

Astrax'20

13-15 March, 2020

THE MOST ASTONISHING ASTRO-MEET
YOU'D EVER SEE!

GREETINGS

We are abundantly delighted to present before you, the second edition of Astrax, the one-of-its-kind inter-college AstroMeet of Indian Institute of Technology Mandi. Bringing together space science and technology, Astrax is a hub for astronomy enthusiasts hosting a variety of amazing events and proficient talks by prominent speakers in the field.

It will be a pleasure for us to have you here with us in Astrax! Therefore, we gladly invite you to be a part of this marvelous fest.

Regards,
Team Astrax



CONVENORS' ADDRESS

Greetings from IIT Mandi,

It fills me up with immense delight to present before you, Astrax 2020 - the second edition of the annual Astro-Meet of IIT Mandi. Marked as the one and only of its kind in the north, Astrax brings together students and professors with an inclination towards astronomy. Therefore, we gladly invite you to be a part of this Astro-technical fiesta.

Decorated by the genius talks of some of the well-known personalities in the field of astronomy, Astrax brings to you a plethora of exceptional cosmic talent and expertise, all wrapped up in this three-day-long festival. Not only this, Astrax also promotes basic Astronomy and Science education in local schools and colleges through Outreach Programs.

Astrax aims to provide and promote knowledge in various aspects of astronomy and astrophysics for those who are passionate about the world beyond the sky and appreciate its visible as well as latent beauty.

We look forward to having you here with us in Astrax!

Yours sincerely,
Shikha Suman & Arshita Kalra
Convenors, Astrax '20



HIGHLIGHTS

With a vast range of participants from various colleges of North India including IITs and IISERs, AstraX is a fest out of the ordinary. AstraX is a central attraction for students and professors with an inclination towards astronomy and astrophysics. Adding to the list of copacetic events, acing talks by prodigious people in the field of computational and theoretical astronomy and lauded workshops, this year we have a lot more in store for you.

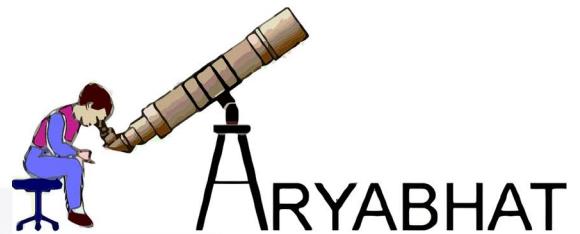


OUTREACH PROGRAM

Every year, Astrax is organized with a vision of not only sharing knowledge among people passionate about the cosmos, but also promoting basic astronomy education in schools and colleges. This is done through our outreach programs. In collaboration with another well-established organization, Astrax takes an initiative to organize workshops, movie screenings and hands-on sessions on telescope training for secondary and higher secondary schools and college students.

This year, our initiative is supported and organized by the Aryabhat foundation, a special endeavor for the promotion of basic sciences in Bhopal, Madhya Pradesh. Aryabhat foundation is committed to serving Basic Science in an exciting way to youngsters and inculcates a science-based temperament in them.

Through our outreach program, we plan to develop an interest in astronomy and astrophysics among students, on a basic level. The events included in our outreach program are organized by professionals, and are highly beneficial for students as they can enjoy the science they read in textbooks through live demonstrations. This results in a boost of interest in science for the students and encourages them to go for higher studies in these fields.



WORKSHOP

AEROENGINEERS, ENGINEERING REASEARCH AND SKILL
DEVELOPMENT ORGANISATION

RC PLANE TRAINING

LIVE PRACTICAL RC FIGHTER AIRCRAFT PLANE MAKING AND FLIGHT SKY TEST.

DEMONSTRATION ON AIRCRAFT DESIGN, STRUCTURE FABRICATION AND PROPULSION-ELECTRONICS CONTROL SYSTEM.

SPACE SHUTTLE DESIGN

WORKSHOP ON CFD SUPersonic SPACE VEHICLE DESIGN AND AERODYNAMICS.

EXPLANATION ABOUT THE PHYSICS OF THE INTER-ORBIT ATMOSPHERE BETWEEN EARTH AND SPACE.

ILLUSTRATION ABOUT AERODYNAMIC FORCES ON SPACE VEHICLES AT LOW GRAVITY AND HIGH ALTITUDE.

SPACE MARS ROVER

PRACTICAL MAKING OF SPACE MARS ROVER KIT AND TESTING ON VIRTUAL SPACE ATMOSPHERE.

MAKING OF ROVER PRACTICAL MODEL, DESIGN AND FABRICATION, ANTENNA COMMUNICATION AND CAMERA PICTURE VISUALIZATION.

RADIO-CONTROLLED ROVER-FLIGHT PATH TESTING AND DEMONSTRATION ABOUT 6 TYRES LANDING SYSTEM.



EVENTS IN ASTRAX

SHOOTING STAR

PRESENT THE SPELLBINDING BEAUTY
OF THE COSMOS, TO THE WORLD,
THROUGH YOUR LENS IN THIS ONLINE
ASTROPHOTOGRAPHY EVENT.

ESTRELLA

FUEL UP YOUR PASSION, PEN DOWN
YOUR STARRY THOUGHTS INTO
WORDS AND SHOW THEM TO THE
WORLD THROUGH THIS ONLINE BLOG
WRITING EVENT.



THE MESSIER MARATHON

GRAB YOUR TELESCOPES AND GET READY TO EXPLORE ONE OF THE MOST BEAUTIFUL AND CLEAREST NIGHT SKIES YOU WOULD HAVE EVER SEEN IN THIS MESSIER MARATHON.

MISSION CANXAT

PUT YOUR TECHNICAL EXCELLENCE TO WORK AND BRING OUT THE GENIUS IN YOU THROUGH THIS EXCEPTIONAL CASE STUDY EVENT.

CELESTA

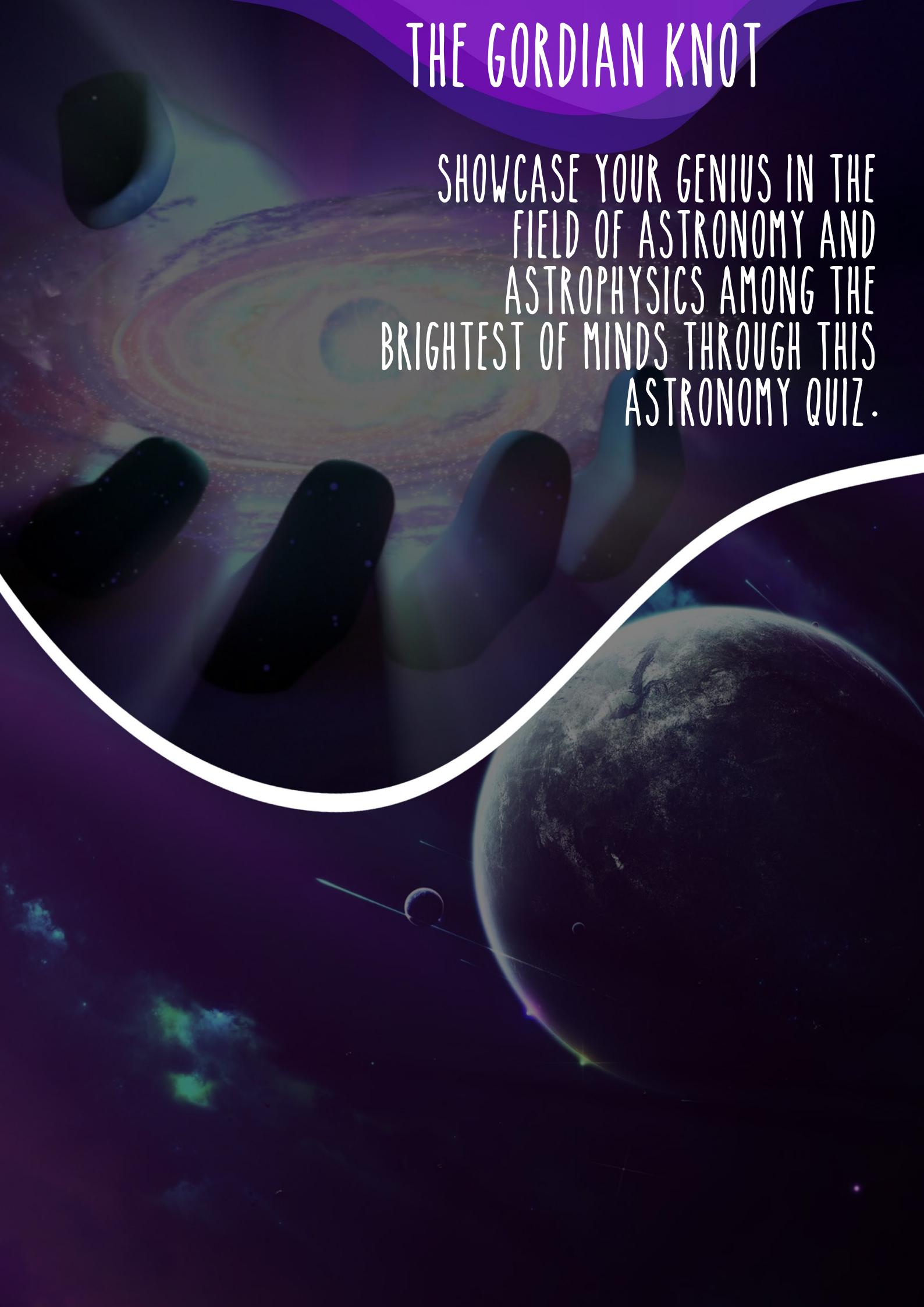
CAPTURE THE BEAUTY OF ONE OF THE
MOST DECORATED NIGHT SKIES,
STUDDED WITH CLEAR
CONSTELLATIONS AND A
BREATHTAKING VIEW OF THE
MILKY-WAY GALAXY.

ENIGMA

DISCOVER THE LATENT BEAUTY OF
THE INTERSTELLAR WITH THIS
INNOVATIVE HACKATHON BASED ON
THE PROCESSING AND ANALYSIS OF
ASTRONOMY DATA.

THE GORDIAN KNOT

SHOWCASE YOUR GENIUS IN THE
FIELD OF ASTRONOMY AND
ASTROPHYSICS AMONG THE
BRIGHTEST OF MINDS THROUGH THIS
ASTRONOMY QUIZ.





KEYNOTES

DR. STUART MUMFORD

A PYTHON DEVELOPER FOR THE DANIEL K. INOUYE SOLAR TELESCOPE DATA CENTRE, NATIONAL SOLAR OBSERVATORY, UNITED STATES. HE IS ALSO THE LEAD DEVELOPER OF THE SUNPY PROJECT.



DR. NICK MURPHY

AN ASTROPHYSICIST IN THE SOLAR AND STELLAR X-RAY GROUP AT THE SMITHSONIAN ASTROPHYSICAL OBSERVATORY (SAO), AND A LECTURER AT HARVARD UNIVERSITY'S DEPARTMENT OF ASTRONOMY. HE IS ALSO A LEAD DEVELOPER OF THE PLASMAPY PROJECT AND IS AFFILIATED WITH HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS.

PROF. AVINASH DESHPANDE

A PROFESSOR AT RAMAN RESEARCH INSTITUTE, INDIA. HE SPECIALIZES IN NEUTRON STARS, PULSARS AND TRANSIENTS, THE GALAXY AND INTERSTELLAR MEDIUM, AND HAS ALSO EXPERTIZED IN INSTRUMENTATION AND SIGNAL PROCESSING. HE IS IN-CHARGE OF THE WELL-KNOWN SWAN PROJECT AS WELL.



PRANAV SHARMA

HE IS THE CURATOR AT THE SPACE MUSEUM, BM BIRLA SCIENCE CENTRE, HYDERABAD. HE HAS BEEN A MEMBER OF THE INSTITUTE OF PHYSICS, LONDON, SINCE 2010.

HE IS ALSO THE FOUNDER OF YASH PAL CENTER FOR SCIENCE AND ASTRONOMY.

SANJAY GUPTA

A FOUNDING MEMBER OF THE ARYABHAT FOUNDATION, HE HAS BEEN ACTIVELY INVOLVED WITH THE STUDENTS FOR MORE THAN 3 DECADES. HE WAS DESIGNATED AS MASTER RESOURCE PERSON BY DEPT. OF SCIENCE AND TECHNOLOGY, GOI IN 1995. HE WAS A MEMBER OF NASA'S SATURN OBSERVATION CAMPAIGN FOR 9 YEARS.



WHY SHOULD YOU BE A PART OF ASTRAX?

ASTRAX HOSTS A VARIETY OF COPACETIC EVENTS RANGING FROM AN ASTRO QUIZ, A HACKATHON TO AN ASTROPHOTOGRAPHY CONTEST, PROVIDING YOU A PLATFORM TO SHOWCASE YOUR GENIUS IN THE FIELD THAT SUITS YOU BEST.

PRODIGIOUS TALKS BY SOME OF THE PROMINENT PERSONALITIES IN THE FIELD OF THEORETICAL AND COMPUTATIONAL ASTRONOMY WHICH ARE SURE TO LEAVE YOU AWESTRUCK WITH A GUST OF HAVING EXPERIENCED SOMETHING NEW.

ASTRAX ORGANIZES AMAZING WORKSHOPS ON VARIOUS ASPECTS OF ASTRONOMY THROUGH DETAILED PRESENTATIONS AND HANDS-ON TRAINING SESSIONS.

A VAST VARIETY OF PARTICIPANTS, LARGELY FROM OTHER IITS AND IISERS SERVES AS AN OPPORTUNITY TO COMPETE AMONG SOME OF THE BRIGHTEST YOUNG MINDS OF THE COUNTRY.

SURROUNDED BY SERENE MOUNTAINS AND FORESTS, IIT MANDI HAS A GREAT NIGHT SKY FOR ASTRONOMY ENTHUSIASTS WHERE MAJOR CONSTELLATIONS AND MILKY-WAY GALAXY ARE VISIBLE WITH NAKED EYES.

LOCATED NEAR THE UHL TRIBUTARY OF RIVER BEAS, THE INSTITUTE HAS LUSH GREEN, PURE AND PEACEFUL CAMPUS AWAY FROM THE CITY BUZZ.