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## **REACHING FOR THE MOON**

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It is a harsh truth that Bangladesh is not a familiar name in the field of global technology. Our disappointment intensifies when we see the developed nations standing light years ahead in comparison to Bangladesh in the space technology scene. All that might change in near future. We have reason to dream big and reach for the stars; moon in this case.

Recently a team of Bangladeshi students created ripples at NASA's Fourth Annual Lunabotics Mining Competition. It was the first time, engineers, astronauts and the audience, present at the Kennedy Space Center in USA, saw a Bangladeshi team — "MIST LUNABOTICS EKUSH" (from the Aeronautical Engineering Department of Military Institute of Science and Technology) — bagging trophies, leaving behind many reputed institutions from around the World.



The eight-member team — formed by Bodiuzzaman Jony (team leader), Rejwanul Haque, Shamir Shakir Shishir, Syed Ehsanur Rahman, Rayhan Siddique Ontu, Shamaun Sobhan Shohan, Tasmirul Jalil Tanmoy and Suvessa Chakraborty — was selected to go USA to attend the competition (from May 20-24). However, only three members and a faculty advisor were able to make it to USA, while the rest had to stay back owing to visa complications. Those who could not be there, remained connected through Skype and shared technical knowhow about their project, thus the whole team worked together. They represented Bangladesh at the competition, along with four other teams — Bangladesh University of Engineering and Technology (BUET), Chittagong University of Engineering and Technology (CUET), Islamic University of Technology (IUT) and North South University (NSU). It wasn't the first time Bangladeshi teams participated in the competition though. Back in 2011, a team from BRAC University entered the competition for the first time but this year's participation was groundbreaking as an institution from Bangladesh bagged highest number of trophies and came 6th out of 50 teams. This was the second time MIST participated in this competition; their robot, the ROBOMIST-2, is the upgraded version of ROBOMIST-1.

According to the team, the competition was divided into a number of categories — Outreach Project, Luna Worldwide Campaign, System Engineering, Team Spirit and Mining. Of the five categories, MIST aced in both Outreach and Luna Worldwide Campaign. They secured 2nd position in System Engineering, 3rd in Team Spirit and in the Mining category, they came 11th.



## THE MIST LUNABOTICS EKUSH TEAM

The aim of Outreach was to popularise and generate interest in NASA's concept; the MIST team visited different schools outside Dhaka to let youngsters know about their project. They also attended science fairs, different Olympiads and Digital World, and presented their project before audiences. Rejwanul Haque, a team member said, Unlike USA, most children in Bangladesh are not familiar with robotics."



"Being impressed by our campaign, one of the judges said, we changed her outreach concept," team leader Jony added.

In the System Engineering paper — technical report of the robot from engineering point of view, the team secured 2nd position. According to the team members, it was a great achievement from theoretical, engineering, concept design and overall technical point of view.

In the Team Spirit category — stretching from the date of registration till the end of the competition — MIST LUNABOTICS EKUSH came 3rd. Collaboration within the team members, cooperation with other teams, positive attitude, and communication with the judges helped them to impress the jury.

As part of Luna Worldwide, they were given the task of promoting the campaign in Bangladesh and USA, and their efforts ensured the 1st position. In this category, the BUET team came 3rd.

In the Mining category, the team secured 11th position. The round is judged on the basis of strength of the robot, how much regolith it can collect and deposit in a given time. Since the robot operator of the MIST team could not go to USA, it was quite difficult for three people to manage all these and as a result they couldn't do better, said the team. However, overall performance was satisfactory and it was a huge success to be 6th in overall ranking — fetching the Joe Kosmo Award For Excellence.

## ABOUT THE COMPETITION:

According to NASA,
the university-level competition is designed to
engage and retain students in science and technology, engineering
and mathematics. The challenge for participants was to design and
build a remote controlled or autonomous excavator that can collect
and deposit a minimum of 10 kilograms of regolith simulants
(aggregate) within 10 minutes. This year 50 teams from across the
world competed for the coveted grand prize, the Joe Kosmo Award
For Excellence. The competition has a particular relevance to NASA's
recently announced plans; the technology concepts designed by the
university teams for this competition conceivably could be used to
mine resources on asteroids. Robotic miners just like this will
allow NASA to take samples at the returned asteroids
and prepare NASA for other deep space
missions.

Behind this tremendous success, there's a long story and contributions of many. The journey was not easy; the team went through many challenges, but with the dedication of team members, assistance of juniors and guidance of faculties of Aeronautical Engineering Department, they made it. Their hard work would not have seen the light of success without MIST's support. According to the team, their eyes were not on the trophies; the aim was to excel and do something to highlight Bangladesh on a global stage.

In our country, we often see 6-year-olds using sophisticated electronic devices. Unfortunately, these devices are not made locally. We simply use others' technology. The MIST team wants to change that; their goal is to see Bangladesh as a technologically developed nation.