

Zenith '18, The AstroFest

14th-20th September



14th September marked the commencement of the first ever edition of Zenith, the AstroFest of IIT Mandi which continued for a week and witnessed several competitions, technical talks and interactive sessions which have been described below in details:

Talk by Prof. Arnav Bhavsar 15th September



Title: Uncertainties in the Drake equation, its relation to the alleviating the Fermi paradox.

This talk discussed a recent work "Dissolving the Fermi Paradox" by Anders Sandberg, Eric Drexler, Toby Ord.

Prof. Arnav Bhavsar delivered a talk where he discussed about the uncertainties present in Drake's equation. He talked about the possibility of having extra-terrestrial life and the factors on which the the probability distribution curve depends. There were around 25 students who were interested to know about the Fermi Paradox. They discussed the possibility of life on the planet Mars and also what made the Drake's equation different from the previous existing theories.

Introduction to Git and Github

9th September

To introduce beginners to Git and Github, essential tools for open source development, a session was organised which was conducted by the head of the open source department, Tanmay Rustagi and Akshat Malviya. Around 60 freshers turned up to attend the session. The aim was to get them acquainted with Git tools that could help them during the Astro Hack Week.

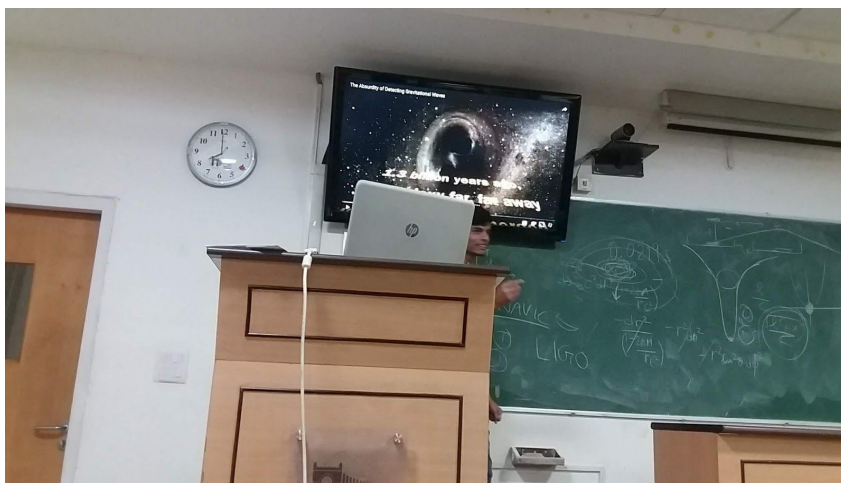


Special Relativity & Geometry in Physics

14th September

Bhavya Bhatt, a core team member of STAC, conducted a session on special relativity and geometry in physics. He explained the space-time diagram, different paradoxes like the twin paradox and discussed several puzzles related to time dilation. The audience was told the significance of the general theory of relativity and how the physicists have been working to make a grand unified theory that could solve problems ranging from microscopic to galactic levels.

Later on, Shreyas Bapat, former co-ordinator, introduced the concepts of gravitational waves and gamma ray bursts. Discussions were made. The audience was also shown the video of the Nobel laureates who talked about the discovery which amazed the world.



Aurora: The paper presentation event

16th September

The event comprised two levels:

- a) Presenting before the judges their views on the topic they've chosen.
- b) Question/Answer round in which the judges asked questions related to their presentations.

All participants were given 10 minutes to present their topic before the audience. After the event, the judges gave the participants tips on how to improve and encouragement to explore more opportunities.



Judges: Swapnil Sharma, V Sai Subba Rao, Indresh Kumar Gupta.

Winner: Shikha Suman

Runner-up: Naman Tayal

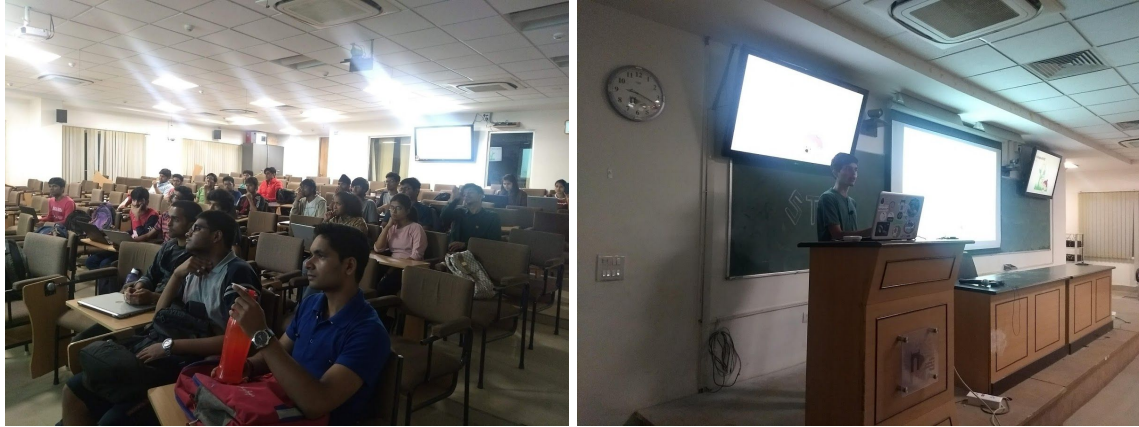
Special mentions: Kumar Harsh & Jai Luthra



The Winner: Shikha Suman

Whatever! by Shreyas Bapat

17th September



Shreyas first talked about gamma ray bursts and the reason behind their existence. He then talked about the Tabby's star which has certain peculiar characteristics. He mentioned about exoplanet detection and how machine learning could be used in the transit method to determine extraterrestrial planets.

Next he shifted towards professional development and introduced the use of git to all the interested freshers. The commands he introduced include init, add, clone, status, log, etc. The students performed hands-on tasks regarding the same.

The students asked several questions related to markup languages, programming languages, open source, open-source licences, etc.

The final part of the session covered things related to Python. 'Jupyter Notebook' was introduced to them.

Pandora's box 18th September

Pandora's box was the Astronomy Quiz conducted on 18th September. The quiz was designed keeping in mind that most of the participants would be beginners and the questions comprised of topics like astronomy and astrophysics, primarily based off of previous sessions and talks conducted by STAC.

Winner: Abhijeet Manhas

First Runner-Up: Shishir Asthana

Second Runner-Up: Shikha Suman

Special Mentions: Amol Agrawal, Tushar Tyagi, Shrinivas Khatavkar



The Winner: Abhijeet Manhas

Astro Hack Week

14th-22nd September

Astro Hack Week was a team event hackathon.

Theme for the hackathon was - **whatever ideas you can come up with.**

The teams had to submit their project presentations that they worked on during the Zenith AstroFest.

Winners: *"Dev" Das*

Team Members: Aashish Kumar, Vishal Anand, Yash Agrawal, and Aman Jain

Runners Up: *Cooler.than.0.K*

Team Members: Varun Singh, Vipul Sharma, Manvi Gupta, Rishi Sharma

"Dev" Das's project was named SEARCH_GURU, which was a user-friendly web-app that maintained a repository of all the professors in different IITs, their name, research interests, contact details etc. to help students looking to apply for internships.

Cooler.than.0.K's project was an IIT Mandi Car Pooling system using which members of the institute could sign up and then either offer rides in their cars between Mandi, South Campus and North Campus, or book seats in a ride offered by another user.

Zenith Closing

24th September



All the winners were felicitated by V Sai Subba Rao, the mentor coordinator and Swapnil Sharma, the former coordinator of STAC. They interacted with the core team members of STAC and shared a few light moments to cherish. This marked the end of a week full of curiosity, learning and innovation.
