Lunar Exploration Innovation Challenge

FAQ

General

1	What is the design theme?
	Theme: Exploring Lunar surfaces such as caves/rocks/volcanoes In light of the rise in space exploration, MAE Robotics and ASPIRE Incubation Labs have decided to launch the Lunar Exploration Innovation Challenge, where participants are suggested to come up with at least one solution to explore lunar surfaces such as rocks/caves from the following categories: Design, Natural Science, Power & Telecommunication, Software, Others. Possible problem statements are listed in the description of each category. However, participants are encouraged to raise any other related problems fallen in the category and propose corresponding solutions. Participants can choose to select the "Others" category if the participant thinks it might not fall under any of the other 4 categories. Note: You may provide a solution by making necessary assumptions based on previous space missions or any other references. However, do state your assumptions clearly.
2	What are the prizes?

Prize	Amount
1st	$1250
2nd	$1000
3rd	$750
4th	$500
5th	$250
People's Choice	$250

For People's Choice award, participants are given time from 7th March to 11th March to get votes for their idea over a google form.

Prototyping: Top 5 teams would be receiving a prototyping fund of up to $800 to build the prototype. All the top 5 teams will be given an opportunity to present their prototype to an astronaut.

3	Who can participate?
	The challenge is open to all the NTU students. You will need to be in groups of 3 to 5 students.
4	When is the submission deadline?

	The deadline for submission is on 6 March 2022.
5	Do I need to submit the idea?

	You are required to submit two things:
	1. 5 - 10 min video presentation about your challenge and solution.
	
	2. Supporting documents including adequate explanation which may include but are not limited to:
	
	    a) CAD
	    b) Code
	    c) Simulations

6	Is there any limitation on the number of submissions by the same team?
	Yes, each team is allowed to make only one submission.
7	Is team entry allowed?
	Team entries are welcome. In case of a team wins, the prize will be transferred to the team leader who is solely responsible for sharing it among team members.
8	When will the challenge result be announced?
	The winners will be notified via email by 12 March 2022.
9	Do I have to follow the problem statements mentioned in the "Information" document?
	No, you may come up with your own problem statement and solution. We would recommend you to classify your problem among the 4 given categories: Design, Natural Sciences, Power & Telecommunication, Software. If it doesn't fall under any of the categories, please consider classifying the problem under the "Others" category.
10	Can I use publicly available datasets related to Lunar exploration?
	Yes, you may use publicly available datasets. An example could be https://gitlab.com/frontierdevelopmentlab/space-resources/sr2018-localization-public for localization on the moon. You may use any publicly available datasets to aid your solution.

Submission of entry

1	Where should I submit my idea?
	You will receive instructions about submission details closer to the submission deadline. It would be via a google form where you need to fill in your video link and shared link to your CAD/codes/simulations.
2	What should be included in the submission?

	You are required to submit: 1. 5 - 10 min video presentation about your challenge and solution. 2. Supporting documents including adequate explanation which may include but are not limited to: a) CAD b) Code c) Simulations
3	Must the entry reach the organizer before the deadline?
	Yes, please make sure you have filled the submission google form which would be sent closer to the submission deadline with all the correct links before the submission deadline (6 March 2022).
4	Will you provide an acknowledgment of receipt?
	Yes, we will provide an acknowledgment upon receiving your submission.

Judging Criteria

1	Who are the judges?
	A panel of judges includes experts from the engineering and Space industry.
2	What are the judging criteria?
	Judging criteria will be shared by email soon.
3	Is there any limitation on the process?
	The top 5 winners should proceed further and build a prototype of their idea.
4	Who else can I contact if I have further questions?
	Please reach out to Grandhi Vamsi @vamsi002@e.ntu.edu.sg or Zhao Yuxuan @zhao0306@e.ntu.edu.sg