**IIT Mandi's Space Technology and Astronomy Club wins Bronze Medal at Inter IIT Tech Meet 2018**

**Twenty-two teams participated in Star Cluster Identifier Hackathon in Inter IIT Tech Meet 2018**

**Mandi, 10th January 2019:** Indian Institute of Technology Mandi's (IIT Mandi) Space Technology and Astronomy Club (STAC) won Bronze Medal in the Star Cluster Identifier Hackathon in the Inter IIT Tech Meet 2018, held at Indian Institute of Technology Bombay. A total of twenty-two teams from various IITs participated in the competition.

A team of four students: Shreyas Bapat, 3rd Year student, Indresh Kumar, 4th Year student, Swapnil Sharma, 4th Year Student and Akash Dakoor, 2nd Year student from School of Computing & Electrical Engineering made a project on 'Star Cluster Identifier' within 6 hours, at the spot.

**Speaking about the prize, Shreyas Bapat, 3rd Year student from School of Computing & Electrical Engineering, said, "***It was a nice experience participating in the competition, for the past two years, we have been getting 4th, 5th ranks respectively and we were aiming for a medal this year. Overall, the hackathon was interesting; the difficulty level of the question was more than what it used to be earlier. And the problem statement was quite a surprise because it was given to us on the spot. Our team was a mix of 2nd, 3rd and 4th years with 3 generations of Space Technology and Astronomy Club (STAC) Co-ordinators. We learnt a lot from this experience and aim to get gold in next year's Inter IIT Tech Meet".*

IIT Mandi's Space Technology and Astronomy Club started this project with the objective to analyze Star Cluster, which included calculation of half-light radius, the age of the cluster and finding the optical counterparts of the star cluster. The project involves rigorous data pre-processing and removal of the erroneous observations due to hardware.

Using the analysis, IIT Mandi's Space Tech and Astronomy Club vividly explained the nature of the globular clusters, their age, the nature of the stars they hold etc. This can be helpful in understanding how the universe works, how galaxies had developed and evolved.

The highlights of the project which helped in winning the medal were: Analysis of Star Clusters, Derivation of expression of lifetime of a star, Finding the optical counterparts of X-Ray Observations etc. IIT Mandi team also implemented a research paper "Optical counterparts of the nearest ultra-luminous X-ray sources" which gave a considerable lead to the team in the competition.

**Speaking about the team, Prof. Arnav Bhavsar, Assistant Professor and faculty coordinator of Space Tech and Astronomy Club, IIT Mandi, said,** *"The Space Technology and Astronomy Club (STAC) has greatly evolved over the last few years. An important activity of the club involves undertaking projects in astronomy data science. This particular achievement of the team signifies the aptitude and enthusiasm of the students in taking up such challenging projects, and is indeed an inspiration for the club to continue contributing to this area, and target more milestones. I congratulate all the members of the team. STAC also acknowledges the constant support from IIT Mandi, which is helping the club to grow".*

**About Space Technology and Astronomy Club (STAC) of IIT Mandi**

Space Technology and Astronomy Club (STAC) is a technical club under Science and Technology Council, Student Gymkhana (SnTC). It's an open-to-all club where members are encouraged to do whatever interests them related to the interstellar- from traditional stargazing through telescopes and building rovers to detecting exoplanets using machine learning. STAC started off in 2013 as a couple students with a pair of binoculars and a love for the night sky. Over the years, it has grown to include an inventory of 3 telescopes and numerous members with varied backgrounds.

**About Star Cluster Identifier Hackathon Inter IIT Tech Meet**

The Star Cluster Identifier is an annual event open for all IITs. Every year Inter IIT Tech Meet has an on spot hackathon on Astronomy Data and problems. Participants are given the data of stars in the cluster to solve. The problem statement is given on the spot and scoring is done on the basis of understandability of code and accuracy of results.