EVENT REPORT

Virtual Visit on Modern Physics

VVMP 2020

#ExploreBeyondBoundaries

5th, 6th, 7th, 12th, & 13th September 2020

Organized by IEEE BVM SB under

NPSS Student Chapter

Birla Vishvakarma Mahavidyalaya

Engineering College

Contents

Acknowledgement

Er. Bhikhubhai Patel
Chairman, Charutar Vidya Mandal

Dr. Indrajit Patel
Principal, BVM Engineering College

Dr. Jagdish Rathod
Faculty Advisor, IEEE BVM SB

Dr. Darshan Dalwadi
Branch Counsellor, IEEE BVM SB

The Virtual Visit on Modern Physics 2020 was impossible for us without the efforts and valuable inputs from college and faculties. We are here extending our great acknowledgment and appreciation to following persons with their memorial inputs that are very significant in making this event possible.

We are thankful to **Er. Bhikhubhai Patel (Chairman, Charutar Vidya Mandal)** who has constantly motivated and supported us to conduct events in order to inculcate knowledge amongst the youth, especially during this period of pandemic.

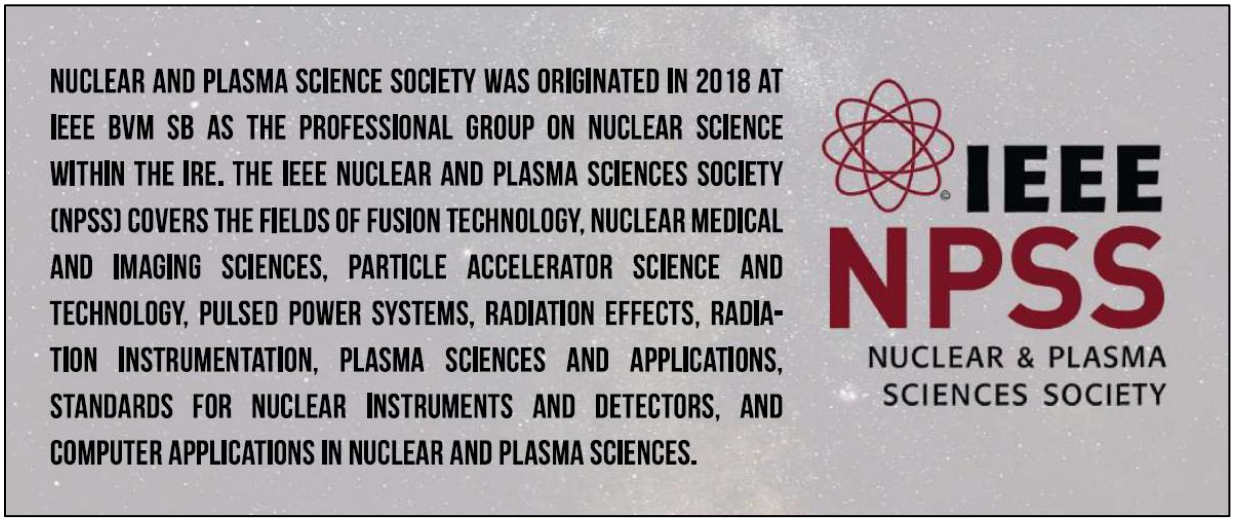
Next and the acknowledged **Dr. Indrajit Patel (Principal, BVM Engineering College)** who has been very supportive to us and always ready for solving problem-related to events.

We also acknowledge **Dr. Jagdish Rathod & Dr. Darshan Dalwadi,** who are **Faculty Advisor** and **Branch Counselor** respectively. They have been giving professional and Academic guidance, and have always motivated the students while supporting us in our endeavors, therefore we are extending our gratitude to them.

We would like to thank **Dr. Vatsal Shah** for providing Technical Support for Online Platform and all the **Faculty Team Members** who supported us in conducting this event successfully.

Lastly thanks to all the Hardworking members of Team VVMP'2020 for sparing their valuable time and making this event possible during the pandemic.

About NPSS Student Chapter



What is VVMP 2020?

Virtual Visit on
Modern Physics 2020

IEEE BVM SB organized its yet another flagship event under the *'IEEE NPSS - Nuclear & Plasma Sciences Society'* known as *'Virtual Visit on Modern Physics - VVMP 2020'* on 5, 6, 7, 12 & 13 September 2020**.** In this unprecedented time of the pandemic, going beyond physical boundaries with the modern-day technology and explore with experts from the finest Laboratories / Institutions around the world.

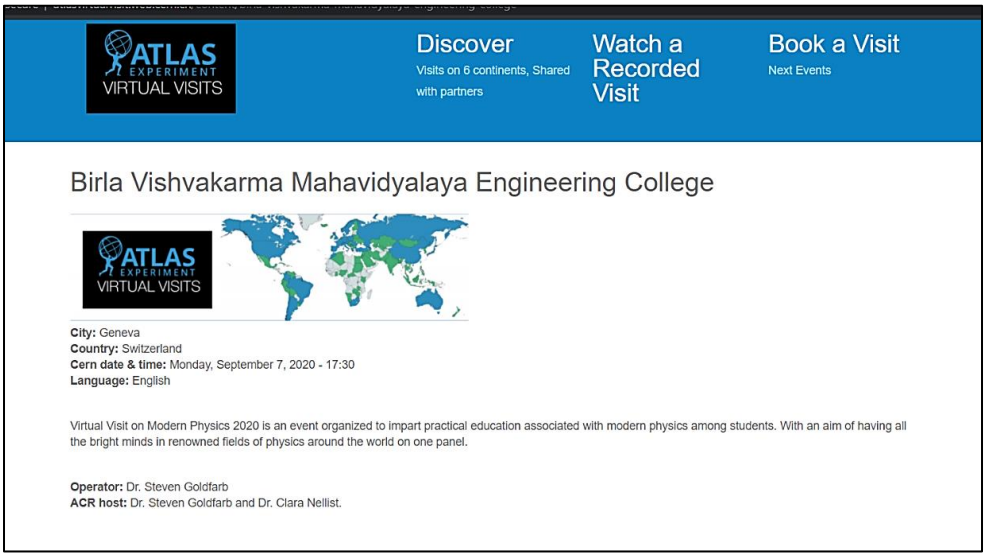
The overall theme focused on enhancing knowledge of students and academic professionals in various the domains of Modern Physics like Nuclear & Plasma Sciences, Space Technologies, & Renewable Energy, etc. Around **600 participants worldwide** registered themselves in these virtual visit sessions.

REGISTRATION FEES STRUCTURE

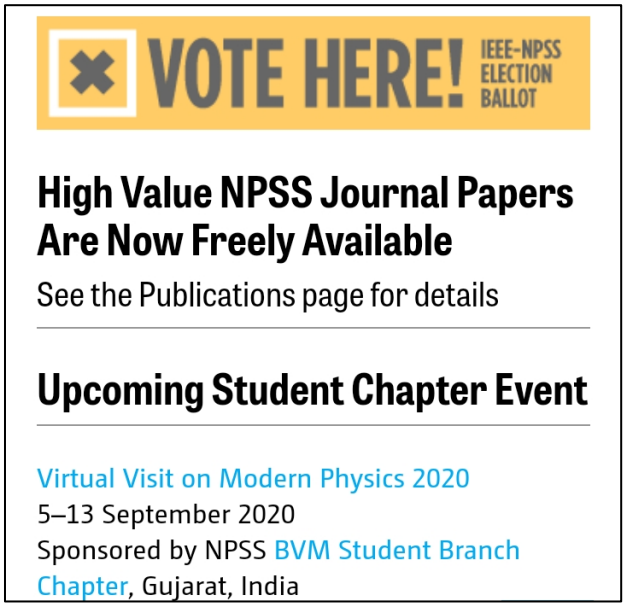
CATEGORY	IEEE MEMBERS	NON-IEEE MEMBERS
STUDENTS	20/- INR	40/- INR
ACADEMICIANS	50/- INR	

PANEL OF SPEAKERS AT VVMP 2020

Feature of VVMP on International Platforms



Feature on Outreach page of ATLAS Experiment VIRTUAL VISITS (CERN)



Feature on NPSS Website in Upcoming Event Section

Inauguration of Virtual Visit on Modern Physics 2020

The Inaugural Ceremony of Virtual Visit on Modern Physics 2020 in conjunction with Keynote Session 2 of International Conference on Research, Innovation, Science, Engineering & Technology (ICRISET 2020) began with **Dr. Indrajit Patel, Principal, BVM Engineering College** gracing the ceremony with his kind words. He motivated the audience to enhance their knowledge and explore the arena of Modern Physics through these sessions. He wished everyone a Happy Teacher's Day as it was 5th of September. He welcomed the Guest Keynote Speaker Dr. Goutam Chattopadhyay. Next, **Dr. Jagdish Rathod, Faculty Advisor, IEEE BVM SB** gave remarks on the topic and welcomed the speaker. Further, **Dr. Darshan Dalwadi, Branch Counsellor, IEEE BVM SB** greeted everyone and described about the theme of event. **Dr. Tanmay Pawar, Head, Electronics Dept., BVM Engineering College** introduced the speaker and briefed his work profile.

Click Here! to watch the Session 1 of VVMP 2020
Terahertz Radar Technology by Dr. Goutam Chattopadhyay

Session #1

Dr. Goutam Chattopadhyay, NASA JPL

Terahertz Radar Technology

September 5, 2020
09:30 AM

Host: Venu Upadhyay
Moderators: Ibrahim Koicha, Dhruv Pokar, Shailesh Bambhaniya & Gaurav Barve

Dr. Goutam Chattopadhyay is a Senior Scientist at NASA – Jet Propulsion Laboratories, Pasadena. **Dr. Tanmay Pawar, Head, Electronics Dept., BVM Engineering College** introduced the speaker and briefed his work profile.

He started the session by describing NASA as a place full of diversified culture and acknowledged his colleagues from all over the world which makes it a great place to work.

Dr. Goutam started a discussion about The Big Bang Theory, when did all this started and what was there before Big Bang Theory. Going in a bit detail, he said that we have not found lives on any of the planet in Universe and that life can exist outside Earth but we have not found it yet. He further added that Mars resembles Earth in many ways, especially in its early history.

Then coming over to the Mars Mission which NASA had launched, he stated about developed rover named Mars 2020 Perseverance. This rover is equipped with a lot of high-resolution cameras. Then, he mentioned the facts about Life on Enceladus. Saturn's moon Enceladus rains down water on Saturn. Enceladus is the only moon in the Solar System is the only moon in the Solar System known to influence the chemical composition of its parent planet. Alien life could thrive in a place like Saturn's icy moon Enceladus, experiment shows.

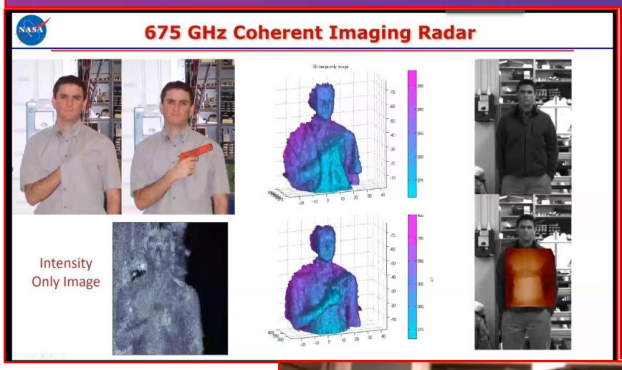
After that he started explaining about the life on Europa. Europa has the best chance of having life there today. This has been said by Britney Schmidt, who studies the moon at the University of Texas at Austin and led the new study appearing in the journal Nature. Then, he briefed about Terahertz FMCW Radar Imager. It is a Frequency modulated continuous wave (FMCW) radar is preferred over common pulse radar when the maximum available transmit power is low to obtain a high signal to noise ratio (SNR) for short duration Pulse.

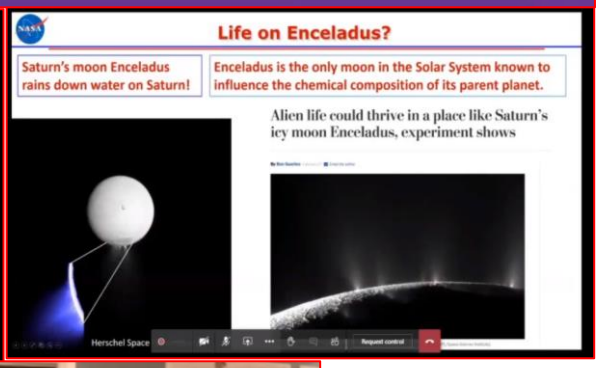
All the participants found the session very much interesting and got to know amazing information on this technology. The session concluded with an interesting Question and answer session.

Ending remarks were given by **Galav Bhatt** about the details of session for the next day of VVMP'2020.

Glimpses


IEEE BVM SB
VIRTUAL VISIT on MODERN PHYSICS 2020
INTERNATIONAL CONFERENCE ON RESEARCH AND INNOVATION IN SCIENCE, ENGINEERING AND TECHNOLOGY 2020
IEEE NPSS NUCLEAR & PLASMA SCIENCES SOCIETY
NPIU
Dr. Goutam Chattopadyay
Jet Propulsion Laboratory
California Institute of Technology
NASA Science Applications and Terahertz Radar
Goutam Chattopadhyay, PhD, Fellow IEEE
NASA-Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California, United States
Request control
Goutam Chattopadhyay (Guest)


675 GHz Coherent Imaging Radar
Intensity Only Image


Life on Enceladus?
Saturn's moon Enceladus rains down water on Saturn!
Enceladus is the only moon in the Solar System known to influence the chemical composition of its parent planet.
Alien life could thrive in a place like Saturn's icy moon Enceladus, experiment shows
Herschel Space
Request control

Session #2

Dr. Arvind K. Singh, ISRO

'AstroSat' India's First Mission on Space

September 6, 2020
11:30 AM

Host: Venu Upadhyay
Moderators: Jay Prajapati, Om Shukla & Galav Bhatt

Dr. Arvind K. Singh, a Senior Scientist at ISRO Ahmedabad Division was the Deputy Project Director of AstroSat- India's first venture in Astronomy. Inaugural and welcome speech was given by **Dr. Darshan Dalwadi**, **Branch Counselor, IEEE BVM SB**.

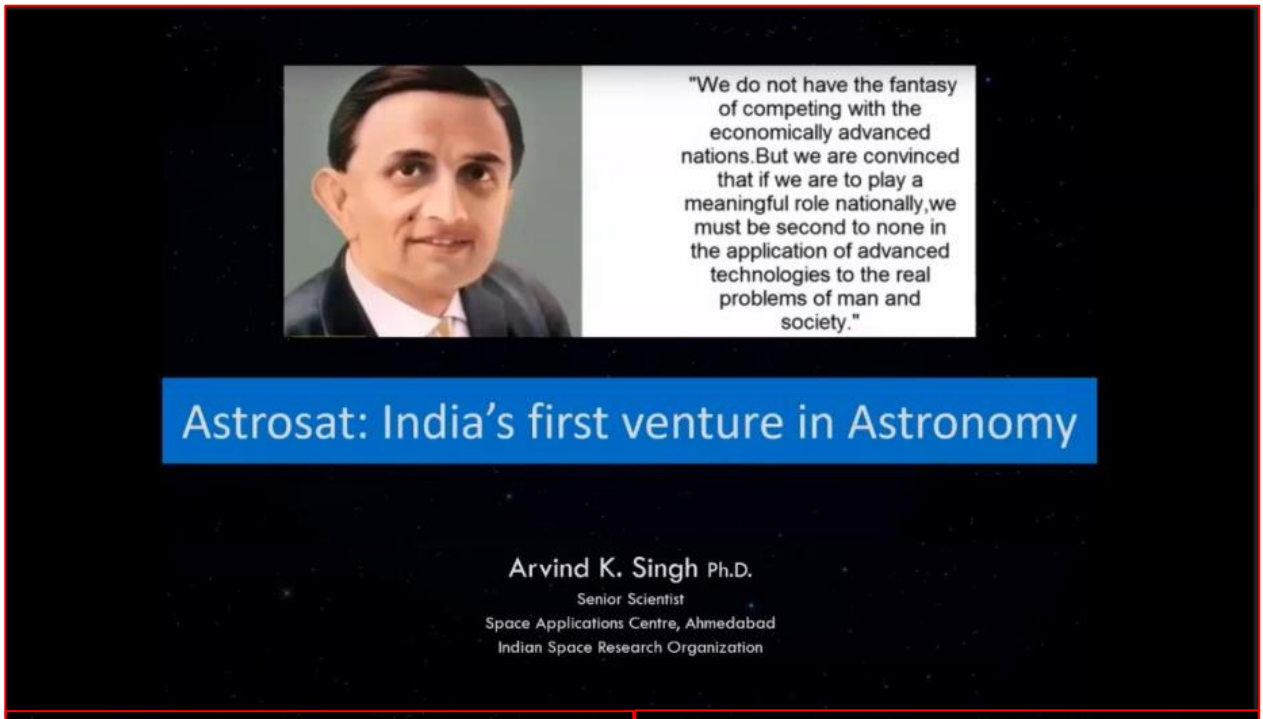
Dr. Arvind started his session by discussing a quote from Dr. Vikram Sarabhai and what he thought about during the foundation of ISRO. Dr. Sarabhai's idea was to make something which works for common people and just not the elites. He feels that lately, it's been thought that India is lagging in space sciences with respect to planetary and astronomy. He showed a picture dividing the 13.7 billion years since the big bang explosion into a few parts like the dark ages, development of galaxies, planets and dark energy accelerated expansion. This is the most accepted Universe model. 1st stars originated about 400 million years ago. The need for space exploration is because the population of earth is constantly on a rise and in the future our life might not be sustainable on the earth and we might have to go on another Planet.

India's participation involves Earth Imaging-lot of satellites, IRNSS (Regional Navigation System), Chandrayan -1,2,3, Mars Orbiter Mission 1,2, AstroSat and Aditya. AstroSat will tell us about our origin and the future. Further, types of satellites like Geo Stationary, Sun Synchronus and Circular were discussed. After this, types of launch vehicles were discussed. AstroSat was launched using PLSV. Then the composition of cosmos and Universe residents was talked about. AstroSat was launched on 28th September 2015. Configuring of AstroSat was shown. It includes of Simultaneous multi wavelength variability, X-Ray timing, Sensitive hard X-ray Spectroscopy. After this, importance of multi wavelength Astronomy was discussed. All the astronomical observatories working right now in space exploration belonging to different countries were shown. Advantage of AstroSat is that we can study everything about a galaxy, without any limitations because all types of wavelength can be observed and studied thereafter. After this, the source of information and how to infer it was discussed.

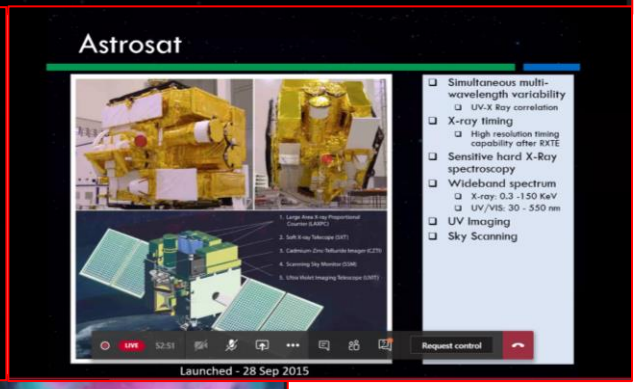
These topics were discussed in detail with pictures and data taken by AstroSat. Finally, the achievements of AstroSat till date were shown. The session concluded with a Question and answer session.

Ending remarks were given by **Gaurav Barve** about the details of session for the next session of VVMP'2020.

Glimpses


"We do not have the fantasy of competing with the economically advanced nations.But we are convinced that if we are to play a meaningful role nationally,we must be second to none in the application of advanced technologies to the real problems of man and society."
Astrosat: India's first venture in Astronomy
Arvind K. Singh Ph.D.
Senior Scientist
Space Applications Centre, Ahmedabad
Indian Space Research Organization


India's Launch Capability
EVOLUTION OF THE INDIAN LAUNCH VEHICLE
Astrosat was launched with PSLV


Astrosat
Simultaneous multi-wavelength variability
UV-X Ray correlation
X-ray timing
High resolution timing capability after RXTE
Sensitive hard X-Ray spectroscopy
Wideband spectrum
X-ray: 0.3 -150 KeV
UV/VIS: 30 - 550 nm
UV Imaging
Sky Scanning
Request control
Launched - 28 Sep 2015

Session #3

Dr. Matthew Greenhouse, NASA GSFC

JWST - James Webb Space Telescope

September 6, 2020
8:00 PM

Host: Venu Upadhyay
Moderators: Atharva Bhave, Stutee Dave & Gaurav Barve

The session commenced with a welcome speech by **Dr. Bhargav Goradiya**, **Vice-president BVM CC & Head, Electronics and Communications Department**. He further introduced the expert of the session Dr. Mathew Greenhouse and briefed about his career and experience.

Dr. Matthew Greenhouse started the session by briefing the audience about why do we build Space Telescope. Our expert then described about the past and importance of James Web Space Telescope. He also explained about the Hubble telescope, its limitations and the advantage of JSWT over Hubble telescope. The speaker explained the star formation, the role JWST will play in studying how planetary system forms and evolve. Along with this it was also explained how JWST will help to search life in planets by detecting liquid water on exoplanet and searching atmosphere in planets with the help of spectrum.

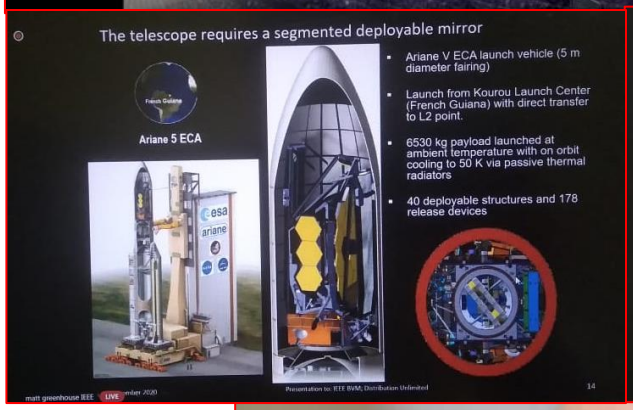
Moving further, the expert mentioned about the parameters required by JWST to achieve science objective. The key problems faced by the JWST team were also discussed major of them being how to provide a mirror that is larger in diameter than available rocket and achieving the cryogenic 40K (-223 C, -383 K) temp for the telescope. These problems were solved making JWST observe the whole sky while continuously being under the shadow of its sunshield to resolve temperature problem and using segmented deployable mirror to resolve mirror problem as mentioned by expert. The “Deployment sequence overview” was shown to audience using Graphics and animation.

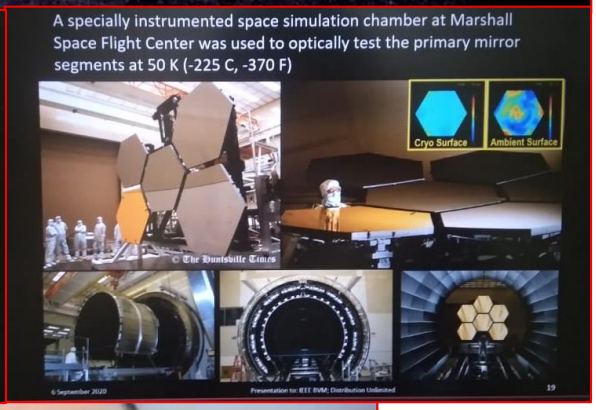
The expert discussed the working of the telescope, the arrangement of the mirrors, how the structure of JWST was formed using composite parts. Adding to this he also described how mirrors were placed in the structure using different machines and then the whole process of integration of other parts which was followed by explanation of JWST’s 5 Layer sunshield & the sensors used in the telescope. At last the different testing stages of the JSWT were mentioned. JSWT will be transported by ship through Panama Canal to French Guiana for launch in March 2021. The session was followed by Questions and answers.

Ending remarks were given by **Dhruv Pokar** about the details of session for the next day of VVMP’2020.

Glimpses


The James Webb Space Telescope Mission
Matt Greenhouse
NASA Goddard Space Flight Center
6 September 2020
@NASAWebb
#JWST


The telescope requires a segmented deployable mirror
Ariane 5 ECA
Ariane V ECA launch vehicle (5 m diameter fairing)
Launch from Kourou Launch Center (French Guiana) with direct transfer to L2 point.
6530 kg payload launched at ambient temperature with on orbit cooling to 50 K via passive thermal radiators
40 deployable structures and 178 release devices


A specially instrumented space simulation chamber at Marshall Space Flight Center was used to optically test the primary mirror segments at 50 K (-225 C, -370 F)
Cryo Surface
Ambient Surface


Request control

Session #4

Dr. Steven Goldfarb & Dr. Clara Nellist, CERN

Virtual Visit to ATLAS Experiment at LHC

September 7, 2020
05:30 PM

Host: Atharva Bhave
Moderators: Venu Upadhyay, Ibrahim Koicha, Keivalya Pandya, & Dhruv Pokar

The Session commenced with the greetings and cheerful speech by **Dr. Indrajit Patel, Principal, BVM Engg. College** who welcomed speakers and thanked and encouraged everyone to learn and participate actively in this virtual visit to LHC. Then, a welcome and introduction to the work profile of the expert speakers were given by **Dr. M E Shimpi**, Associate Dean – R&D, BVM Engineering College.

The experts kicked off the session by explaining what is the main aim of LHC and the answers to yet unanswerable mysterious and fascinating questions like what are we made up of? What is the most basic fundamental particle on which the universe exists?

The experts then uncovered the accelerator and particle detector of LHC which was a treat to watch. They also described how the Collider was constructed and formed in 1954.The LHC is so huge that it was constructed in parts and assembled 100 meters below the ground. The catch here is that there are mountains on one side and lake on the other side so the LHC is slightly tilted that is the top part is 0.5meters ahead of the bottom part. The fascinating thing was each wire and components was assembled by individual humans. The experts went on to explain the underlying concepts and principles of the detector and accelerator starting from the top to right at the heart of the accelerator. Some of the concepts were Ionization and the bending of particle in magnetic field.

The experts then gave a brief description about the necessary equipment in LHC. We also had a chance to look at various different accelerators and experiments like Alice experiment, LHCB and CMS. The experts then went on to talk about their experience as a physicist and what are they working on. The most exciting thing for them was when they are proven wrong because that is what motivates them to work hard and do more research and so the experts then told us about a model to find out the fundamental particle and how it has been correct since more than 50 years and how the Higgs Boson particle was confirmed according to this theory.

The session came to a close with a Q/A session where the participants expressed their queries and the experts discussed them in a great detail which was very encouraging and exciting.

Ending Remarks were given by **Jaimin Shimpi** and details for the next session of VVMP'20.

Glimpses


4 Virtual Visit at LHC, CERN
@ATLASEXPERIMENT
@STEVENCOLDFARB
Here's where we visited today!
Steve
Clara Nellist
01:18:55

Session #5

Ms. Cathy Suo, DTU

Wind Energy System at Technical University of Denmark

September 12, 2020
01:00 PM

Host: Atharva Bhave
Moderators: Gaurav Barve, Jay Goswami, Mansi Patel, & Khanjan Marthak

The Session commenced with a warm welcome by **Dr. S. D. Dhiman**, **TEQIP Coordinator - BVM Engineering College**. He introduced and welcomed the expert speaker of the session Ms. Cathy Suo and briefed the delegates about her work field.

Ms. Cathy Suo heads the wind energy system at the Technical University of Denmark. She introduced and described briefly about the DTU founded in 1979 in Denmark.

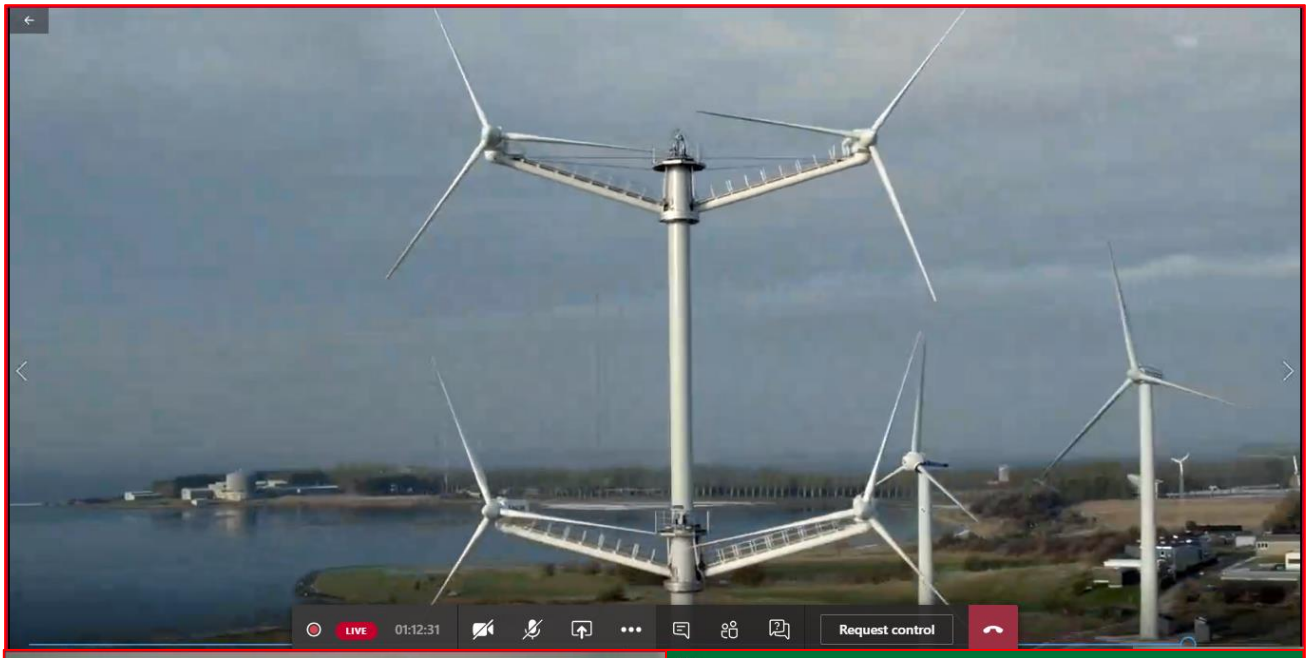
Further, she started discussion on **Wind energy distribution**: having five focused areas like wind resource assessment, wind field measurement, system design, grid integration and society market policy. **The turbine division**: having five further subdivisions like rotor and airfoil division, aero and fluid dynamics, turbine response and control, measurement system and method and finally testing and calibration. Then, **Wind energy material and component** division which included topics like mechanics and analysis of material, manufacturing and testing of composites, blade structural design and testing and last but not the least supporting structure integrity.

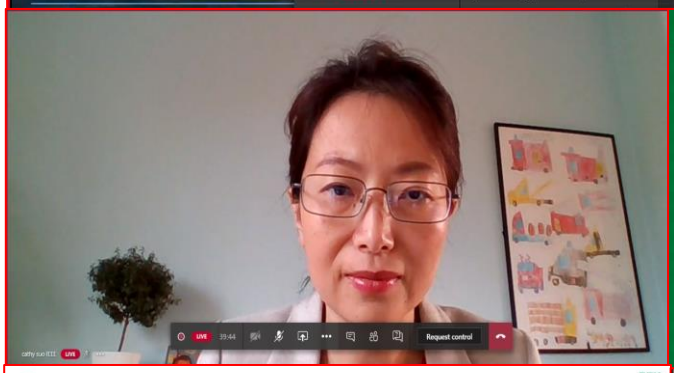
Then she showed some of the models and described them briefly, developed by the DTU Wind Energy and the models do give satisfying level of accuracy. She explained about a software platform that integrates all the aspects and is named as TOPFARM and presented the applications and results obtained. Participants were also given some overview of the lab instruments and machineries and their working briefly. Glimpses of Wind tunnels and visuals were also shown during the session. Some of the interviews of the students were shown who had completed their PhD who described work culture at DTU.

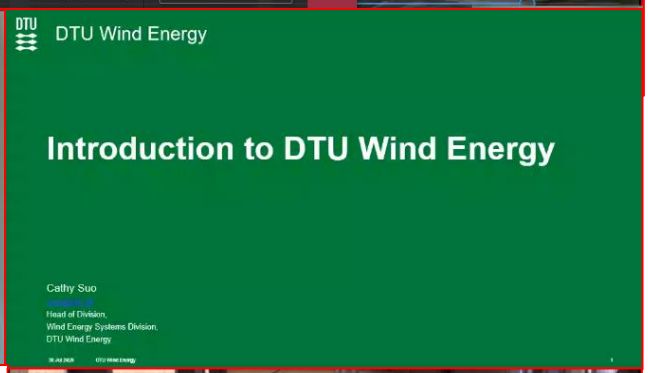
At the end, a Question and Answer session was engaged where the participants asked their queries and then the expert discussed them in a great detail which was quite encouraging and exciting.

Ending Remarks were given by **Ibrahim Koicha** and details for the last session for VVMP'20.

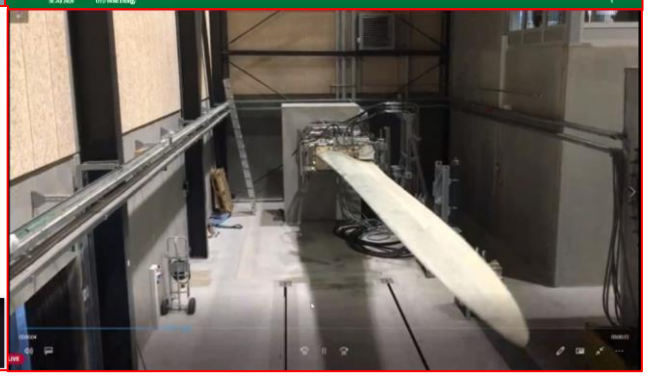
Glimpses


LIVE
01:12:31
Request control


Request control


DTU Wind Energy
Introduction to DTU Wind Energy
Cathy Suo
Head of Division,
Wind Energy Systems Division,
DTU Wind Energy


Wind Energy Systems Division
DTU
Atmosphere ---> Plant ---> Energy ---> Society
Wind Resource Assessment
Wind Field Measurement
System Design
Grid Integration
Society Market Policy
POLICY



Session #6

Dr. Ligia Diana Amorim, Lawrence Berkeley National Laboratory

Plasma based Technology for Future Particle Colliders

September 13, 2020
09:30 AM

Host: Atharva Bhave
Moderators: Sneh Trivedi, Galav Bhatt, & Dhruv Pokar

The Final Session for the event commenced with a prayer to God and warm welcome to all participants. **Dr. Keyur Brahmbhatt**, **Head, Information Technology Dept., BVM Engineering College** introduced and welcomed the expert speaker Dr. Ligia Diana Amorim.

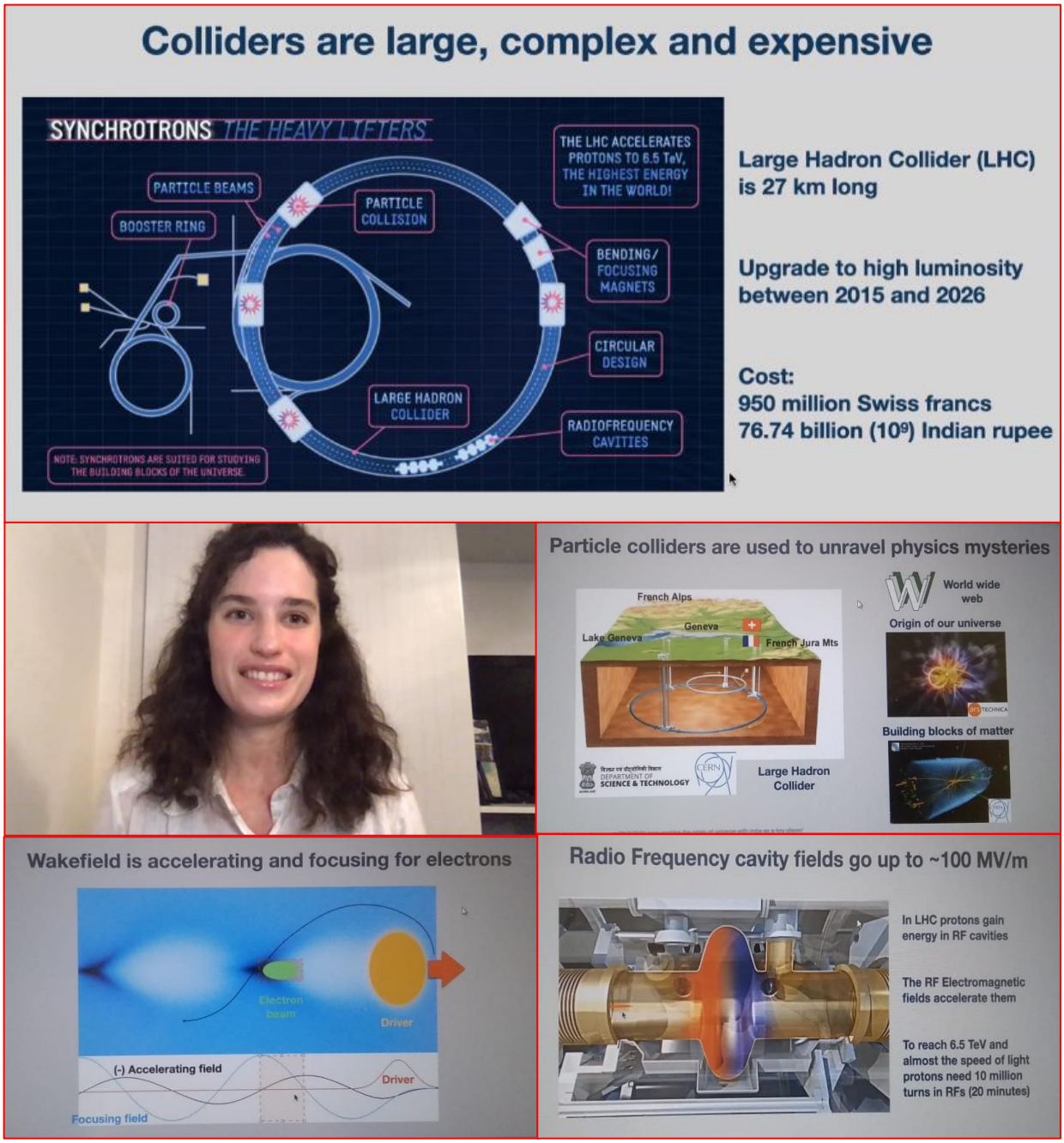
Dr. Diana started the session by introducing fundamental particles/ basic building blocks of nature i.e. electron, proton and positron and how they are all different from each other. "What is a particle collider?" and then explained in a lucid way. She described India's contribution to particle physics and CERN by remembering great Indian physicist Satyendra Nath Bose. She further explained the construction and working of particle collider which is at CERN Laboratories and answered many questions like why these laboratories are at such deep underground, why it is very long e.g. LHC is 27 kms long, how it will help us in finding the origin of our Universe and how it helped in developing World Wide Web.

Next, the session focused on plasma and its different forms available in nature i.e. during lightening stroke and from the surface of the sun and how this similar type of plasma can be useful in accelerating particles. Then she showed how cold plasmas are used to accelerate particles in their lab, how field is created by displacing plasma electrons using beams (powerful laser pulse or relativistic particle beam). Having covered different applications of plasma accelerators, as a tool for medical imaging she then explained the concept of Wakefield by comparing it with Radio frequency fields and how it helps in displacing electrons for producing plasma. They showed the process of modelling plasma beams in computer simulations and shared their current problem with positron.

At the end, a Question and Answer session was engaged. In response to a question, she described about her journey and her interest in physics and to this level as a physicist working in Lawrence Berkley Laboratory, California US.

A Closing Speech for the event VVMP'20 and valedictory thanking address was given by **Dr. Darshan Dalwadi** following to which **Rudrax Dave** gave ending remarks while acknowledging the whole team with a vote of thanks to all participants engaged in the event.

Glimpses


Colliders are large, complex and expensive
SYNCHROTRONS THE HEAVY LIFTERS
PARTICLE BEAMS
BOOSTER RING
PARTICLE COLLISION
THE LHC ACCELERATES PROTONS TO 6.5 TeV, THE HIGHEST ENERGY IN THE WORLD!
BENDING/ FOCUSING MAGNETS
CIRCULAR DESIGN
LARGE HADRON COLLIDER
RADIOFREQUENCY CAVITIES
NOTE: SYNCHROTRONS ARE SUITED FOR STUDYING THE BUILDING BLOCKS OF THE UNIVERSE.
Large Hadron Collider (LHC) is 27 km long
Upgrade to high luminosity between 2015 and 2026
Cost:
950 million Swiss francs
76.74 billion (10⁹) Indian rupee
Particle colliders are used to unravel physics mysteries
French Alps
Geneva
Lake Geneva
French Jura Mts
DEPARTMENT OF SCIENCE & TECHNOLOGY
Large Hadron Collider
World wide web
Origin of our universe
Building blocks of matter
Wakefield is accelerating and focusing for electrons
Electron beam
Driver
(-) Accelerating field
Driver
Focusing field
Radio Frequency cavity fields go up to ~100 MV/m
In LHC protons gain energy in RF cavities
The RF Electromagnetic fields accelerate them
To reach 6.5 TeV and almost the speed of light protons need 10 million turns in RFs (20 minutes)

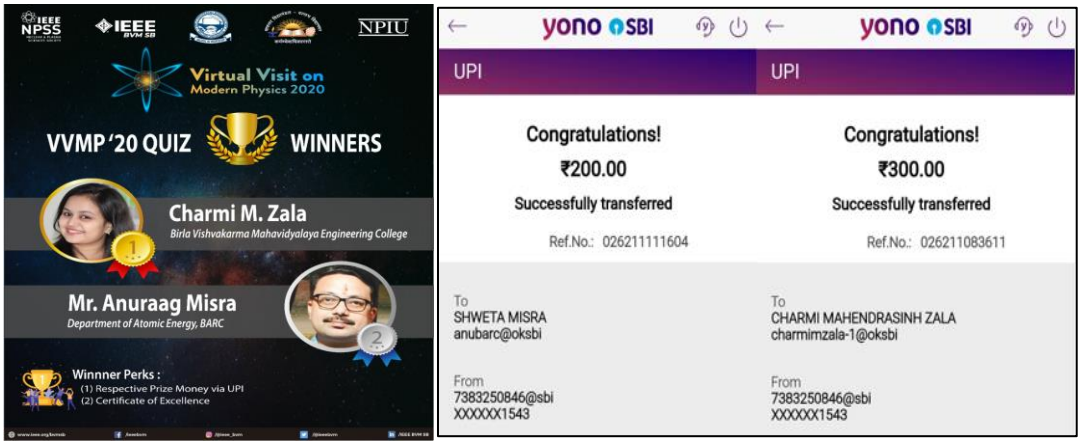
VVMP Ambassador Program

Team VVMP conducted an Ambassador Program for elevating the reach of the event in different students as well as professional communities and engage maximum number of people with the event from different parts of the world.

In response to which, total of 66 Ambassadors from different parts of the country and some parts of foreign countries were engaged with us. As a gesture of appreciation, the Top 3 Ambassadors evaluated by their performances were awarded with **Cash Prizes** and **Certificate of Achievement**. Following are the **Top 3 Performers of VVMP Ambassador Program**.

Rank	Name of Ambassador
1	Swetal Patel
2	Achal Kandoi
3	Dhruvil Nakum

Winners of Quiz at VVMP'20



E-Receipt of Prize Money transferred to the Winners of Quiz

Print Media Coverage

બીવીએમ કોલેજ દ્વારા વિદ્યાર્થીઓ માટે મોર્ડન ફિઝિક્સની વર્ચ્યુઅલ વિઝીટ યોજાઇ

આણંદ: વલ્લભ વિદ્યાનગર સ્થિત ચારૂતર વિદ્યામંડળ સંચાલિત બીવીએમ એન્જિનિયરીંગ કોલેજ દ્વારા વિદ્યાર્થીઓ માટે મોર્ડન ફિઝિક્સની વર્ચ્યુઅલ વિઝીટનું આયોજન કરાયુ હતું. પ્રિન્સિપાલ ડો.ઇન્દ્રજીત પટેલે જણાવ્યું હતું કે વર્ચ્યુઅલ વિઝીટ ઓન મોર્ડન ફિઝિક્સનો મૂળભૂત ઉદ્દેશ્ય વિદ્યાર્થીઓ તથા રિસર્ચ સ્કોલર્સને ન્યુક્લિઅર સાયન્સ, સ્પેસ ટેકનોલોજી, પ્લાઝમા રિસર્ચ જેવા મોર્ડન ફિઝિક્સના વિષયો પર વર્તમાન સમયમાં થઈ રહેલા રિસર્ચ વિષે માહિતી પૂરું પાડવાનો હતો. યુએસએના નાસામાં જેટ પ્રોપલઝન લેબના સિનિયર સાયન્ટિસ્ટ ડો.ગૌતમ ચક્રોપાધ્યાયએ ટેરા હર્ટઝ ફ્રિકવન્સી એન્ડ ઇટ્સ એપ્લિકેશન્સ, રડાર ટેકનોલોજી, મિલિટરી એપ્લિકેશન્સ, વોટર મોલેક્યુલ્સ ડિટેક્શન ઓન ડિફરન્ટ પ્લેનેટ્સ વિષે માહિતી આપી હતી. ઇસરોના ડેપ્યુટી પ્રોજેક્ટ ડિરેક્ટર ડો.અરવિંદ કે.સિંઘે ફર્સ્ટ ઇન્ડિયન મિશન ઓન સ્પેસ, ડિફરન્ટ સ્પેસ ટેકનોલોજીસ, મલ્ટિ વેવલેન્થ સેટેલાઇટ, સોફ્ટ X-Ray ટેલિસ્કોપ, અલ્ટ્રા વાયોલેટ ડિટેક્શન સિસ્ટમ વિષે જણાવ્યું હતું.

બિરલા વિશ્વકર્મા મહાવિદ્યાલય ખાતે વર્ચ્યુઅલ વિઝિટ ઑન મોર્ડન ફિઝિક્સ

આણંદ, તા. ૧૭

ચારુતર વિદ્યામંડળ સંચાલિત બિરલા વિશ્વકર્મા મહાવિદ્યાલયની IEEE NPSS સ્ટુડન્ટ બ્રાન્ચ દ્વારા વર્ચ્યુઅલ વિઝિટ ઑન મોર્ડન ફિઝિક્સ - ૨૦૨૦ યોજાઈ હતી. જેમાં એક્સપર્ટ તરીકે ડો. ગૌતમ ચક્રોપાધ્યાય (સિનિયર સાયન્ટિસ્ટ, જેટ પ્રોપલઝન લેબ, નાસા, યુ.એસ.એ.), ડો. મેથ્યુ ગ્રીન હાઉસ (એસ્ટ્રોફિઝિસ્ટ, ગોડાર્ડ સ્પેસ ફ્લાઈટ સેન્ટર, નાસા, યુ.એસ.એ.), ડો. અરવિંદ કે. સિંઘ (ડેપ્યુટી પ્રોજેક્ટ ડિરેક્ટર, ASTROSAT, ISRO), ડો. સ્ટીવન ગોલ્ડફર્બ (ફિઝિસીસ્ટ, એટલાસ એક્સપેરિમેન્ટ, CERN), ડો. ક્લેરા નેલિસ્ટ (પાર્ટિકલ ફિઝિસીસ્ટ, એટલાસ આઉટરીચ કોર્ડિનેટર, CERN), કેથી સુઓ (હેડ, વિન્ડ એનર્જી સિસ્ટમ, ડી.ટી.યુ. ટેકનિકલ યુનિવર્સિટી ઓફ ડેન્માર્ક), ડો. લીગીઆ એમોરીમ (લોરેન્સ બર્કલે લેબ, કેલિફોર્નિયા, યુ.એસ.એ.) ઉપસ્થિત રહ્યા હતા.

વર્ચ્યુઅલ વિઝિટ ઈવેન્ટના ઉદ્ઘાટન પ્રસંગે સંસ્થાના પ્રિન્સિપાલ ડો. ઈન્દ્રજિત એન. પટેલે જણાવ્યું હતું કે, વર્ચ્યુઅલ વિઝિટ ઑન મોર્ડન ફિઝિક્સનો મૂળભૂત ઉદ્દેશ્ય વિદ્યાર્થીઓ તથા રિસર્ચ સ્કોલર્સને ન્યુક્લિઅર સાયન્સ, સ્પેસ ટેકનોલોજી, પ્લાઝમા રિસર્ચ જેવા મોર્ડન ફિઝિક્સના વિષયો પર વર્તમાન સમયમાં થઈ રહેલા રિસર્ચ વિશે માહિતી પૂરું પાડવાનો હતો.

વર્ચ્યુઅલ વિઝિટમાં ડો. ગૌતમ ચક્રોપાધ્યાયએ ટેરા હર્ટઝ ફ્રિકવન્સી એન્ડ ઈટ્સ એપ્લિકેશન્સ, રડાર ટેકનોલોજી, મિલિટરી એપ્લિકેશન્સ, વોટર મોલેક્યુલ્સ ડિટેક્શન ઓન ડિફરન્ટ પ્લેનેટ્સ વિશે માહિતી આપી હતી. ડો. અરવિંદ કે. સિંઘે ફર્સ્ટ ઈન્ડિયન મિશન ઑન સ્પેશ, ડિફરન્ટ સ્પેસ ટેકનોલોજીસ, મલ્ટી વેવલેન્થ સેટેલાઈટ, સોફ્ટ એક્સ-રે ટેલિસ્કોપ, અલ્ટ્રા વાયોલેટ ડિટેક્શન સિસ્ટમ વિશે જણાવ્યું હતું.

ડો. મેથ્યુ ગ્રીન હાઉસ એ જેમ્સ વેબ સ્પેસ ટેલિસ્કોપ, તેમાં ઉપયોગી ટેકનોલોજી તથા અન્ય ડિવાઈસીસ, નાસા, ગોડાર્ડ સ્પેસ ફ્લાઈટ સેન્ટર લેબ્સ વિશે માહિતી આપી હતી. ડો. સ્ટીવન ગોલ્ડફર્બ તથા ડો. ક્લેરા નેલિસ્ટે ઓનલાઈન ડિજિટલ માધ્યમ દ્વારા જીનીવા સ્થિત CERN લેબ્સની વિઝિટ કરાવી હતી.

ડો. લીગીઆ એમોરીમે પ્લાઝમા બેઝડ ટેકનોલોજી, ઈલેક્ટ્રોન્સ, પોઝિટ્રોન્સ, આયન્સ વિથ ઈલેક્ટ્રીક ફિલ્ડસ એન્ડ ઈલેક્ટ્રોન પ્લાઝમાં વેવ્સ, હાઈ ગ્રેડીએંટ પ્લાઝમાં સ્ટ્રક્ચર વિશે માહિતી આપી હતી. ઈવેન્ટને સફળ બનાવવા માટે IEEE BVM SB ના વિદ્યાર્થીઓએ ઉત્સાહપૂર્વક કામગીરી હાથ ધરી હતી. આ પ્રસંગે ચારુતર વિદ્યામંડળના અધ્યક્ષ ભીખુભાઈ પટેલ તથા અન્ય હોદેદારોએ શુભેચ્છા પાઠવી હતી.

Team IEEE BVM Student Branch
Birla Vishvakarma Mahavidyalaya Engineering College
Vallabh Vidyanagar, Anand, Gujarat. PIN - 388120