

SOCIETY FOR PROMOTION OF SCIENCE & TECHNOLOGY IN INDIA

TAKING SCIENCE TO THE PEOPLE

IS OUR MISSION

ANNUAL REPORT 2020-21



- The Novel Coronavirus & the Vaccine
- Annular Solar Eclipse, June 21, 2020
- National Education Policy 2020
- Turing Award - 2020
- The Science Playground Series

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MESSAGE FROM THE PRESIDENT OF THE SOCIETY



It began in 2009, when thirty-seven leading scientists, academicians and administrators joined hands to contribute towards the Article 51A (h) of the Constitution of India – *‘It is a fundamental duty of all citizens to develop scientific temper, humanism and the spirit of inquiry and reform’*. The aim was to develop an organization that would reach out to a large number of people especially children and engage them in activities which would help them develop scientific temperament and unlock their creative potential. Thus the organization Society for Promotion of Science & Technology in India (SPSTI) was formed on October 14, 2009.

During SPSTI’s early years, the organization was limited to a small geographical area including Chandigarh, Panchkula, Mohali and Kurukshetra. Summer Schools in Science & Mathematics as a campaign named “प्रेरणा” was initiated in the year 2010 by holding a residential school in summer vacations at Kurukshetra. Fifty girls were provided free classes by working on their basic fundamentals of science and mathematics. The results were appreciating. Later, the students performed better in their schools. The summer schools expanded gradually with support from Intel Corporation, Govt. of Haryana and many other government and private agencies.

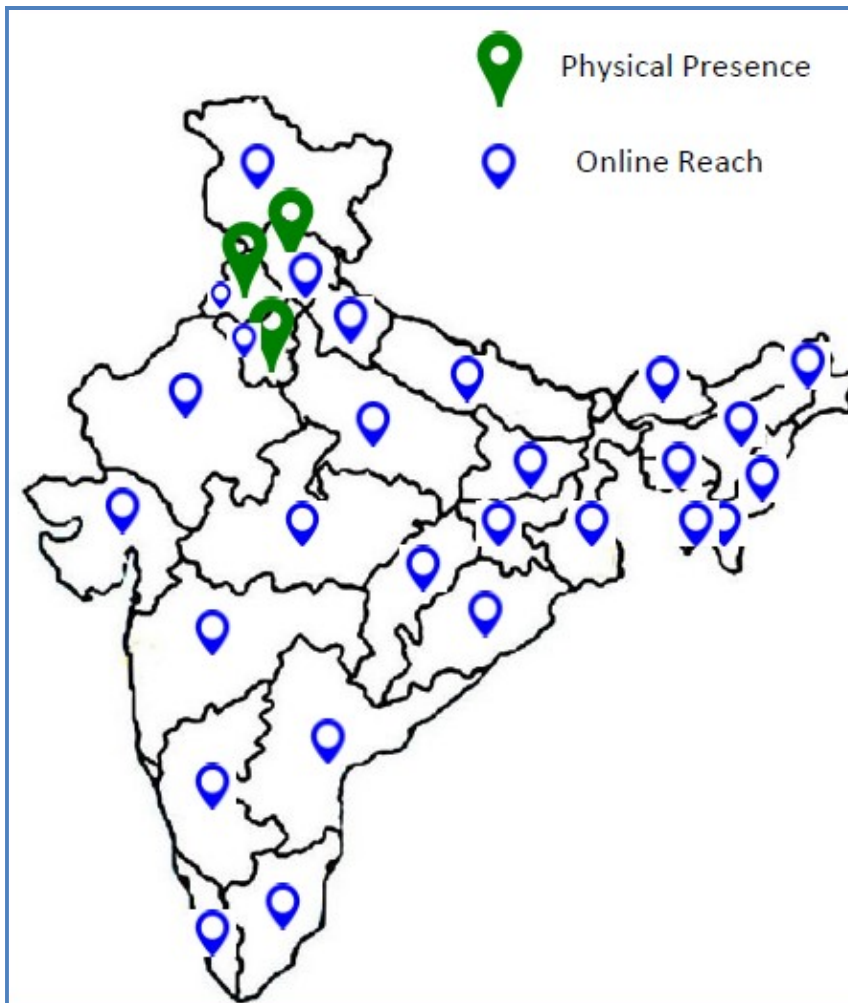
The Mobile Science Laboratory, launched in 2016, boosted our physical reach to thousands of children and teachers in schools in Haryana. The motive was to engage them in hands-on experiments.

The wings are expanding with more collaborations and MoUs. The Society is now associated with Chandigarh Chapter of National Academy of Sciences, India (NASI), Indian National Young Academy of Sciences (INYAS), have signed MoUs with Central University of Punjab, Bathinda and Guru Nanak Dev University, Amritsar. Further, Punjab University, Chandigarh, IISER Mohali and IIT Ropar are our regular outreach partners. Many new eminent personalities have joined as members who are Vice Chancellors or Ex-Vice Chancellors, Scientists or Administrators.

My heartfelt thanks to all SPSTI members and employees, and to our partners, thousands of children, their parents, teachers, state and central governments, social investors, corporate organizations, educational institutes, our invited resource persons in India and abroad whose help, support and generosity has made SPSTI’s efforts closer to reality.

Dharam Vir, IAS (Retd.)
Former Chief Secretary, Government of Haryana
President, SPSTI

OUR EXISTENCE & REACH



Currently, SPSTI is working in all districts of Haryana, Punjab and Himachal Pradesh. The Society has online reach to over one lakh people through online modes throughout the country.

| Acquisition | | | |
|------------------|---------|-------------|------------|
| | Users ↓ | New Users ↓ | Sessions ↓ |
| | 27,885 | 27,731 | 50,040 |
| 1 Organic Search | 14,668 | | |
| 2 Direct | 12,698 | | |
| 3 Social | 727 | | |
| 4 Referral | 322 | | |

| Country ↓ | | Acquisition |
|-----------|---------------|--|
| | | Users ↓ |
| | | 39,112 % of Total 100.00% (39,112) |
| 1. | India | 29,365 (75.08%) |
| 2. | Philippines | 4,055 (10.37%) |
| 3. | United States | 2,059 (5.26%) |
| 4. | Germany | 346 (0.88%) |
| 5. | (not set) | 295 (0.75%) |
| 6. | China | 222 (0.57%) |
| 7. | Canada | 157 (0.40%) |
| 8. | Ireland | 153 (0.39%) |
| 9. | Pakistan | 143 (0.37%) |
| 10. | Malaysia | 118 (0.30%) |

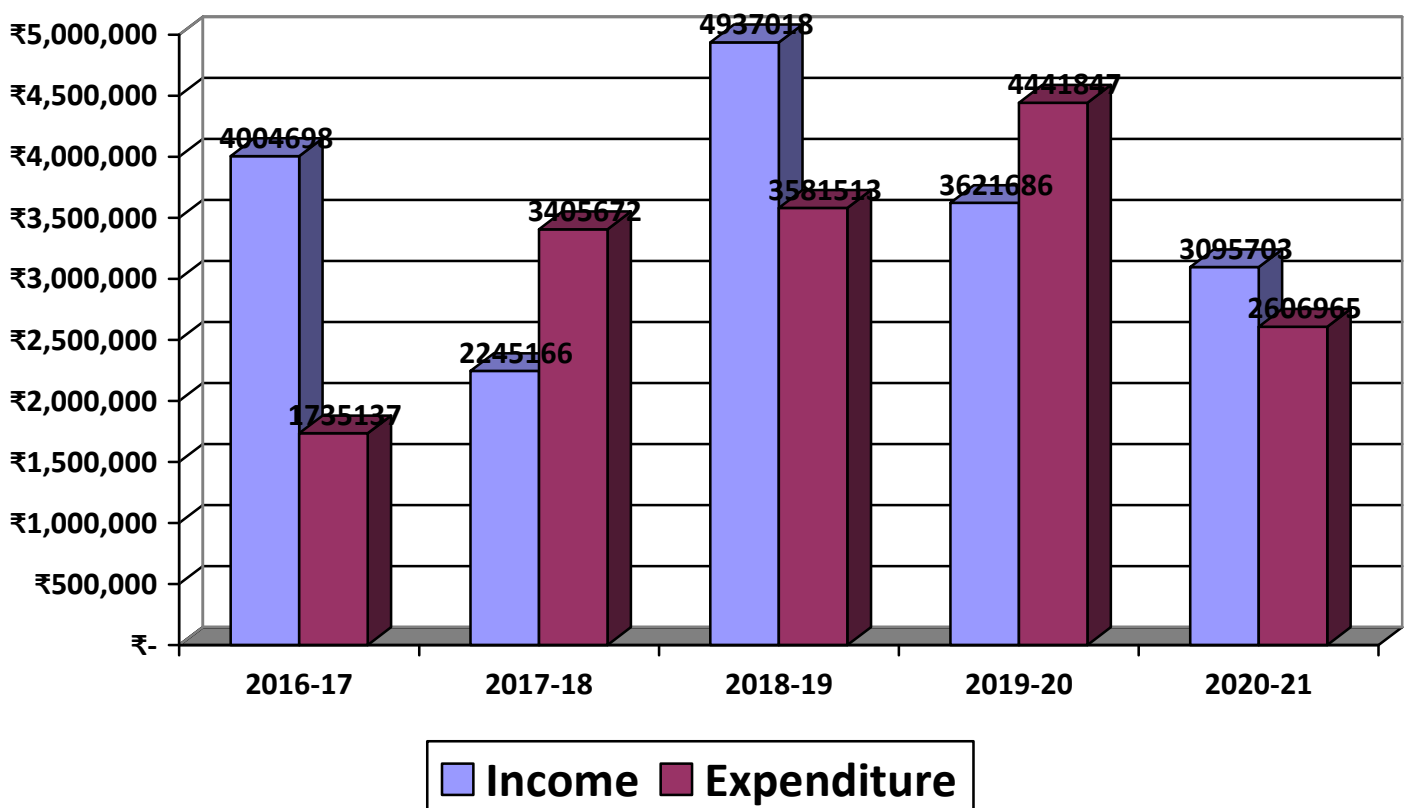
INCOME & EXPENDITURE

The Society for Promotion of Science & Technology in India (SPSTI) keeps transparency in all its accounts. The Society received Rs. 24 Lacs as grant from National Council for Science & Technology Communication (NCSTC), Department of Science & Technology, Government of India to operate the Mobile Science Laboratory for two years in districts Yamunanagar and Nuh.

Other grants included Rs. 30,000 from Department of Science & Technology, Chandigarh Administration for conducting Panel Discussion on National Education Policy 2020. The financial support was also received from Haryana State Council for Science, Innovation & Technology for conducting various activities viz. Rs. 33,690 for conducting online workshops on telescope and sky-watch programs, Rs. 26,500 for conducting online fun-learning experiment based sessions, Rs. 1.50 Lacs for National Mathematics Day and National Science Day.



The total grants received were Rs. 26,90,190/-. A sum of Rs. 53,000 was received on account of Membership Fee.








The expenditure on running the Mobile Science Lab. was Rs. 13,64,791 which accounted for the grants received in the previous financial year. A sum of Rs. 24 Lacs were received as fresh grants out of which Rs. 6,96,144 were spent on running the Lab. under new project. The total income of the Society during the financial year was Rs. 30,95,703 with a total expenditure of Rs. 26,06,965.



MEMBERS & GOVERNING COUNCIL

The Society for Promotion of Science & Technology in India (SPSTI) was founded in the year 2009 by thirty-seven leading scientists, academicians and administrators. Since then the family of the Society has gradually expanded. Three of the founder members had left for their heavenly abode. At the end of the financial year 2020-21, the Society has thirty four founder members, seventeen life members, twenty-one ordinary members and two associate members. In the year 2020-21 the elections for the Governing Council were held on October 17, 2020 in the Annual General Meeting of the Society. The list of the members elected for a period of three years follows:

| S.No. | Member Photo | Name | Designation | Occupation |
|-------|---|----------------------------|----------------------|---|
| 1 |  | Dharam Vir, IAS (Retd.) | President | Ex-Chief Secretary of Haryana |
| 2 |  | Prof. Arun K. Grover | Vice President | Former Vice Chancellor, Panjab University, Chandigarh |
| 3 |  | Prof. Keya Dharamvir | General Secretary | Formerly at Department of Physics, Panjab University, Chandigarh |
| 4 |  | Prof. N. Sathyamurthy | Advisor | Founder Director, IISER Mohali |
| 5 |  | Er. M.L. Garg | Treasurer | Educationist, Social Activist & Former Superintending Engineer (Irrigation), Govt. of Punjab |
| 6 |  | Ms. Rajni Bhalla | Joint Secretary | Principal (Retd.), Department of Higher Education, Govt. of Haryana |

| | | | | |
|----|---|---------------------|--------|--|
| 7 |  | Prof. Suman B. Beri | Member | Emeritus Professor, Department of Physics, Panjab University, Chandigarh |
| 8 |  | Prof. I.S. Dua | Member | Department of Botany, Panjab University, Chandigarh |
| 9 |  | Dr. K.S. Arya | Member | Former Director, DAV College, Chandigarh |
| 10 |  | Prof. R.K. Kohli | Member | Vice Chancellor, Amity University, Mohali & Ex-Vice Chancellor, Central University of Punjab |
| 11 |  | Mr. D.S. Bedi | Member | Director-Principal, Shivalik Public School, Mohali |
| 12 |  | Prof. Arvind | Member | Vice Chancellor, Punjabi University, Patiala |
| 13 |  | Prof. R. Baskar | Member | Department of Environment Science & Engineering, Guru Jambheshwar university of Science & Technology, Hisar |

MOBILE SCIENCE LABORATORY – CIRCUS OF SCIENCE OF SCIENCE



SPSTI's Mobile Science Laboratory – Circus of Science, Vigyan ka Jantar Mantar works extensively towards imparting practical knowledge and development of scientific temperament in the children and general people in rural areas in need by addressing their problems of less exposure to science and its achievements in modern era. The model envisages an efficient and cost-effective system for the students in schools, out of school children in villages, and people of all age groups in rural and sub-urban areas.

The programme operates with a two-pronged approach – first it engages students of government schools in hands-on experiments with an approach of “करो, देखो और सीखो” in the school premises and second it works for the awareness in rural community under the program - “प्रयास”, on issues related to various concerns like women education, water conservation, soil erosion, air and water pollution, effect of plastics etc. etc. The Mobile Science Laboratory – Circus of Science, Vigyan ka Jantar Mantar was launched in April 2016 by Hon'ble Chief Minister of Haryana from Karnal. With support from Govt. of Haryana, Intel Corporation Ltd.

and National Council for Science & Technology Communication (NCSTC), Department of Science & Technology, Government of India, the laboratory has visited more than 450 schools so far and more than 75,000 students have performed hands-on experiments with facilities available in the laboratory. In addition, it has visited more than 100 villages and conducted community awareness programs.

In CoViD-19 Pandemic, the operations of the educational institutions halted but the Mobile Science Laboratory visited village to village for creating awareness about the notorious disease. In consultation with administration of districts Kurukshetra and Nuh (Mewat), the laboratory visited fifty-one villages and distributed masks and sanitizer to the people and made them aware about the importance of masks, social distancing and cleanliness in daily routine.






The laboratory visited many villages in district Nuh (Mewat), an aspirational district. The volunteers interacted with the children, youth and senior citizens in the villages and discussed with them about the coronavirus and its deadly effects. People were made aware about the proper methods of wearing masks, washing hands with soap and maintain cleanliness in day-to-day life. The volunteers also distributed masks among the people.



Mobile Science Laboratory in Schools

The Mobile Science Laboratory - Circus of Science, Vigyan ka Jantar Mantar is supported by National Council for Science & Technology Communication (NCSTC), Department of Science & Technology, Government of India to operate in district Yamunanagar for another two years from December 2020. In consultation with Department of School Education, district Yamunanagar, the Lab. has started working in the government senior secondary, government high and government middle schools. The laboratory is equipped with a large number of scientific equipments and experiments related to physics, chemistry, biology, mathematics, electrical and electronics etc. It has facilities for audio-visual sessions and a collection of a number of motivational and scientific movies. The laboratory spends one-two three days in each schools depending on the strength of the students.



| |
|---|
| DURING DEC. 2020 to MAR. 2021 |
|  6366 Students performed hands-on experiments |
|  309 Teachers came in contact during the programs |
|  36 Schools visited in rural areas |

The Laboratory conducted two science exhibitions in collaboration with District Education Office, Yamunanagar; one at Government Senior Secondary School, Jagadhri Workshop and other at Govt. Model Sanskriti Sr. Sec. School, Bilaspur in district Yamunanagar. Students actively interacted with all the science equipments displayed in the lab. Many teachers were amazed to see many experiments for the first time in their career.

STORIES THAT INSPIRE US

Muskaan, a class 12th student of Government Senior Secondary School, Village Attawa (Yamunanagar) – “I came to learn for the first time about the applications of science in daily life through the activities in the Mobile Science laboratory and I wish that the Lab. should visit our school frequently and regularly”

STEERING COMMITTEE MEETING HELD AT KURUKSHETRA



By courtesy of the National Council of Science Technology and Communication, Department of Science and Technology, Government of India, the meeting of the Steering Committee of the Mobile Science Laboratory, run by the Society for Promotion of Science and Technology in India, was held in Pipli, Kurukshetra on February 20, 2021. The meeting was presided over by the President of the Society Shri Dharam Vir, IAS (Retd.). The Principal Investigator of Mobile Science Laboratory Project, Prof. Keya Dharamvir apprised the members of the Steering Committee about the 2 years tenure of the Lab in Kurukshetra and commencement in the district Yamunanagar with effect from December 2020.

She informed that Science Lab has worked on scientific activities in all government schools of district Kurukshetra and some schools in Nuh (Mewat). More than 20,000 students have been benefitted. Along with this, more than 25,000 people came in contact with the laboratory, including awareness programs, International Gita Festival, Science and Mathematics Day and other activities in various villages of Kurukshetra.

At the conclusion of this project in Kurukshetra, Mr. Dharam Vir, paid a vote of thanks to the members of the Steering Committee, Prof. R.K. Moudgil of Physics Department, Kurukshetra University, Dr. D.D. Sharma, Director of SKIET Kurukshetra and Shri Surender Singh, District Science Specialist, Kurukshetra.

Former Vice Chancellor of Panjab University, Prof. Arun Grover, Dr. K.S. Arya, Principal (Retd.) D.A.V. College, Chandigarh, Ms. Rajni Bhalla, Principal (Retd.), Higher Education Haryana, Er. M.L. Garg, Treasurer of the Society, Mr. Sanjiv Jawa, Principal (Retd.), Government Polytechnic, Er. Anuj Goel Manager and Mr. Mahi Paul Sharma, Coordinator of the Mobile Science Laboratory were present. In the inspection of the lab, science communicator Aman Kumar showed the scientific experiments present in the lab to all the members.

NATIONAL LEVEL POSTER-MAKING & ESSAY-WRITING COMPETITION - "CORONAVIRUS - PROBLEMS & SOLUTIONS"

Due to the COVID-19 pandemic, there was a situation of worldwide lockdown. To keep the students engaged in educational activities, essay-writing and poster-making competitions on "Coronavirus – Problems & Solutions" were organized through online modes. The event was launched on April 20, 2020 and entries were invited up to May 10, 2020. The entries were divided into four categories i.e. Class 1st – 4th, 5th – 8th, 9th – 12th & higher education. In this event, more than Three Thousand students participated from Seventeen states of the country. More than 800 students participated in essay competition. The experts picked up top two essays in Category of Classes 1st - 4th, top three essays in Classes 5th -8th and top two essays in classes 9th -12th.

Winners in Poster Competition

- i. Ram Agarwal, Class 4th, Delhi Public School, Rohini, New Delhi
- ii. Aradhya Mohapatra, Class 4th, D.A.V. Public School, Bhubneswar, Odisha
- iii. Kanishka Verma, Class 2nd, Seth Tek Chand Memorial Public School, Kurukshetra
- iv. Anirudhra, Class 3rd, D.A.V. Public School, New Panvel, Mumbai, Maharashtra
- v. Srijita Garain, Class 8th, D.A.V. Model School
- vi. Aisha Panda, Class 8th, Buxi Jagabandhu English Medium School, Bhubneswar, Odisha
- vii. Kumar Ajit Mishra, Class 7th, D.A.V. Public School, Unit-8, Bhubneswar, Odisha
- viii. Sheetal, Class 7th, D.A.V. Police Public School, Kaithal, Haryana
- ix. Santanu Basu Ray, Class 12th, D.A.V. Model School, Durgapur, West Bengal
- x. Shreshtha Qazi, Class 10th, St. Francis School, Indirapuram, Ghaziabad, Uttar Pradesh
- xi. Tanisha Sahu, Class 11th, The Khaithan School, Noida, Uttar Pradesh
- xii. Swagatika Sahoo, Class 9th, D.A.V. Public School, Unit-8, Bhubneswar, Odisha
- xiii. Yashmeen Kaur, Class B.Sc. 1st Year, Government National College, Sirsa, Haryana
- xiv. Gouri Rani, B.A. Final Year, Shri Guru Teg Bahadur Khalsa College for Girls, Patiala, Punjab

Winners in Essay Competition

- i Disha P. Class 4th, Mitra Academy, Bangalore
- ii Sakshi Sharma, Class 3rd, Sacred Heart Convent School, Sanewal
- iii Writam Naha, Class 8th, Hem Sheela Model School, Durgapur, W.B.
- iv Geetanjali Sharma, Class 6th, Adani D.A.V. Public School, Kumara, Bhadrak
- v Parthivi Singh, Class 8th, D.A.V. Public School, Vasant Kunj, New Delhi
- vi Manjil, Class 10th, Base Model Sr. Sec. School, Charkhi Dadri
- vii Sunaina Thapliyal, Govt. International College, Kandali Rudraprayag
- viii Tania Sharma, G.N.M. 3rd Year, A.M.T. School, Jammu
- ix Sindhusree Nayak B.G., Sheshadripuram PU College, Mysure



WEBINARS AMID COVID-19 LOCKDOWN

During the coronavirus pandemic, when all the educational institutions were closed, SPSTI initiated online lectures for the students of schools and colleges.

Webinar on Atomic Structure (May 26, 2020)

The lecture was organized through online mode and delivered by Mr. Vivek Sharma, Chemistry Teacher. Prof. Sharma explained to the students of eighth to twelfth that how neutrons and protons are held together in so small sized nucleus and why some elements are radioactive and why they are unstable. He also explained how to calculate the charge on electron using Milliken's Oil Drops experiments and Theory of Relativity. There was a healthy question-answer session in the end. In this webinar Dr. Rupali Sethi (Chemistry Department, Allahabad Univ.) and Prof. Keya Dharamvir, General Secretary, SPSTI were present. This session was very interactive and informative for the students as well as teachers and was attended by 90 students.

Properties of Periodic Table (June 17, 2020)

This interactive session by Mr. Vivek Sharma discussed all the properties like affinity, electron negativity etc. More than 80 students attended this session.

Online Chemistry Laboratory Session (June 04, 2020)

To motivate the students to perform some experiments at home, an online experimental session was conducted for students of classes 8th onwards. Students learnt about the use of Phenolphthalein indicators, Magnesium ribbon, burning of ethanol using currency note, decomposition and displacement reactions. A question answer session was held at the end of every experiment.

Importance of Science & Technology in Archaeology (August 21, 2020)

This lecture was organized under Circus of Science – Vigyan ka Jantar Mantar and was delivered by Dr. Sukhdev Saini, Chairman, Department of Ancient History & Archeology. Dr. Saini explained about history, archeology

and how human life evolved. He emphasized that science and technology cannot move forward without knowing history because history and



archeology is a root of our information, on the basis of which various discoveries have been made and have been taking place. The lecture was attended by 70 students.

Workshop on Telescope Assembling (Aug. 08, 2020)

“Equipped with his five senses, man explores the universe around him and calls the adventure science” says Edwin Powell Hubble. The telescope has played a critical role from the moment of its use by Galileo in 1608. Since then, scientists have drastically changed the design and structure of modern telescopes. A workshop under the Project Mobile Science Lab. was conducted at the Aashiana Children’s Home, Panchkula by Prof. Keya Dharamvir along with Er. M.L. Garg, Er. Anuj Goel and Mr. Mahi Paul Sharma. Thirty students of different age groups learnt about the parts of telescope and how to assemble them. A Celestron Powerseeker 700/60mm telescope along with 20mm and 4mm eyepieces were used for terrestrial viewing.



SKY-WATCH from Aashiana Children’s Home (Sept. 29, 2020)

The Sky-Watch was conducted at Aashiana Children’s Home, Panchkula. Thirty students witnessed the craters of Moon and stars of Jupiter well visible with Celestron Powerseeker 700/60mm Telescope. Children also learnt about how to spot the stars and planets in the night sky using various mobile softwares.



Resource Person demonstrating the use of mobile software to locate and identify the stars & planets in the night sky (left) and children watching Jupiter and its stars with telescope (right)

Workshop on Telescope and Science Experiments (Oct. 09, 2020)

A one-day workshop on Telescope Assembling was conducted at Government Senior Secondary School, Village Mandhana, Panchkula. Prof. Keya Dharamvir, General Secretary of the Society along with Er. Anuj Goel, Mr. Mahi Paul Sharma and Er. Aman Kumar demonstrated the assembly of refractor type telescope. Seventy students of classes 9th & 10th participated in this session. Many interesting experiments of chemistry and physics were also demonstrated.



Students watching a distant object with telescope (left) and Demonstration of experiments (right)



Prof. Keya Dharamvir interacting with students and teachers and explaining them about telescope

KNOW THE BLUE MOON (OCTOBER 31, 2020)

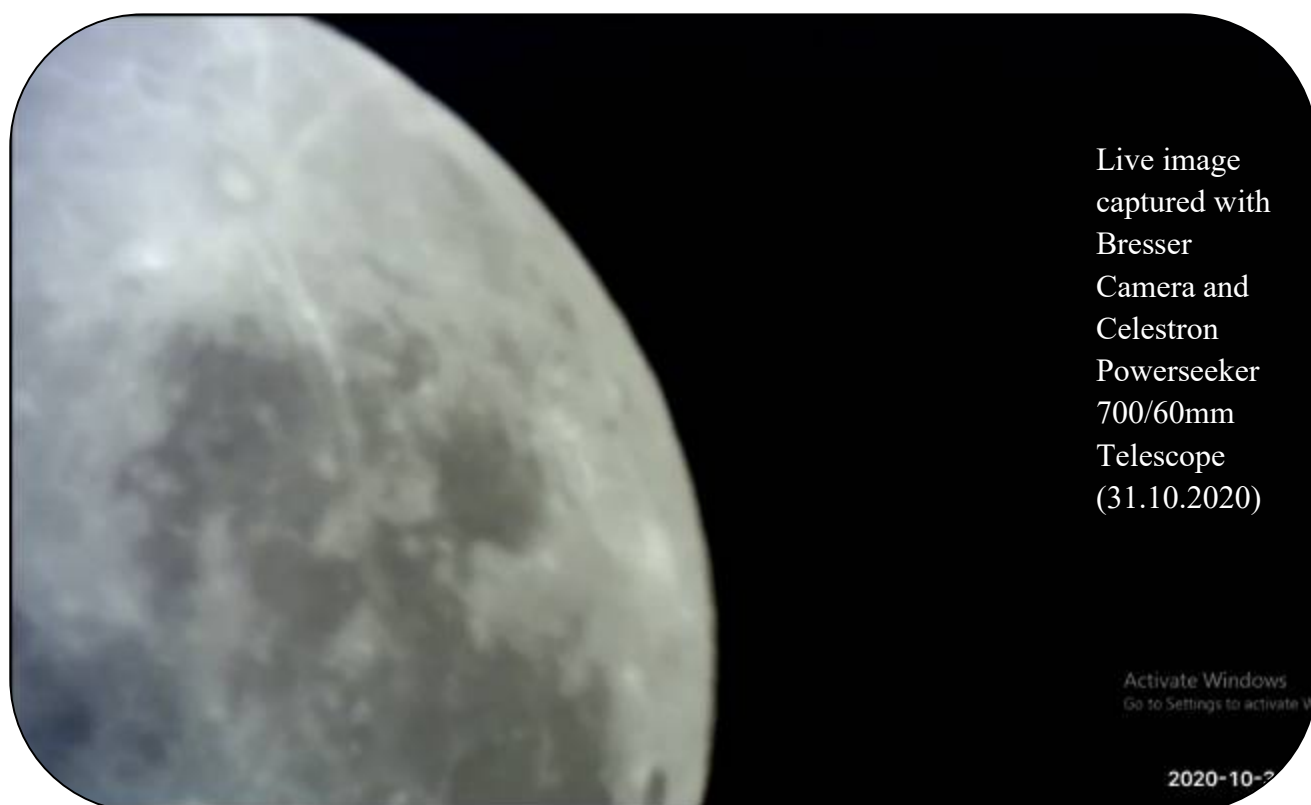
A sky-watch program was conducted through online mode. Eighty-nine (89) students from different parts of India attended this live program “*Know the Blue Moon*” on October 31, 2020. The invited speakers were Prof. Harvinder Kaur Jassal and Prof. J.S. Bagla of Dept. of Physical Sciences, IISER Mohali. The event was organized with support from Haryana State Council for Science, Innovation & Technology, Govt. of Haryana. The Speaker was Prof. Jasjeet S. Bagla, Department of Physical Sciences, IISER Mohali. The unique was that the telescope was employed to live telecast the view of the surface of full moon. Students asked many questions related to craters, possibility of water on the surface of moon, color changes on the surface etc.



Prof. Bagla explained that it was second full moon in the calendar month on October 31 and it does not happen very often. On full moon, the earth, sun and moon are approximately in a straight line and the moon is approximately 99.2 to 99.4 percent.

Prof. Bagla explained about the Tycho Crater visible as bright spot on the top left of the image shown below and that it was named after the Danish astronomer Tycho Brahe.

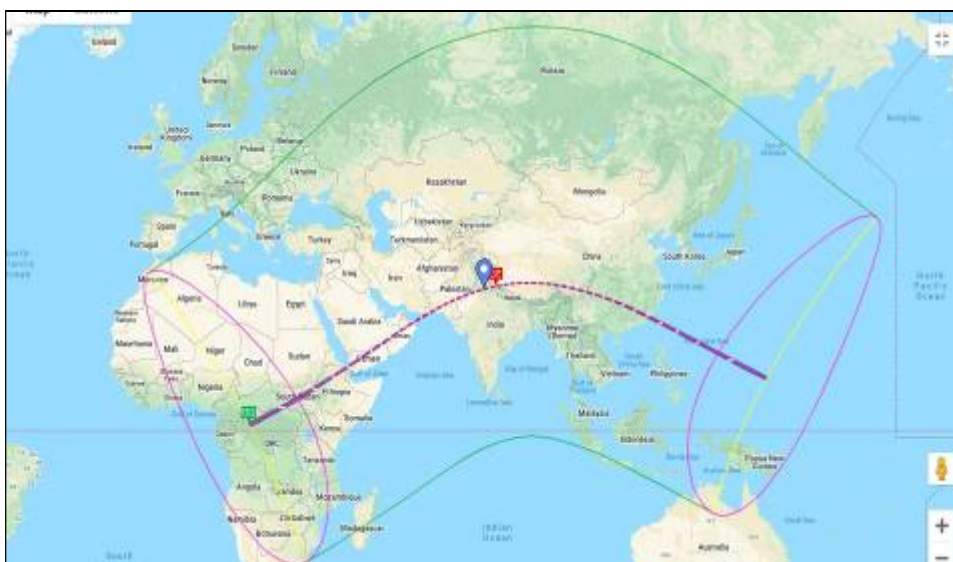
On being asked about the big dark surfaces, he explained that these are plain sand surfaces reflecting very less amount of light.



ANNULAR SOLAR ECLIPSE (JUNE 21, 2020)

On June 21, 2020, the world enjoyed a wonderful astronomical event. Amid Coronavirus Pandemic, the Society conducted live streaming of annular solar eclipse from the line of maximum eclipse, Village Sirsla, District Kurukshetra (Haryana). Prof. Keya Dharamvir, Principal Investigator, Mobile Science Laboratory and General Secretary, SPSTI, organized the camp to live telecast the view of annular solar eclipse in which Former Chief Secretary of Haryana & President, SPSTI, Sh. Dharam Vir, IAS (Retd.), Er. Anuj Goel, Manager, Mahi Paul Sharma, Coordinator along with team of Circus of Science were present. The event was organized under Mobile Science Laboratory which is supported by National Council for Science & Technology Communication, Department of Science & Technology, Government of India. During the live telecast, following Professors were invited to discuss the phenomenon of eclipses:

| | |
|--|---|
| <ol style="list-style-type: none"> 1. Prof. M.S. Sriram, Madras University, PI, DST Project on Eclipses in Ancient Indian Texts 2. Prof. Dilip G. Kanhere, Professor Emeritus, Savitribai Phule, Pune University (Director, Science Museum, Pune University) 3. Prof. Rajesh Kochhar, Honorary Professor, IISER Mohali and Panjab University 4. Prof. Suman B. Beri, Professor Emeritus, Panjab University, Chandigarh (Ex-Scientist, CERN Geneva) 5. Prof. Sandeep Sahijpal, Panjab University 6. Prof. Harvinder Kaur Jassal, IISER Mohali <p>The following students also participated in the discussion</p> <ol style="list-style-type: none"> 1. Tanmay Gupta, Final Year Student from Kaulampur 2. Shomick Adhickey, Research Scholar from IISER Pune | <p>Location & Timings of Coverage of Annular Solar Eclipse:</p> <p>Village Sirsla, District Kurukshetra (Haryana)</p> <p>Geographical Coordinates: 30.0119903, 76.8636959</p> <p>Start of Eclipse: 10:21 AM</p> <p>Start of Maximum Annular Eclipse: 12:01:24 PM</p> <p>End of Maximum Annular Eclipse: 12:01:56 PM</p> <p>End of Eclipse: 01:47 PM</p> |
|--|---|



The red dotted line marks the path from where the maximum eclipse was visible.

SPSTI organized camp to live telecast the annular solar eclipse on June 21, 2020 from the location shown with Blue Mark.

There are three types of solar eclipse; partial solar eclipse, annular solar eclipse and full solar eclipse, depending on the position of the moon with respect to the sun and earth. The solar eclipse of June 21 falls in the category of annular solar eclipse. The line of maximum eclipse originated from Pacific Ocean, and passed over from Taiwan, China, Utrakhand, Uttar Pradesh, Yamunanagar, Kurukshetra, Kaithal, Fatehabad and Sirsa in Haryana, some areas of Rajasthan, Pakistan, Oman, Saudi Arabia, Yemen, Ethiopia, South Sudan, and finally in Africa.



Prof. M.S. Sriram pointed out that Indian scholars have been observing and recording eclipses for the past at least 1500 years. Prof. Kanhere said it was a matter of pride and progress that whereas 50 years ago during an eclipse, the neighborhood elders drove everybody inside and streets were deserted, today there is great enthusiasm to observe the eclipse. Even uneducated sections of the society show keen interest to understand the phenomena. Prof. Suman Beri applauded the audience for joining in such large numbers and remarked on the myth that during eclipse it is “forbidden” to go out; finding explanation in the fact that it is injurious to the eyes to look-up at the sun and during an eclipse it is tempting to do so. Prof. Kochhar also commented on the shastric injunction of many do’s and don’t’s during eclipses saying these were formulated earlier than 1500 years ago i.e. earlier than the time when, as Prof. Sriram said, Indians understood the trajectory of heavenly bodies and eclipses. He also said this is an occasion to sift science from pseudoscience.

spsti Society for Promotion of Science & Technology in India
 science & technology
Photographs of Annular Solar Eclipse, 21 June 2020 from Line of Maximum Eclipse, Village Sirsla (Kurukshetra)

Visit us at: <https://spsti.org/annular-solar-eclipse-21-june-live-telecast/>

Images of Projection through Celestron Powerseeker 700/60mm Telescope

Location: Sirsla, Kurukshetra, Haryana, India
 Coordinates: 30.0119903, 76.8636959

Start of Eclipse: 10:21 AM
 Time of Maximum Eclipse: 12:01:24 PM
 End of Maximum Eclipse: 12:01:56 PM
 End of Eclipse: 01:47 PM

Supported by: NCSTC, Department of Science & Technology, New Delhi

STORIES THAT INSPIRE US

Kashish Arora of Sultanpur Lodhi says *“the live view was amazing. I got to know many new things and the live view gave me great extent of knowledge. As in village Sirsla, Kurukshetra, the ring was maximum, it looked really amazing.”*

Devang Sharma, Ghaziabad (U.P) – *“It was a wonderful experience to watch the solar eclipse live. Pictures were very much clear. I along with my mother and brother watched the entire program. Thanks to SPSTI”*

CELEBRATE BIODIVERSITY - WORLD ENVIRONMENT DAY 2020

On the occasion of World Environment Day, June 05, 2020, an online campaign was launched to plant more number of trees. The theme for World Environment Day 2020 was "Celebrate Biodiversity". The campaign invited children from all over the India to plant a tree, take selfie and describe the techniques to keep the plant healthy and discuss the challenges in plant growth. A declamation contest was held on "Biodiversity & its Applications" and "Threats to Biodiversity". Children from around twelve states participated and contributed to the green environment. Many children actively prepared the videos of their speeches explaining how they can care about their plants.



More than 500 children participated in Plant-a-Tree Campaign

Entries received were divided in two categories; one for class 5th to 8th and second for class 9th to 12th. More than 500 students participated. The number of essays and declamation received was 250 and 134 respectively.

Winners of Declamation Competition: Group 1 (Class 5th to 8th)

1. Itish Roy, Class 8th, Public School, Hudco, Bhilai, Chhattisgarh
2. Saanvi Patnaik, Class 6th, D.A.V. Public School, Vasant Kunj, New Delhi
3. Svanik Sharma, Class 5th, Montessori Cambridge School, Pathankot

Winners of Declamation Competition: Group 2 (Class 9th to 12th)

4. Shakti Sidhu, Class 9th, K.L. International School, Meerut, U.P
5. Dhriti Thakur, Class 11th, Himalayan Public Sr. Sec. School, Pandoh, Mandi (H.P.)
6. Puneet Kaur, Class 11th, BCM Arya Model Sr. Sec. School, Ludhiana

Winners of Essay Competition: Group 1 (Class 5th-8th)

7. Milan Gambhir, Class 7th, K.L. International School, Meerut, U.P.
8. Umra, Class 7th, K.L. International School, Nand Nagri, Delhi
9. Athrav Mahajan Class 5th, K.L. International School, Meerut

Winners of Essay Competition: Group 2 (Class 9th-12th)

10. Milan Dhriti Thakur, Class 11th, Himalayan Public Sr. Sec. School, Pandoh, Mandi (H.P.)
11. Arshdeep Kaur Class 9th, Govt. Sr. Sec. School, Jhallian Kalan, Ropar (Pb.)
12. Kanwar Partap Singh, Class 10th, G.D. Goenkan Public School, Sirsa

THE SCIENCE PLAYGROUND

A playground is a place to move, explore and enjoy. The laboratory is the scientist's playground, one which a young student can identify with! However, budding scientists studying in our schools and colleges seldom ever get an opportunity to see the workings of any research laboratory. To bridge this gap, some very eminent young scientists are lecturing and interacting from their laboratories.

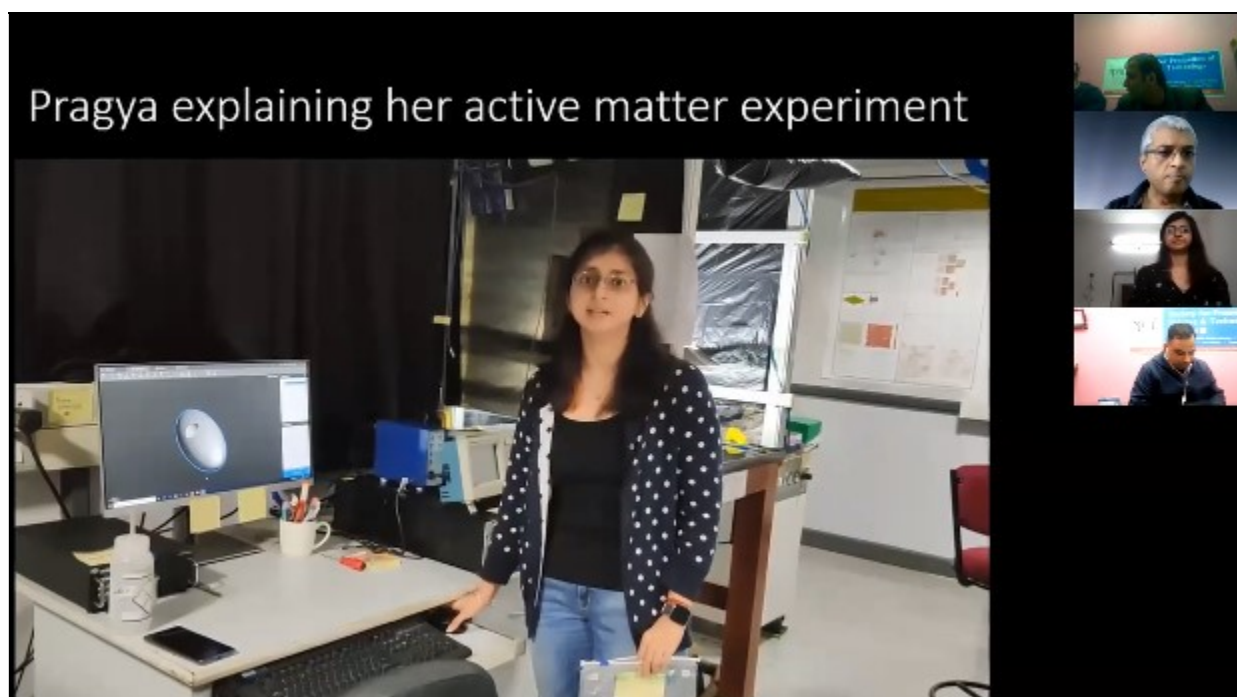
The Series was initiated in association with Chandigarh Chapter of National Academy of Sciences, India (NASI) with support from Haryana State Council for Science, Innovation & Technology, Govt. of Haryana.

Experiments in Soft Matter: Exploring Friction - November 10, 2020

The first of these expository lectures was presented by **Prof. Shankar Ghosh** from Tata Institute of Fundamental Research, Mumbai, awardee of S. S. Bhatnagar Prize in Physical Sciences, 2019. Prof. Arun Grover, former Vice Chancellor, Panjab University, Fellow, NASI and Vice President, SPSTI, greeted all those present and introduced this series of lectures emphasizing its benefits. Prof. Sudesh K. Dhar, also from TIFR, introduced the speaker Prof. Shankar Ghosh. Prof. Ghosh's presentation was carried out from his laboratory at TIFR, Mumbai, one of the premier scientific research institutions in the country. He showed objects of various shapes and discussed ways of transforming a flat surface to one solid shape to another.

Imaging of Crystallization in Colloids and other Soft Matter (Dec. 19, 2020)

Dr. Rajesh Ganapathy, Awardee of SS Bhatnagar Prize and Professor, Dept. of Soft Matter Physics, JNC SR, Bangalore, described the physics of organized movement as in the flight of a flock of birds or a school of fish; stimulations were carried out in his lab with the help of rice-like particles moving together on a plate. The presentation made along with his research scholars was much appreciated. Also available was Prof. Ajay K. Sood, FRS, on this occasion.



Walking through Walls & Flowing through Resistance – Amazing World of Electrons in Solids (February 06, 2021):

Prof. Pratap Raychaudhuri, SS Bhatnagar Prize awardee & Professor, Department of Condensed Matter Physics & Materials Sciences, TIFR Mumbai used various animated slides, diagrams and graphs to elaborate the concepts. His talk focussed on quantum tunnelling, the unexpected behaviours of electrons in solids as

solids have many electrons and collectively the behaviour of these electrons is very different from the behaviour of sum of isolated electrons. He explained the tunneling and electron as particles and waves with simple examples of a squash game and shooting through a canon. He explained how during tunneling the intensity of wave decreases due to barrier in the path. He discussed the work of Nobel laureates Leo Esaki and Ivar Giaever who discovered tunneling phenomenon in semiconductors and superconductors respectively and Brian Josephson for his theoretical predictions of properties in a super current flowing through a tunnel barrier.

Two-day Online Conference on 100th Death Anniversary of Srinivasa Ramanujan

During his short life span, the great Mathematician Srinivasa Ramanujan (1887 – 1920) independently compiled nearly 3900 results (mostly identities and equations). The Department of Mathematics, Panjab University, Chandigarh, in association with the Chandigarh Chapter of the National Academy of Sciences,

SPSTI
SCIENCE
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Dept. of Mathematics Chandigarh Chapter

A Lecture Series on
Life, Work & Legacy of Srinivasa Ramanujan
(Remembering on his 100th Death Anniversary)

November 20-21, 2020

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| <p>Friday, November 20, 2020 04:40 PM</p> <p>The Tragedy and Triumph of Life of the Genius: Ramanujan</p> <p></p> <p>Prof. Dinesh Singh (Padma Shri) Chancellor, K.R. Manglam University Gurugram & Former VC, Delhi University</p> | <p>Friday, November 20, 2020 06:00 PM</p> <p>How Ramanujan May Have Thought of the Mock Theta Functions</p> <p></p> <p>Prof. George Andrews Evan Pugh Professor of Mathematics Pennsylvania State University</p> | <p>Saturday, November 21, 2020 11:30 AM</p> <p>The Legacy of Srinivasa Ramanujan</p> <p></p> <p>Prof. A.K. Agarwal Professor Emeritus, Dept. of Mathematics Panjab University, Chandigarh</p> |
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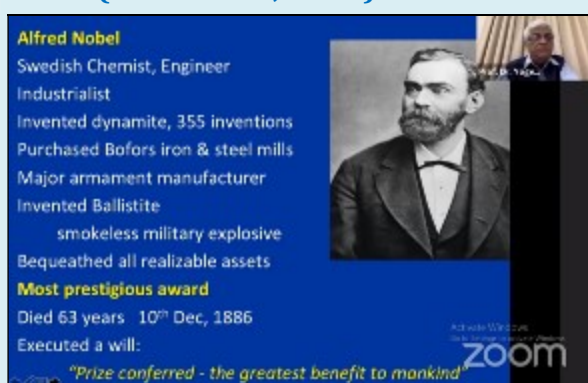
India and SPSTI organized a two days' online conference, "Life, Work and Legacy of Srinivasa Ramanujan", to commemorate his 100th death anniversary. Two sessions were organized, on November 20 and 21. Prof. I. B. S. Passi and Prof. Madhu Raka, two of the well known Mathematician from the Department, graced the occasion. The first lecture, "*the tragedy and triumph of life of the genius*", was delivered by Padma Shri Prof. Dinesh Singh, Chancellor, K. R. Manglam University, Gurugram and former VC, Delhi University. He dwelled on the life of Ramanujan and presented the achievements and challenges he faced in a very lucid manner. He mentioned how inspite of facing many difficulties throughout the life, Ramanujan pursued his grand passion for till his last breath. Ramanujan was the first to show the British that Indians not only can match them but can also be better. The next speaker, Prof. George Andrews, Evan Pugh Professor of Mathematics at Pennsylvania State University, deliberated on how Ramanujan may have thought of the mock theta functions. He engaged the participants with a detailed derivation of mock theta functions and also mentioned that there are three more functions which Ramanujan mentioned in his last letter to Prof. G.H. Hardy which are higher order series, not related to each other, and remain mysteries till today.

Prof. A.K. Agarwal, Dept. of Mathematics, Panjab University, Chandigarh, delivered a very insightful and critical lecture, "*The Legacy of Srinivasa Ramanujan*". The Mathematician talked on various aspects of his life and research considering his family, his struggle and also his spirituality. His practical approach to the life of Ramanujan made the audience connected with both the Speaker and the great Ramanujan. The talk ended with a discussion on inclusion of Ramanujan's work at junior classes as well. The sessions were coordinated by Prof. Gurmeet Kaur Bakshi, Chairperson and Prof. Vanita Verma of Dept. of Mathematics, PU.

LECTURE SERIES ON NOBEL PRIZES 2020

Every year at the onset of the month of October, the scientific community eagerly waits for the highest prizes in sciences, the Nobel Prize. Alfred Nobel, in his wisdom instituted two more prizes – for Literature and Peace - along with the three in the sciences. The Society contacted well-known experts in these respective areas to deliver expository lectures on Nobel prizes awarded for the year 2020, for a lay public. The lectures were conducted in association with Chandigarh Chapter of National Academy of Sciences, India with support from Department of Science & Technology, Chandigarh Administration. These lectures, detailed below, were attended by a large number of school and college students, teachers and members of the public.

Nobel Prize in Medicine & Physiology 2020 (October 31, 2020)



The Nobel Prize in Physiology or Medicine 2020 was announced on October 05, awarded jointly to Harvey J. Alter, Michael Houghton and Charles M. Rice for the discovery of the Hepatitis C virus, a breakthrough that has made possible blood tests and new medicines that have saved millions of lives.

Prof. Arun K. Grover, former Vice Chancellor of Panjab University, Chandigarh and Vice President of the Society introduced the lecture series on Nobel Prizes 2020.

Prof. Mriganka Sur of MIT, who is a Patron of SPSTI, offered his best wishes to the organizers and greeted the speaker, Prof. Yogesh K. Chawla, a renowned hepatologist, Ex-Director, PGIMER.

Prof. Chawla shed light on the contribution of each of the three laureates, whose beginning of the research story dates back 50 years. He compared the program of research involving Hepatitis C with that of the novel coronavirus. He presented at length the contribution of his group and department at PGIMER, towards the study of this disease in the Punjab region where it is widely prevalent.

CRISPR CAS9 - A Revolutionary Gene Editing Tool (November 07, 2020)

Prof. (Dr.) Madhu Khullar, Emeritus Scientist, Dept. of Experimental Medicine, PGIMER Chandigarh delivered a talk on the Nobel Prize in Chemistry that was awarded jointly to Emmanuelle Charpentier and Jennifer A Doudna for the discovery of the CRISPR CAS9 system of gene editing. For the first time in the history of the Prize, the Nobel has been jointly awarded to two women scientists. She delivered an enlightening lecture on the topic to an audience of scientific temperament including educationists, scientists, students and teachers. Prof. Madhu Khullar, through effective slides and diagrams explained the technology of gene splicing and patching. She discussed application on stem cells which in turns provide effective disease models.



Pig organs for human transplantation can be immunized by CRISPR-CAS9 system. This research has implications for diagnosis of HIV, Hepatitis-B, Cancer and Blood disorders.

Questions and discussions mainly consisted of the ethical debates of creating monsters and gene-edited organisms. The Speaker believed “CRISPR will one day weave into our physical reality like computers came from the discipline of mathematics.

Webinar on Nobel Prize in Literature 2020 (November 17, 2020)

Prof. Pushpinder Syal, Dept. of English & Cultural Studies, Panjab University, Chandigarh delivered a thought provoking lecture on Nobel Prize in Literature 2020 which was awarded to Louise Gluck for her unmistakable poetic voice that with austere beauty makes individual existence universal. Prof. Suman Beri from Panjab University coordinated the program. Prof. Syal dwelled on the writings of Louise Gluck not only limited to her poems but also the essays written by her. Her poems revolve around the themes of childhood, family relationships, which were deep and conflicted, nature, mortality, loss and mythology. Mr. Vivek Atray, ex-IAS officer and an author talked about bringing young and talented minds to such for a so as to be encouraged and we can come up with better quality of literature.

Webinar on Nobel Prize in Economics 2020 (November 21, 2020)



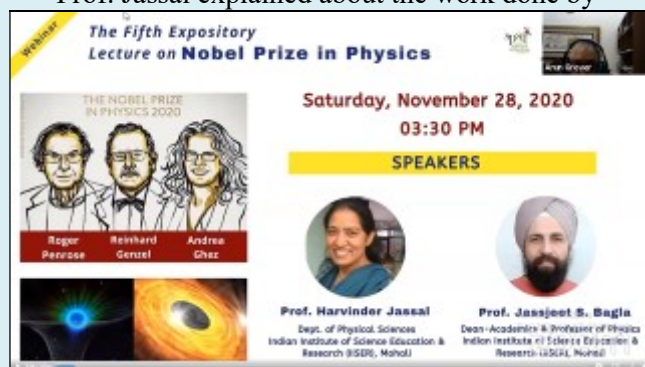
Prof. Upinder K. Sahni, Economics Department, Panjab University, introduced the speaker, Prof. Krishnendu Ghosh Dastidar, who is Professor in Dept. of Economics, Centre for Economic Studies & Planning School of Social Sciences (II), Jawaharlal Nehru University, New Delhi. He delivered a webinar on Nobel Prize in Economics (The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel) which was awarded jointly to Paul R. Milgrom and Robert B. Wilson from Stanford University, USA for "Improvements to Auction Theory and Inventions of New Auction Formats". The economics prize was not one of the five original prizes established in 1895. It was instead set up by Sweden's Central Bank and was first awarded in 1969. He explained the meaning, types and optimal auction in an effective manner.

Lecture on Nobel Prize in Physics 2020 (November 28, 2020)

The Nobel Prize in Physics 2020 was awarded to Roger Penrose for the discovery that black hole formation is a robust prediction of the general theory of relativity and to Reinhard Genzel and Andrea Ghez for the discovery of a supermassive compact object at the centre of our galaxy.

Prof. Harvinder Jassal and Prof. Jassjeet S. Bagla of Dept. of IISER Mohali were invited to deliver a talk on the subject.

Prof. Jassal explained about the work done by



Roger Penrose for understanding the black holes. She explained the work done by various scientists over the years to understand black holes. She used videos to explain the concept of black holes, the singularity and event horizon.

Prof. Bagla deliberated on the topic "black hole" in the galaxy. His talk focused on work done by Reinhard Genzel and Andrea Ghez who proved that there is a very massive and compact object in the centre of our galaxy. Through his presentation which included videos, graphs and diagrams he explained how black hole mass is correlated with mass of the bulge. He explained how reduction in flux and atmospheric turbulences made it difficult to observe the black holes using speckle imaging. Then came in active optics which continued for decades but deformation in lens due to mechanical load and difference in temperature resulted in low resolution images. With adaptive optics deformable mirrors were used leading to high resolution images. This helped in reconstruction of orbits of stars and understanding that there is very massive and compact object in the centre of our galaxy.

The sessions followed with questions about use of such discoveries in human welfare and relating the phenomenon related with black holes and our solar system. There was an elaborative discussion relating these topics. The session was much appreciated by attendees. The concluding remarks were made by Prof. K. P. Singh.

Lecture on Nobel Prize in Chemistry 2020 (Dec. 05, 2020)

This was second lecture delivered on Nobel Prize in Chemistry 2020. The lecture was delivered by Dr. Mahak Sharma, Associate Professor & Wellcome Trust/DBT Senior Fellow, Dept. of Biological Sciences, IISER Mohali.



Dr. Mahak began her presentation from basics of gene editing explaining its concept and importance. She explained the process of central dogma and its importance in process of gene editing. Mentioning about Dr. Mojica, computational biologist, she explained how he discovered the Clustered Regular Interspaced Short Palindromic Repeats (CRISPR) while sequencing the DNA of salt tolerant bacteria. An elaborative explanation was made with the help of lucid diagrams about the experiments conducted by Charpentier and Doudna collaboratively to simplify the system of gene editing with high speed and accuracy. She focused on this strategy can be used for the benefit of human kind but there are ethical issues involved. She mentioned these should be used only where is essentially required.

Lecture on Nobel Prize in Peace 2020 (Dec. 10, 2020)

The Nobel Prize in Peace 2020 was announced on October 07 was awarded to World Food Programme (WFP), a United Nations agency for its efforts to combat hunger, bettering conditions for peace in conflict-affected areas and preventing the use of hunger as a weapon of war and conflict. Prof. I. S. Dua introduced the speaker Prof. (Dr.) S. S. Chahal, a renowned agricultural scientist and honorary professor at Panjab University, Chandigarh delivered the talk. Prof. Chahal's lecture focused on food production, work of the World Food

Programme, scenario of food production in India, contribution of Indian scientists in food production and International collaborations for increasing food production and food security and distribution. He talked about the food act and public distribution system and India being ranked 94th among 107 countries surveyed on global hunger index. He highlighted the work of the World Food Programme as protecting livelihood security and emergencies, supporting and restoring food security, to reduce disparity and restore food availability in areas of need and enable people to meet their own needs and food nutrition needs in times of emergencies.



Similar work has been done by the World Food Programme in India during the Bhuj earthquake and many other times. He also talked about the World Food Prize which has been won seven times by Indians for their work including the Dr. Rattan Lal who is awarded the same this year.

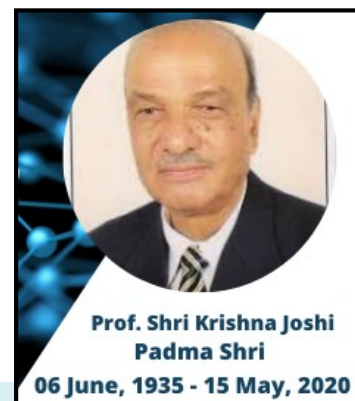
He also talked on many national and international collaborations which have resulted in great improvement in researches done to improve agriculture in the country and counter the problems of global hunger. He said the major collaboration among these he sees is Consultation Group on International Agricultural Research which has objectives of food for people, environment for people and policies for people. He concluded his session with the view that we might see the 21st century as an era for gene revolution as we had the green revolution in the 20th century for the better for society as well as for environment.

The session was followed with questions and discussion about global hunger, increasing accessibility of food, sustainability issues, post green revolution problems and the researchers to solve these problems, and also improvement of soil to increase the food production.

Memorial Meetings in Honour of Eminent Scientists

A Condolence Meeting for Tribute to Prof. S.K. Joshi (May 20, 2020)

Prof. Shri Krishna Joshi, one of the best science leaders and condensed matter physicist of this country left to his heavenly abode on 15 May, 2020 at the age of 86 at his residence in Gurugram, Haryana. Through his academic journey from Allahabad University to National Physical Laboratory, he contributed to the research work in different fields and bagged many prestigious awards including Padma Shri, Padmavibhushan, Watumull Memorial Prize, Shanti Swarup Bhatnagar Prize for Physical Sciences and many more. Prof. Keya Dharamvir, General Secretary, SPSTI hosted the online memorial meeting.



The speakers were Prof. K.N. Pathak, former V.C. Panjab University, Prof. Satyaprakash, EX-V.C. of Gwalior University, Prof. Ishwar Singh of IIT Ropar, and Roorkee, Prof. D. G. Kanhere of Pune University, Prof. V.C. Sahni, BARC and ex Director RRCAT Indore, Prof. Subroto Ray of IIT Roorkee and Mandi, Prof. Arun Grover, former V.C. Panjab University, Prof. K.C. Sharma, Himachal Pradesh University and Shri Dharam Vir, President SPSTI. Forty-five Physicists, academicians and students attended the Condolence Meeting. The speakers talked about the life and times and contribution of Prof. S.K. Joshi, through his journey from a small village in Utrakhand to the position of Director General, Council of Scientific and Industrial Research, New Delhi. In 1986, Prof. Joshi was appointed as the Director of National Physical Laboratory and worked there till 1991.

Meeting in Honor of Prof. Govind Swarup (Sept. 20, 2020)

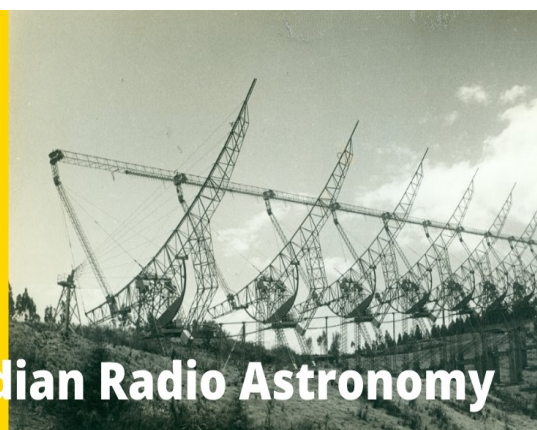
The Society organized a meeting “In Memoriam – Pioneer of Radio Astronomy” to pay tribute to Prof. Govind Swarup who left for his heavenly abode on September 07, 2020. The meeting was hosted by Indian Institute of Science Education and Research (IISER) Mohali in association with Chandigarh Chapter of National Academy of Sciences India (NASI) & SPSTI. The resource persons in the meeting were:

- Prof. Ajit Kembhavi, IUCAA, Pune
- Prof. Kulinder Pal Singh, IISER Mohali
- Dr. Divya Oberoi, NCRA – TIFR, Pune
- Prof. Rajaram Nityananda, Ajim Premji University, Bengaluru
- Prof. Yashwant Gupta, NCRA-TIFR, Pune
- Prof. Ashok K. Singal, Physical Research Laboratory, Ahmedabad
- Prof. Jayaram N. Chengalur, NCRA-TIFR, Pune



Prof. Govind Swarup
(March 23, 1929 - Sept 07, 2020)
Padma Shri (1973) & S.S. Bhatnagar Award (1972)

Father of Indian Radio Astronomy



Meeting in memory of Dr. F. C. Kohli (Dec. 06, 2020)

Dr. F. C. Kohli, Emeritus (founder) Chairman of Tata Consultancy Services and an alumnus of the University of Punjab at Lahore (a precursor of Panjab University, Chandigarh), passed away on Nov. 26, 2020. During 2013 and 2014, Dr. Kohli visited Chandigarh on three occasions, reconnecting with his alma mater and further strengthening the ties by giving meaningful and active advice to University Institute of Engineering

A Titan of IT and Service Industry in India



Padma Bhushan
Dr. Faqir Chand Kohli
(1924-2020)
Emeritus Chairperson
Tata Consultancy Services

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and Technology, Panjab University and Punjab Engineering College (PEC University, Chandigarh). A number of distinguished personalities participated. Prof. Arun Grover, Vice President, SPSTI and former VC of Panjab University, currently Emeritus Professor at PEC steered the program. The Technology Enabling Centre (TEC), UIET and Panjab University Alumni Association (PUAA) were the partners in the organization of this Memorial Meeting.

Those who shared their thoughts on Dr. Kohli were: Prof. Rajesh Kochhar, ex-director, NISTADS, Message from Prof. Raj Kumar, VC, PU, Prof. Anil Sahasrabudhe, Chairman, AICTE, Shri Som Mittal, Ex-President, NASSCOM, Dr. K. Ananth Krishnan (TCS), Message from Prof. Kesav Nori, Shri Rajiv Vaishnav, Message from Shri S. K. Munjal, CEO Hero Enterprises, Prof. Manoj Arora ex-director, PEC, Prof. Sarit. K. Das, Director, IIT Ropar, Prof. Dheeraj Sanghi, Director, PEC Univ, Prof. R. K. Kohli, NASI, Prof. Deepti Gupta, PUAA.

Remembering Pioneer of Fiber Optics – Dr. N.S. Kapany (Jan. 25)

Dr. Narinder Singh Kapany, born in 1926 in Moga (Punjab), known as the “Father of Fiber Optics”, and referred to as the ‘Jewel of Punjab’ left for his heavenly abode on December 03, 2020. Dr. Kapany had applied the term “Fiber Optics” first in 1956 and defined it as the art of active and passive guidance of light along transparent fibers through predetermined path. It caught global attention as he reiterated it in a 1960 article in Scientific American. He wrote the first book in this field titled ‘Fiber Optics: Principles and Applications’ (Academic Press, 1967), and played a prominent role in advancing the field both as a researcher and as the founder of several companies.

Indian Institute of Technology, Ropar in association with National Academy of Sciences, India (Chandigarh Chapter)

and SPSTI organized a webinar in honour of Dr. N.S. Kapany on January 25, 2021. Prof. S.K. Das, Director, IIT Ropar inaugurated the webinar, and the scientific session was chaired by Director, CSIO. The Speakers in the Webinar were Dr. Sivanand Kanavi, NIAS, Bangalore, Dr. Rajesh V Nair, IIT Ropar, Dr. Umesh Tiwari, CSIR-CSIO and Dr. Kamal P Singh, IISER, Mohali.

Panel Discussions on NEP

School Education (August 25, 2020)

The recently rolled out National Education Policy has created excitement in all sections of society. Three organizations joined together to hold a web-based panel discussion on the new National Education Policy 2020. The last policy was introduced in the year 1986, followed by a few amendments in the year 1992. The new policy has come after a gap of thirty-four years.

The Panel Discussions on the National Education Policy were organized by the Society for Promotion of Science and Technology in India, the Department of Education, Panjab University, Chandigarh and National Academy of Sciences

India (Chandigarh Chapter). In this session, discussions took place on School Education. The event was supported by the Department of Science and Technology, Chandigarh Administration. Two Panel Discussions were organized separately for school education and higher education. On the Panel for school education, the resource persons were

- i Prof. H. Senapaty, Director, N.C.E.R.T.
- ii Prof. C.B. Sharma, Professor Education, I.G.N.O.U.
- iii Dr. Leena Chandran Wadia, Observer Research Foundation
- iv Dr. Vibha Ray, Principal, D.A.V. School, Sector-8, Chandigarh
- v Prof. K.N. Pathak, Former Vice Chancellor, Panjab University, Chandigarh
- vi Prof. K. Ramachandran, Sr. Advisor, N.I.E.P.A.



Higher Education (Aug. 28)

Prof. Keya Dharamvir, General Secretary, SPSTI, Prof. I. B. S. Passi, Chairman, Advisory Committee, NASI Chandigarh Chapter and Prof. Latika Sharma, Dept. of Education, PU and Prof. Kirandeep, Chairperson, Dept. of Education, PU joined the panel as members of the organizing committee. The resource persons in the Panel Discussion were

- i Shri Ashok Thakur, Former Secy. Education, Govt. of India
- ii Prof. Jaspal S. Sandhu, Vice Chancellor, G.N.D.U. Amritsar
- iii Prof. Dinesh Singh, Former Vice Chancellor, Delhi University
- iv Prof. Dheeraj Sanghi, Director, P.E.C. Chandigarh
- v Brig. (Dr.) R.S. Grewal, Former Vice Chancellor, Chitkara University



National Mathematics Day - 2020

The Society for Promotion of Science & Technology in India (SPSTI) and the Chandigarh Chapter of National Academy of Sciences, India (NASI), with support from Haryana State Council for Science, Technology & Innovation, Government of Haryana launched a series of online events to commemorate National Mathematics Day – 2020, the birth anniversary of the great mathematician Srinivasa Ramanujan.

Webinar on Mathematics behind Data Transmission (Dec. 22, 2020)

Prof. Gurmeet Kaur Bakshi, Department of Mathematics, Panjab University, Chandigarh delivered the lecture on data transmission, digital transmission and digital communication in the context of the physical transfer of data over a point-to-point or point-to-multipoint communication channel and its correction using examples such as ISBN number, which is a code allotted as International Standard Book Number.

Dynamics, Ergodic Theory and the Abel Prizes (January 30, 2021)

Abel Prize is the highest prize in Mathematics, equivalent to Nobel Prize in Science Subjects, awarded by Norwegian Academy of Sciences and Letters since 2003. It is awarded annually for research in mathematics, in commemoration of the brilliant 19th-century

Norwegian Mathematician Niels Henrik Abel. The Niels Henrik Abel Memorial Fund was established on January 1, 2002, and it is administered by the Norwegian Ministry of Education and Research. The lecture on the topic was delivered by Prof. S. G. Dani, University of Mumbai (M-DAE) Centre for Excellence in Basic Sciences (CEBS), Vidyasagar Campus of the University of Mumbai, a renowned Mathematician who has worked in the broad area of Ergodic theory and dynamics to solve various mathematical problems.

Perimeter, Area and Volume in Daily Life (Feb. 22, 2021)

Shri Shiv Charan Gupta, District Maths Specialist, Kurukshetra from Department of School Education delivered a talk on the topic with the help of many mathematical demonstrations.

Turing Award – Akin to Nobel Prize of Computer Science (March 12, 2021)

The ACM A. M. Turing Award is an annual prize given by the Association for Computing Machinery (ACM) for contributions "of lasting and major technical importance to the computer field". The award is named after Dr. Alan Turing, who was a British mathematician at the University of Manchester. Dr. Turing is often credited as being the key founder of theoretical computer science and artificial intelligence. Dr. Raj Reddy, an Indian-American Computer Scientist, received the Turing Award in 1994 for pioneering the design and construction of large scale artificial intelligence systems, demonstrating the practical importance and potential commercial impact of artificial intelligence technology. Prof. S. Anantha Ramakrishna, Director, CSIO formally introduced the speaker, Prof. Dheeraj Sanghi. Dr. Sanghi is an eminent computer scientist and Director, Punjab Engineering College (Deemed to be University), Chandigarh. Prof. Sanghi gave a detailed account of Alan Turing (1912-54), who is credited as being the key founder of theoretical computer science and artificial intelligence. During the Second World War he was responsible for breaking the code (s) of German Navy and his efforts are regarded as crucial one for the win of Allied forces over the Nazis. As a mathematician, he had developed the Turing machine, which is a mathematical tape of computation that defines an abstract machine that manipulates symbols on a strip of tape according to a table of rules. It was a simple model of computation which he had invented in 1936 itself, even before he went to Princeton in US for his PhD. He returned to UK as the war commenced in 1939. His model provided the answer to fundamental questions about decidability and limits of computation.

Haryana State College Level Mathematics Quiz (Feb. 09-10, 2021)

An online mathematics quiz was organized for the students of government, aided and self-financed colleges of Haryana. The quiz was conducted in two stages – preliminary round and final round. Thirty-two colleges from various districts of Haryana participated in the Quiz. Sixty teams consisting of one-hundred-eighteen students participated in all. Eight top scoring teams were selected for the Final Round of the Quiz which was held online on Wednesday, 10th February.

The teams selected for the final round were from D.A.V. College for Girls (Yamunanagar), K.L.

Mehta Dayanand College for Women (Faridabad), Yaduvanshi Degree College (Mahendergarh), I.B. PG College (Panipat), M.L.N. College (Yamunanagar), CMRJ Govt. College (Ellenabad) and Govt. PG College (Ambala Cantt.). The final quiz consisted of three rounds conducted by Dr. Sudhir Pujara, Assistant Professor, Dr. Neela Pawar, Associate Prof., MCM DAV College, Chandigarh and Ms. Rajni Bhalla, Principal (Retd.) from Department of Higher Education, Haryana. Prof. Arun K. Grover, former Vice Chancellor of Panjab University, Prof. I.B.S. Passi, Dept. of Mathematics, Panjab University, Prof. Keya Dharamvir, formerly of Dept. of Physics, Panjab University, Dr. Urmil, Govt. College, Sec. 42, Chandigarh and Shri Dharamvir, IAS (Retd.) & President of SPSTI were the invited jury members.

The first prize was won by Yaduvanshi Degree College, Mahendergarh represented by Pratham & Vishal. The second prize was won by Ravinder & Dhapi from CMRJ Govt. College, Ellenabad (Sirsa) while the third prize went to Aman & Sagar of IB College Panipat.

The students found the questions very interesting and responded enthusiastically. The basic aim of the quiz was to create a scientific approach towards mathematics and to make it more interesting for students.

Mini Conference in Mathematics – Commemorate International Day of Mathematics

The International Day of Mathematics (IDM) is celebrated every year on March 14. Society for Promotion of Science & Technology in India (SPSTI) in association with Chandigarh Chapter of National Academy of Sciences, India (NASI) and Indian National Young Academy of



Science (INYAS) with support from Haryana State Council for Science, Innovation & Technology organized a mini conference in mathematics. The conference that was organized in two halves began with lecture by an eminent mathematician, Dr. Rama Bhargava, Professor of Mathematics, former Dean Admin and Member BOG at IIT, Roorkee. She talked on 'Exploring the potential of Mathematics'. She explained how mathematics is related with all other subjects like physical and life sciences, social science, computer sciences, manufacturing, marketing, entrepreneurship and many more. Talking about nature of mathematics she explained it is the science of discovery which involves intuitive methods and is an abstract science. The second part of the event included speeches by nine shortlisted undergraduate, postgraduate students and research scholars out of thirty two students who participated in an online declamation contest announced earlier by the Society. Prof. I.B.S. Passi, Member of SPSTI is credited for the conception of the idea of this mini conference including lecture and speeches by selected students from various universities. The webinar was steered and coordinated by Dr. Sugandha Maheshwary, Secretary, INYAS.

In declamation competition, Upasana secured the first position, followed by Rajni at second and Anubhav at position third in undergraduate category. All 3 are from Punjabi University, Patiala. In postgraduate and research scholars' category, Hushanpreet Kaur secured first position followed by Bharti from IIT Ropar at second and Ramanpreet at third. The first and third positions were again annexed by students of Punjabi University, Patiala.

Webinar, Cooperation to Preserve the Himalayan Ecological System

(March 09, 2021) - Prof. Shailesh Nayak, Director, NIAS, Bengaluru

Himalayas play a vital role in modulating the global weather and climate especially the Asian Monsoon. The large rivers viz. Indus, Ganges, Brahmaputra, Irravady, Salween, Mekong, Yangtze and Yellow originate

Third Pole - The Himalayas

- Plays vital role in global weather and climate, Asian Monsoon. Warming faster than rest of the globe.
- Large rivers viz. Indus, Ganges, Brahmaputra, Irravady, Salween, Mekong, Yangtze and Yellow rivers originate.
- These rivers provide much of the freshwater to 1.4 billion people in Asia. Their river plains provide food to almost 40% of the World's population.
- Largest concentration of snow and ice outside polar regions. The high albedo of snow & ice surface of Himalaya has a cooling effect on mountains but warming effect over Persian Gulf and Arabian Peninsula (Bush, 2000).
- Holds large reserves of trapped carbon in permafrost and wetlands.
- Prone to natural hazards, earthquakes and landslides.
- Limited mineral resources.
- Himalayan grasslands. Unique biodiversity.
- Profound impact on social, economic, cultural and demography of India, Bhutan, Tibet China, Nepal, Pakistan.
- Significant impact on Myanmar, Afghanistan, Bangladesh, Laos, Thailand and Vietnam.

from Himalayas and provide much of the freshwater to 1.4 billion people in Asia. Their river plains provide food to almost 40% of the world's population, said Prof. Nayak, Director, National Institute of Advanced Studies (NIAS), Bengaluru on the forum of Society for Promotion of Science & Technology in India (SPSTI) and Chandigarh Chapter of National Academy of Sciences, India (NASI) on Tuesday, March 09, 2021. The Webinar was organized with support from Haryana State Council for Science, Innovation and Technology with a motive to spread awareness about the profound impact of Himalayas on social, economic, cultural and demography of India, Bhutan, Tibet, China, Nepal and Pakistan. Prof. Nayak delivered the talk online on "Cooperation to Preserve the Himalayan Ecological System" which was coordinated by Prof. Arun K. Grover, former Vice Chancellor of Panjab University. Prof. R. Baskar, of Department of Environmental Studies, GJU Hisar introduced the Speaker.

Vaccine Awareness – Webinars



Principles of Vaccines (Feb. 01, 2021)

Prof. Javed N. Agrewala, Dean Research, IIT Ropar

The session was the first in the new series “*All that you wanted to know about the Corona Vaccine*”. Prof. Agrewala introduced about vaccines as an infection agent preparation, administered into a person to induce long-lasting protective immunity, to prevent disease caused by the pathogen. Sharing importance of vaccine, he quoted the deaths of millions of people around the globe at different point of times due to various deadly diseases like smallpox, Spanish flu, black death, typhus, plague, cholera, malaria, AIDS and latest COVID-19, which till date has infected more than 103 million people and has cost lives of nearly 22 lakh people.

Harnessing the power of immune system for improving personal and public health as it related to COVID-19 (Feb. 03, 2021)

Dr. Sharvan N. Sehrawat, Dept. of Biological Sciences, IISER Mohali

Dr. Sehrawat said that the treatment to viral diseases has become more frequent and apparently more people are dying with the new pandemics. He explained we as hosts are constantly exposed to many infectious agents that we are to handle these, and many we don't. But when there are ecological disturbances, more of these pathogens start encroaching our area and in reverse encroach their areas, resulting in us getting exposed to infectious diseases, and many of them we are not able to handle and leading to pandemic, the recent being COVID-19.

Need for vaccine and establishing its safety & efficacy (Feb. 05, 2021)

Dr. R. Kumar, President, Society for Promotion of Ethical and Affordable Healthcare (S.P.E.A.K.) India

Dr. Kumar gave a brief introduction of the vaccine as an attenuated or killed infectious agent and corona vaccine is not a killed virus but is a genetic molecule that stimulates protein spikes like the against corona and causes antigen antibody response. He questioned if vaccines can banish COVID-19 from the globe and talk about both aspects of the situation. He explained that the Government of India has taken steps for mass vaccination to prevent infection and reinfection and with that he also focussed on that vaccines may not be needed as coronavirus is dying its own death.

History of Immunization with special reference to India (Feb. 08, 2021)

Prof. Rajesh Kochhar, Honorary Professor, Panjab University, Chandigarh

Prof. Kochhar talked about the history of vaccines. The term vaccine came from word cow as it was developed as inoculation against cow pox for immunizing against smallpox. Western countries looked at smallpox as a disease and looked for medicine to cure. But India, Persia, China, Turkey, and the west coast of Africa knew that smallpox is not curable, so instead of medicine, they wanted to raise immunity against smallpox. These countries found that if a person gets smallpox they would not suffer from it again. So under controlled condition inoculation was done, as prevention.

National Science Day 2021

National Science Day is celebrated every year on February 28 to commemorate the discovery of Nobel Laureate Sir C.V. Raman. SPSTI with support from Haryana State Council for Science, Innovation & Technology, Government of Haryana and in association with Chandigarh Chapter of National Academy of Sciences, India (NASI) and Indian National Young Academy of Sciences (INAYAS) organized a series of activities to celebrate the National Science Day. The activities involved online invited talks, quiz competitions and a panel discussion.



Webinar - Scientific Research in the Family (Feb. 13, 2021)

“Atomic Energy is in the Family but my father never tried to influence me”. These were the words of the eminent scientist Prof. Srinivas Krishnagopal, Head of the Ion Accelerator Division of Bhabha Atomic

Achievements to date: LEHIPA (1)



(a) LEHIPA ion source:
Produces 10 mA proton beam.



(b) LEHIPA RFQ: 4 m long RFQ, in 4 sections, with stringent mechanical tolerances (~ 50 microns), and over 100 braze joints.



(c) Beam acceleration:
a Fast Faraday Cup, sh...
accelerated 3 MeV pro...
pulses.

The LEHIPA ion source and RFQ have been commissioned to accelerate 3 MeV. Experimental results are in good agreement with design simulations.

Front end of a high intensity accelerator (ion source + RFQ) is fully dem

Research Centre (BARC) and son of late Dr. P.K. Iyengar, Chairman, Atomic Energy Commission (1990-93) and Director BARC (1984-90). He was speaking at the first session of the series “*Scientific Research in the Family*” which was conducted on the title “Atomic Energy in the Family”. Prof. Krishnagopal shared how he proceeded to US for his PhD after doing M.Sc. at IIT Bombay. After his doctorate from Cornell University, he did his post doctoral work at the famous Lawrence Berkeley National Laboratory in California, before returning to India. He was motivated for returning back to India to follow the example set up by his father to build something on his own. He shared that Dr. Iyengar was not the kind of person who would tell people what to do but his actions spoke for him.

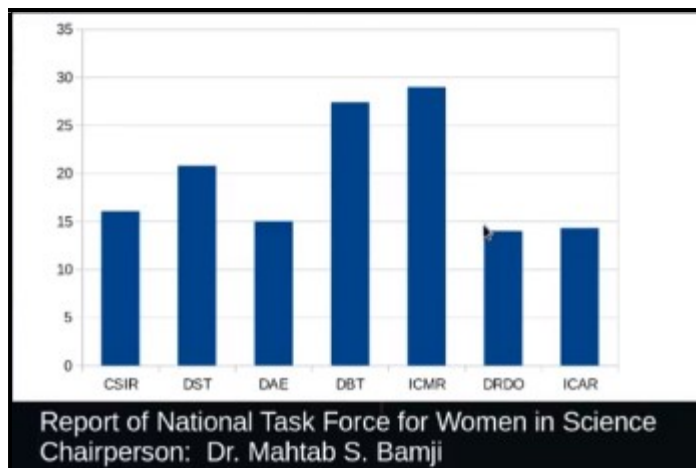
Legacy of C.V. Raman – National Science Day

Vignettes from Raman’s life, an interesting presentation on the above topic was made by Dr. Rajinder from the Institute of Physics, University of Oldenburg, Germany. He is a well-known historian of Science and a prolific author who has made extensive studies on Raman’s contributions as well as early 20th century Indian scientists many of whom were responsible for the rise of current day scientific enterprise in India. The webinar had two speakers. The second session was by Dr. Fouran Singh, Incharge, Structural & Spectroscopy Lab, Inter-University Accelerator Centre, New Delhi. He demonstrated the Raman Spectrometer currently in use in his lab after introducing the basics of Raman scattering. He also discussed the multifarious ways in which Raman spectra are used to investigate properties of matter at the nano and molecular levels.



Women & Girls in STEM – A Panel Discussion (March 08, 2021)

International Women's Day 2021 is observed every year on March 08. To commemorate the day, a panel discussion on “Women & Girls in STEM” was organized online in which eight eminent personalities were invited to share their life experiences and challenges faced by the Women in STEM education. The session was attended by students, teachers and members of the general public. The panelists included Dr. Pratibha Jolly, FNASc, FInstP (IoP, UK), Science & Society Fellow, NASI, Academic Consultant NAAC, Former Principal, Miranda House, University of Delhi, Dr. Harvinder K. Jassal, Associate Professor from Dept. of Physical Sciences, IISER Mohali, Dr. Rama Bhargava, Professor of Mathematics and Former Dean Academics & Member BOG, IIT Roorkee, Dr. Suman B. Beri, Professor of Physics from Panjab University, Chandigarh, Dr. Abha Sur, Lecturer, History of Science & Gender Studies from MIT, USA, Dr. Meenal Kumar, Sr. Gynecologist, and formerly SMO, General Hospital, Sec-16, Chandigarh,



Dr. Nishima Wangoo, Assistant Professor from Dept. of Applied Sciences (Chemistry), UIET, Panjab University, Chandigarh and Dr. Genemala Haobijam, General Manager,

Statistics presented by Prof. Harvinder K. Jassal

Haryana State School Level Online Science Quiz (Mar. 24-25, 2021)

To reinvent the education system and give students a break from traditional classroom learning, there is a dire need to revive the quiz culture in schools and colleges. And technology can act as a facilitator by bringing innovation to quizzes and ensuring active participation among students. Quizzes redefine the education system in significant ways. Students gain knowledge, seek opportunities to excel beyond academics. It changes scope of learning as questions are based out-of-syllabus and require critical thinking and extensive research, students get into the habit of innovative learning from an early age. With support from Haryana State Council for Science, Innovation and Technology (HSCSIT) and in association with Chandigarh Chapter of National Academy of Sciences India (NASI), the online science quiz was organized for the students of classes 9th to 12th of all schools of Haryana. One hundred twenty three (123) schools from twelve (12) districts of Haryana submitted their entries. Each team consisted of three students from classes 9th to 12th. Out of 123, thirty-three were Private Schools and rests were Government Senior Secondary and Government High Schools.



The Final Round of the Science Quiz was held on March 25, 2021. Miss Rajni Bhalla, Principal (Retd.), Department of Higher Education, Haryana, Mr. Iqbal Singh, Assistant Professor in Chemistry, Government College for Women, Shahzadpur, Dr. Priyanka, Assistant Professor in Physics, Government College, Ambala and Ms. Sarika Dhupar, Lecturer in Bio-Sciences, Government Senior Secondary School, Sector-19, Chandigarh were the invited quizmasters. Prof. Alok Srivastava, Department of Chemistry, Panjab University Chandigarh, Prof. Suman B. Beri, Dept. of Physics, Panjab University, Chandigarh and Prof. Keya Dharamvir, General Secretary of SPSTI were the invited Jury members. Students were asked more than 100 questions in all subjects, in which they responded carefully. The first position was held by Etti Agarwal, Iqleen Kaur and Gulshan of Yaduvanshi Shiksha Niketan Narnaul. The second position was held by Navya, Ayush and Tanishka of Wisdom World School, Kurukshetra while the third position was held by Harshvardhan, Abhishek and Shanu of Suraj School, Gurugram.

Celebration of International Year of Periodic Table

Dimitri Mendeleev invented the Periodic Table in 1869. With support from Department of Science & Technology, Chandigarh Administration, SPSTI in association with Chandigarh Chapter of Alexander Von Humboldt Foundation conducted many activities to commemorate the international year of periodic table (IYPT-2019) to mark the 150 years of completion of Mendeleev's Periodic Table. The Society conducted many invited talks in schools and colleges of Chandigarh in 2019. In continuation, online poster-making, essay-writing and declamation competitions were organized. The following activities were conducted during the year:

Periodic Table - Evolution over the Years (August 06, 2020)

The Speaker was Prof. Alok Srivastava, Department of Chemistry, Panjab University, Chandigarh.

Periodicity & Diagonal Relationship in Periodic Table (August 14, 2020)

This lecture was delivered by Prof. P.V. Bharatam, Department of Medicinal Chemistry, N.I.P.E.R. Mohali. More than 80 students attend this online session. This lecture was also organized under the celebration of IYPT-2019.

Closing Ceremony of IYPT-2019 (September 30, 2020)

The series of events concluded on 30th September, 2020, with distribution of prizes to the winners of competitive events in which a large number of students from schools and colleges of Chandigarh had participated actively amid lockdown (due to COVID-19 pandemic). These lectures and other events were coordinated by Prof. Alok Srivastava, Prof. K.K. Bhasin & Prof. Tej Vir Singh, Professors of Chemistry Department, PU along with Prof. P.V. Bharatam of NIPER Mohali and Prof. Keya Dharamvir, General Secretary of SPSTI.

The winners in the said competitions were Rabhya Gupta from KBDVAV School, Geetali Pathania and Akriti from St. Anne's Convent School, Jatin Agarwal from Govt. Model Sr. Sec. School, Sec-40B, Nishtha Chhatwal from Mount Carmel School, Avantika Pandey of Ajit Karam Singh Public School, Sec-45, Rahima of DAV Model School Sec-15, Kanika Thakur, Arshdeep Kaur, Tanya, and Yatika Khurana from MCMDAV College for Women and Tusheka & Sahil Sharma from G.G.D.S.D. College.

All the winners were awarded cash prizes and certificates at Paryavaran Bhawan by Shri Debendra Dalai, IFS, Director, Department of Science & Technology & Renewable Energy, Chandigarh Administration and Shri Dharam Vir, IAS (Retd.) & former Chief Secretary of Haryana. On this occasion, Prof. Ram Adhar of Banaras Hindu University and Er. ML Garg was present. The prize winning posters were displayed and were appreciated by all.



SPSTI Signs MoU with Guru Nanak Dev University, Amritsar



To promote science and scientific temperament among students of the Punjab region, the SciRox-Science Club of Guru Nanak Dev University has signed a Memorandum of Understanding with Society for Promotion of Science and Technology in India (SPSTI) in Vice Chancellor's office of the University.

The pact was inked by Prof. (Dr.) Jaspal Singh Sandhu, Vice-Chancellor, GNDU and Mr. Dharam Vir, IAS, Former Chief Secretary of Haryana and President of Society for Promotion of Science and Technology in India. Dr. Karanjeet Singh Kahlon, Registrar, Dr. Hardeep Singh, Dean Student's Welfare, Dr. Preet Mohinder Singh Bedi, Coordinator, University-Industry Linkage Programme, Prof. Keya Dharamvir, General Secretary SPSTI, and Er. M.L. Garg, Treasurer, SPSTI were also present during the MoU signing ceremony.

In a bid to make science popular, SciRox is constantly working to keep the scientific spirits alive by organizing a number of activities for students under the mentorship of Dr. Hardeep Singh (Dean Students' Welfare, GNDU), Dr. Bindiya Arora (Department of Physics, GNDU) and Dr. Venus Singh Mithu (Department of Chemistry, GNDU).

Addressing the gathering in the MoU signing ceremony, Mr. Dharam Vir said "We are really glad to sign MoU with SciRox because this we believe will help spread scientific awareness among the children of this region. Our main objective is popularization of science among all the children to create future scientists."

Speaking on the occasion Vice Chancellor, GNDU, Prof. Sandhu said, "Guru Nanak Dev University, Amritsar campus, has initiated activity clubs for students. These clubs are managed by students along with a mentor. The clubs focused on developing skills beyond education. SciRox has been taking active steps for the promotion of science among the children and youth of this region. We hope that this collaboration with SPSTI will help to create awareness and a competitive culture among the children in the area of science and technology."

Dr. Preet Mohinder Singh Bedi, Coordinator University Industry Linkage Programme, Guru Nanak Dev University informed as per the MoU, both the societies will jointly organize seminars, workshops, conferences, talent competitions, and science exhibitions etc. Moreover, rallies and awareness campaigns would be organized to promote and inculcate science education. The two institutions will share resources for organizing various activities and will jointly celebrate important occasions and jointly carry out activities from time to time.

Activities conducted by SciRox, GNDU Amritsar with support from SPSTI

SciRox-Science Club, Guru Nanak Dev University jointly with Chemical Research Society of India. (Local Chapter Chandigarh/Amritsar) organized a two days conference on Spectroscopy which was supported by Society for Promotion of Science and Technology in India (SPSTI), American Chemical Society via ACS Publications and Punjab State Council for Science and Technology (PSCST), Chandigarh. The conference aimed to give an in-depth knowledge on the recent developments in spectroscopy by means of invited talks, pre-recorded demonstrations and poster presentations. One of the aims of the conference was to enable the participants to learn basic principles and current developments in atomic and molecular spectroscopy. UG, PG and PhD students from various universities and colleges were invited to participate in this conference.

The event was organized on Zoom Platform and was live streamed on YouTube, there were total 550 registrations out of which around 100 participants were present on zoom and was live viewed by more than 200 participants on YouTube.



The Conference was a unique in a way that it was fully a student driven virtual conference. The conference was inaugurated by Mr. Dharam Vir, IAS (Retd.), President, Society for Promotion of Science and Technology in India. Mrs. Keya Dharamvir, Secretary, Society for Promotion of Science and Technology in India, Prof. Hardeep Singh, Dean Students' Welfare, GNDU and Er. M.L. Garg, Director, Society for Promotion of Science and Technology in India were also present during the inaugural session

In Poster competition, 37 posters were received out of which 12 were shortlisted for final review by the team of experts and nine of these were selected for cash prizes. SPSTI awarded cash prizes to:

1. NSCoS 01: Dr Prabhpreet Singh, Institute: Guru Nanak Dev University, Amritsar
Title: Fluorescent Imaging of latent fingerprints
2. NSCoS 07: Deepika Sardana, Jawaharlal Nehru University, New Delhi
Title: Origin of Slow Solvation Dynamics in DNA: DAPI in Minor Groove of Dickerson-Drew DNA

Launch of Vigyan Safari – Mobile Science Laboratory by SciRox, GNDU



Science Club, GNDU under its MoU with Society for Promotion of Science & Technology in India (SPSTI), has launched a science exhibition bus “Vigyan Safari” for promotion of science among school students of Punjab. The inaugural ceremony of the same took place on March 1, 2021 at Khalsa College Public School, GT Road, Amritsar. The event witnessed the presence of Dr. Sukhchain Singh Gill, Commissioner of Police, Amritsar as the Chief Guest. Dr. Gill emphasized on the need of the recent changes that have been made in the Science, Technology and Innovation Policy and the New Education Policy. Prof. Arun K. Grover, Ex-Vice Chancellor of Panjab University Chandigarh and Vice President of SPSTI uplifted the spirit of audience by a pre-recorded message in which he emphasized the role of universities and higher education institutes in promotion of science among school children. Prof. Arvind, former Director IISER Mohali commented on the eternal vastness of science and how one can never have a hold of all the science involved in our universe by reading any book.



Prof. Keya Dharamvir, General Secretary of SPSTI shared the other initiatives that are being taken by SPSTI in the regime of science communication and enthralled the audience with an inquisitive science show. The inaugural ceremony concluded with a formal vote of thanks by Dr. Bindiya Arora who coordinated the whole program of the launch of Vigyan Safari. She said, Vigyan Safari is an attempt to generate curiosity among school children and motivate them to build a successful career in science. As a part of this mission, the exhibition bus will visit different schools of Amritsar on a regular basis.

MEDIA COVERAGE

मोबाइल साइंस लैब से ग्रामीणों को किया जागरूक
कोरोन प्रमोशन

कोरोन प्रमोशन के तहत ग्रामीणों को जागरूक किया जा रहा है। मोबाइल साइंस लैब से ग्रामीणों को जागरूक किया जा रहा है। कोरोन प्रमोशन के तहत ग्रामीणों को जागरूक किया जा रहा है। कोरोन प्रमोशन के तहत ग्रामीणों को जागरूक किया जा रहा है।

ऑनलाइन कैरियर काउंसलिंग व लक्ष्य निर्धारण वेबिनार सत्र का आयोजन
वेबिनार सत्र में 5 सौ से अधिक विद्यार्थियों ने लिया भाग

वेबिनार में भाग लेने वाले लोग चर्चा करते हुए।

कुरुक्षेत्र, चरखाबाबू न्यूज। सोमायटी फॉर प्रमोशन ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया कुरुक्षेत्र एवं और एजुकेशन वेल्फेयर सोमायटी के संयुक्त संस्थापक में एक ऑनलाइन कैरियर काउंसलिंग और लक्ष्य निर्धारण सत्र का आयोजन किया गया। इस में युव और फेमस्युक के माध्यम से संयुक्त रूप से 5 सौ से अधिक विद्यार्थियों ने भाग लिया। वेबिनार में हरियाणा के पूर्व मुख्य सचिव रिटायर्ड आई.ए.एस. धर्मवीर मुखर्जी आतिथ्य रहे। इस वेबिनार में मुख्य वक्ता के तौर पर विश्वासिंद, सोशल एंटरप्रेन्योर एवं साइंस कन्सल्टेंट डॉ. वी.ए.एस. ने अभिभाषकों को संबोधित करते हुए कहा कि विद्यार्थियों पर हर समय पढ़ने के लिए दबाव नहीं बनाना चाहिए बल्कि उन्हें अन्य गतिविधियां जैसे खेल-कूद, निष्काम अखबार पढ़ने इत्यादि के लिए प्रेरित करना चाहिए। उन्होंने पाठ्यक्रम और होम प्रोजेक्टों के बजाय पाठ्य पुस्तकों को अपनाने और स्वतंत्र रूप से खोजना सलाह देने के लिए भी विद्यार्थियों को प्रेरित किया। डॉ. वी.ए.एस. ने 9वीं, 10वीं, 11वीं एवं 12वीं कक्षा के विद्यार्थियों के लिए अपने दो चर्चे के सत्र में आस-आसपास 10वीं और 12वीं के बाद अपने आकर्षक साइंस के माध्यम से विद्यार्थियों के लिए कैरियर विकल्पों पर चर्चा की। उन्होंने यह भी बताया कि किसी को खींच के आधा पर विचारधारा को कैसे तय किया जाए और उपयुक्त विषयों का चयन कैसे किया जाए। वेबिनार में भारत के विभिन्न राज्यों से जुड़े विद्यार्थियों एवं अभिभावकों ने विभिन्न प्रश्न पूछकर सत्र में सक्रिय रूप से भाग लिया। वेबिनार में भाग लेने वालों को डॉ. वी.ए.एस. ने बड़ी सटीकता से निराह और स्पष्ट किया।

चंडीगढ़ भास्कर
चंडीगढ़ भास्कर 22-11-2020

चंडीगढ़ भास्कर
इकोनोमिक्स नोबेल प्राइज पर एसपीएसटीआई ने करवाया लेक्चर

चंडीगढ़ | सोमायटी फॉर प्रमोशन ऑफ साइंस ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया (एसपीएसटीआई) और नेशनल एकेडमी ऑफ साइंस इंडिया (एनएसआई) की तरफ से संयुक्त रूप से एक ऑनलाइन लेक्चर इकोनोमिक्स नोबेल पर शनिवार को करवाया गया। एसपीएसटीआई और एनएसआई की तरफ से मिलकर नोबेल प्राइज 2020 पर लेक्चर आयोजित किए जा रहे हैं। इस सत्र में शनिवार को करवाया गया लेक्चर चौथा था, जिसमें जवाहरलाल नेहरू यूनिवर्सिटी के सेंटर फॉर इकोनोमिक्स स्टडीज एंड प्लानिंग स्कूल ऑफ सोशल साइंस दिल्ली के प्रोफेसर कृष्णेंद्र घोष ने जानकारी दी। सेशन की शुरुआत पंजाब यूनिवर्सिटी के पूर्व वाइस चांसलर प्रोफेसर अरुण के प्रोवर ने की। अलग-अलग ऑनलाइन सिस्टम के जरिए इस लेक्चर का आयोजन हुआ। यहां पर इस साल इकोनोमिक्स में दिए गए नोबेल प्राइज की ध्येरी को लेकर जानकारी दी गई। इसमें अलग-अलग ध्येरीज, रिस्क, जियोग्राफिकल कंडीशन और इसके इंपैक्ट को लेकर बताया गया। मैथेमेटिकल्स मोडल्स को लेकर अलग अलग ध्येरीज को लेकर भी बताया गया साथ ही इकोनोमिक्स प्रोसेस इंप्रूवमेंट के लिए इनको प्रैक्टिकली यूज करने को लेकर लेक्चर में शामिल लोगों को प्रेरित किया गया।

दैनिक भास्कर
यमुनानगर भास्कर 15-03-2021

जिले को दो साल के लिए मिली चलती-फिरती लैब सुविधा
स्टूडेंट्स का बढ़ाएगी भौतिकी, रसायन, जीव विज्ञान सहित गणित का ज्ञान

विद्यार्थियों की बढ़ेगी रुचि

जिले को चलाई मिलती चलती-फिरती लैब सुविधा है। अत्याधुनिक उपकरणों से लैब प्रकृतिक वैज्ञान में बढ़ेगी रुचि। इससे ही राज्य तक चली सैद्धांतिक प्रयोगों का प्रसारण होगा। एनएसआई के अध्यक्ष डॉ. वी.ए.एस. ने कहा कि लैब सुविधा को जिले में लाने का उद्देश्य है कि ग्रामीणों को जागरूक किया जा सके। उन्होंने कहा कि लैब सुविधा को जिले में लाने का उद्देश्य है कि ग्रामीणों को जागरूक किया जा सके। उन्होंने कहा कि लैब सुविधा को जिले में लाने का उद्देश्य है कि ग्रामीणों को जागरूक किया जा सके।

MEDIA COVERAGE

चंडीगढ़ भास्कर
06-12-2020

डॉ. एफसी कोहली यादगारी लेक्चर आज

चंडीगढ़। सोसायटी फॉर प्रमोशन ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया (एसपीएसटीआई) की ओर से फादर ऑफ इंडिया आईटी इंस्टीट्यूट पर्यटन डॉ. एफसी कोहली की याद में लेक्चर रिक्विर को कराया जाएगा। टाटा कंसल्टेंसी सर्विसेज के संस्थापक कोहली की याद में ये लेक्चर कराने में नेशनल अकैडमी ऑफ साइंसेज इंडिया, यूनिवर्सिटी इंस्टीट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी पीयू और टेक्नोलॉजी एनैबलिंग सेंटर भी मदद करेंगे। ऑल इंडिया काउंसिल फॉर टेक्निकल एजुकेशन प्रो अनिल डी सहस्त्रबुद्धे, वीसी प्रो राज कुमार, नासकॉम के प्रेसिडेंट सोम मित्तल इसमें शामिल होंगे।

my city अमर उजाला
20.12.2020
कुरुक्षेत्र

कुरुक्षेत्र नई श्रृंखला वर्चुअल मोड में द साइंस प्लेग्राउंड

कुरुक्षेत्र। जिस प्रकार खेल का मैदान घूमने और आनंद लेने का स्थान है उसी प्रकार प्रयोगशाला भी एक वैज्ञानिक का खेल का मैदान है। जिसे एक युवा छात्र पहचान सकता है।

सोसायटी फॉर प्रमोशन ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया कुरुक्षेत्र में एक नई श्रृंखला को वर्चुअल मोड में द साइंस प्लेग्राउंड नाम से लेकर चली है। इससे देश के प्रख्यात युवा वैज्ञानिकों द्वारा प्रयोगशालाओं से व्याख्यान देने नवोदित वैज्ञानिकों के लिए बहुत ही रोचक होने वाला है। जनकारी के अनुसार इस श्रृंखला का आयोजन सोसायटी फॉर प्रमोशन ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया (एसपीएसटीआई) एवं नेशनल अकैडमी ऑफ साइंसेज इंडिया के चंडीगढ़ चैप्टर के संयुक्त तत्वावधान एवं हरियाणा स्टेट कार्सिल फॉर साइंस, इनोवेशन एंड टेक्नोलॉजी, हरियाणा सरकार की सहायता से किया गया है। व्याख्यान में प्रमुख वक्ता 2020 में फिजिकल साइंसेज में एस.एस. भटनागर पुरस्कार से सम्मानित डा. राजेश गणपति, एसोसिएट प्रोफेसर, इंटरनेशनल सेंटर फॉर मेटेरियल्स साइंस एंड स्कूल ऑफ एडवांस्ड मेटेरियल्स, आईसीएमएस, जवाहरलाल नेहरू सेंटर फॉर एडवांस्ड साइंटिफिक रिसर्च (जेएनसीएसआर) रहे। संवाद

my city अमर उजाला
25.03.2021
कुरुक्षेत्र

विज्ञान प्रश्नोत्तरी की स्क्रीनिंग परीक्षा दी

कुरुक्षेत्र। सोसायटी फॉर प्रमोशन ऑफ साइंस एंड टेक्नोलॉजी इन इंडिया द्वारा राज्य स्तरीय ऑनलाइन विज्ञान प्रश्नोत्तरी की स्क्रीनिंग परीक्षा आयोजित की गई। परीक्षा में राज्य के 16 जिलों से 117 स्कूल के 351 विद्यार्थियों ने गूगल टेस्ट दिया। पहले चरण में परीक्षा में 117 टीम में आठ टीम का चयन किया जाएगा, जो वीरवार को फाइनल राउंड में भाग लेगी। उल्लेखनीय है कि एसपीएसटीआई ने राष्ट्रीय विज्ञान दिवस पर विद्यार्थियों में वैज्ञानिक दृष्टिकोण को बढ़ावा देने के लिए ऑनलाइन गतिविधियों का आयोजन किया, जिसमें विज्ञान प्रश्नोत्तरी भी शामिल है। प्रतियोगिता का फाइनल राउंड सोसायटी के फेसबुक पेज पर लाइव प्रसारित किया जाएगा। -संवाद

Resource Persons of the Year

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| 1. Prof. K.N. Pathak, former Vice Chancellor, Panjab University | 29. Prof. I.B.S. Passi, Chairman, Advisory Committee, NASI (Chandigarh Chapter) |
| 2. Prof. Ishwar Singh, IIT Ropar | 30. Prof. Ajit Kembhavi, IUCAA Pune |
| 3. Prof. Dilip G. Kanhere, Professor Emeritus, Savitribai Phule, Pune University (Director, Science Museum, Pune University) | 31. Prof. Kulinder Pal Singh, IISER Mohali |
| 4. Prof. V.C. Sahni, BARC and ex-Director RRCAT Indore | 32. Dr. Divya Oberoi, NCRA-TIFR, Mumbai |
| 5. Prof. Subroto Ray of IIT Roorkee and Mandi | 33. Prof. Rajaram Nityananda, Azim Premji University, Bengaluru |
| 6. Prof. Arun Grover, former V.C. Panjab University | 34. Prof. Yashwant Gupta, NCRA-TIFR, Mumbai |
| 7. Prof. K.C. Sharma, Himachal Pradesh University | 35. Prof. Ashok Singhal, Physical Research Laboratory, Ahmedabad |
| 8. Prof. M.S. Sriram, Madras University, PI, DST Project on Eclipses in Ancient Indian Texts | 36. Prof. Jayaram N. Chengalur, NCRA-TIFR, Mumbai |
| 9. Prof. Rajesh Kochhar, Honorary Professor, IISER Mohali and Panjab University | 37. Prof. Jasjeet S. Bagla, Dept. of Physical Sciences, IISER Mohali |
| 10. Prof. Suman B. Beri, Professor Emeritus, Panjab University, Chandigarh (Ex-Scientist, CERN Jeneva) | 38. Dr. Ashish Bhalla, Professor, Dept. of Internal Medicine, PGIMER Chandigarh] |
| 11. Prof. Sandeep Sahijpal, Panjab University | 39. Prof. (Dr.) Yogesh K. Chawla, Padma Shri, Ex-Director, PGIMER Chandigarh |
| 12. Prof. Harvinder Kaur Jassal, IISER Mohali | 40. Prof. (Dr.) Madhu Khullar, Emeritus Scientist, ICMR, Dept. of Experimental Medicine & Biotechnology, PGIMER Chandigarh |
| 13. Tanmay Gupta, Final Year Student from Kaulampur | 41. Prof. Shankar Ghosh, Awardee of SS Bhatnagar Prize & Professor, TIFR Mumbai |
| 14. Shomick Adhicary, Research Scholar from IISER Pune | 42. Prof. Pushpinder Syal, Dept. of English & Cultural Studies, Panjab University, Chandigarh] |
| 15. Prof. Alok Srivastava, Dept. of Chemistry, Panjab University, Chandigarh | 43. Prof. George Andrews, Evan Pugh Professor of Mathematics, Pennsylvania State University |
| 16. Prof. P.V. Bharatam, Dept. of Medicinal Chemistry, NIPER Mohali | 44. Prof. A.K. Agarwal, Emeritus Professor, Dept. of Mathematics, Panjab University, Chandigarh |
| 17. Dr. Leena Chandran, Observer Reasearch Foundation | 45. Prof. Krishnendu Ghosh Dastidar, Dept. of Economics, Centre for Economic Studies & Planning, School of Social Sciences (II), Jawaharlal Nehru University, New Delhi |
| 18. Prof. C.B. Sharma, Professor of Education, IGNOU, former Chairman, NIAS | 46. Er. M.L. Garg, Social Entrepreneur & Science Communicator, Superintending Engineer (Retd.), Dept. of Irrigation, Govt. of Punjab |
| 19. Dr. Vibha Ray, Principal D.A.V. Sr. Sec. School (Lahore), Sec-8, Chandigarh | 47. Dr. Mahak Sharma, Dept. of Biological Sciences, IISER Mohali |
| 20. Prof. K. Ramachandran, Sr. Advisor, NIEPA | 48. Prof. Raj Kumar, Vice Chancellor, Panjab University, Chandigarh |
| 21. Prof. H.K. Senapaty, Director, NCERT | 49. Prof. Anil D. Sahasrabudhe, Chairman, AICTE |
| 22. Shri Ashok Thakur, Former Secretary Education, Govt. of India | 50. Shri Som Mittal, ex-President NASSCOM |
| 23. Prof. Jaspal S. Sandhu, Vice Chancellor, G.N.D.U., Amritsar | 51. Shri K. Ananth Krishnan, Exec. Vice President, TCS |
| 24. Prof. Dinesh Singh, former Vice Chancellor, Delhi University | |
| 25. Prof. Dheeraj Sanghi, Director, Punjab Engineering College, Chandigarh | |
| 26. Brig. (Dr.) R.S. Grewal, former Vice Chancellor, Chitkara University, Baddi | |
| 27. Prof. Latika Sharma, Dept. of Education, Punjab University, Chandigarh | |
| 28. Prof. Kirandeep, Dept. of Education, Punjab University, Chandigarh | |

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| 52. Prof. Manoj Arora, VC, Brij Munjal University; former Dir., PEC Chd. | 75. Dr. Neela Pawar, Assistant professor, Dept. of Mathematics, MCMDAV College for Women Chandigarh |
| 53. Shri Rajiv Vaishnav, ex-Vice President, NASSCOM | 76. Dr. Srinivas Krishnagopal, Head Ion Accelerator Development Division, Bhabha Atomic Research Centre (BARC) and Professor, Homi Bhabha National Institute, Mumbai |
| 54. Prof. Kesav V. Nori, IIIT Hyd.& ex-VP, TCS | 77. Shri S.C. Gupta, District Mathematics Specialist, Dept. of Education, Govt. of Haryana |
| 55. Shri S. K. Munjal, Chairman, Hero Enterprise | 78. Dr. Rajinder Singh, Institute of Physics, Research Group: Physics Didactic and Science Communication, University of Oldenburg, Germany |
| 56. Prof. Sarit K. Das, Director, IIT Ropar | 79. Dr. Fouran Singh, Scientist-F, Incharge, Structural & Spectroscopy Lab, Inter-University Accelerator Centre (IUAC), New Delhi |
| 57. Prof. Rajesh Kochhar, Honorary Professor of History of Science, Dept. of Maths, PU Chd. | 80. Dr. Pratibha Jolly, Science & Society Fellow, NASI and Academic Consultant NAAC, former Principal, Miranda House, University of Delhi |
| 58. Dr. Girish Sahni, ex-DG, CSIR | 81. Dr. Rama Bhargava, Professor of Mathematics, Former Dean Admin & Member BOG, IIT Roorkee |
| 59. Prof. Renu Wig, UIET (former Director), PU Chd. | 82. Dr. Suman B. Beri, Professor of Physics, Panjab University, Chandigarh |
| 60. Prof. R. K. Kohli, VC, Amity Univ., Mohali; formerly VC CUP Bathinda, Secretary, Chd. Chapter NASI | 83. Dr. Abha Sur, Lecturer, History of Science & Gender Studies, MIT, USA |
| 61. Prof. Deepti Gupta, Panjab University Alumni Association | 84. Dr. Meenal Kumar, Sr. Gynecologist, formerly SMO, General Hospital, Sec-16, Chandigarh |
| 62. Prof. Manu Sharma, Faculty in Charge, Entrepreneurship Dev. Cell, UIET, PU Chd. | 85. Dr. Nishima Wangoo, Assistant Professor, Dept. of Applied Sciences (Chemistry), UIET, Panjab University, Chandigarh |
| 63. Prof. (Dr.) S.S. Chahal, Agricultural Scientist, Honorary Professor, Panjab University, Chandigarh | 86. Dr. Genemala Haobijam, General Manager, Samsung Research Institute, Noida |
| 64. Dr. Rajesh Ganapathy, Awardee of SS Bhatnagar Prize, Associate Professor, International Centre for Materials Science & School of Advanced Materials, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) | 87. Dr. Shailesh Nayak, Director, National Institute of Advanced Studies, Bengaluru |
| 65. Dr. Shivanand Kanavi, NIAS Bengaluru | 88. Dr. Sugandha Maheshwary, Dept. of Mathematics, Panjab University, Chandigarh |
| 66. Dr. Rajesh V. Nair, IIT Ropar | 89. Mr. Iqbal Singh, Assistant Professor, Govt. College, Shahzadpur |
| 67. Dr. Umesh Tiwari, CSIO, Chandigarh | 90. Dr. Priyanka, Dept. of Chemistry, Govt. College, Amabala Cantt. |
| 68. Dr. Kamal P. Singh, IISER Mohali | 91. Ms. Sarika Dhupar, Dept. of Biology, Govt. Model Sr. Sec. School, Sec-19, Chandigarh |
| 69. Prof. S.G. Dani, UM-DAE Centre for Excellence in basic Sciences (CEBS), Vidyanagari Campus of the University of Mumbai | |
| 70. Prof. Javed N. Agrewala, Dean Research, IIT Ropar | |
| 71. Dr. Sharvan Sehrawat, Associate Professor, Dept. of Biological Sciences, IISER Mohali | |
| 72. Dr. R. Kumar, President, SPEAK India & Medical Sciences, formerly at PGIMER Chandigarh | |
| 73. Miss Rajni Bhalla, Principal (Retd.), Dept. of Higher Education, Govt. of Haryana | |
| 74. Dr. Sudhir Pujara, Assistant Professor, Dept. of Mathematics, Govt. College, Panipat | |

Supporting & Collaborating Agencies

1. National Council for Science & Technology Communication (NCSTC), Department of Science & Technology, Government of India
2. Haryana State Council for Science, Innovation and Technology, Government of Haryana
3. Department of Science & Technology, Chandigarh Administration
4. National Academy of Sciences, India (Chandigarh Chapter)
5. Indian National Young Academy of Sciences (INYAS)
6. Guru Nanak Dev University, Amritsar
7. Indian Institute of Science Education and Research (IISER), Mohali
8. Indian Institute of Technology (IIT), Ropar
9. Department of School Education, Government of Haryana
10. District Administration, Kurukshetra
11. District Administration, Yamunanagar