

## MECHATHON 8.0 2023

Mechathon is an event organized by IMechE NED Student chapter on December 26, 2023. Institution of Mechanical Engineers (IMechE) is one of the most renowned and fastest growing engineering institutions in Europe which works for the growth of Mechanical Engineering. IMechE student chapter is the society of the Department of Mechanical Engineering at NED University of Engineering & Technology, Karachi, was formed in December 2013 for the sole purpose of carrying out technical events that are beneficial for engineering students.

It is an event where students apply their engineering knowledge & skills. Students can participate and showcase their talent across Pakistan from any field. Till last year Mechathon consist of 3 Modules;

- 1- Bridge Building Competition
- 2- Bottle Rocket Competition
- 3- Spud Gun Competition

But this year Mechathon has launched new Module named Balloon Cart Competition.

The event was held in the fountain area of NED University on 26 Dec, 2023 and became a creative opportunity for the learning engineers while providing them with good technical knowledge. A total of 160 teams took part in it with 35 teams participated in the Bottle Rocket Competition 65 teams in the Bridge Building Competition and 25 in the Spud Gun Competition. And in the new Module we have 35 teams to compete with each other. Like the previous events hosted by the IMechE student chapter at NED, this year's event was also a great success with many teams and break all the records.

All the module started at precisely 1100 hours. The Bottle Rocket and Balloon Cart was conducted at the point area along with the provision of essential equipment to the registered teams. The Bridge Building was organized at the fountain area of NED University. The Spud Gun was executed near Petroleum Garden. The necessary equipment was provided along with safety measures by supporting staff. The event gathered a lot of attention from the students: To merely watch the event, a crowd of 700-750 with 170+ members and 500+ non-members gathered.

In the Bridge building competition, the candidates developed a wooden bridge capable of withstanding loads of weight out of some ice-cream sticks and took the opportunity to practically demonstrate their architectural abilities and knowledge of Truss structures. The Team **Urbanites** won the competition and claimed the winner place, while Team **Titans** claimed the runner up position.

The event persuaded the students to gear up and give themselves some capital time and get their bottle rocket shoot up high at maximum range. The students were inspired into making different designs of their own choosing out of plastic bottles. The first round comprised of 35 teams. Top 10 teams were shortlisted from the 1<sup>st</sup> round on the maximum target and range obtained. They moved on to the second round showing excellent results and exceptional performance throughout the event. In the end, Team **Junkyard Junk** came on top and claimed the winner position while Team **A.M.A** rose to be at the runner up position

To make a balloon cart, cut cardboard into a rectangular base and four side panels. Attach bottle caps as wheels. Inflate balloons and stick them onto the sides to cover the cart. Add strings

as handles if desired. The balloon that goes ahead will win the race. In this competition the Team **Circuit** takes all the ends followed by the Team from Dawood University **DUET Tigers**.

Students participate in a group and have to design a spud gun before the day of the competition. All teams will have 5 chances each to hit targets set at different distances and the points are also set in accordance to it. The team which gain the highest points wins. In this competition the Team from DHA Suffa University named **DHA Suffa Boltz** hit the targets and scored the highest point followed by Team **COD Fighters** who came second.

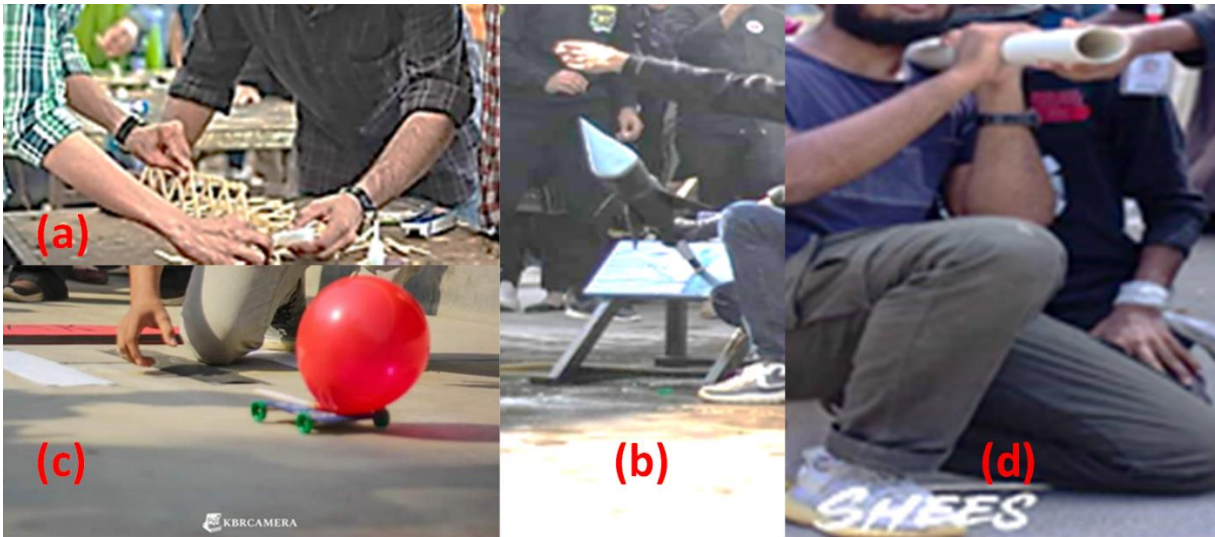


Figure 1. (a) Bridge Building Competition (b) Bottle Rocket Competition (c) Balloon Cart Competition (d) Spud Gun Competition

The faculty advisor of IMechE, Dr. Tariq Jamil, presented awards to the winners on their astounding performance. The competitions were judged by the panel of judges.

There is a Need for such types of events because in the present era, where the whole world is engaged in a race to win, to conquer and to explore, such events help the students think out of the box. Their creative thinking enhances with these events and their skills are improved.

The event was sponsored by *The Naz Enterprises* and *Safina Enterprises*.



Figure 2. Event Poster