

EGG-DROP COMPETITION

Sharif University of Technology – May 2015

8/18/2015

Introduction

Egg drop competitions are usually held by high school and college students. It brings out the creativity and lets the students find their way through the path of engineering. The purpose of this competition is to create a device to refrain a raw chicken egg from breaking when released from 20m above the ground.

The civil magazine party, under supervision of Dr. Vahab Toufigh executed the competition in campus of Sharif University of Technology on May 27th.

Preparation

Amir Mostofinejad and Amir Hossein Azizzadeh as representatives of Civil Magazine Party and Amir Hossein Hassanpour as representative of Dr. Vahab Toufigh were in charge of the competition.

The announcement started 3 month before the event day. Posters were installed throughout the university and departments; the event was announced on Facebook and students were informed via email.

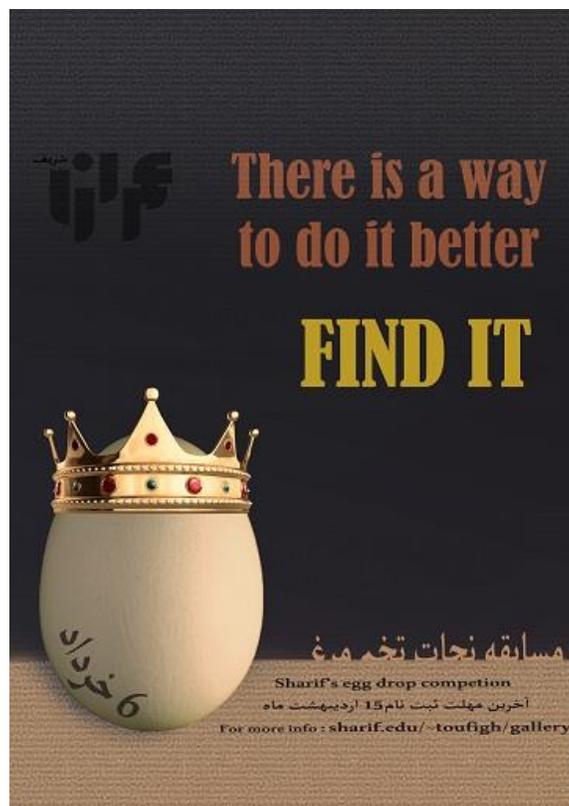


Figure 1: Poster

Students could access the news and the rules about the competition on Dr Vahab Toufigh's website (<https://www.sharif.ir/~toufigh>).

Meetings were arranged with professors in Civil Engineering Department; they were informed about the competition and invited to attend the event as a guest or as a jury member. They welcomed the idea with enthusiasm. At the end Prof. Maleki, Dr. Tabatabaee, Dr. Estekanchi, and Dr. Toufigh himself were selected as the jury members.



Figure 2: Jury Members

The rules were revised a number of times; however, summary of the rules are listed as below:

- Every student from every department is welcome to participate in the competition.
- Registration due date is 15 days before the competition
- There is no registration fee
- Devices will be drop from 20 m above the ground
- The lightest, the fastest, and the most accurate device wins the competition
- Final score will be doubled if the egg comes out of the device after landing and multiplied by 0.66 if cracked.

A self-erecting crane was brought to the drop zone to provide the 20 meter height; however, it was not stable enough when tested. Dr. Nassiri recommended that the ceiling over the strong floor building be used as the drop zone as it had the proper height and it was safe.



Figure 3: Drop Zone

The Event Day



The area was decorated; signs were hanged throughout the campus which gave direction to the competition area; seats were provided for the jury and a whiteboard to keep scores.

20 groups registered for the competition from different departments; however, 13 of them took part in the competition. Each group started by introducing themselves and their device to the jury and the audience. After weighing their device they headed to the ceiling for the drop.

Figure 4: Students introducing themselves

Cold drink was offered to the guests as it was a hot day in spring.



Eight out of 13 groups had safe landings. There were lots of brilliant new ideas such as a parachute, cone shaped and cylinder shaped devices which performed well; a C60 shaped device made with straw and cotton; a bucket of viscous liquid and a bucket of homemade mixture of honey and soil etc. and at the end there was a simple but impressive device which delivered the egg outside after landing.

Figure 5: Winner of the competition

Group number 13; consisting of Adel Ahmadi and Mehdi Hosseini, won both the final score and the creativity reward.