

A group of students from different departments have participated in **ISRO Robotic Challenge-2024** competition (as Team 10106) in Nationwide and qualified 1st round.

The model is based on **Design of space rover** with having stair climbing characteristics also. Image processing based automative navigation will be there. The robotic arm manipulator will be used to do some assigned job.

Involved students:

Sl. No.	Name	Department
1	SHUBHAJIT PAL	CSE-DATA SCIENCE
2	SAGNIK MANDAL	CSE-DATA SCIENCE
3	VARAD PAWAR	CSE
4	ANIK KUMAR SINHA	CSE-DATA SCIENCE
5	AVIJIT BAURI	CSE-DATA SCIENCE
6	HIMANSHU KUMAR	ME
7	SOUVIK BHATTACHARYYA	ECE
8	ANKIT SARKAR	CSD
9	SWAPNADEEP MONDAL	EE
10	DIPANJAN KUNDU	CSD

Mentor:

Dr. Dola Sinha, Department: EE

Dr. Chandan Bandyopadhyay, Department: CSE

Prof. Sovan Bhattacharya, Department: CSE

Dr. Saibal Majumder, Department: CSE (DS)

Prof. Moutusi Mondal, Department: CSE (DS)



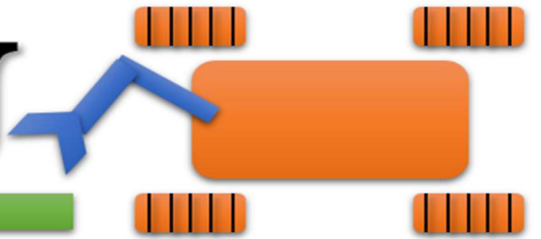
Fig. 1 Mechanical structure of the rover



Fig. 2. Stair climbing nature of the rover

Work Compliance report_ Team-10106

Compliance work	Compliance to the specifications (Y/N)	Mobility on “0” slope	Mobility on “15” slope	Climbing 150×150×150 mm ³ cube.	Traversing through 200mm diameter hemispherical crater	Detection and avoidance of the Obstacles and craters	Manipulator sample tube taking and placing demonstration	Live telemetry feed demonstration	Kill switch demonstration	Total Compliance
Status	Y	Y	Y	Y	Y	Y	Y	Y	N	Out of 9
Video Timing	Upto 12 sec	Almost all through the video.	1m 24 sec – 1m 52 sec And 2m 6sec - 2m 8sec (Non smooth road)	45 sec- 1m 10 sec. (Due to light weight of the cube it is tested in 150mm height staircase.)	1m 58 sec- 2m 5 sec	17sec -43sec (Obstacle avoidance) and 3m 28sec -3 m 37sec (big crater avoidance. Big Crater has been made and defined as Red coloured circular area.	3m 38sec- 3m 56 sec	2m 13sec - 3m 26sec		8



IRoC-U 2024: Prelims Round Results

Date: 30th January 2024

We congratulate the following teams for their selection to the next round based on evaluation of their proposals. We are pleased to enhance the number of teams for the next round due to overwhelming response.

We appreciate the best efforts of the teams who couldn't qualify for the next round.

Table: List of Teams qualifying for the next round

Sl. No.	Team ID
1	10024
2	10036
3	10048
4	10097
5	10104
6	10106
7	10124
8	10132
9	10136
10	10138
11	10151
12	10172
13	10192
14	10216
15	10263
16	10268
17	10273
18	10288
19	10317
20	10320
21	10326
22	10327
23	10331
24	10341
25	10344

Sl. No.	Team ID
26	10345
27	10346
28	10356
29	10357
30	10360
31	10383
32	10393
33	10408
34	10416
35	10421
36	10451
37	10487
38	10500
39	10508
40	10521
41	10524
42	10538
43	10548
44	10556
45	10557
46	10558
47	10562
48	10567
49	10581
50	10589

Sl. No.	Team ID
51	10624
52	10634
53	10641
54	10646
55	10649
56	10651
57	10666
58	10668
59	10671
60	10673
61	10675
62	10678
63	10679
64	10700
65	10708
66	10742
67	10750
68	10752
69	10770
70	10780
71	10788
72	10798
73	10805
74	10807
75	10812

Table: List of Teams qualifying for the next round

Sl. No.	Team ID
76	10818
77	10828
78	10855
79	10860
80	10863
81	10871
82	10874
83	10898
84	10943
85	10949
86	10963
87	10985
88	10990
89	11015
90	11020
91	11023
92	11043
93	11053
94	11067
95	11068
96	11072
97	11075
98	11092
99	11094
100	11099

Sl. No.	Team ID
101	11109
102	11113
103	11116
104	11117
105	11127
106	11135
107	11163
108	11165
109	11170
110	11174
111	11178
112	11182
113	11184
114	11189
115	11191
116	11193
117	11194
118	11198
119	11202
120	11207
121	11208
122	11209
123	11215
124	11218
125	11220

Sl. No.	Team ID
126	11229
127	11236
128	11237
129	11247
130	11251
131	11254
132	11259
133	11268
134	11271
135	11272
136	11280
137	11286
138	11289
139	11293
140	11296
141	11299
142	11303
143	11309
144	11324
145	11330
146	11338
147	11339
148	11342

CHAIRMAN – ORGANISING COMMITTEE

IRoC-U 2024