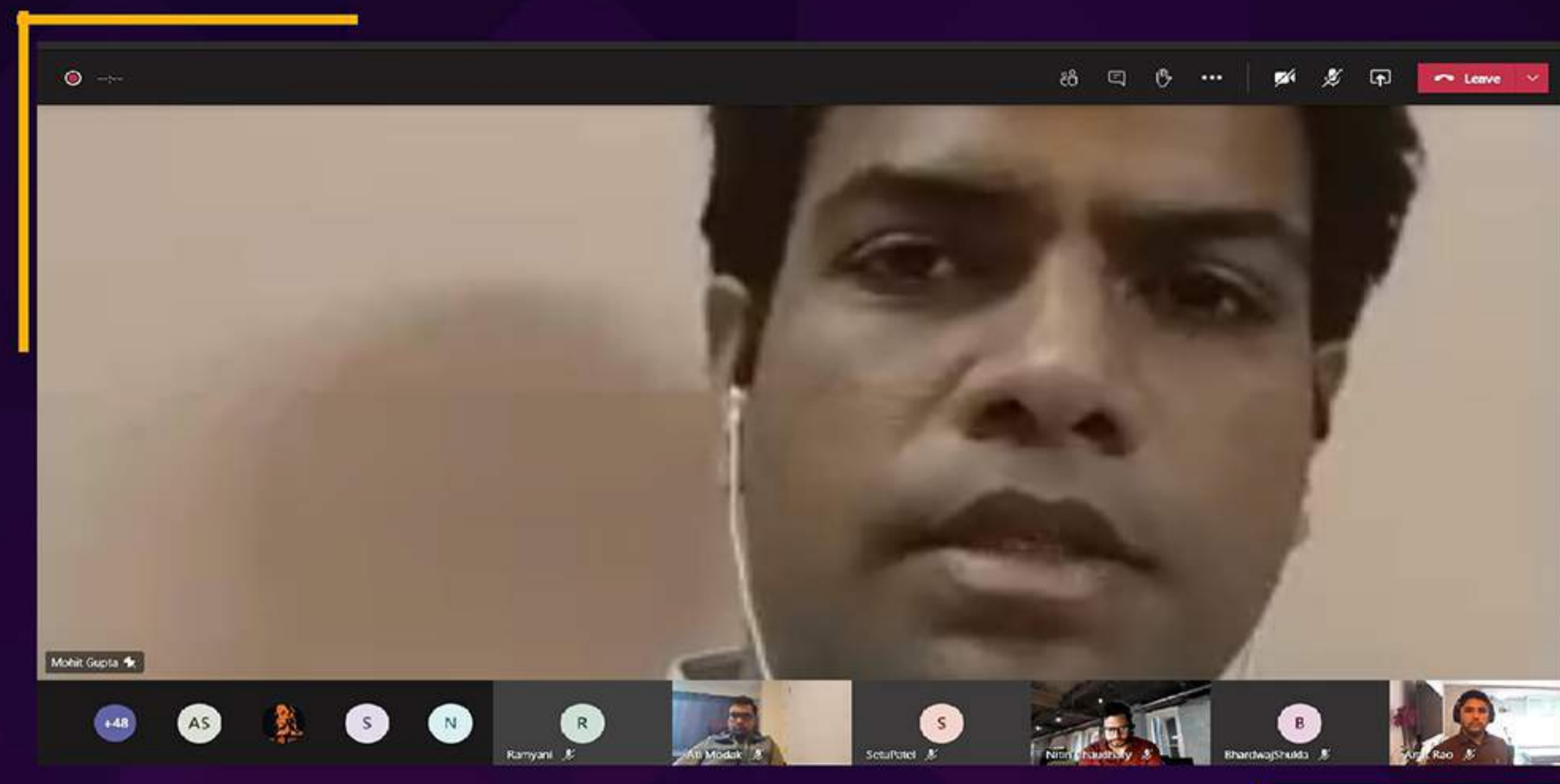
Shot on OnePlus
By VADIA

FIPI PDEU Student Chapter organized an extensive Plantation Programme in different parts of our locality. The Committee Members selected the empty places and the roadsides to plant saplings in a well-organized way. In order to restore the eco-balance of the afforestation drive was taken with all seriousness. Participants were highly enthusiastic to make it a big success. The students planted saplings, and fenced them, and watered the plants. Every step of the program was appreciated by the representatives of the administration. The program created a great stir among the general public too. At the end of the program, the FIPI PDEU Student Chapter motivated others to do Tree Plantation to make the city green and clean.

Panel Discussion on Pathways after B.Tech in Petroleum



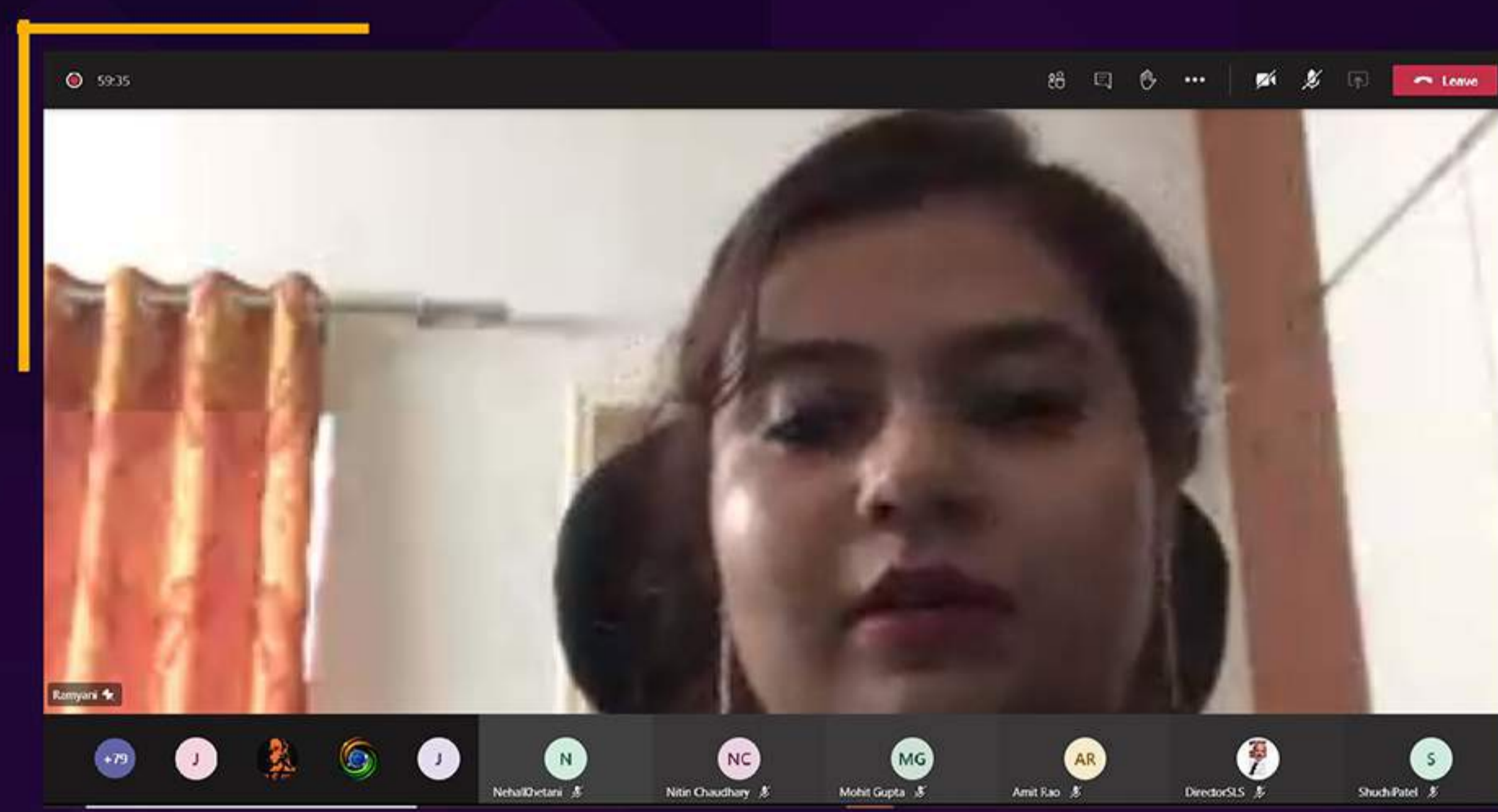
Mr. Atidrip Modak
Equity Analyst at Goldman Sachs
New York, USA



Mr. Mohit Gupta
Associate Vice President, HSBC Bank
Karnataka, India



Mr. Amit Rao
Senior Consultant at IHS Markit
Paris, France



Mrs. Ramyani Mukhopadhyay
Reservoir Engineer at Exxonmobil
Karnataka, India

n Engineering



Dr. Nitin Chaudhary
Data Scientist
Texas, USA



Prof. (Dr.) Nigam Dave
Director SLS
PDPU

FIPI PDEU SC organized an exemplary event named Pathways after B.tech. It was intended to give understudies a superior comprehension of the multitude of various fields after B.Tech. The panel discussion was moderated by Dr. Nigam Dave (Director of SLS PDEU) and the panel also consisted of Amit Rao (senior consultant at IHS Markit), Nitin Choudhary (Data scientist, PHD in petroleum engineering, Texas, USA), Ramyani Mukhopadhyay (Reservoir Engineer at Exxon Mobil), Atidrip Modak (Equity Analyst at Goldman Sachs MBA, Finance, New York, USA), Mohit Gupta (Associate Vice President, HSBC bank)

At the starting of the Panel discussion, Dr. Nigam Dave gave a brief introduction about the topic and then all the panelists shared their valuable experiences of their fields and discussed how to plan for a particular vocation and how the plan can be effective in the world of work in general. Throughout the session, panelists discussed about Campus Placements, further studies with Specialization i.e. M.Tech, Business and Management i.e., MBA, Abroad study, Civil Services Examination etc.

At the end of the Panel discussion, there were queries asked by the students and the panelists answered all their question.

Best Student Chapter Award

FIPI India organized the 10th Annual Convention on “Meeting Energy Demands Amidst Climate Changes”, wherein FIPI PDEU SC also presented their views by giving the message that a true conservationist is a man who knows that the world is not given by his father, but borrowed from his children. FIPI PDEU SC has always enlightened the youth to proceed towards sustainable energy development with Principle, integrity and experience by providing a platform to mould themselves into the Energy soldiers of tomorrow. FIPI PDEU SC showcased all the tremendous events of the year 2019-20 which included various guest lectures, workshops, online events, informal events and social initiatives. As someone said that coming together is a beginning, keeping together is progress and Working together is success, FIPI PDEU SC was once again recognised as the best student chapter 2020 among its peers all over India at the 10th annual FIPI convention. FIPI PDEU SC is looking forward to providing the best outcome towards energy with the belief that the apex is yet to be achieved and we will strive hard to achieve it.



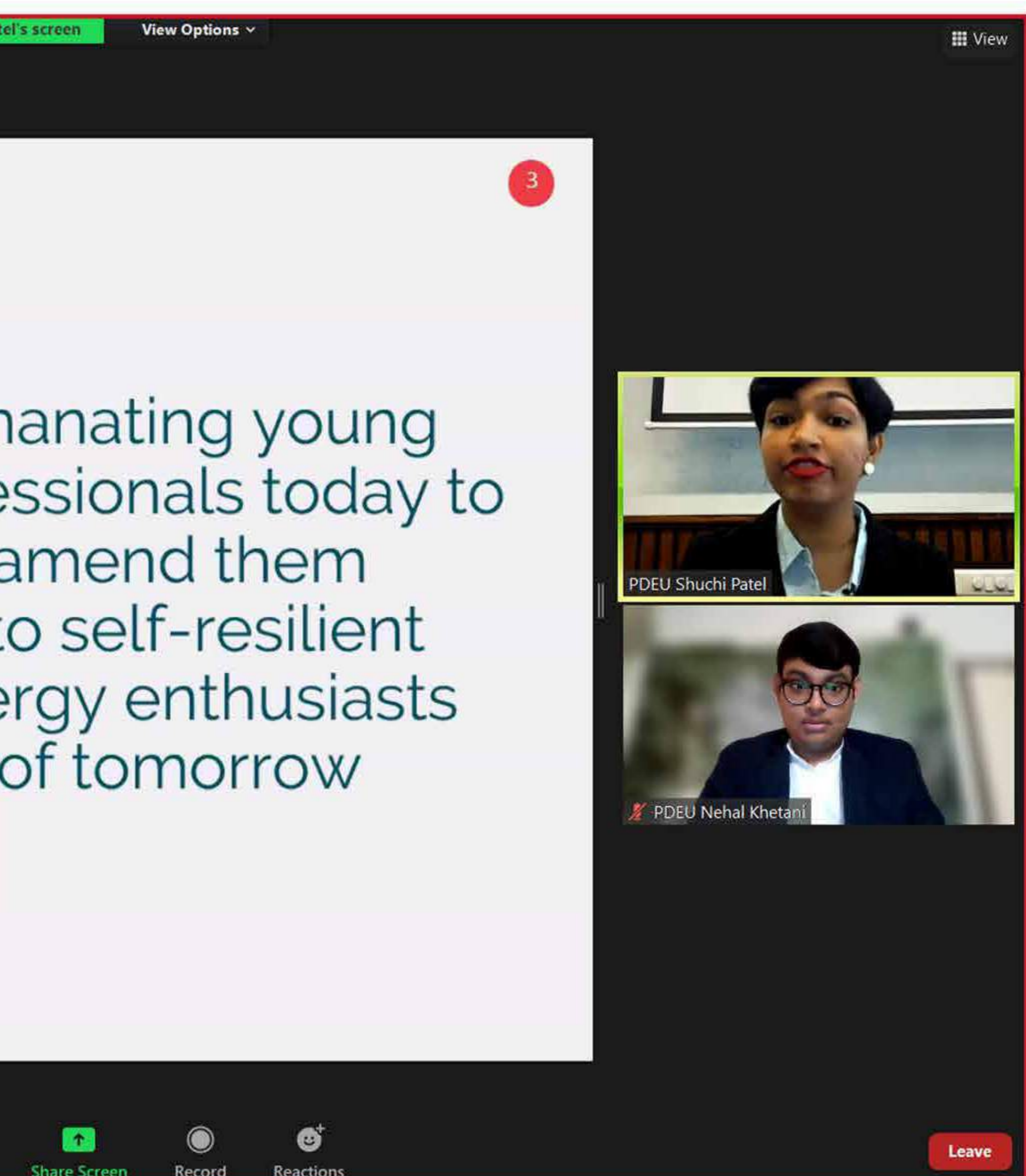
Chapter Representation **Virtual Workshop on Thermal EOR**



A virtual workshop on Enhanced Oil Recovery (EOR) with the theme “EOR Enablers -Technology & Policy Framework to leverage EOR Potential in India” was organized by Federation of Indian Petroleum Industry (“FIPI”). The Workshop was organised to refresh the latest technology developments, academic researches and policy support required in the space of EOR.

The main issues discussed were about the low productivity reservoirs, high water-cut oilfields, high-viscosity oil and fractured reservoirs shows us the importance of EOR methods application both as promising technologies and technology challenges to improve oil and gas development efficiency in the current situation of low oil prices.

Participants shared their own experiences, discussed existing methods and results of oil recovery enhancement. This workshop reviewed the basic methods of EOR, including thermal, gas, chemical and combined methods of formation stimulation, case studies and position of their application as well as the implementation of new technologies.



Poster_EnhancingOil.pdf - Adobe Acrobat Reader DC (32-bit)

ENHANCING OIL RECOVERY VIA STEAM ASSISTED GRAVITY DRAINAGE

AUTHORS: NISHIT PATEL, RAS KOTHIVA AND NANDAN RADADIVA

Abstract: This paper presents a detailed study on the application of steam-assisted gravity drainage (SAGD) for enhancing oil recovery from heavy oil reservoirs. The study focuses on the effect of steam injection on the mobility of heavy oil and the resulting increase in recovery. The authors analyze the impact of various parameters such as steam injection rate, well spacing, and reservoir properties on the overall recovery efficiency. The results show that SAGD significantly improves oil recovery compared to conventional methods, especially in heavy oil reservoirs. The study also discusses the challenges associated with SAGD and provides recommendations for optimizing the process.



Microsoft Teams

Request control

Question: 4

Comment on disaster shown here and who declared state of emergency in which country

Bit Evaluation

Calculator bit	Calculator	Winlogon	
		Calculator bit	Calculator bit
Calculator bit	Calculator	65%	95%
Calculator bit	Calculator	60%	0%
Calculator bit	Calculator	5%	5%

TECHNO

5.

Microsoft Teams

Award Ceremony

FIPI

MIT-WPU UNIVERSITY

LOGGER'S HUNT

Round: 02- Log Interpretation

'Team Wloggers'

Shubham Chavac
Swara Deshmukh
Hrithik Swarna

INSTRUCTIONS

- I. There are 5 sections and In each section contains 5 questions
- II. ONLY 15 Seconds will be given for first 4 sections. After 15 second leader of the team have to give their final answer. (+10 Point) for right answer and (-0.5) point for wrong answer
- III. 15 Seconds will be given for last section. After one minute leader of the team have to give their final answer. (+10 Point) for right answer and (-1.0 Point) for wrong answer

The Emergence of Nano Silica for Oil & Gas Well Cementing

Application | Challenges | Future Scope

By
Harsh Kumar Verma, Dhrumil Khatri, Mousumi Nandi

School of Petroleum Technology,
Pandit Deendayal Energy University

ASSUMPTIONS &

- Injection Rate: 0.25 m³ per well (250000 m³)
- $\rho_{slurry} = 2.4 \text{ g/cc}$
Yield: 20000 - 200000 (150000 - 1000000)
- Production Rate: 10000 m³/day
- Well Life Span: 10 years
- Well Depth: 10000 m
- Monthly Expenditure: INR 500000



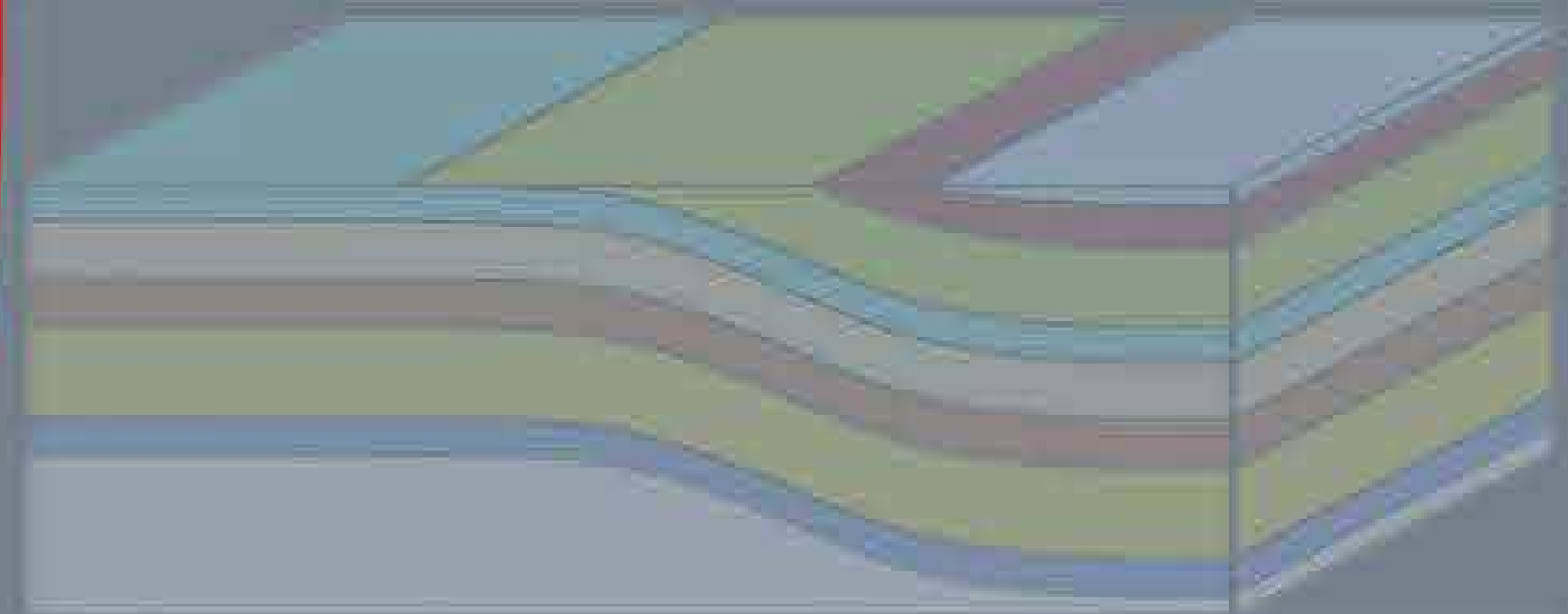
DALSTAR

0

Question: 8

6

Identify Fold Type



TechnoAltar 5.0: Revolution in Indigenous Energy Technology

Dr. Frank Deimbacher
Head of Technology, Energy, Amazon Web Services (AWS)

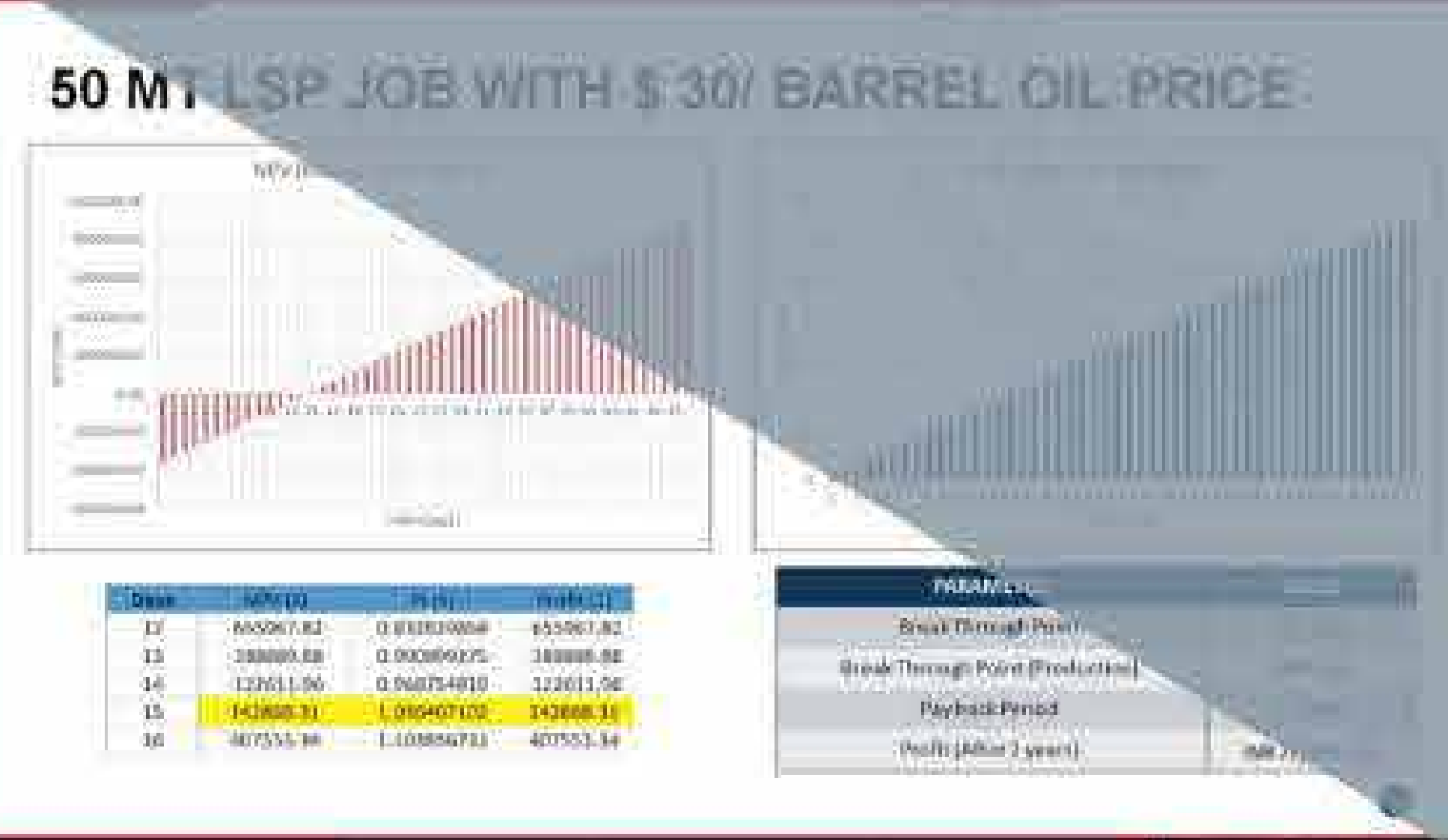
There's a big drive towards cost efficiency and that has also been sort of emphasized and made more important through the last year with the pandemic where there have been a lot of initiatives to put more autonomous operations, remote operations, and all that sort of course leads itself towards robotics whatever your definition of robotics.

agora #CWAgora at #CERAWeek

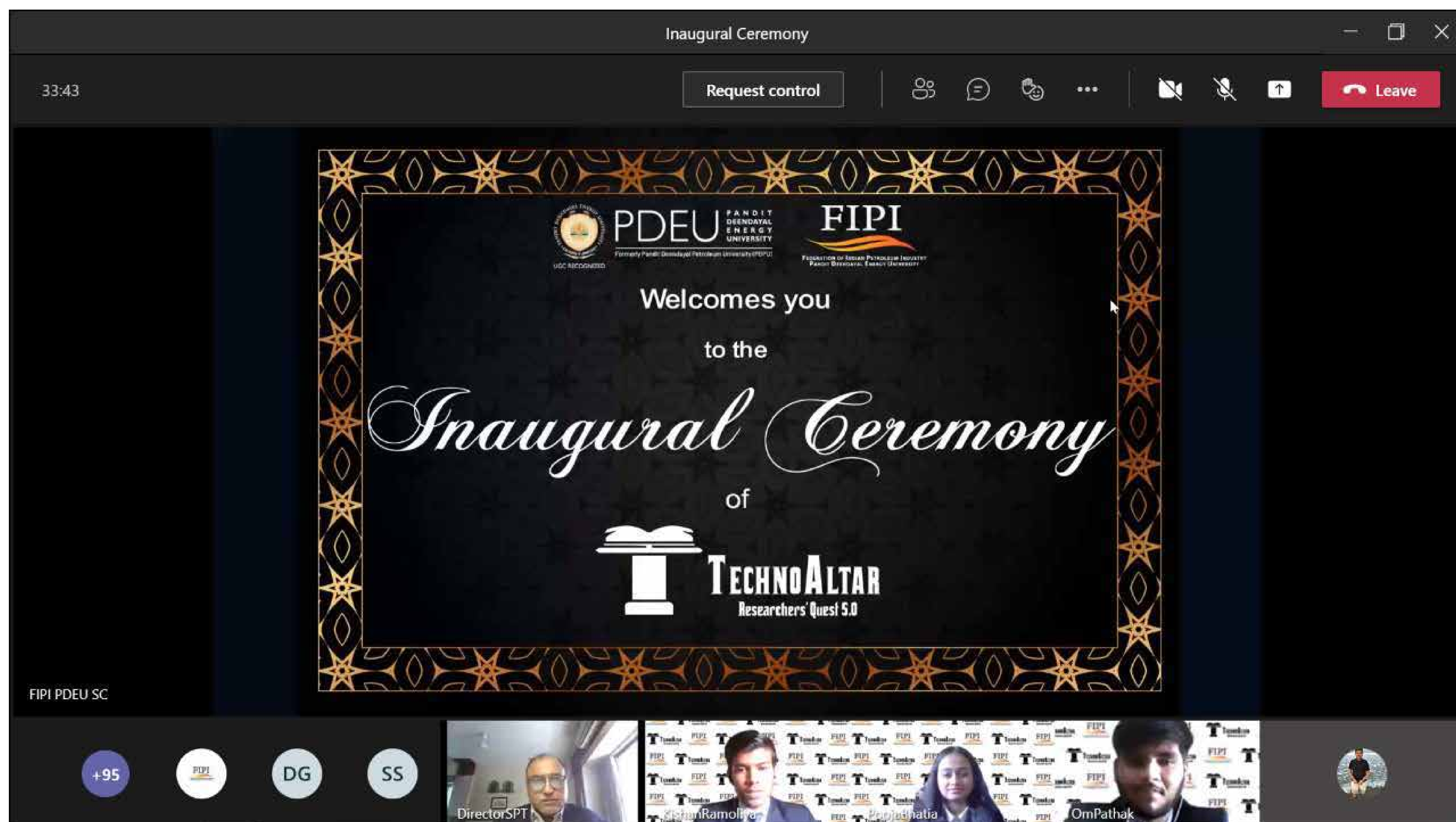
TechnoAltar 5.0: Revolution in Indigenous Energy Technology

Increasing Domestic H/C Availability

* Production



Inaugural Ceremony



Always memorize the celebration of a milestone. Because when you do it you are ready for the road ahead." The Fifth edition of mega fest TechnoAltar commenced with a Virtual Inaugural ceremony.

The ceremony was started by illuminating the Industrial Guests, Faculties and participants about the history, journey and achievements of the chapter. The inaugural ceremony was honoured by the presence of Guest of Honor Dr. Rakesh Kumar Vij(Director SPT-PDEU) and Mr. Sudhir Kumar(HOD, Producing Fields-II Directorate General of Hydrocarbons Ministry of

Petroleum, Natural Gas Government of) and Chief Guest Dr. Anand Gupta(Additional Director General, Directorate General of Hydrocarbons).They shared their valuable experience and contribution in oil and gas industry and enlightened students with the current changing scenario of oil and gas industry and motivated the students with their valuable words.

The dignitaries announced the fest open by virtual lighting of the lamp and then the President of FIPI PDEU SC shared the roadmap for MegaFest TechnoAltar. At the end, inclusive addresses of the dignitaries charmed the members with Energy and Enthusiasm.

Guest Lecture On India's Future Hydrocarbon Outlook

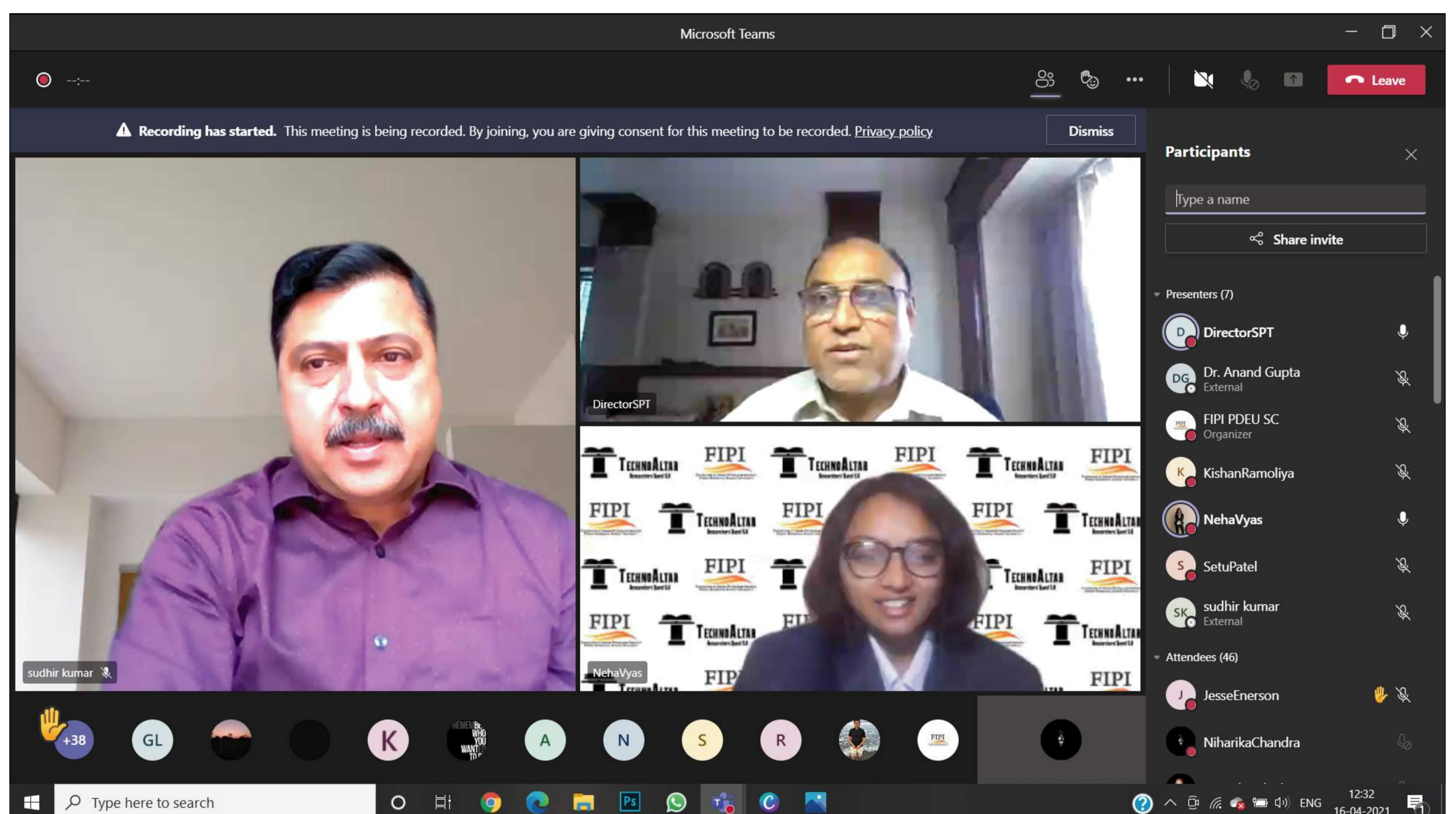
by Mr. Sudhir Kumar
(Producing fields - DGH)

The energy sector has seen various technological transformations from data analytics to artificial intelligence to robotics which are enabling the sustainable efficiencies in energy use, as they improve productivity of resource producers and speed the emergence of renewable energies. As we look into the future of India's Hydrocarbon Outlook, we see an unparalleled journey.

As a part of TECHNO ALTAR 5.0, FIPI PDEU SC hosted a Guest Lecture on India's Future Hydrocarbon Outlook by Mr. Sudhir Kumar, HOD, Producing Fields-II Directorate General of Hydrocarbons Ministry of Petroleum, Natural Gas Government of India.

He talked about energy vision and critical transformation goal. He also said that energy demand increased because of the world shift towards low carbon sources and showed the path of country's energy securities, wherein transformative initiative undertaken during the last 6 years. He also told that the opportunity of Oil & Gas Exploration in India is high and its projects are characterized by high risk.

He explained all these topics in a dynamic and plenteous manner while answering the doubts of the inquisitive minds. The enthusiasm shown by students kept the session thought provoking.



Guest Lecture On AI, ML & DL in Oil & Gas Industry

by Dr. Rakesh Kumar Vij
(Director SPT, PDEU)

The oil and gas industry has always been associated with challenges and complexities. Due to the global and distributed nature of the



introduction about the AI, ML and DL. He explained to the participants about the “Importance of AI, ML and DL in the Oil and Gas Industry”. He covered a plethora of topics like Market Trends and Development, explained Elements of

business, processing and managing this information is an arduous task. Artificial Intelligence (AI) and Machine Learning (ML) in particular, have gained huge acceptance in many areas recently, including the Oil and Gas Industry.

As a part of TECHNOALTAR 5.0, FIPI PDEU SC hosted a guest lecture on AI, ML and DL in Oil and Gas Industry by Dr. Rakesh Kumar Vij, Director SPT, Pandit Deendayal Energy University.

Digital Oil Fields – AI, ML, DL, Data Pool, Digital Twin, Augmented Reality etc. He briefly explained the Ongoing Applications in Indian E & P sector, Adaptation of different technology, Benefits of AI and what are the challenges faced by Oil and Gas Industry. At last, he ended his lecture with the Regulator's role i.e., “Data will drive the future, so we must get its governance rights”.

The lecture was appreciated by the students and they also found it to be very informative.

The plenary began with an

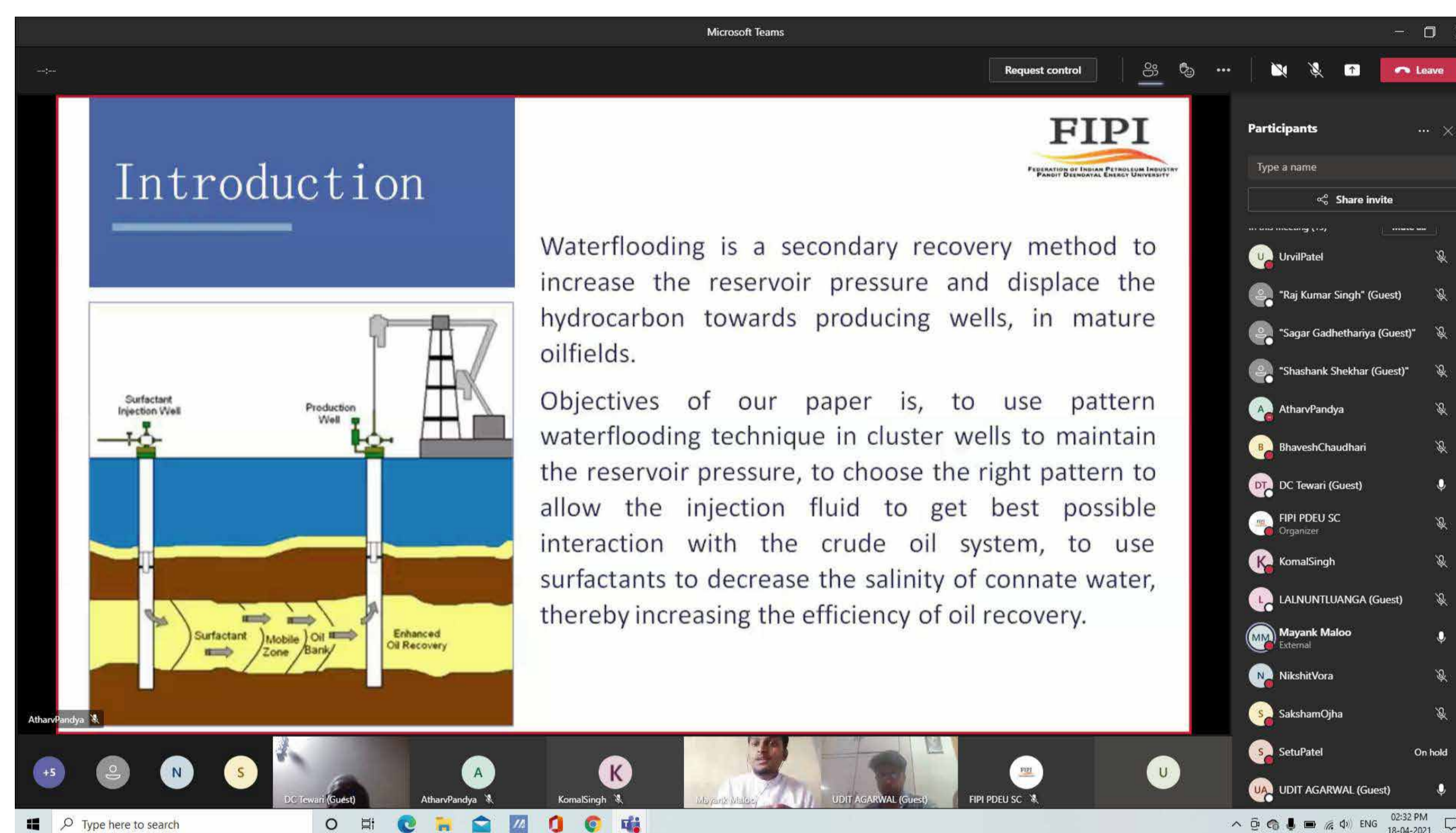
Prastutikaran

Technical Paper
Presentation
Competition

FIPI PDEU hosted P R A S T U T I K A R A N - Technical Paper Presentation Competition on the last day of our megafest Technoaltar 5.0. A prodigious amount of students from PDEU as well as other reputed universities of India, participated in this event. The competition was held in parallel panels which included Drilling, Production, Reservoir, Energy and a separate panel for the 1st year students in order to nurture their presentation skills. The aim of prastutikaran was to convert the technical understanding to potential outcomes that could make aspire for a futuristic betterment of the industry.

Prastutikaran held utmost importance as participants got a chance to

present a core topic where they simultaneously sharpened their presenting skills. Some of the discussed topics were The Evolution of Nanoparticle aided Hydraulic Fracturing, Water flooding aided with nitrogen miscible injection, CO2 Sequestration on New Materials, etc.



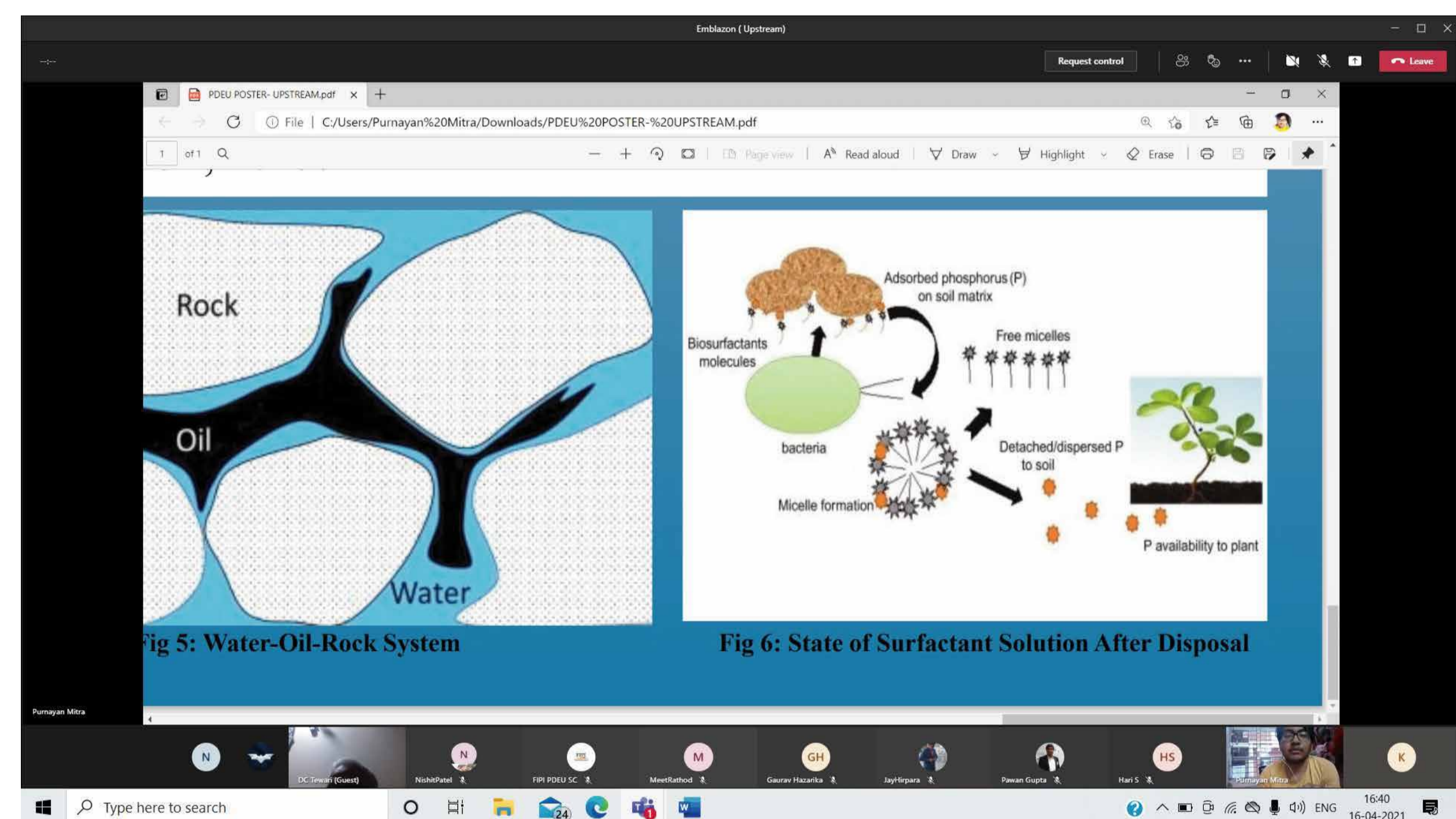
All the participants had to submit their abstracts and presentation before the fest. After reviewing them, the selected participants got the chance to present their papers. The event had judges from respective domains who tested their knowledge of the subject and enlightened them about the innovations in the oil and gas industry and enriched the event. Everyone appreciated the event and found it to be very informative.

Emblazon

Technical Poster
Presentation
Competition

In the midst of the buzz of extravagant Technoaltar 5.0, FIPI PDEU organized a staggering competition named EMBLAZON - A technical poster presentation Competition where students transcribed their innovative ideas through eye-catching posters which provided them an opportunity to learn in detailed about a core subject which is a part of curriculum and develop effective presentation skills by showcasing their presentations on topics like Drilling technologies, Exploration of Hydrocarbons, Reservoir and Production technologies. All the participants had to submit their abstracts before the fest. After the reviewing procedure, the selected participants got the chance

to present their poster. The event was organized in two different parallel panels i.e upstream and downstream due to the enormous number of participation from students of different fields. There was a special panel for the students of first year so that they could nurture



their presentation skills and compete with the students of their level. Students were judged on the basis of their creativity, confidence, understanding of the topic and their presentation skills. Students from various universities enthusiastically took part in this competition. The event had judges from respective domains who tested their knowledge of the subject and enlightened them about the innovations in the oil and gas industry and enriched the event.

Gollum's Riddle

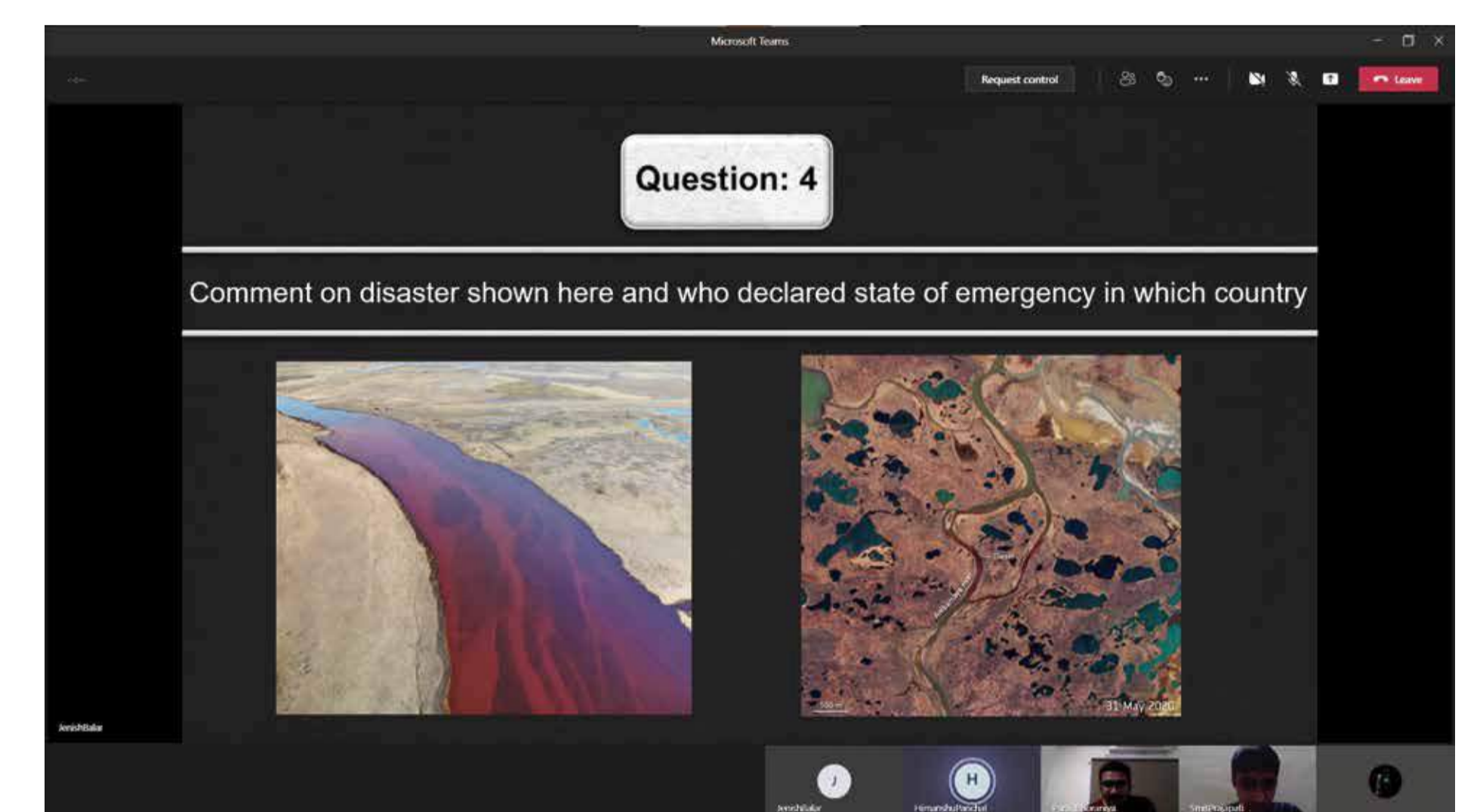
Technical Quiz Competition

In order to scrutinize the technical knowledge of the students, FIPI PDEU SC organized a technical quiz

competition as a part of Technoaltar Researcher's Quest 5.0 named Gollum's Riddle in association with the Institute of Petroleum

Engineers. The team of two Or three participants was made To tackle the competition. The Mind-boggling and astounding Questions that were covered in this Competition were from Geology, Drilling, Reservoir, Well testing, EOR and Current trend of oil and Gas industry, etc. There were mainly three rounds. In the 1st round participants had to answer 40 questions. After the tremendous responses, Eight teams were Qualified for the second round. Five Teams

made it to the third Round where they had answered the questions in 15 seconds each. The enthusiasm shown by participants kept the quiz thought provoking.



The quiz was appreciated by the participants and they also found it to be very informative and interesting.

Contougeo

Contour Quiz Competition

As a part of TechnoAltar Researchers Quest 5.0, FIPI PDEU SC organized a spectacular event 'ContouGeo'. The event began with the instructions to the participants by Harshal Gajera, Member of FIPI PDEU Student Chapter. The Round-I of the event was completed earlier and in Round-II, total 6 teams participated in the

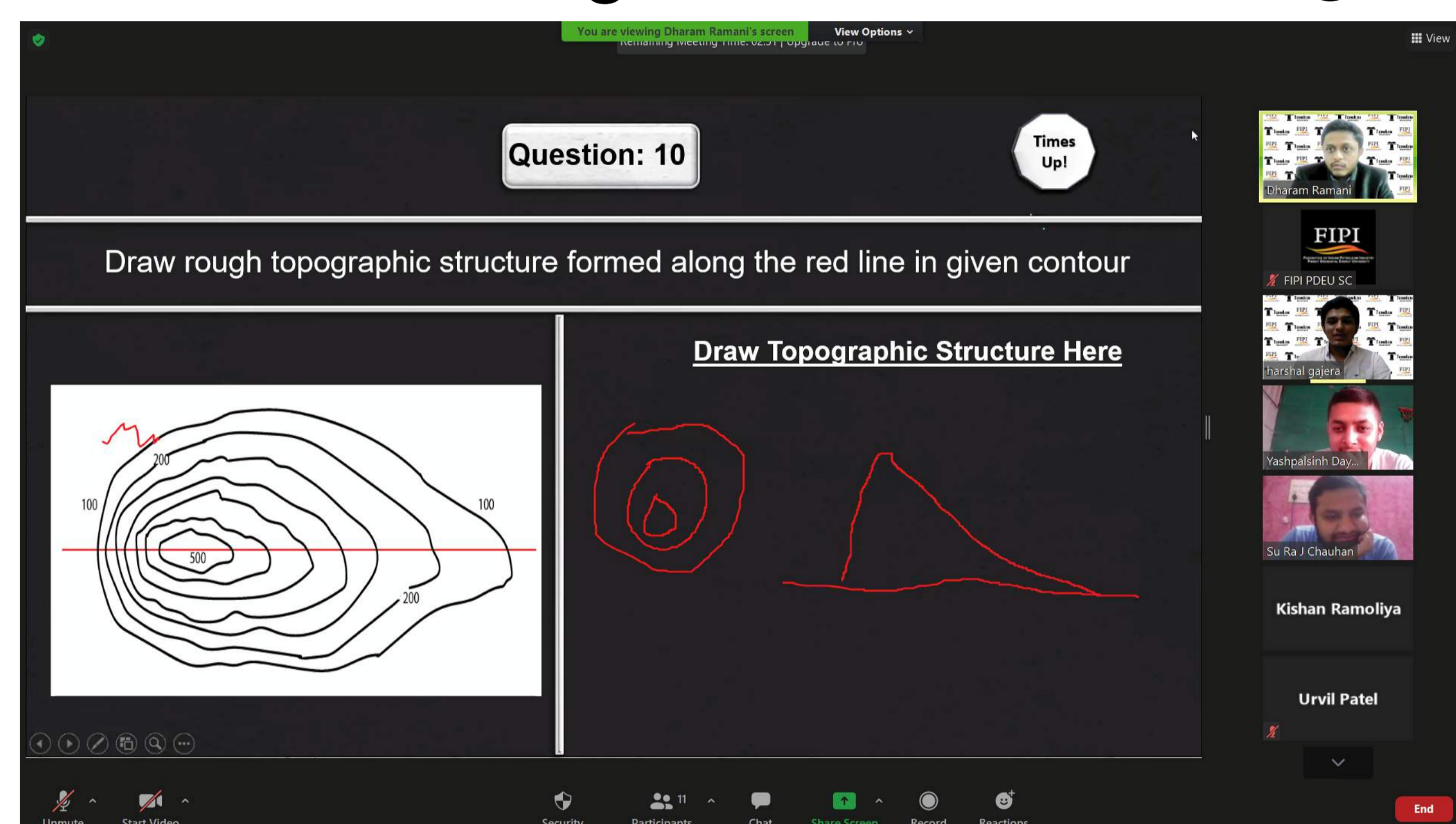
event where total 10 questions were asked to the participants in which 5 questions were based on general oil and gas whereas other 5 questions were based on identification of fold, fault and construction of topographic structure from Contour Map. Participants had to answer within a time limit of 15 seconds for the first 9 questions and after 15 seconds the leader of the team had to give the final

gave all the answers of the questions and made it a great event.

Bid-2-Win

Block Bidding Competition

As a part of TechnoAltar Researchers' Quest 5.0, FIPI PDEU SC organized a spectacular event 'Bid to Win'. The event began with the introduction



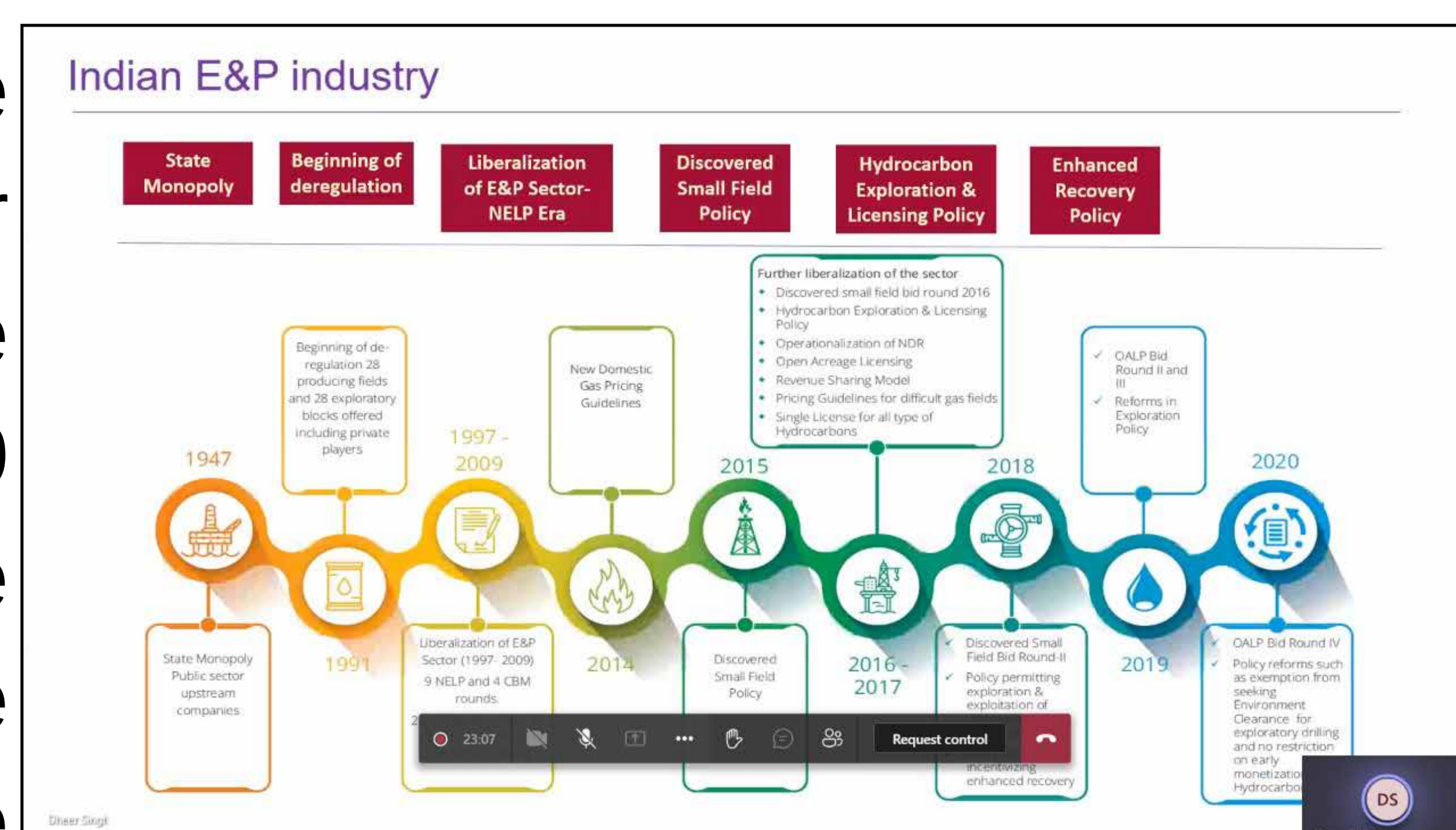
answer. In the last question, Stratigraphy was given to each team from which they had to make the Contour Map. The questions were asked through a presentation by Dharam Ramani, Member of FIPI PDEU Student Chapter and the final scores were noted by Urvil Patel, Member of FIPI PDEU Student Chapter. Participants enthusiastically

of our Chief Guest and Event Partner DGH by Kunal Nagdev, Member of FIPI Committee. Mr. Dheer Singh, Judge of the Event started his presentation and explained about the bidding of the block. After Mr. Dheer Singh's presentation there was a Round-I of quiz in which 15 questions were asked to the participants. After the finish of the Round-I, top 10 participants were selected for the Round-II. In the

second round participants were given a budget and were asked how they will use their money in drilling wells and where they will drill the bid and many other questions. The bids were noted by Mr. Dheer Singh in the Excel Sheet. FIPI PDEU Student Chapter would like to thank our Judge Mr. Dheer Singh and our Event Partner DGH for their valuable time towards FIPI PDEU Student Chapter and guiding the students in the field of Oil and Gas Industry.

Logger's Hunt

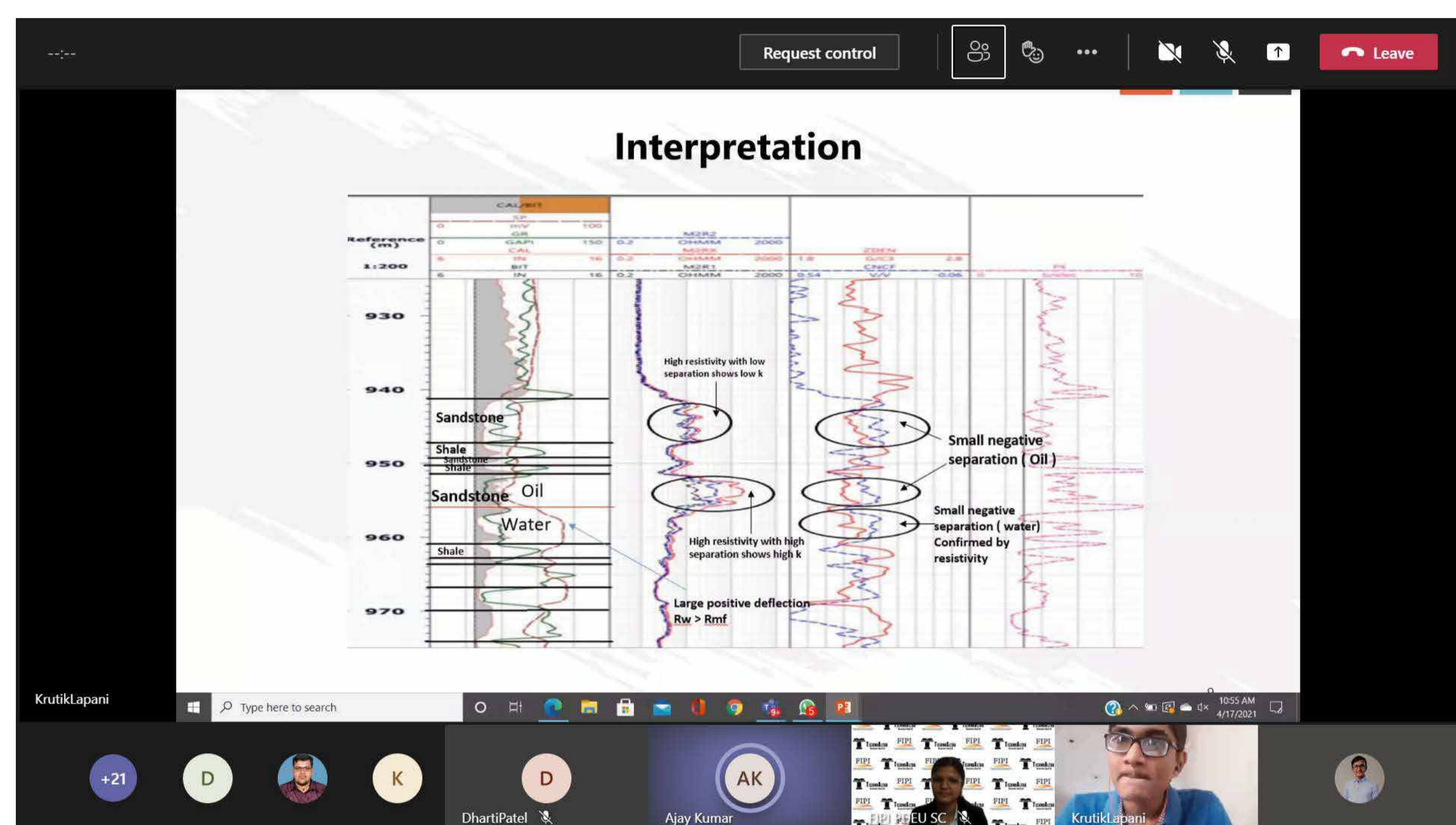
Well Log Interpretation Competition



As a part of the TechnoAltar 5.0, FIPI PDEU SC coordinated "LOGGER'S HUNT - Well Log Interpretation Competition.

properties of the reservoir.

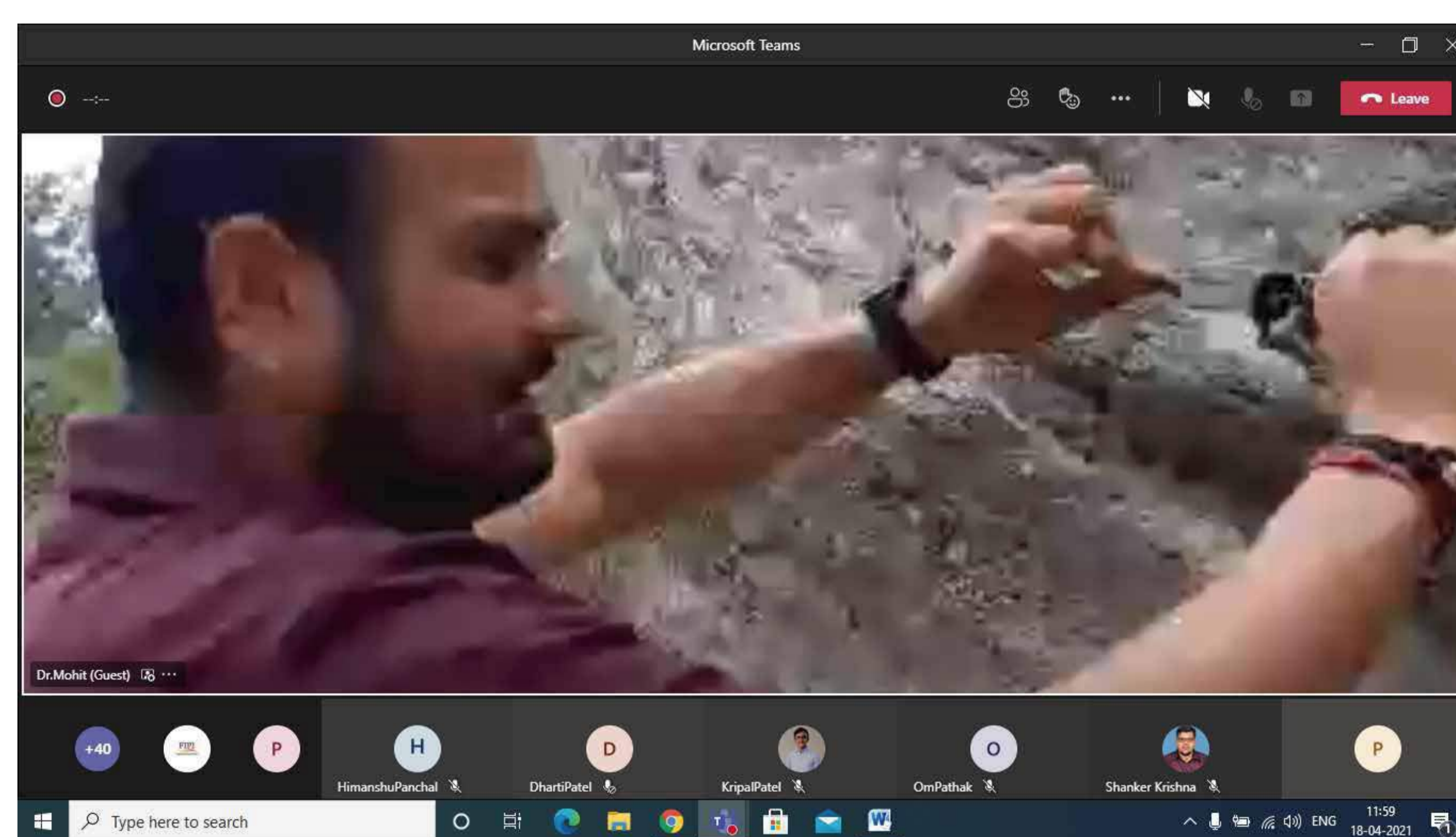
The event was valued by the members and they likewise discovered it to



The main aim of this event was to enhance knowledge about Well Log Interpretation. This was a brainstorming rivalry that consisted of Quiz and contextual analyses dependent on Well Logging and Formation Evaluation. Event Partners for the logger's hunt were IPE and HLS-India. The first round of the event consisted of 40 quiz type questions on an online IPE platform and the second round consisted of interpretation of well-log. In the second round participants interpreted the well logs with vital information regarding the lithology and petro physical

be instructive and fascinating. In this event Participants actually upgraded their scientific abilities and improved their insight in the individual regions.

Virtual Field Trip



As a part of Technoaltar Researcher's Quest 5.0, FIPI PDEU SC organized an marvellous event 'Virtual Field Trip' by Dr. Mohit Kumar Puniya who is scientist at National Geotechnical Facility, Surveys of India.

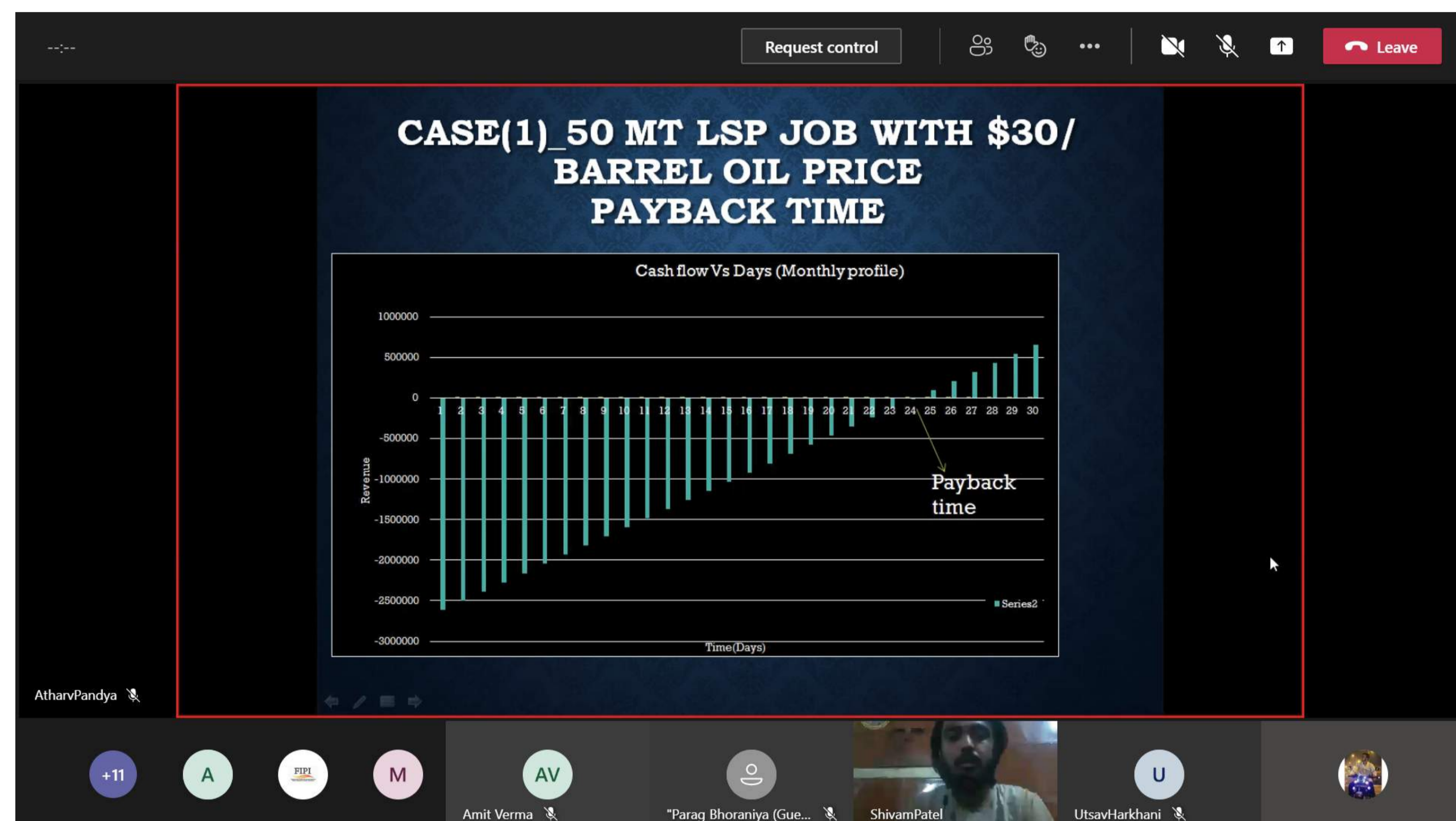
He decided the location near the Higher Himalayan field and visited each destination and showed the geological structures, sedimentology, etc live. They showed the geological Foliation Plane and taught how to identify it. He also talked about deep strike and Showed the brinton compass and how to use it. They cleared the concept of stress and strain on the Foliation Plane. They also showed joints and fractures and gave techniques on how to find it and identify it. Really, Virtual

trip field experience intended to create an immersive and realistic environment.

This was the first time any student Chapter organized that kind of event. The session was appreciated by participants and they also found it to be very informative and interesting.

Solvier

Case Study Solving Competition



As a part of TechnoAltar Researchers Quest 5.0, FIPI PDEU SC organized a spectacular event 'Solvier- A Case Study solving Competition'. The event began with the instructions to the participants by Bharadwaj Shukla, Member of FIPI PDEU Student Chapter. In this event, participants did a detailed analysis of situations related to the Oil and Gas Industry. Participants were evaluated based on the best suitable and accurate approach to the problem. Participants also used their problem solving skills to identify the solution. From the solutions of the case study by participants, top 8 teams were selected to give

their presentation on the case study which they had solved. This event helped the students to provide insight for further research and provided detailed information of the Oil and Gas Industry. From the presentation top 3 winners were declared.

Petrocature Online Meme Making Competition

FIPI PDEU SC organized a pre fest online event PETROCATURE - A theme based meme making competition on online classes under the banner of the mega fest 'TechnoAltar Researchers' Quest 5.0'.

Memes serve many purposes and functions, but at a fundamental level, they serve as an expression of people's opinions and

emotions. They are simple, succinct and explicit in their messages, and this cultural paradigm is a reflection of the mentality of modern society – one that values entertainment, champions materialism, and reinforces the need felt by people to remain relevant. This competition was designed with the intention of having great fun and examining the humour of the participants. In this competition the participants had to make a meme on the provided topic that were posted on our social media platforms and the winners were decided on the basis of the number of likes and shares on their post.

It was a golden opportunity for the participants to test their skills over the best co-relating power with the real life and turn it to a great meme. Prize money worth Rs 1000 was awarded to the winners. Participants gained experience on how to increase the number of likes and shares on any social

media platform. Thus, the event was appreciated by participants and they also found it to be very interesting and entertaining.

Portraire

Themed Photography Competition

FIPI PDEU SC organized pre fest online event named PORTRAIRE- A theme based Photography competition on 'Down the streets Indian traditional markets'.

The photograph is completely abstracted from life, it looks like life. That is what has always excited all of us about photography. With this belief FIPI PDEU SC organized a photography competition wherein participants submitted the photographs of historical markets, Different shops, types of customer and types of things sold We got entries from all over India. The event assesses photography skills of the participants. In the event,

half of the evaluation would be based on no. of likes and shares obtained for the photo posted on our official social media pages (Instagram and Facebook). Participants gained experience on how to increase likes and shares and they increased their photography skills. The motto of the event was satisfied by bridging technical knowledge of social media. The event was appreciated by participants and they also found it to be very interesting.

Aggrandize

Essay Writing Competition

Essay writing is imperative since it upgrades our creative ability, considering and envisioning capacity. In this event the understudies were approached to pass on their sees on India's approach towards Gas Based Economy in the form of essay. The essays were judged by Dr. Anirbid Sircar(Professor, Petroleum Engineering, School of Petroleum Technology).

The main aim of this event was to seek after free examination on an engaged theme and create exploration and relational abilities. The purpose of this event was to build up the abilities of imaginative and basic education and to take part in a deliberate interaction of exploration, proper to the subject of the experiences and the energy of scholarly revelation.

Participants showed their writing skills by providing various ideas regarding the topic and this event helped them to gain more knowledge about India's approach towards Gas Based Economy.

COMMITTEE 2020-21

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FIPI PDEU Student Chapter

 Pandit Deendayal Energy University, Raisan,
Gandhinagar- 380027

FIPI


FEDERATION OF INDIAN PETROLEUM INDUSTRY
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 fipi.pdpu@spt.pdpu.ac.in
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Fueling The Future