



Report on “STEM ANTARIKSH” – “Outer Galaxies Astronomy Education” sponsored by IEEE Bombay Section

Topic: “Outer Galaxies_ Astronomy Education”

Date: 15th September, 2023

Time: 8:00 am to 11:30am

Venue: Mumbai Utkal English High School

Speaker: IEEE Team

Objective: Knowledge Rover, outer astronomy, Planets, space and engineering fields

- Knowledge of Rover, Planet, Space.
- Easy demonstration of Rover.
- Increase motivation towards engineering.
- Students will get hands on experience on Rovers.
- Interesting Facts of ISRO, NASA, ASTRONOMY.

Description:

- IEEE-DBIT Student Chapter arranged a workshop of “*STEM ANTARIKSH OUTER GALAXIES ASTRONOMY EDUCATION*” for class of 7th and 8th students on 15th September, 2023.
- The IEEE-DBIT along with S.T.E.M. volunteers reached Utkal High School at 8:20 AM. The event was commenced at 8:40 AM
- Mr. Umer Shaikh (IEEE-DBIT Chairperson) was the host for the workshop. He



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began by interacting with students by asking questions. Questions included were about what children aspired to become in future and asking about gravity and blackhole and space. It was followed by the introduction of the team.

- The microphone was passed to Miss Dibyarupa. Miss. Dibyarupa gave an introduction of Solar System. Furthermore, she gave a brief explanation of list of Sun, Mercury, Venus, Earth, Moon, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto. To make the workshop interactive, the students who answered correctly were given chocolates.
- Next topic was Big Bang Theory, Gravity, Light Year. She also taught them logical and mathematical expressions. She asks some questions to keep the students active. And Students were so brilliant and they answer each and every question so enthusiastically. They were listening courteously to each IEEE Volunteer.
- Miss. Dibyarupa handed the microphone to Miss Aanaya and Miss Khushi. Miss Aanaya and Miss Khushi given a self-introduction. And started their topic Blackhole in details. And even showed the Blackhole concept video for better understanding
- And they told a lot of facts, they also told the students to read the facts and to make the workshop interactive and fun, the students who answered correctly were given chocolates.
- Miss Aanaya and Miss Khushi handed the microphone to Miss Zubia. Miss Zubia introduced the Achievements. Such as Sputnik, Chandrayan 1 (Oct 2008), Chandrayan 3 (5th Aug 2023), Mangalyaan, Voyager 1 (Nov 2008), First-ever image of blackhole, James Webb telescope catches glimpse of possible first ever Dark Star, Pictures taken by Hubble Telescope, White Dwarf of stars, Juno Satellite, Zond Satellite, Aditya -L1 (2nd Sep 2023).
- And she asked some questions on ISRO and NASA to students and also given the chocolates and also told the facts of ISRO and NASA.



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- Miss Zubia handed the microphone to Miss Suhaani. Miss Suhani introduced to Instruments gives for astronomy, such as COS & STIS, Flyby Spacecraft, Atmospheric Spacecraft. And she told some facts and ask some questions.
- Miss Suhani handed the microphone to Mr. Karthik. Mr. Karthik introduced to Rover.
- Mr. Karthik explained about the ROVER and the recently successful lander Chandrayan 3 Rover and Lander.
- The IEEE TEAM made a Rovers for the better understanding of the students and they should get interest in engineering field. He explains about the hardware and software components.
- Such as Arduino, and sensor used for making the Rover re NRF Sensor, BMP Sensor, DHT Sensor, IR Sensor. He also showed some video and photo of making Rovers.
- IEEE Technical Team was working on Rover's connections and kits testing and checking the Software as well as Hardware. Technical Team Mr. Mohd Raza and Mr. Girish Sangare.
- Mr. Karthik handed the microphone to Miss. Prerana. She told us about the Story of moon formation. She ended her session by the facts and some questions and chocolates for correct answers.
- After the story session IEEE Team Started the hands on or Demonstration session To the Students.
- The students were divided into 3 Group for demonstration of Rover. Each group were given volunteers for explaining and the both Hardware and software and its working.
- The live working of rover, how the rover takes turn by its own when he



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detects the obstacles. And the transmitter and receiver concept, where the transmitter transmit high temperature and the receive the accurate readings of temperature on receiver on software.



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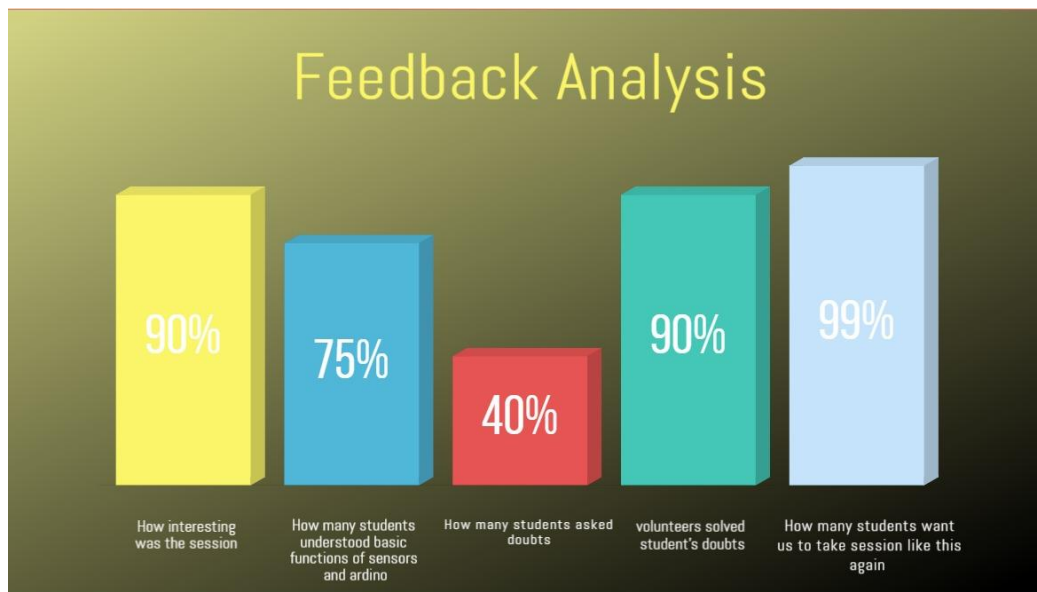
- Students also got to learn about rover lander. And also got the chance for use the rover. Group 1 was handed by Dibyarupa and Zubia, Group 2 Karthik, Tanmayee and Prerana, Group 3 Pram, Girish and Raza.
- Tanmayee started distributing the Feedback Form to students. Ended the session by the Vote Thanks by Umer (IEEE-DBIT Chairperson). As IEEE Team given on rover kit to Utkal English school for the students.
- Lastly Utkal English High school students and Faculty given and a vote of Thanks to IEEE Team and given snacks and gifts.
- Here we Successfully ended the Day 2 of STEM ANTARIKSH.

Summary of session analysis:

From the analysis we can determine, that the majority of the attendees were students. Most of the participants have responded that the session was relevant and well organized. The questions asked during the webinar were answered in appropriate and satisfactory manner. The attendees agree that the overall session was valuable and informative. As reflected by the feedback, decent number of attendees felt that they can now better understand their measuring equipment and the measurement mechanics under practical conditions. Significant number of people are interested in participating in future webinars.

Feedback of session from students:

78 students attended the session. They found the session very interesting. Here is a static analysis of feedback of the session.



Some picture of the event:





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