



Information Booklet

FOR

AVALON 2019

NATIONAL LEVEL
TECHNICAL PAPER PRESENTATION
AND
PROJECT COMPETITION

BY

TERNA ENGINEERING COLLEGE

Sector 22, Nerul(W), Navi Mumbai 400706

AVALON 2019 NATIONAL LEVEL PROJECT COMPETITION 8

NATIONAL LEVEL PROJECT COMPETITION & TECHNICAL PAPER PRESENTATION



ABOUT TERNA

Terna Public Charitable Trust's Terna Engineering College is One of the well known and finest technical institutions, with 'A' Grade from Maharashtra Government and having ISO 9001 quality management system along with NBA accreditation and is among the top Colleges in Navi Mumbai. Terna offers education of the highest quality with its curriculum presents a broad array of exceptional offerings in engineering and technological studies.

ABOUT AVALON

Avalon is an annual Technical Festival of Terna Engineering College which will be conducted on 13th & 14th March 2018. It provides students from different streams over the nation with a perfect stage to showcase their technical expertise. The main goal of 'PROJECT COMPETITION & TECHNICAL PAPER PRESENTATION' is to acknowledge students with emerging ideas in this fascinating and expanding world of science and engineering. Thus, this festival manifests the conglomeration of talent, intellect, innovation and competitive spirit of the students.





CATEGORY I COMPUTER & IT

TOPICS

- 1. DESIGNING MODULES TO DETECT LIFE ON MARS.
- 2. MISSION SYSTEM SOFTWARE (DESIGNING, PLANNING, ENGINEERING AND SCIENTIFIC DATA ANALYSIS)
- 3. ADHOC & SENSOR NETWORK
- 4. OPEN SOURCE TECHNOLOGIES
- 5. SURFACE TECHNOLOGY
- 6. IOT (INTERNET OF THINGS)
- 7. BIO INFORMATICS
- 8. DATA SCIENCE/ DATA WAREHOUSE / DATA MINING
- 9. AI
- 10. MACHINE LEARNING
- 11. BIG DATA





CATEGORY II ELECTRONICS, EXTC

TOPICS

- 1. DEEP SPACE COMMUNICATION (BETWEEN MARS AND EARTH)
- 2. SOLAR WIND ELECTRON ANALYZER
- 3. SIGNAL PROCESSING
- . ADVANCES IN AUTOMATION
- 5. DIGITAL IMAGE PROCESSING
- 6. MICROWAVES & ANTENNAS
- 7. SIMULATION TOOLS FOR DESIGNING ELECTRICAL COMMUNICATION DEVICES
- 8. ADVANCES IN CELLULAR SATELLITES
- 9. RFID & APPLICATION





CATEGORY III

MECHANICAL, MECHATRONICS, AUTOMOBILE

TOPICS

- 1. DESIGNING MARS ROVER / ROCKER BOGIE ROBOT
- 2. MARTIAN SELF MONITORED BOTS
- 3. DEEP SPACE NAVIGATION (TO SEND ORBITERS AND LANDERS TO MARS)
- 4. ADVANCES IN DESIGN ENGINEERING
- 5. MECHANICS OF TERRAFORMING
- 6. FLUID MECHANISM
 FUTURE TRENDS IN AUTOMOBILE ENGINEERING
- 7. UAV (UNMANNED AERIAL VEHICLE)
- 8. AIR TRAFFIC MANAGEMENT
- 9. AIR CRAFT DESIGN
- **10. ENERGY EFFICIENCY**
- 11. ENERGY GLIDER
- 12. SOLAR ENDURANCE FLIGHT
- 13. OBSTACLE AVOIDANCE DRONE
- 14. MERCURY VORTEX ENGINES
- 15. EARTH-MARS CYCLERS FOR A SUSTAINABLE HUMAN EXPLORATION OF MARS
- 16. THE ALBEDO OF MARS: SIX MARS YEARS
 OF OBSERVATIONS FROM PANCAM
 ON THE MARS EXPLORATION ROVERS
 AND COMPARISONS TO MOC, CTX AND HIRISE



TECHNICAL PAPER PRESENTATION

Technical presentations serve engineering, scientific and high tech purposes, describing advances in technology, problem resolution, product design and project status. In general, technical presentations serve one of two purposes: to inform or to persuade.

Unlike other public speaking occasions, technical presenters are not usually expert presenters. Instead, they're usually experts in the material, but not in projecting, engaging the audience, demonstrating enthusiasm, using humor and other best practices successful presenters use. They may have little or no preparation for, or background in, public speaking, yet they are required to do so. Often they present material as if the material should speak for itself, no additional enthusiasm or expression required. The main advantage or motto of the presenting paper is to bring students out of stage fear and also improve their communication skills. It also provides you an opportunity to learn in detailed about a core subject which is a part of curriculum and develop effective presentation skills. Paper presentation is one of those activities and is very much required in today's world.



PROJECT COMPETITION

Group projects turn learning into doing, and they are important for our education. Through a project you not only get a deeper understanding of the subject but also gain hands-on practical experience. We have a chance to apply our knowledge to real-world applications and create something tangible using what we've learned in college. Group projects are also a perfect example of the power of combined effort. An individual working alone could never hope to achieve what a group could. Doing a Project and participating in a competition gives students an opportunity to meet and spend time with others who have the same interests.

Project Competitions provide a great platform to display the knowledge and skills you have amassed over the years. The experienced panel of jury can provide a critical analysis and feedback of your performance. If you are looking to do internships in college, the best way to catch the companies' attention is through projects. In this way, competitions can prove to be a great source of self-evaluation for students and help nurture their experience and skills further.





PROJECT COMPETITION

Registration Fees:

Rs. 600/- (Group of 6)*

Prize Amount: (For all categories)

1st Prize - Rs. 10,000/-2nd Prize - Rs. 5,000/-

TECHNICAL PAPER PRESENTATION

Registration Fees:

Rs. 400/- (Group of 4)

Prize Amount: (For all categories)

1st Prize - Rs. 5,000/-2nd Prize - Rs. 3,000/-

*Rs.50/- more for every extra member





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