robotix Iran

TECHNOXIAN WORLD ROBOTICS CHAMPIONSHIP IRAN

WORLD'S BIGGEST ROBOTICS CHAMPIONSHIP TECHNOXIAN

TECHNOXIAN IRAN

The 12th National Student and Open robotics Competition RobotixIran

First TechnoXianIran International Competition

KISH-IRAN-2025

DATE: 23-25 June

WWW.ROBOTIXIRAN.COM
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Innovations and Inventions (Open Category)

Introduction:

A designer or inventor, upon identifying a need in their surroundings, embarks on a journey to find a solution. The process begins with an idea that might occur to anyone. However, the difference lies in the ability of an innovative designer to approach problem-solving systematically and turn ideas into functional and practical solutions. The aim is to create products that address real-world needs effectively. Students and learners must recognize the importance of nurturing and experimenting with their ideas, considering various aspects thoroughly.

Objective of the Competition:

This competition aims to provide a solid platform for innovative projects and inventions, allowing participants to showcase their creativity and compete on a global level. The winner will be the one whose project best aligns with real-world needs and industry standards, presenting practical and innovative solutions. Participants are encouraged to present projects accompanied by all necessary documentation, promoting advancements in fields such as engineering, educational technologies, health and hygiene, and renewable energy. The competition also emphasizes the commercialization potential of projects, fostering professional growth and business opportunities for participants.

Age Requirements:

This competition is held at two levels:

- Participants Under 18 Years
- University Students (18+ Years)

The rules of the competition remain the same for both levels, ensuring fairness and consistency across all participants.

Competition Structure

- Each team can have up to three members.
- Competitions will be held in the following categories:

1. Autonomous Robots and Automation:
    - Developing new algorithms for self-driving vehicles to improve performance.
    - Designing delivery robots for urban goods delivery.
2. Service Robots:
    - Designing robots to assist with elderly care or patients.
    - Robots for educational environments, acting as teachers or teaching aids.
    - Waste Management Robots: Creating intelligent systems for waste collection and recycling.

3. Search and Rescue Robots:
    - Developing rescue robots for challenging conditions such as earthquakes or natural disasters.
    - Utilizing sensor technology to improve the accuracy of rescue robots in identifying people in danger.
4. Agricultural and Industrial Robotics:
    - Designing agricultural robots for crop harvesting or farm monitoring.
    - Enhancing production lines using robots for increased efficiency and reduced costs.
5. Prosthetics Design and Medical Robotics:
    - Designing intelligent prosthetics and assistive devices to enhance individual lives.
    - Developing robots for surgeries or patient care.
6. Artificial Intelligence and Machine Learning in Robotics:
    - Optimizing deep learning algorithms for object recognition and interaction.
    - Creating intelligent robots capable of learning from past interactions to improve performance.

Evaluation Criteria

Projects will be assessed based on their creativity, uniqueness, approach to solving real-world problem, and functionality.

Project Display and Presentation Space

- Each team participating in the competition is provided with a display space (booth) to present their design and creation. Participants can use banners, videos, and other methods to showcase their project to judges and visitors, allowing them to evaluate and assess it. ****
- Judges will visit the designated display spaces according to a scheduled timeline. Teams may be asked to present their products in a separate room during evaluations.

Presentation Requirements

- A 180-second video introducing the project.
- A banner (1.5m x 1m) summarizing the project.
- A poster covering:
    - Team introduction.
    - Product name.

  - Associated designs and documentation.
  - Identified problem and proposed solution.
  - Solution to the existing problem.
  - Details of efforts to address the problem.
  - Creativity and innovation.
  - Technical specifications.
  - Development roadmap for commercialization and pricing.

- Participants will have time to set up and prepare their booths. Team members must consider how much space is required for their project and its presentation. The space allocated to each team is limited, so if their project requires more space than provided, they must ensure that their documentation and display tools can be properly presented within the available area.
- All teams must have a poster of their project in A1 paper size displayed at their booth.
- On the day of the event, judges will visit the booths and fill out the scoring sheets. The judges are selected from professional experts and researchers in various fields of science. During this visit, the judges will determine the scores for each team. The final score will be calculated based on the individual scores given by each judge.
- Each team must be able to present their project to visitors using visual and auditory methods, explain the challenges and problems addressed, and demonstrate how these challenges were resolved.
- Each team will have a maximum of 10 minutes to present and defend their project in front of the judges.

Judging Criteria

- Project concept
- Project goal
- Presentation of new ideas (scope of innovation, creativity, and uniqueness)
- Practicality of the project – feasibility and market potential
- Development scope
- User experience
- Project design and construction – adherence to engineering principles (mechanical and electrical)
- Booth decoration (each team can design their booth with content relevant to their project to attract visitors and judges).

- Posters and banners (scientific content of the poster holds special significance from the judges' perspective).
- Branding activity
- Environmental compatibility

Objections

- Objections must be submitted in the specified forms immediately after the competition or during the round. Late objections will not be considered.
- The final decision on disputes lies with the referees and the organizing committee.
- After the results are announced, no objections will be accepted.

Organizational Chart

- Teams are responsible for staying updated on any rule changes up to one week before the competition.
- Teams must register within the specified timeframe and submit a 1-5 minute video (max 100 MB) showcasing their robot's functionality and their motivation for participating. Videos should be emailed to technoxian.iran@gmail.com.
- Robots will undergo technical inspections before the competition.

Attention: Only one trophy and cash prize will be awarded to the winning team, not to individual members.

GOOD LUCK!