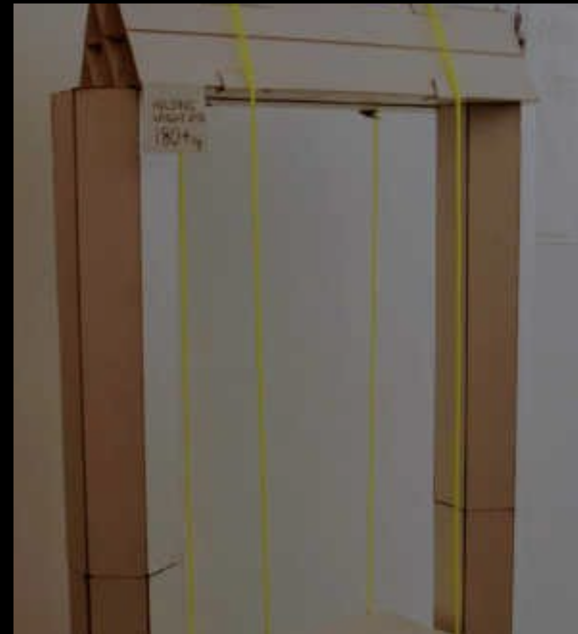


DESIGN II

THE S.W.I.N.G. PROJECT

ARCHITECTURE

SEMESTER II
DSATM - SOA
2017

WITH THE SUPPORT OF OUR PRINCIPAL DR. B R LAKSHMIKANTHA, AND THE DIRECTIONS OF DIRECTOR, PROF. GADDAM RAMESH, THE STUDENTS OF SOA-DSATM UNDERTOOK THIS PROJECT.

Ar. Arun Swaminathan, Ar. Govind Rao, Ar. Rhythema Rawat and Mr. Arun Desai (paper engineer) along with core faculty Ar. Praseetha G, Ar. Mamtha N, Ar. Anusha, Ar. Rashmika Singh and Ar. Pooja B guided the students and lead the project.

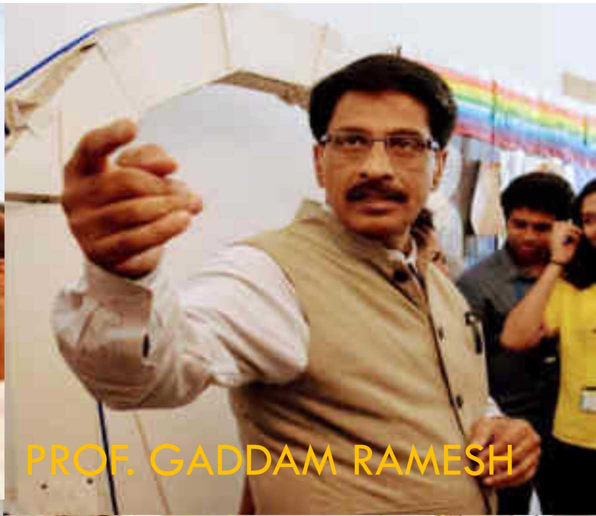
On the 26th of April, 2017 **THE SWING PROJECT** was presented by the students of sem II as a part of their design curriculum. They displayed a total of 13 swings.

The task was to design and build a swing to the scale 1:1 purely out of mount board. The project covered the following features:

- **It has to take the minimum weight of a 35kg person**
- **Light weight structure made of mount board**
- **Catering to a specific height and width dimensions**
- **Use of innovative members**
- **Design the swing seat**
- **Joinery details between different components**

The work was done in teams of four and the whole project was made over a single weekend.

DR. B R LAKSHMIKANTHA



PROF. GADDAM RAMESH

AR. ARUN SWAMINATHAN

AR. RYTHEMA RAWAT

SWING 1

The swing that took the most weight –

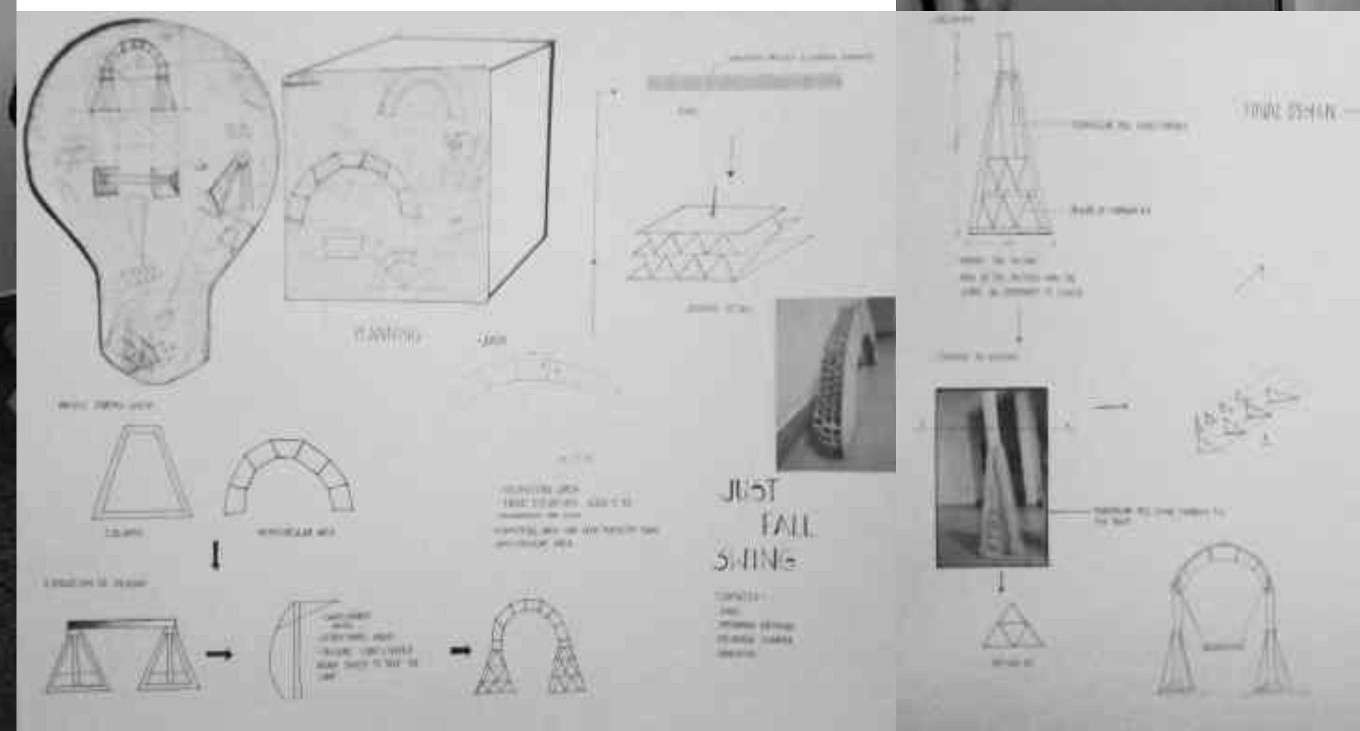
A construction of triangular prisms in a hexagonal form which was light in weight yet carried more 180kg of weight easily.

It was a great achievement for the students who put in a lot of hard work to make this project successful.

SWING 2

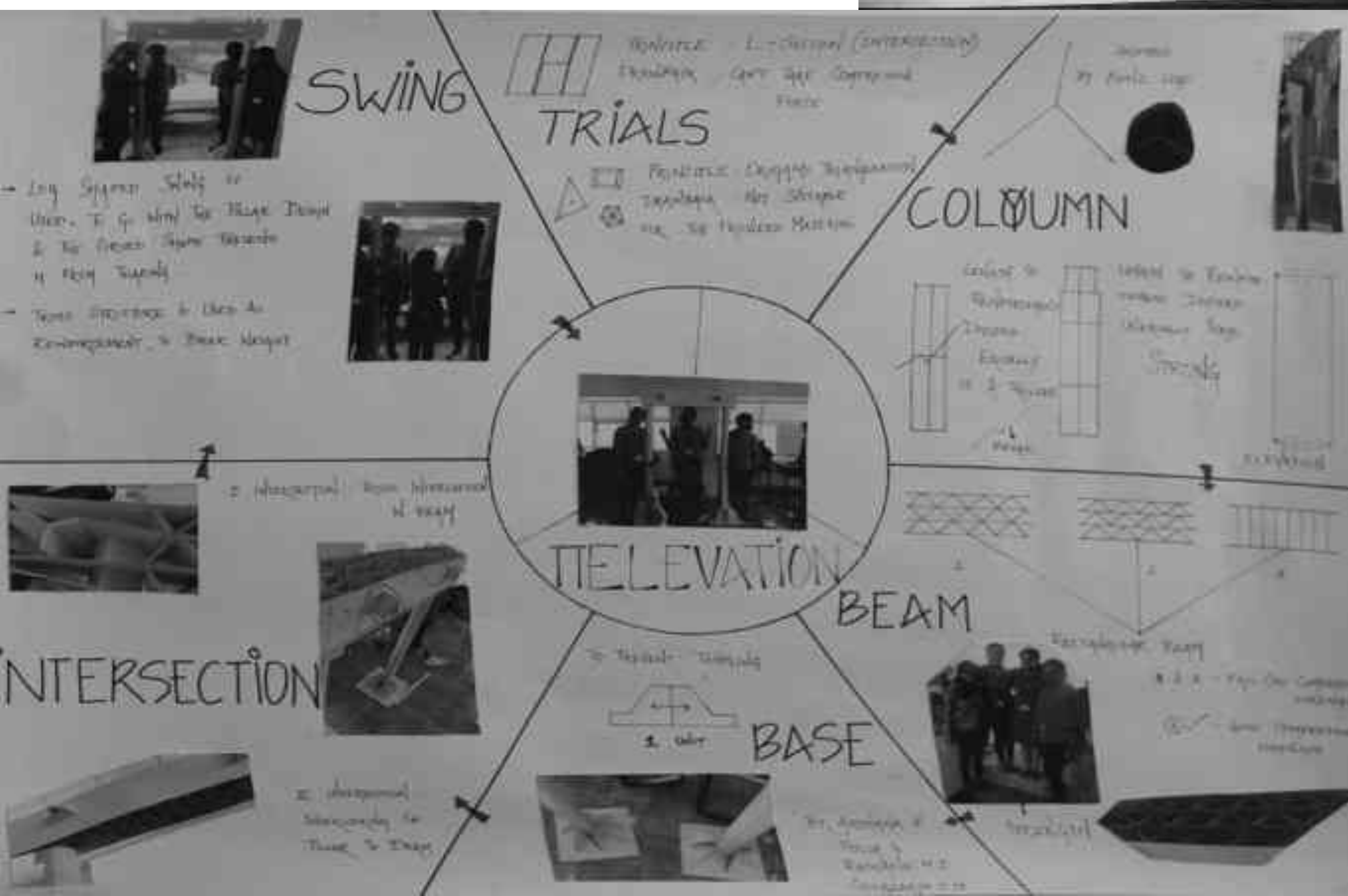
Arched swing –

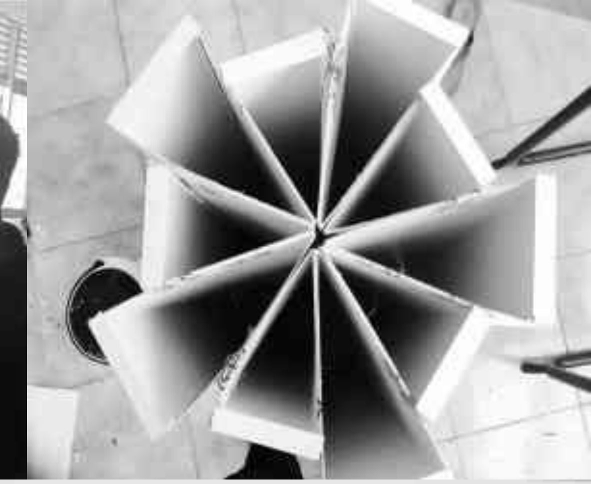
Experimentation at its peak with truss elements and curved structures.
Out of the box design which proves arches are no less.

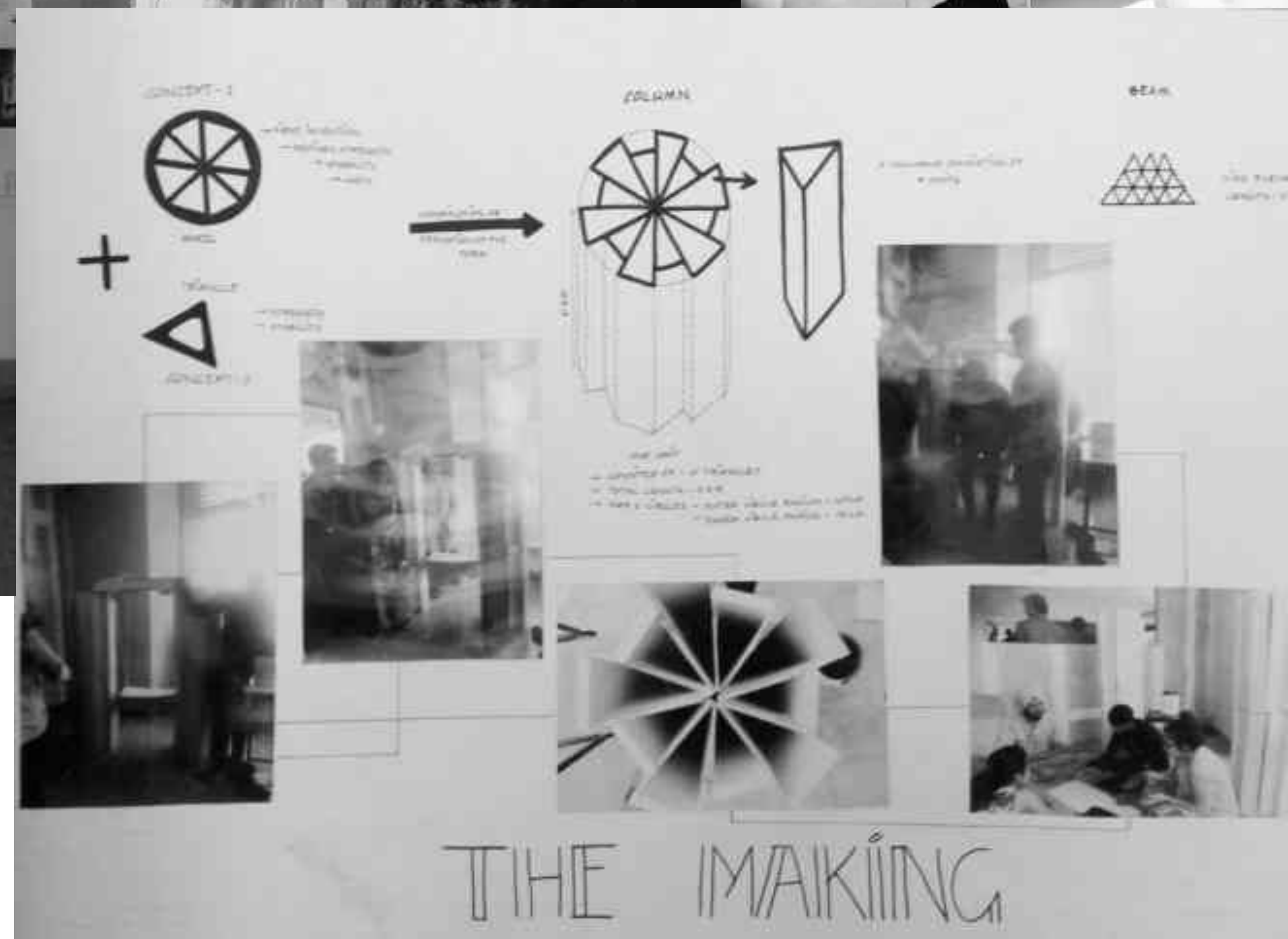


SWING 3

Different base support and use of curved pillars instead of rectangular or triangular made it one of a kind.







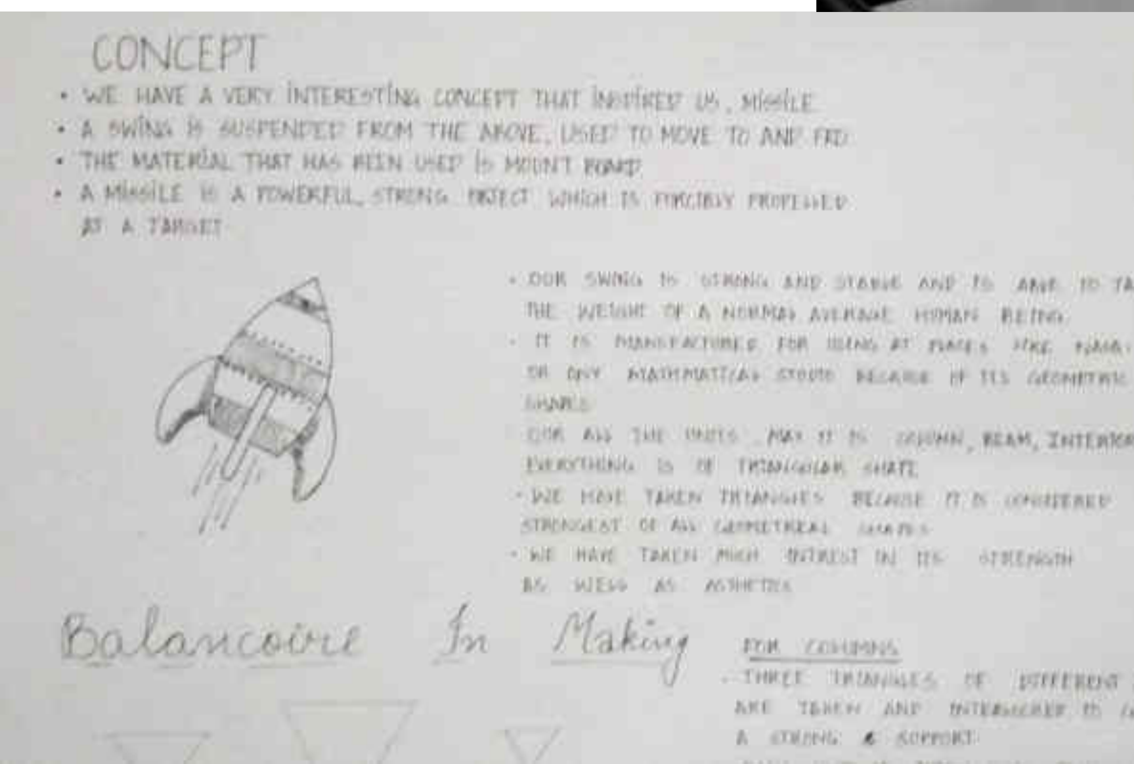
SWING 4

Students out did themselves with different designs and came up with unique structures.

SWING 5

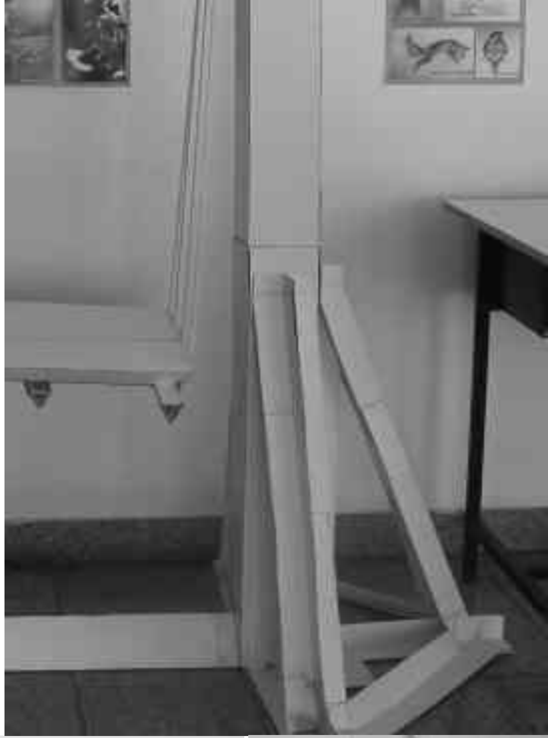
Smart thinking –

The students went another step further and re-enforced their structure with double columns and used cantilever beams.



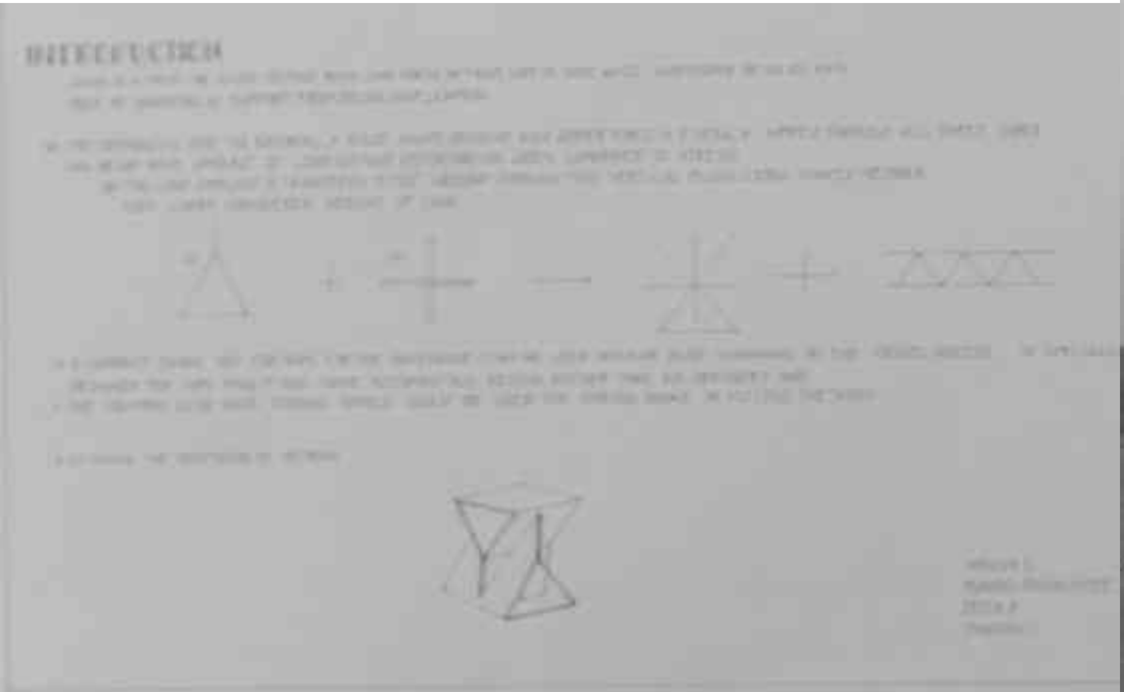
SWING 6

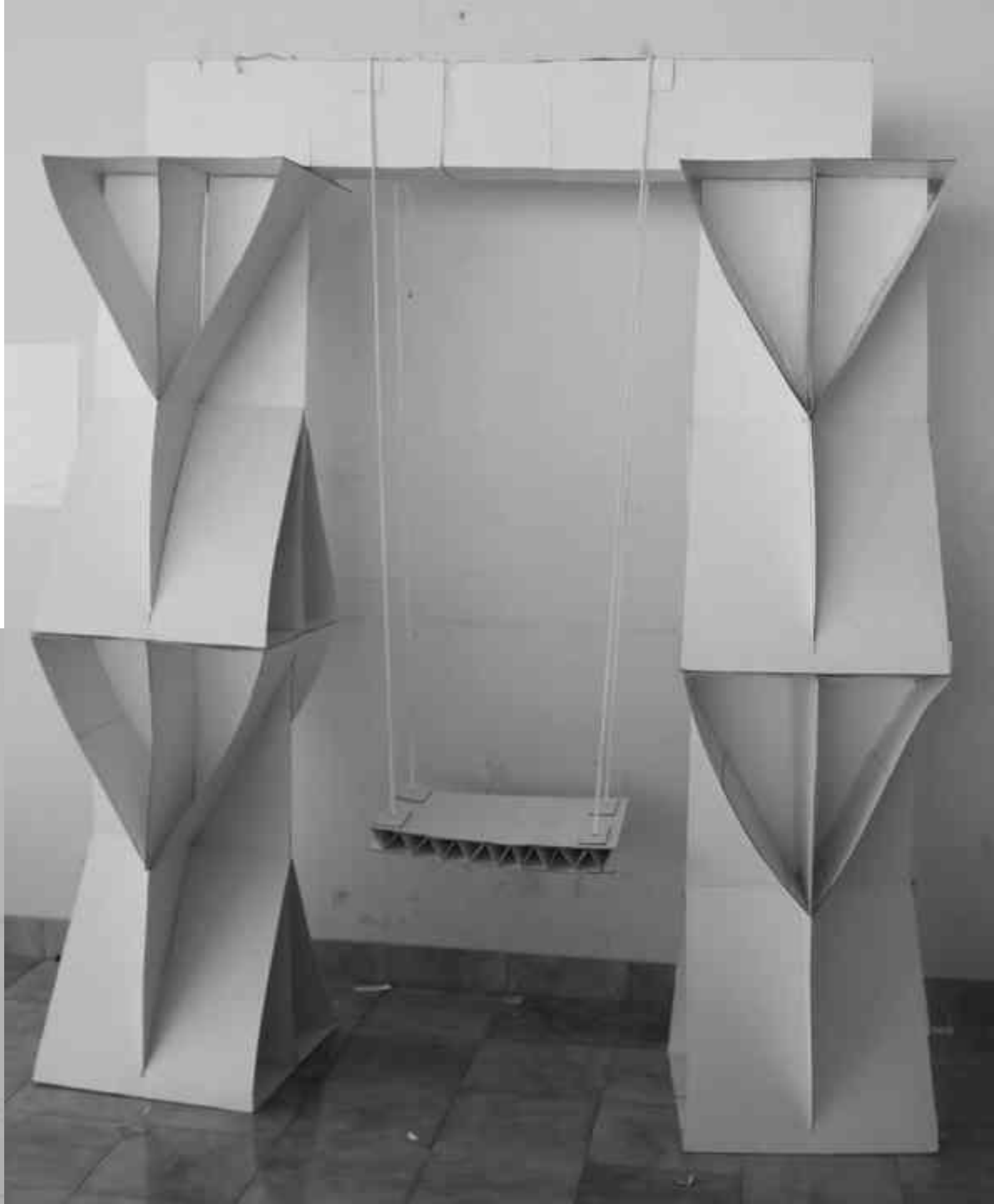
Strong beams which were heavy at the base and usage of a contrasting thin beam which seemed weak but carrying more than expected.



SWING 7

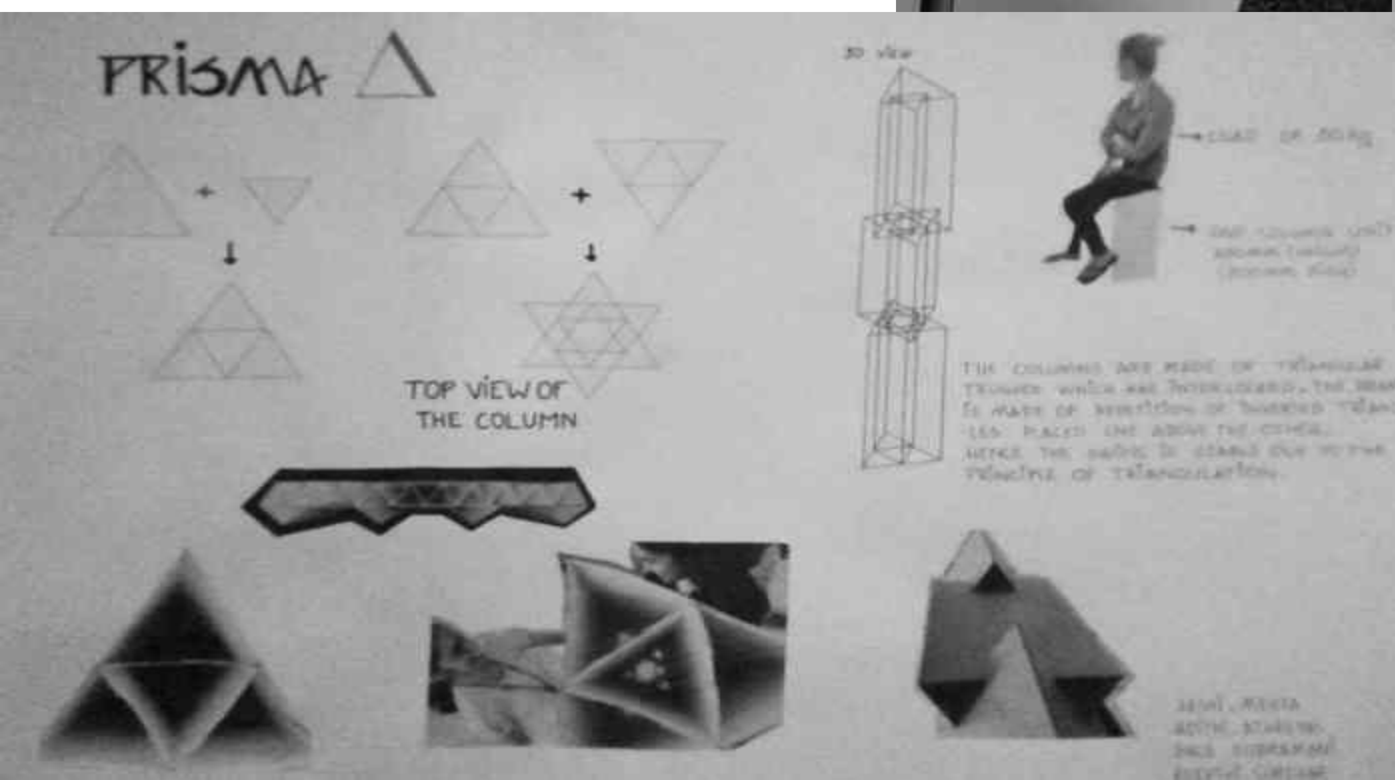
Unique member designs exhibited – The triangular forms intersecting each other at the centre in different sides presents a beautiful design and innovative method of thinking. This truly depicts that art can be found in simple structures.





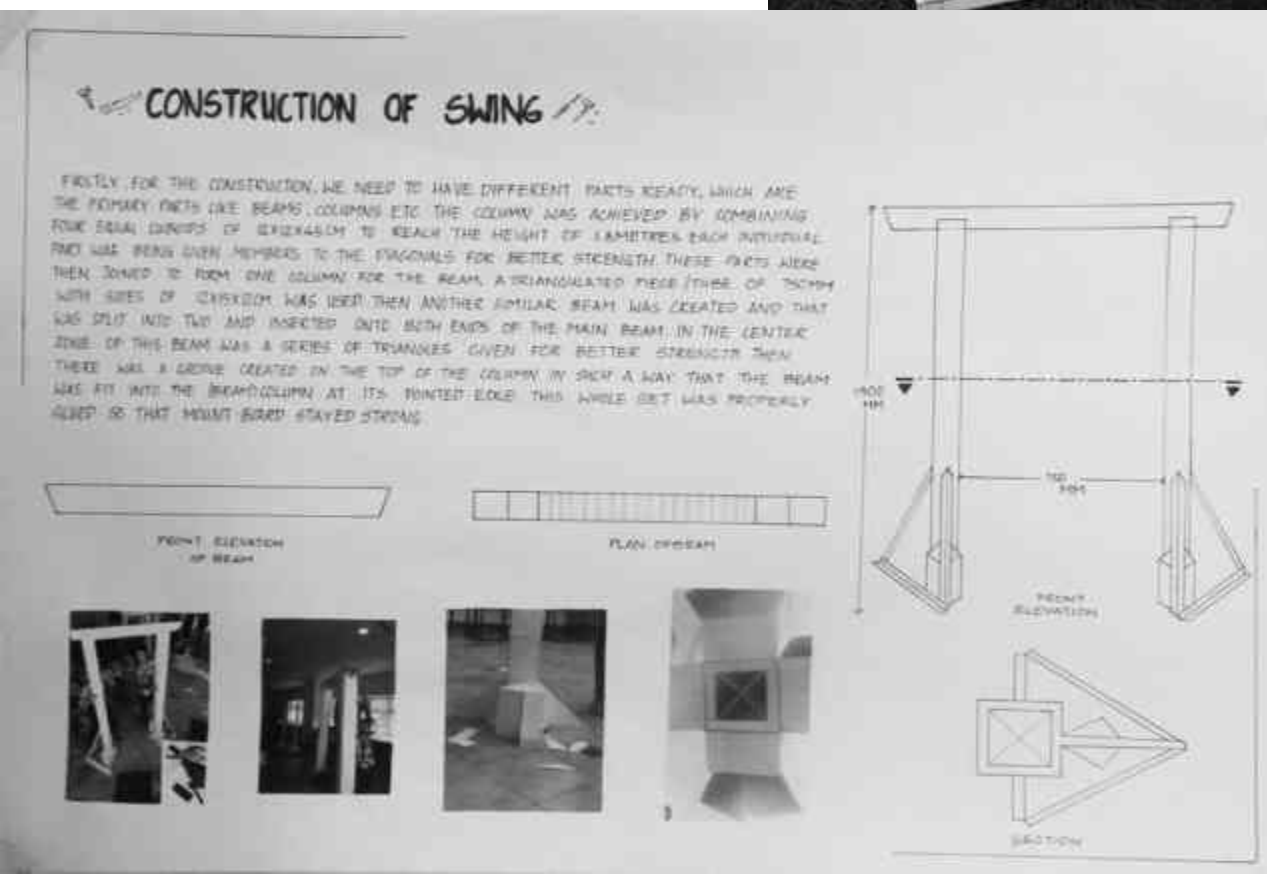
SWING 8

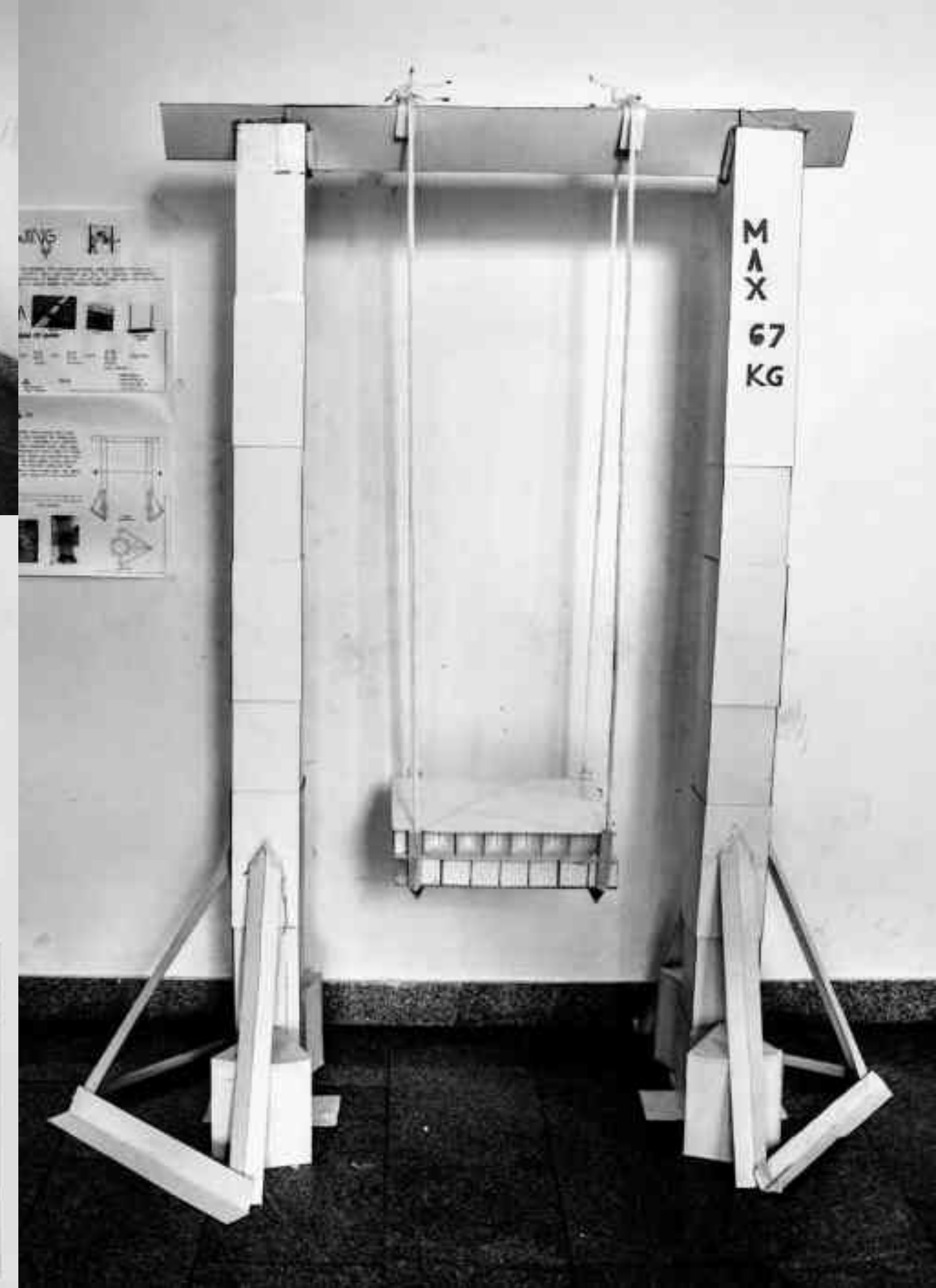
Another display of truss usage where triangular elements were used innovatively. The whole structure from beam to base was made out of triangular prisms, hence named – PRISMA!



SWING 9

Strong composition and clean presentation which was a proud representation of their makers.



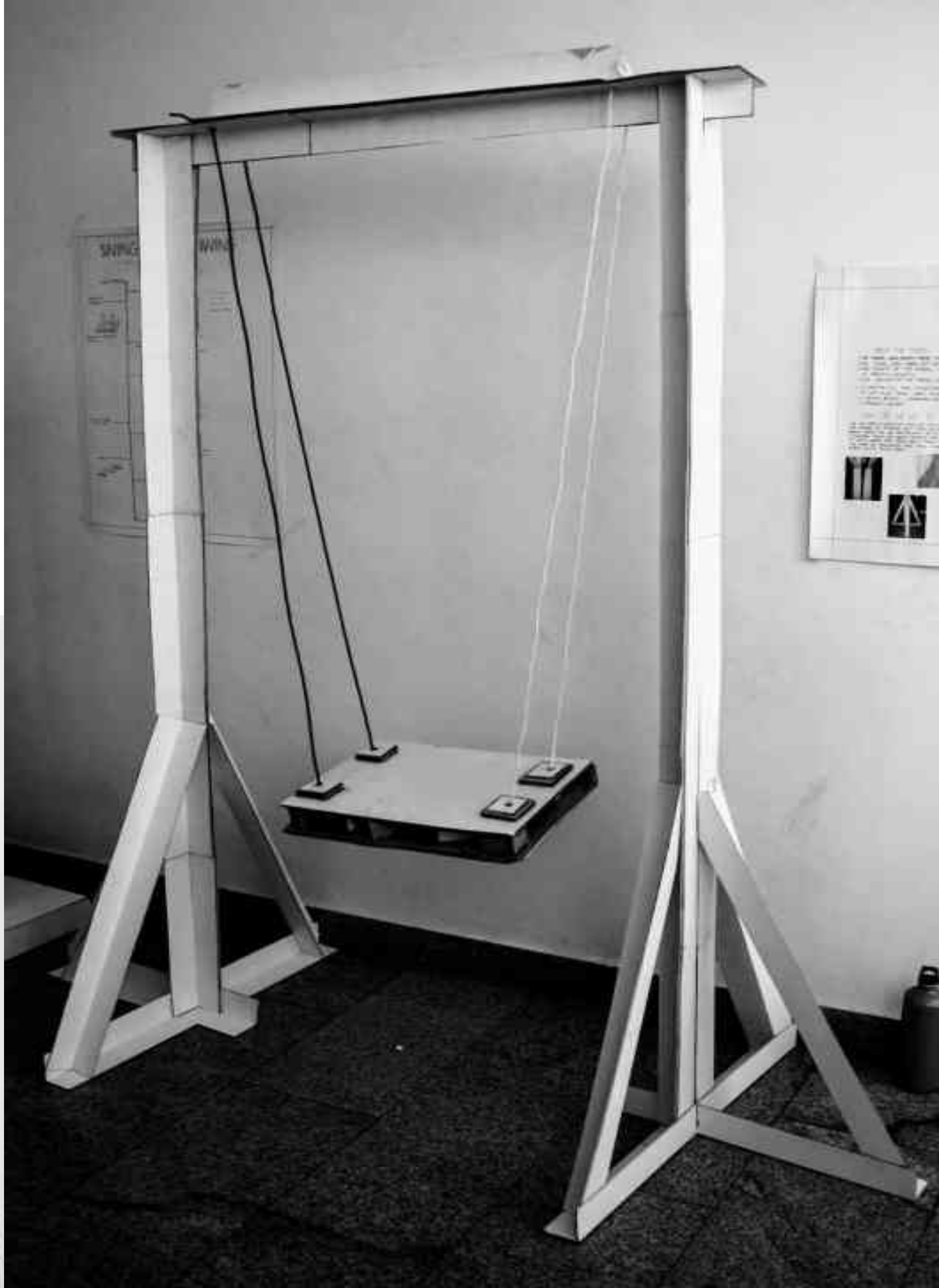


SWING 10

The most efficient and light weight design -

Weight carrying capacity up to 98kg.

The complete structure was made using T-sections, from the beam to the base the thin T-sections stood against everyone's expectation and bore through.



The students worked day and night through the weekend.

They enjoyed throughout the project and conquered all the barriers that came in their way. When their models failed they didn't loose hope but started again. No matter how many injuries or obstacles they persevered and at the end presented brilliant works for all to see.

During this, the students learnt about the basics of bending moment, slenderness ratio and dynamic load. They got a hands on feel of the structural limitations of a design and while over coming these limitations, they came up with models that took double the prescribed weight and got an intuitive sense of structures.

LATER ON,

Great architect Shahrukh Mistry visited our college for a talk show – LET'S TALK MISTRY. He saw each and every swing and appreciated the hard work of all the teachers and the students.

THANK YOU