

**DBT-STAR COLLEGE PROGRAMME AT VIMALA COLLEGE
(AUTONOMOUS), THRISSUR
POSTGRADUATE DEPARTMENT OF PHYSICS
2020-2021**

National Webinar on “X-ray diffraction analysis”

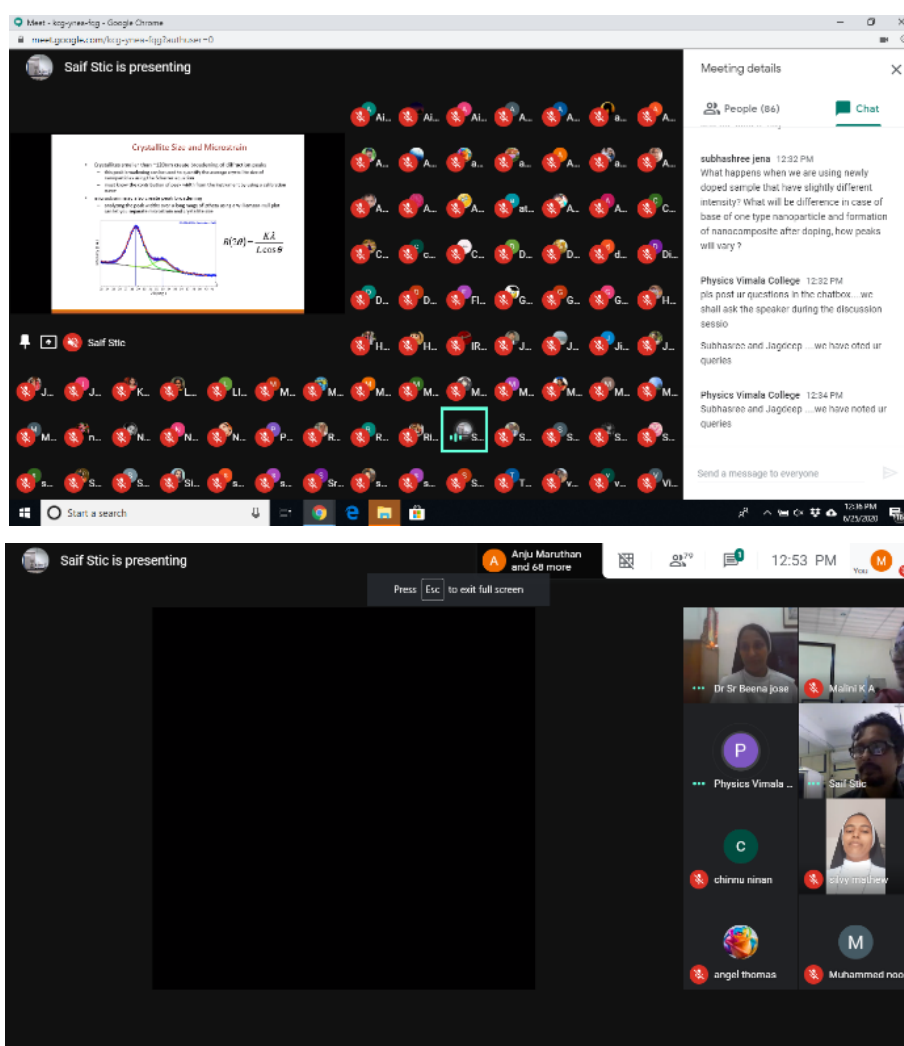
Supported by DBT STAR College Scheme

Date: 25-06-2020, 10:30 pm – 01:00 pm

Dr. Shibu M Eappen, Scientist D, STIC, CUSAT

No. of Participants: 90 students and 5 Faculty

Mode: ONLINE (Google Meet), meet.google.com/kcg-ynea-fqg



National Webinar on “X-ray Diffraction: Good Analytical Practices”

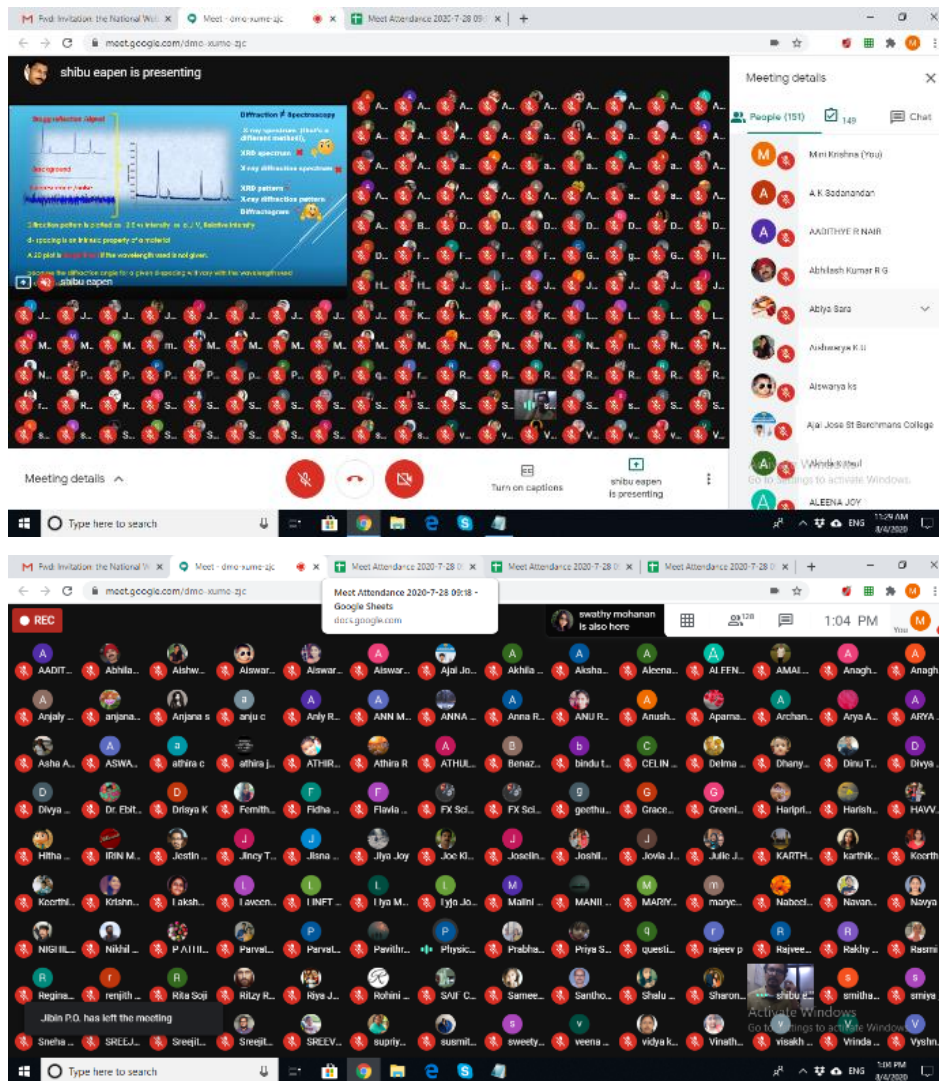
Supported by DBT STAR College Scheme

Date: 4 August 2020, 10:30 am – 01:00 pm

Resource Person: Dr. Shibu M Eappen, Scientist D, STIC, CUSAT

No. of Participants: 160 Students and 38 Faculty

Mode: ONLINE (Google Meet), meet.google.com/dmo-xume-zjc



Regional Webinar on “Energy Conservation for Sustainable Living”

Supported by DBT STAR College Scheme

Date: 14-12-2020, 10:00 am – 12:00 pm

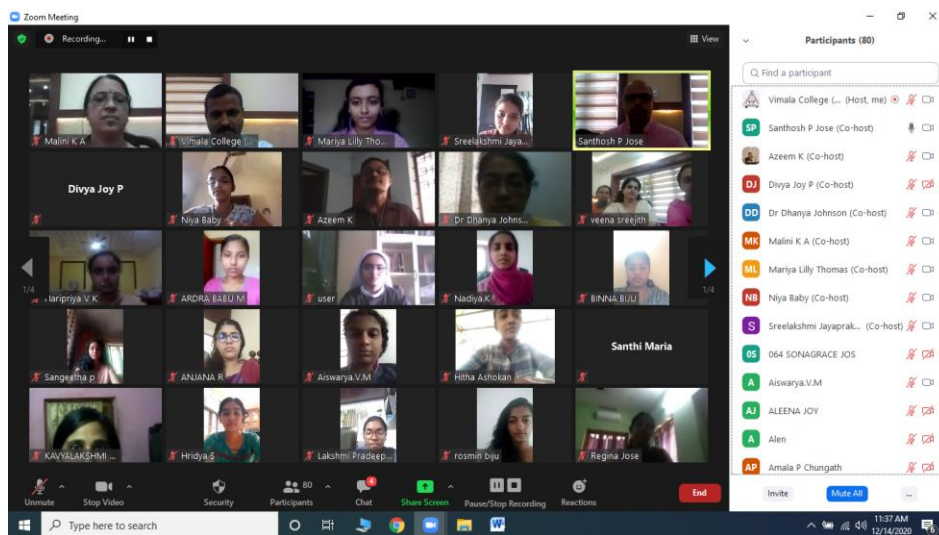
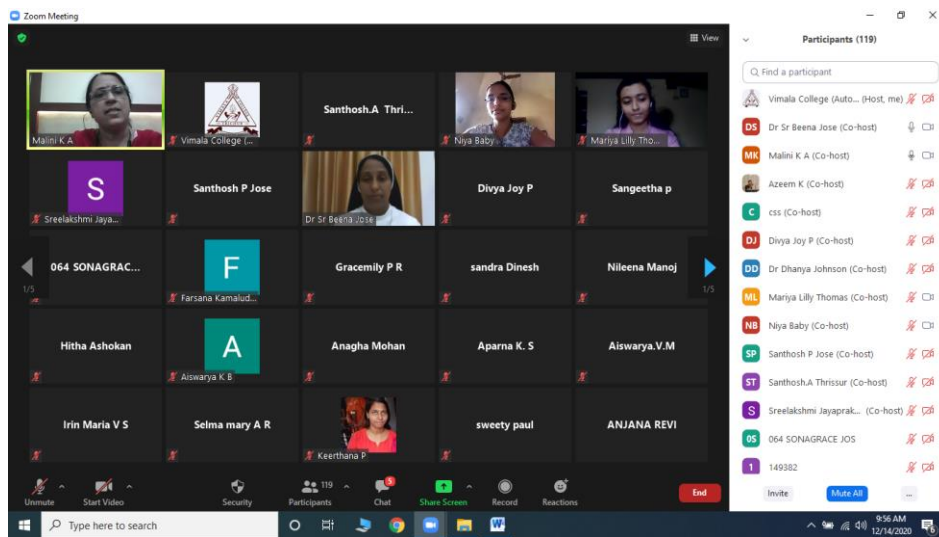
Resource Person: **Shri. Azeem K**, Senior consultant – Energy & Process Efficiency
Cofounder Alenso Energy

No. of Participants: 128 Under-graduate students, 4 Faculty

Mode: ONLINE (ZOOM),

<https://zoom.us/j/7041264513?pwd=SE03dUdpRUUpWUXBKZitMeDdSN292dz09>

Meeting ID: 704 126 4513



Regional Webinar on “Permanent Magnets: Current and Future Perspectives”

Supported by DBT STAR College Scheme

Date: 16-12-2020, 10.00 am – 12.00 pm

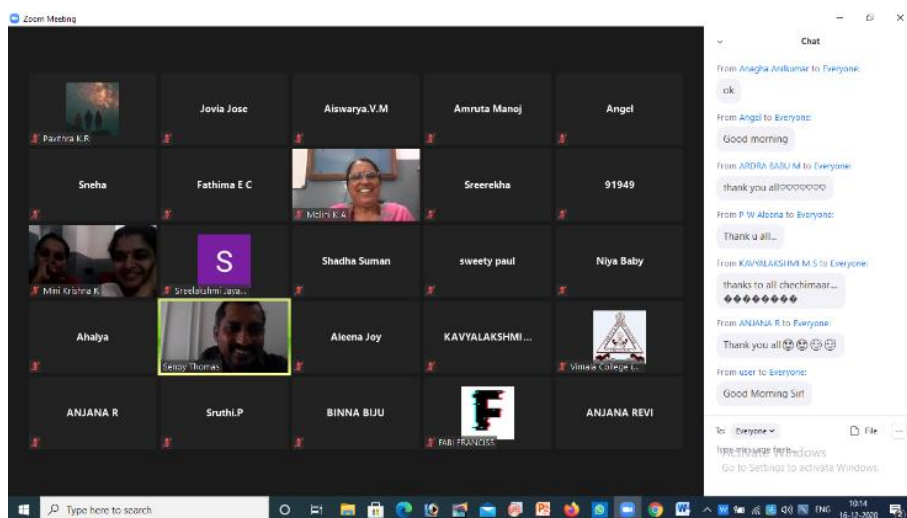
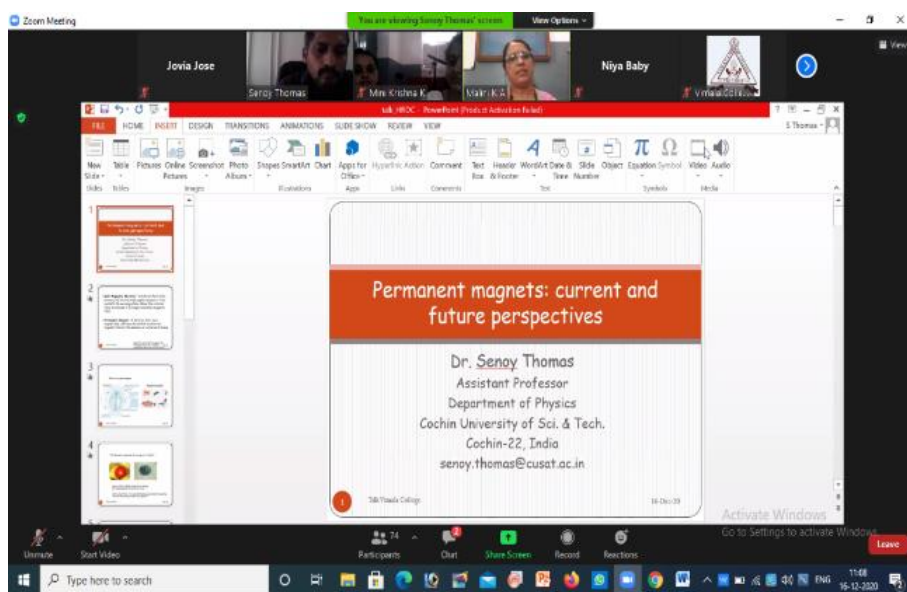
Resource Person: **Dr. Senoy Thomas** , Assistant Professor, Department of Physics
CUSAT

No. of Participants: 97 (UG Students)

Mode: ONLINE (Zoom)

<https://zoom.us/j/99316187304?pwd=enoyb0s3K0lyUHFjSE5lY2JCc3ZNQT09>

Meeting ID: 993 1618 7304



National Webinar on “Computations in physics: history, current status and future perspectives”

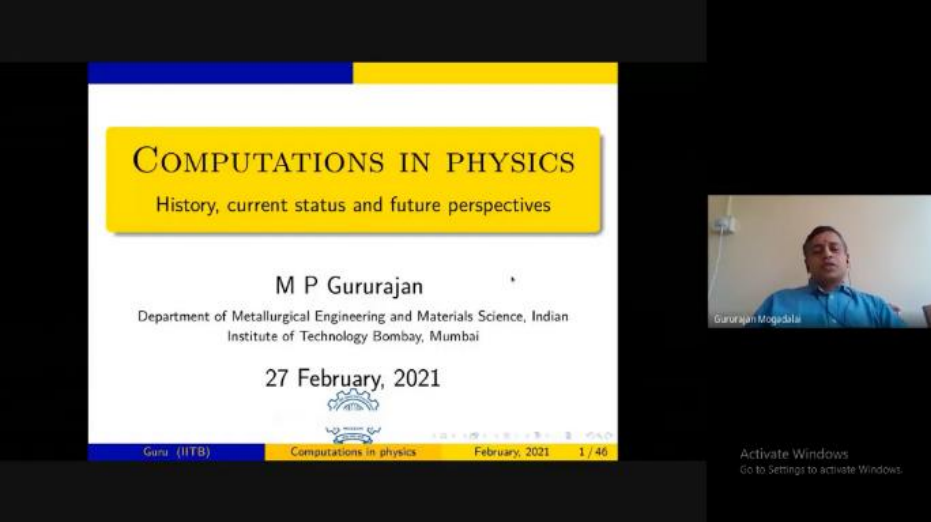
Supported by DBT STAR College Scheme

Date: 27-2-2021, 3.00 pm – 5.00 pm

Resource Person: **Dr M P Gururajan**, Associate Professor, Department of Metallurgical Engineering and Materials Science, IIT Bombay

No. of Participants: 89 (UG Students)

Mode: ONLINE (G meet) meet.google.com/wrp-uikq-gxq



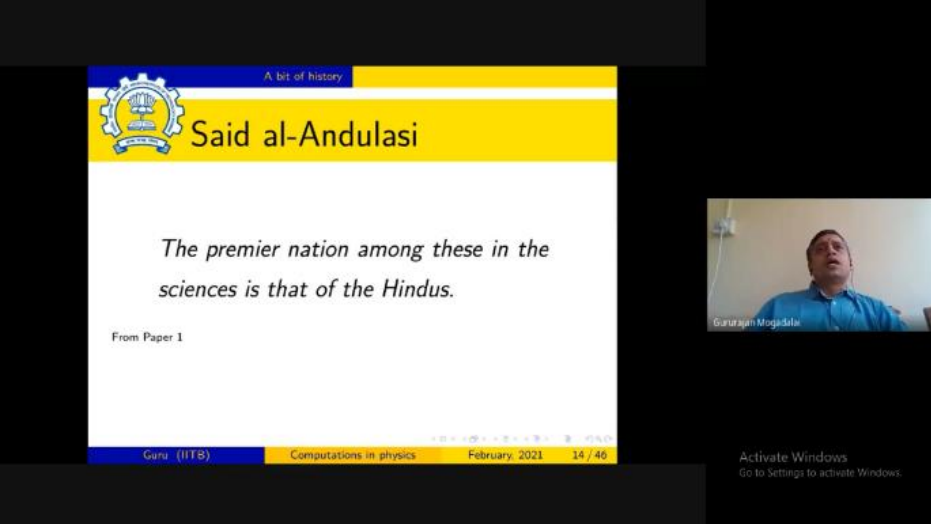
COMPUTATIONS IN PHYSICS
History, current status and future perspectives

M P Gururajan
Department of Metallurgical Engineering and Materials Science, Indian
Institute of Technology Bombay, Mumbai

27 February, 2021

Guru (IITB) Computations in physics February, 2021 1 / 46

Activate Windows
Go to Settings to activate Windows.



A bit of history

Said al-Andulasi

*The premier nation among these in the
sciences is that of the Hindus.*

From Paper 1

Guru (IITB) Computations in physics February, 2021 14 / 46

Activate Windows
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National Webinar on “Stars, Galaxies and Beyond...”

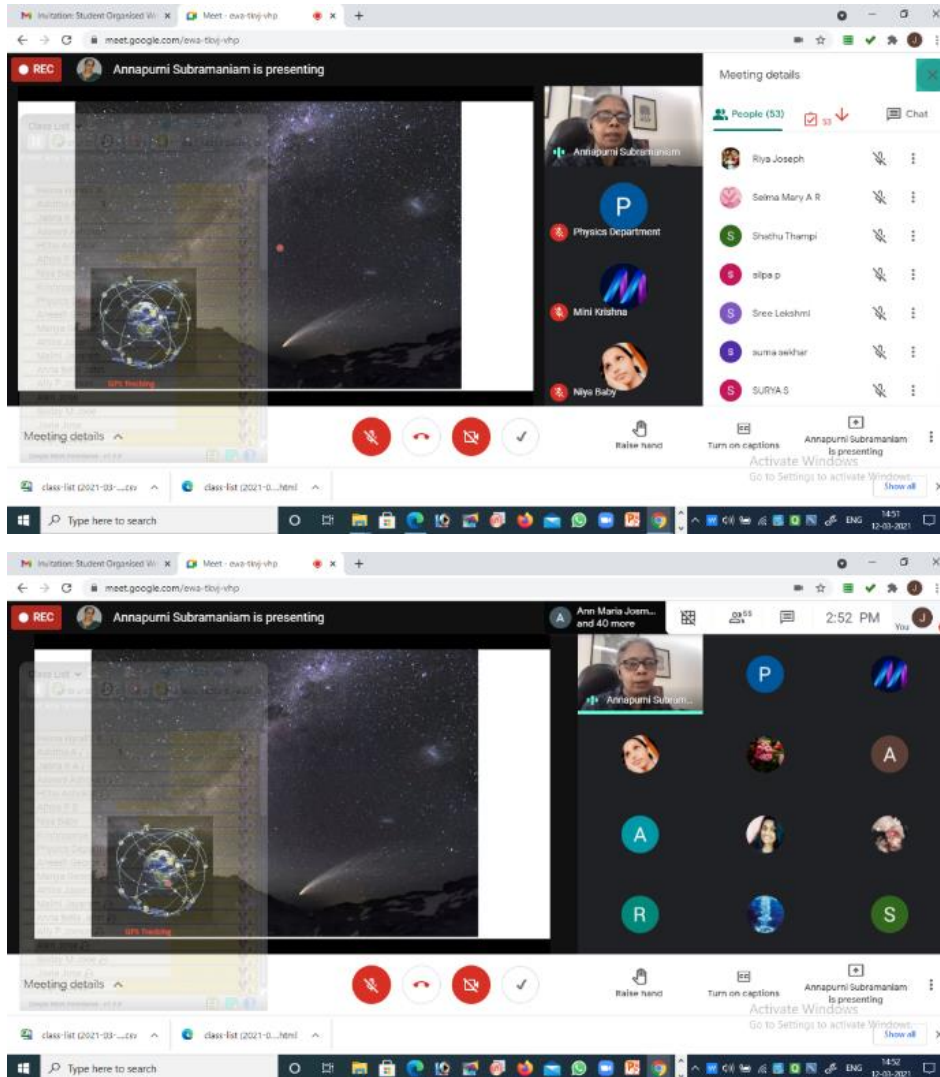
Supported by DBT STAR College Scheme

Date: 12-3-2021, 2.30 pm – 4.30 pm

Resource Person: Prof. (Dr.) Annapurni Subramaniam, Director, Indian Institute of Astrophysics, Bangalore

No. of Participants: 56 Students, 4 Faculty

Mode: ONLINE (G meet) meet.google.com/ewa-tkvj-vhp



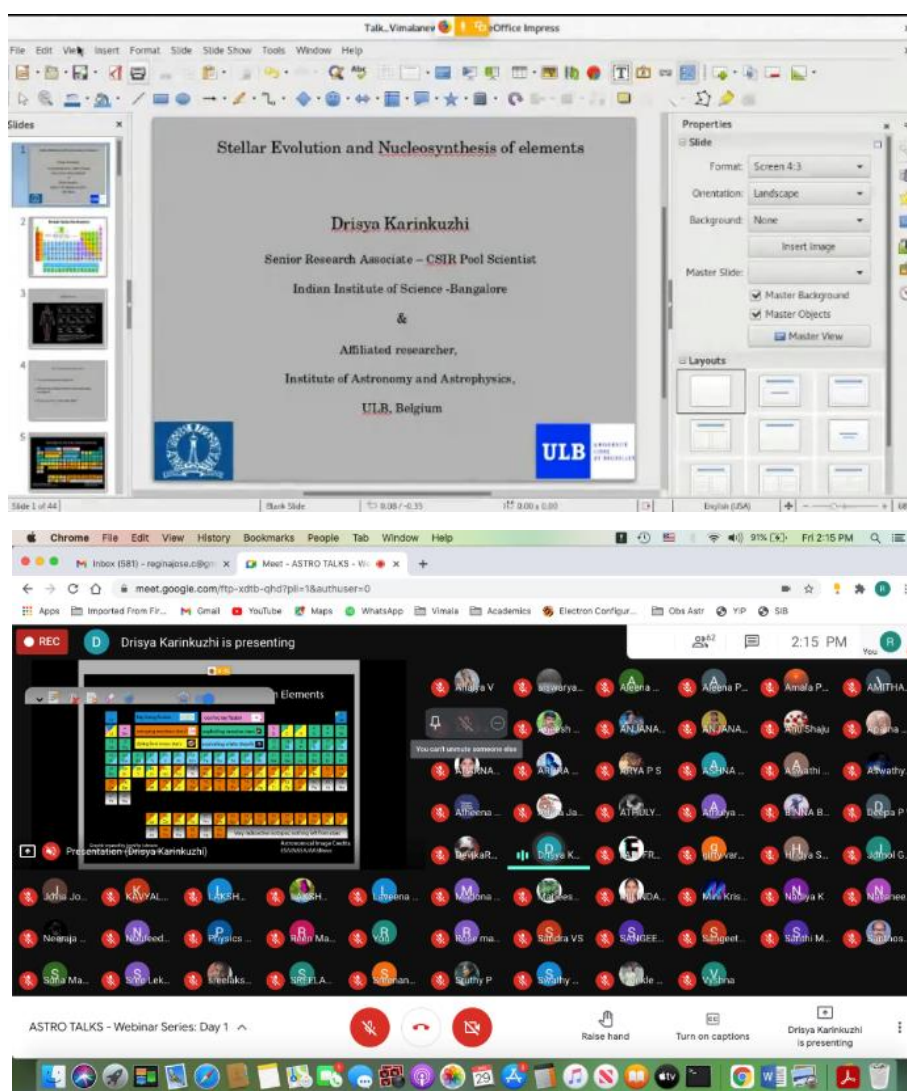
WEBINAR SERIES: ASTRO TALKS - Day 1
“Stellar Evolution and Nucleosynthesis of Elements”
Supported by DBT STAR College Scheme

Date: 29-01-2021, 2.00 pm – 4.00 pm

Resource Person: **Dr Drisya Karinkuzhi**, Senior Research Associate - CSIR - Pool Scientist Scheme, Indian Institute of Science, Bangalore

No. of Participants: 62 (57 UG Students, 5 faculty)

Mode: ONLINE (Google Meet), meet.google.com/ftp-xdtb-qhd



WEBINAR SERIES: ASTRO TALKS - Day 2

“Universe: A Telescopic View”

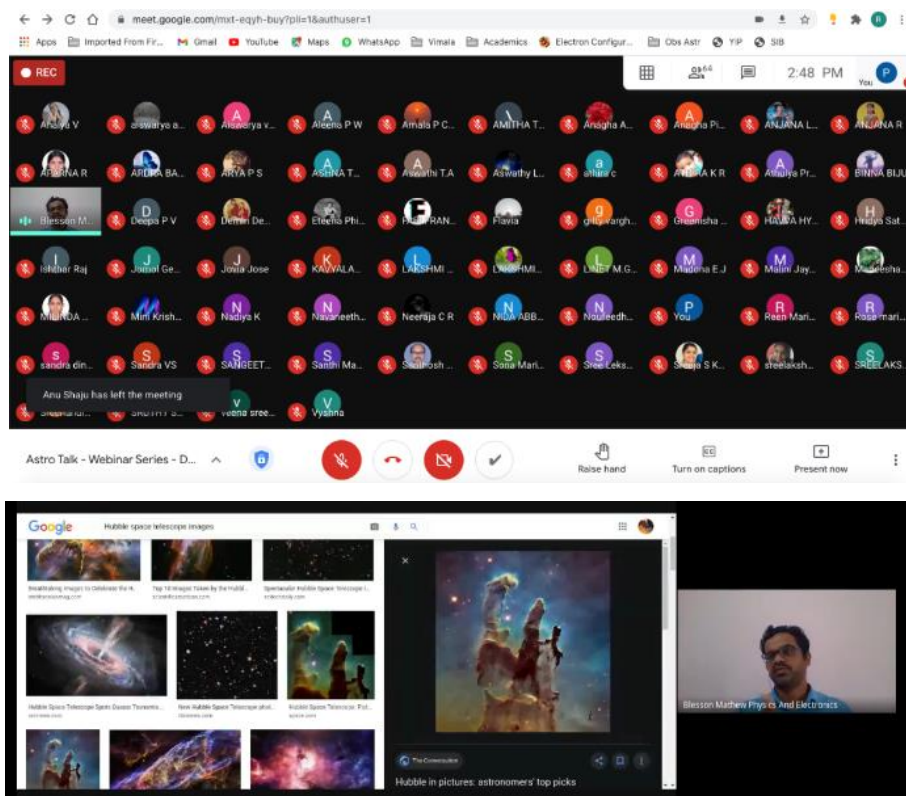
Supported by DBT STAR College Scheme

Date: 30-01-2021, 2.00 pm – 4.00 pm

Resource Person: **Dr Blesson Mathew**, Assistant Professor, Department of Physics and Electronics, CHRIST (Deemed to be University), Bangalore

No. of Participants: 74 (69 Students, 6 faculty)

Mode: ONLINE (Google Meet): meet.google.com/mxt-eqyh-buy



WEBINAR SERIES: ASTRO TALKS - Day 3

“Introduction to Extragalactic Astronomy”

Supported by DBT STAR College Scheme

Date: 11-02-2021, 2.00 pm – 4.00 pm

Resource Person: **Dr Vivek M**, Assistant Professor, Indian Institute of Astrophysics, Bangalore

No. of Participants: 63 (57 Students, 6 faculty)

Mode: ONLINE (Google Meet): : meet.google.com/mxt-eyh-buy

The image displays two screenshots of a Google Meet webinar. The top screenshot shows the title slide of the presentation, which reads: "Introduction to Extragalactic Astronomy" by Vivek M, Indian Institute of Astrophysics, Bangalore. The slide features a background image of a starry galaxy. The bottom screenshot shows a slide titled "Radiation is the main source of Information about astronomical objects". This slide includes a diagram of "Andromeda in different wavelengths" showing various color filters, a graph of "Gravitational waves" showing a sinusoidal wave, and a list of radiation types: "Electromagnetic radiation", "Gravitational radiation", and "Particulate radiation". The Google Meet interface shows a list of participants on the right side of the screen, including names like Selma Mary A R, Sree Lekshmi, and Anisha Anilkumar.

WEBINAR SERIES: ASTRO TALKS - Day 4

“Astronomy: An Observer’s View”

Supported by DBT STAR College Scheme

Date: 20-03-2021, 2.00 pm – 4.00 pm

Resource Person: **Dr Susmitha Rani Antony**, Visiting Fellow, Indian Institute of Astrophysics, Bangalore

No. of Participants: 80 (64 Students, 7 faculty, 9 alumnae)

Mode: ONLINE (Google Meet): meet.google.com/cza-iwua-mib

The image is a screenshot of a Google Meet webinar. The main content is a presentation slide titled "A bit of history" which compares two telescope models. On the left is "Kepler's telescope model in 1611", showing a diagram with two convex lenses (Objective and Eyepiece) and a virtual image. On the right is "Newton's reflecting telescope" from 1668, showing a diagram with a concave primary mirror and a convex secondary mirror. Below these are smaller images of the actual telescopes. The bottom part of the screenshot shows a slide titled "Stellar spectra" with a graph of spectral lines for different stellar classes (O, B, A, F, G, K, M) and a vertical axis for "Surface temperature". The right side of the screen shows a grid of participant video feeds, with the presenter, Susmitha Rani Antony, visible in the top left of the grid. The bottom of the screen shows the Google Meet interface with various controls like "Raise hand", "Turn on captions", and "Susmitha Rani Antony is presenting".

NATIONAL WORKSHOP on “Virtual Lab”

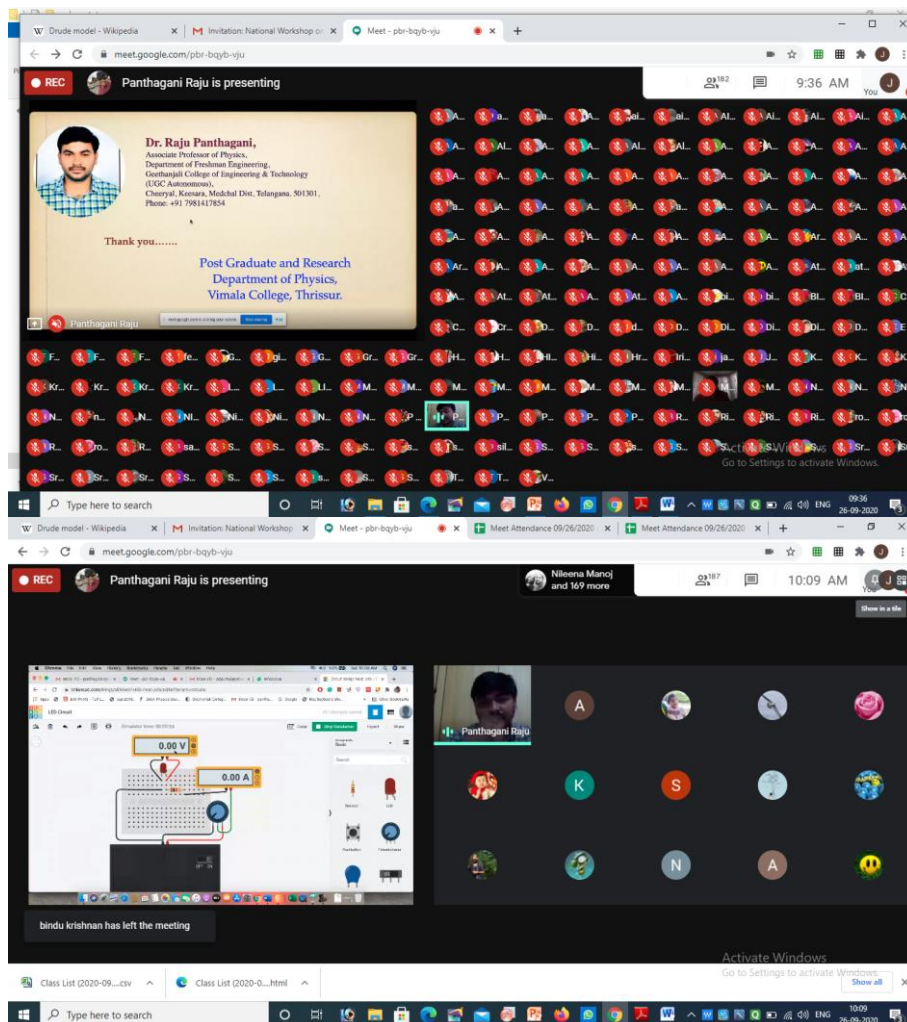
Supported by DBT STAR College Scheme

Date: 26-09-2020, 9:00 pm – 12:00 pm

Resource Person: **Dr. Raju Panthagani**, Associate Professor, Geethanjali College of Engineering and Technology (GCET), Hyderabad

No. of Participants: 207 Undergraduate students

Mode: ONLINE (Google Meet), meet.google.com/pbr-bqyb-vju



REGIONAL WORKSHOP SERIES on 'JAM-2021'

Supported by DBT STAR College Scheme

Date: 2 Dec 2020, 7 Dec 2020, 8 Dec 2020, 14 Dec 2020, 15 Dec 2020, 6 pm – 9 pm

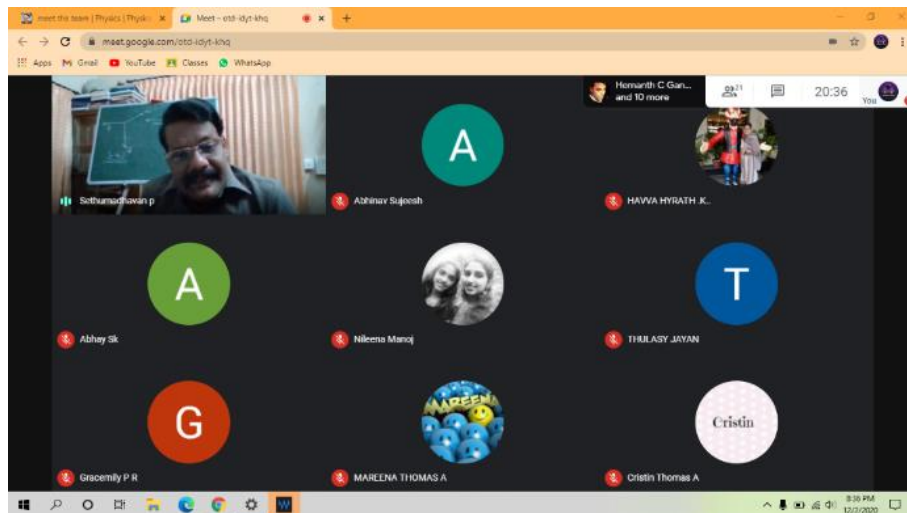
Resource Person: Dr. P Sethumadhavan, Former HoD of Physics, Sree Narayana Guru College, Chelannur, Calicut

No. of Participants: 30 (UG Students)

Online Platform: Google Meet

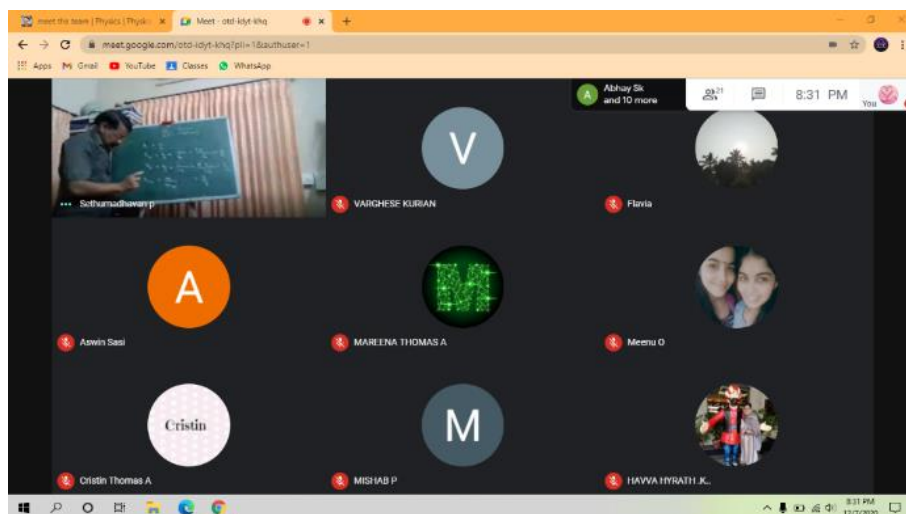
Day 1 – 2 Dec 2020

Meet Link: meet.google.com/otd-idyt-khq



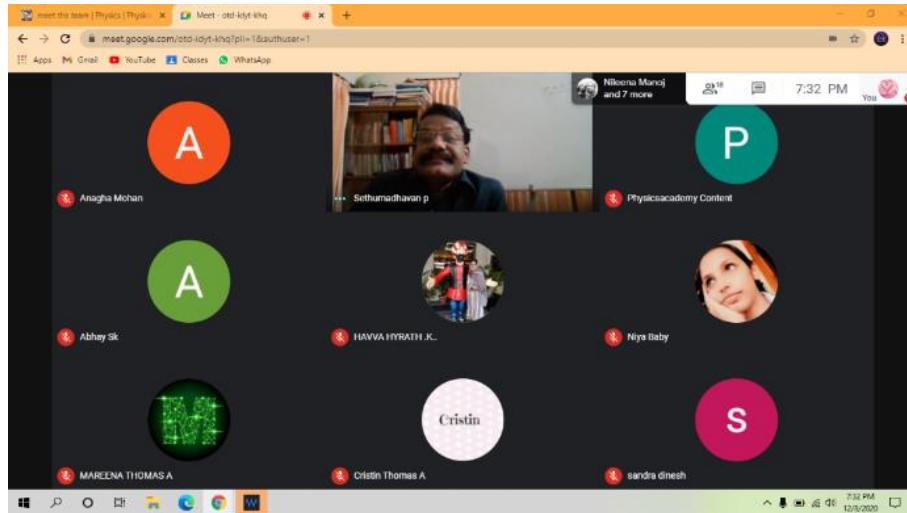
Day 2 – 7 Dec 2020

Meet Link: meet.google.com/otd-idyt-khq



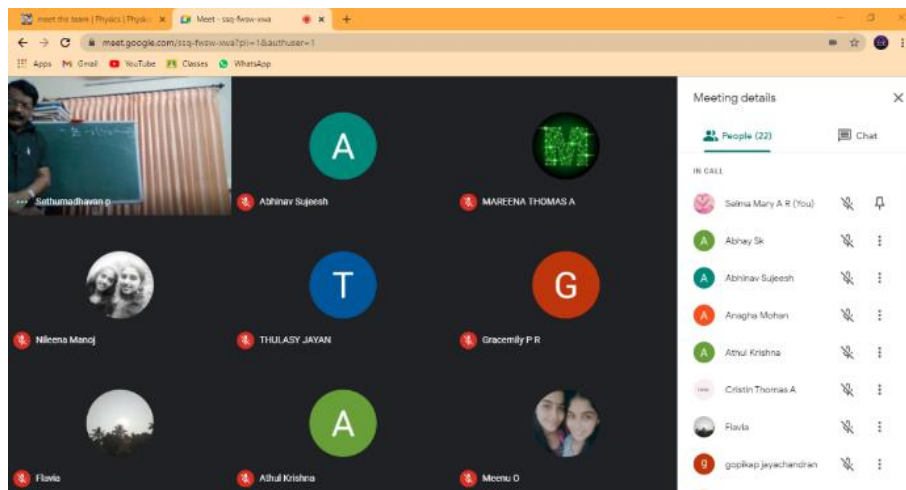
Day 3 – 8 Dec 2020

Meet Link: meet.google.com/otd-idyt-khq



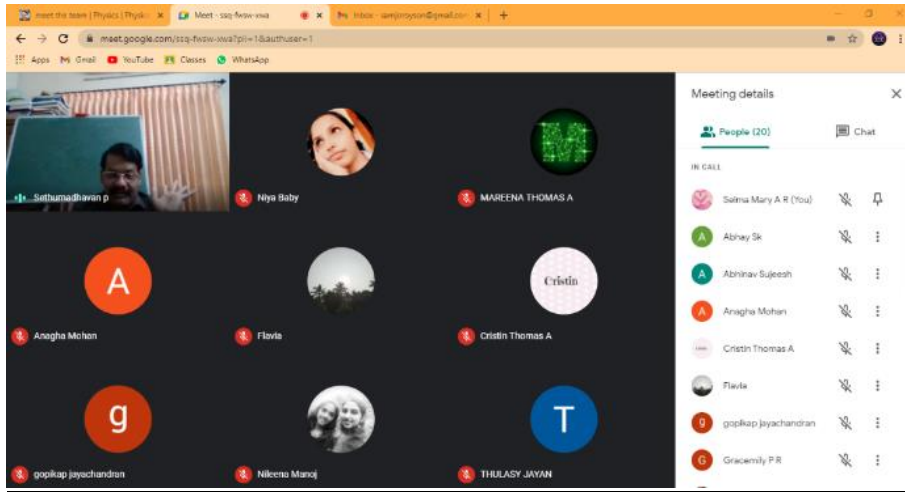
Day 4 – 14 Dec 2020

Meet Link: meet.google.com/ssq-fwsx-xwa

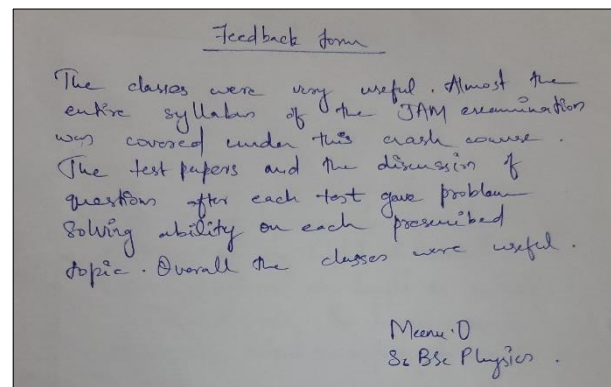
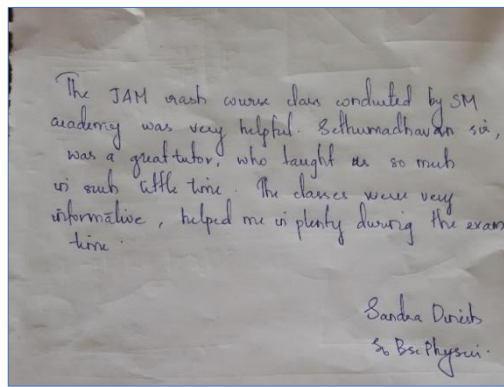
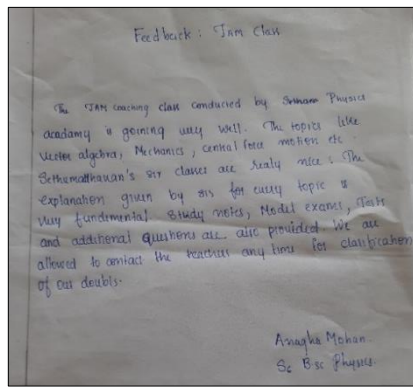
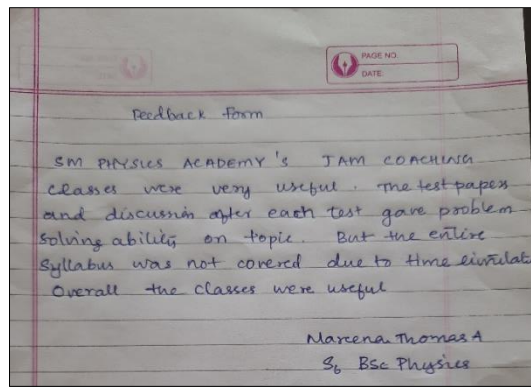
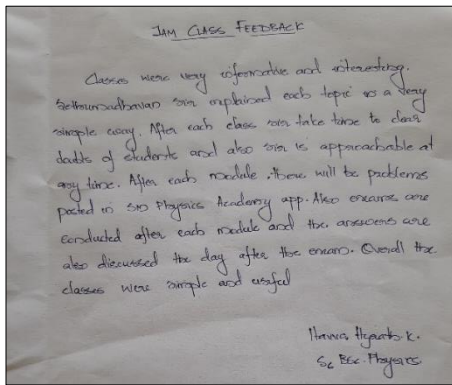


Day 5 – 15 Dec 2020

Meet Link: meet.google.com/ssq-fwsx-xwa



Class feedback



REGIONAL WORKSHOP SERIES on “LATEX for Documentation”

Supported by DBT STAR College Scheme

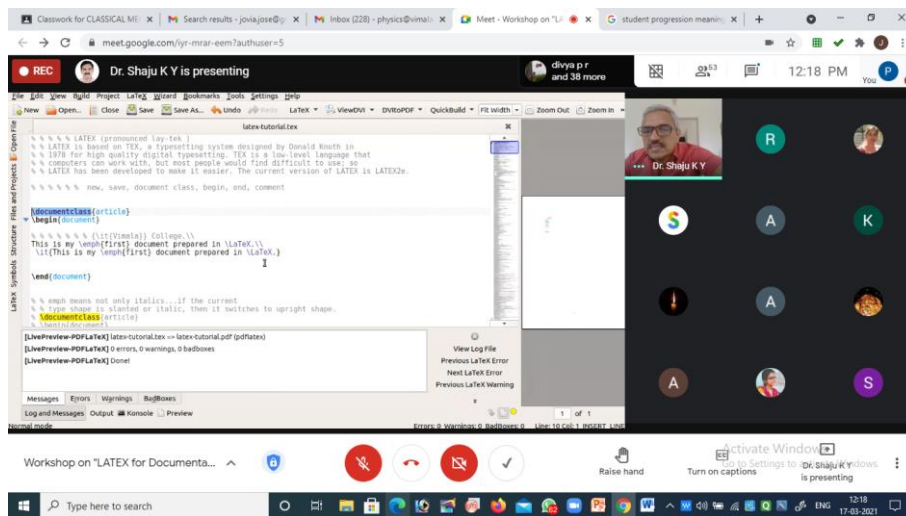
Date: 17 March 2021 (12 pm to 3 pm) and 20 March 2021 (10 to 12 am)

Resource Person: Dr. Shaju K Y, Vice Principal, Associate Professor & Head, Department of Physics, Christ College (Autonomous), Irinjalakuda, Thrissur, Kerala

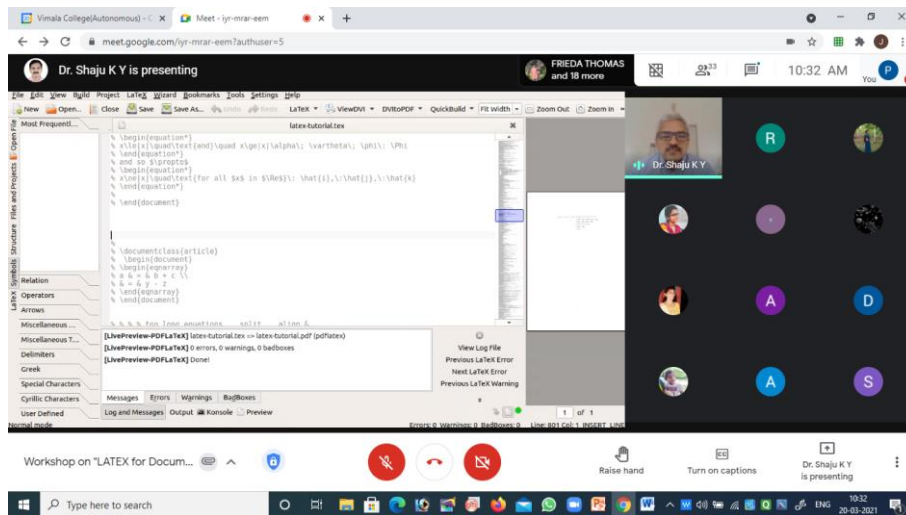
No. of Participants: 54 Students

Mode: ONLINE (Google Meet), meet.google.com/iyr-mrar-eem

Day 1



Day 2



**DBT-STAR COLLEGE PROGRAMME AT VIMALA COLLEGE
(AUTONOMOUS), THRISSUR
POSTGRADUATE DEPARTMENT OF PHYSICS
2021-2022**

Exhibitions/seminars/training courses conducted:

Industry-Academia interface (01-12-2021)



Industry-Academia interface (01-12-2021)

RESOURCE PERSON: Mr. Anoop R, Managing Partner, PROMINENT
TOPIC: Familiarization of Digital CRO & Demonstration of Optic Fibre Characterization



Familiarization of Digital CRO

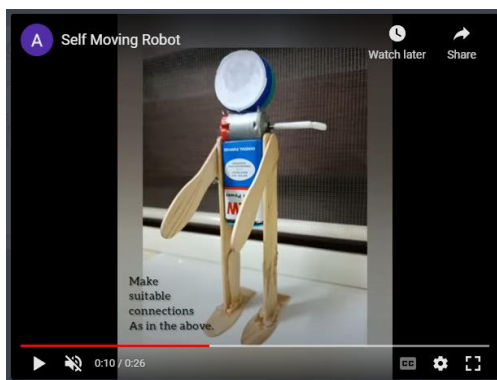
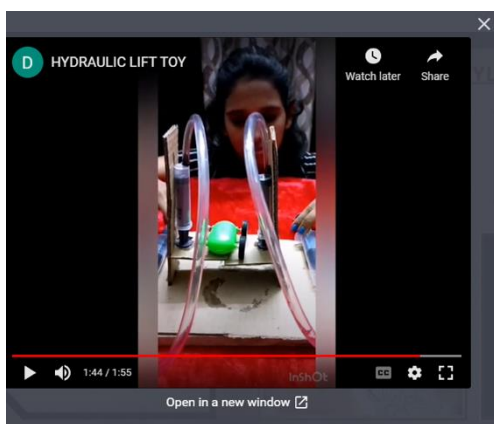


Demonstration of Optic Fibre Characterization

Tech Toy (05-02-2022)

The Post graduate and Research Department of Physics, Vimala College (Autonomous) Thrissur, organized 'Tech Toy' - a video compilation of various creative experiments done by the UG final year students of the department. Tech Toy offered a platform for the students to transform simple ideas of science into creative working models. Based on different science concepts like magnetism, center of gravity, hydraulics, etc., working models were created and videos were made explaining the principle and procedure behind them. The videos prepared by the students were compiled by using book creator application and presented for display.

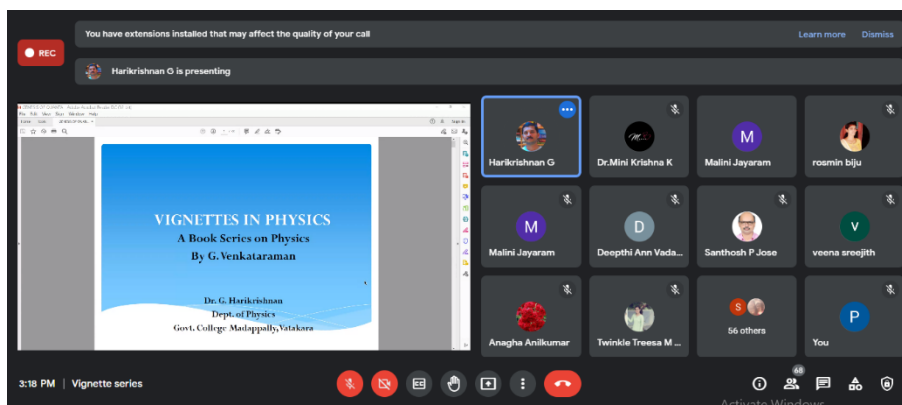
<https://read.bookcreator.com/iaoNZuYfjfQ4o5pDQXOFiNUQkRw2/lp2o2ZZURNeINuD4wyJ71g>



Invited lectures:

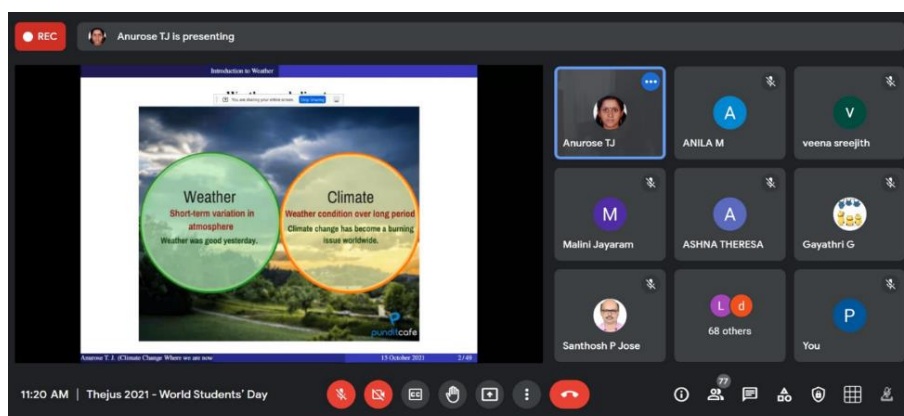
Reading Week (21-27 June 2021)

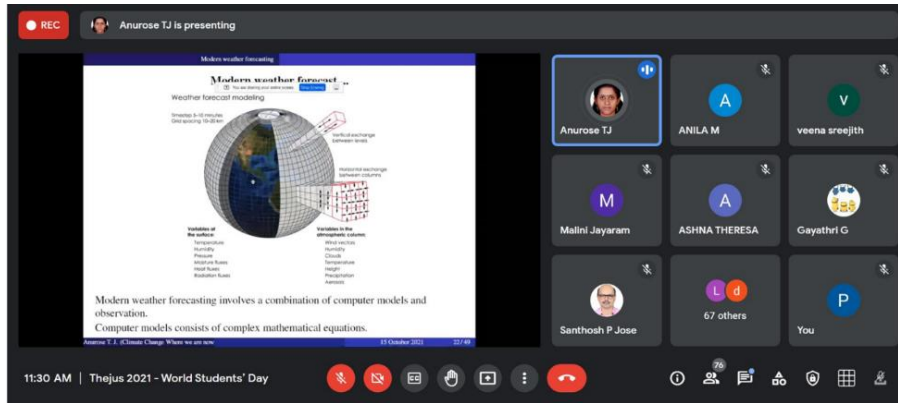
As a part of reading week observation (21-27 June 2021), talk on “VIGNETTES in PHYSICS” by Dr Harikrishnan G, Associate Professor, Government College, Madappally was conducted. Throughout the week, UG students presented reviews on various books in the series.



THEJUS - World students' day celebration (15-10-2021)

As a part of World Students' Day, 'Thejus 2021' was organized commemorating the birthday of Dr. APJ Abdul Kalam. Talk titled “Fridays for future and First Nobel Prize... Where we are now in the era of climate change?” by Dr Anurose T J, Scientist D, National Centre for Medium Range Weather Forecasting, Ministry of Earth Sciences, Government of India was conducted. Dr Anu explained the basic concepts and techniques used in weather forecasting. She also dealt with the opportunities available for students after completing post-graduation in Physics. Many students interacted with her on related topics.





National Energy Conservation Day (14-12-2021)

On 14th December 2021, the national energy conservation day was observed. Dr K Soman, President, Energy Conservation Society, Kerala, gave an invited talk creating awareness on the need and ways of energy conservation. A pledge to conserve energy was also taken



Pledge



Talk

National Science day (19-02-2022)

Talk on ‘Integrated approach in science and technology for a sustainable future’ by Er. G Krishnakumar, chief operating officer –Society of Energy Engineers and Managers (SEEM), on 19 February 2022 in association with Institution’s Innovation Council.

VIMALA COLLEGE (AUTONOMOUS), THRISSUR
Department of Physics In association with Institution's Innovation Council

Topic: National Science Day Lecture - "Integrated approach in science and technology for a sustainable future"
Venue: Google Meet
Date & Time: 19th February 2022, 4:00 pm to 5:00 pm
Registration Link: <https://forms.gle/f9z4ZoRq1U8jRw1mE9>
Meeting Link: <https://meet.google.com/dym-mmpy-qub>

Resource Person: Er. G. Krishnakumar
Chief operating Officer- Society of Energy Engineers and Managers (SEEM)

Kavyalakshmi M S
Swathy S
Student Coordinators

Mr Santhosh P Jose
Dr Dhanya Johnson
Faculty Coordinators

Dr Malini K A
Vice Principal &
Head of the Department of Physics

Dr Sr Silvy Mathew
IIC Convenor

Dr Sr Beeno Jose
Principal

Dr Sr Ritty J Nedumpara Endowment Lecture

A talk on ‘Early Questions’ – the need for inquisitive nature and questioning that leads to great works in science was conducted by Dr. Eluvathingal D. Jemmis, Year of Science Chair Professor-SERB, Dept of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, the resource person for the annual event Dr Sr Ritty J Nedumpara Endowment Lecture on 15 March 2022.

Post Graduate & Research Department of Physics
Vimala College (Autonomous), Thrissur

Organizes

**DR SR RITTY J NEDUMPARA
ENDOWMENT LECTURE**

on
15th March 2022 at 2 to 3 pm
Google meet Link: meet.google.com/pku-zcun-pop

Topic
Early Questions

Resource Person

Eluvathingal D. Jemmis,
PhD(Princeton), FASc, FNA, FNAsc, FTWAS
Year of Science Chair Professor-SERB
Dept of Inorganic and Physical Chemistry
Indian Institute of Science
Bangalore

For More Details

Dr Malini K A, +91 9495220673 Dr Regina Jose +91 9490705980

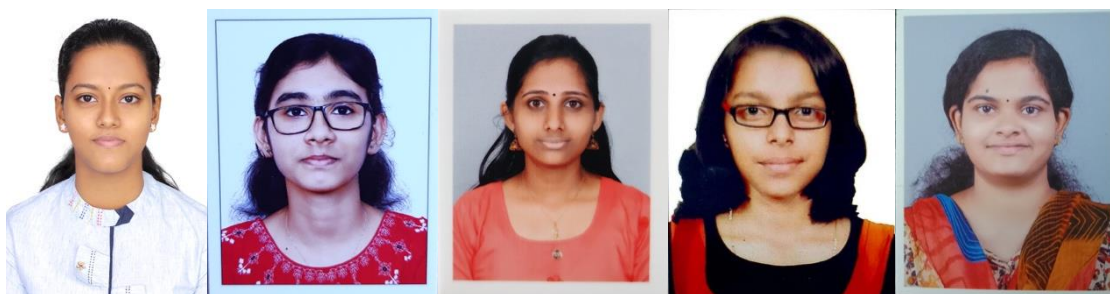
Outreach activities

AGNI 2K21 (27-7-2021)

'An awakening about Dr. APJ Abdul Kalam' - An online quiz competition was organized on 27 July 2021 by the PG students for school and college students in connection with AGNI 2K21, the annual event organized by the Department in honour of Late Dr APJ Abdul Kalam, the former president of India. 362 responses were received for Level 1 Quiz and 219 for Level 2.



Young Innovators Programme 2020-23



Fabi Franciss, Hridya S, Kavyalakshmi M S, Santhi Maria Martin and Swathi S

As a part of Young Innovators Programme 2020-23 conducted by Kerala Development & Innovation Strategic Council (K-DISC), five ideators - **Fabi Franciss, Hridya S, Kavyalakshmi M S, Santhi Maria Martin and Swathi S** of second year Bsc physics qualified in the district level online presentation of their idea on 11th June 2021 and participated in the state level presentation held in online mode on 29th September 2021. The team found its place in the State level winners list.

YIP 2020 - State Level Winners List

Sl. No.	Idea ID	Micro theme	Instt. ID	Instt. Name	District	Ideator's name	Idea Title	Theme
83	2494	Food Technology	15834	Sahrdaya College of Engineering and Technology	Thrissur	Sumi Maria Babu,Sangeetha Gopal,Dr Leon Ittiachen	NANOSEAL PACKS Seal with silver...Seal for future..	Agriculture & Allied Sectors
84	2497	General	13016	University College of Engineering Muttom Thodupuzha Idukki	Idukki	Bibin Sajan,Anandu Ajayan,Ajith P Mangottil,Shahin Nasir,Mariyam Aji	Semi- Automatic jaggery making machine	Traditional Industries
85	2503	Thermal Energy Conversion	17799	vimala College(Autonomous) Thrissur	Thrissur	Santhi Maria Martin,Kavyalakshmi M S,Swathy S,Fabi Franciss,Hridya S	WE Tapping Heat Energy from Incineration	Energy, E-Mobility and Renewables

World Space Week celebrations (4-10 October 2021)

World Space Week Celebration 2021 was conducted by the Post Graduate and Research Department of Physics and Vimala Astronomy Club (VAC) in association with Breakthrough Science Society during 4-10 October 2021. In 2021, World Space Week was dedicated to the theme of “Women in Space”.



Day 1 (04-10-2021)

An interactive session on ‘Space physics’ lead by Mr. Santhosh P Jose, Assistant Professor, Dept of Physics, Vimala College.



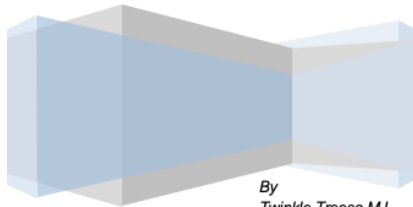
Day 2 (05-10-2021)

Presentation by students on the prospects of space inhabitation on planet mars.

SPACE HABITATION

MARS EXPLORATION

REPORT SUBMITTED IN CONNECTION WITH WSW SPACE
HABITAT CHALLENGE



By
Twinkle Treesa MJ
Fabi Francis
Hridya S
Swathy Satheeshan
Santhi Maria Martin

Day 3 (06-10-2021)

Talk by P P Sajeew Kumar and engineer at BPCL, member of State executive committee of breakthrough science society, Kerala chapter.



Day 4 (07-10-2021)

Presentation of video created by the UG and PG students of the department.

Topic: Chandrayaan

<https://youtu.be/MUNeuACgsio>



Chandrayaan - 4th Day of World Space Week Celebration 2021

Day 5 (08-10-2021)

A talk on “Space Missions 2021“ by Adv. Sajeev T Prabhakaran, an amateur astronomer and member of Breakthrough science society was conducted.



Day 6 (09-10-2021)

Presentation of videos created by the UG and PG students of the department.

Topic: PSLV and GSLV

PSLV - <https://youtu.be/c6sY3cZKHFA>

GSLV - <https://youtu.be/60Ga6moTBYw>



Day 7 (10-10-2021)

Presentation of video created by the UG and PG students of the department.

Topic: Women in Space

Kalpana Chawla - <https://youtu.be/rVtkNEfsvmo>

Sunitha Lyn Williams - <https://youtu.be/8DKEUSn6Wj0>

Indian Women Space Scientists - <https://youtu.be/1uzH3-MLDuU>

Dr V R Lalithambika - <https://youtu.be/bjmT4EMIJfA>



Kalpana Chawla



Sunita Lyn Williams



Nandini Harinath



Dr V R Lalithambika