



StrongTruss2023

StrongTruss2023 contest is organised at the Faculty of Mechanical Engineering and Ship Technology of Gdańsk University of Technology intended for students.

Registration deadline:	13.12.2023
Date of the contest:	15.12.2023
Start of the qualification (weighing/measuring):	15:00
Start of the contest:	16:00

Place of the contest:

Gdańsk University of Technology,
Narutowicza 11/12, Gdańsk 80-233, Poland
WIMiO, building 40, room 211
(assembly hall)

Registration email:

wiktor.sieklicki@pg.edu.pl

(Wiktor Sieklicki, tower category)

oleksii.nosko@pg.edu.pl

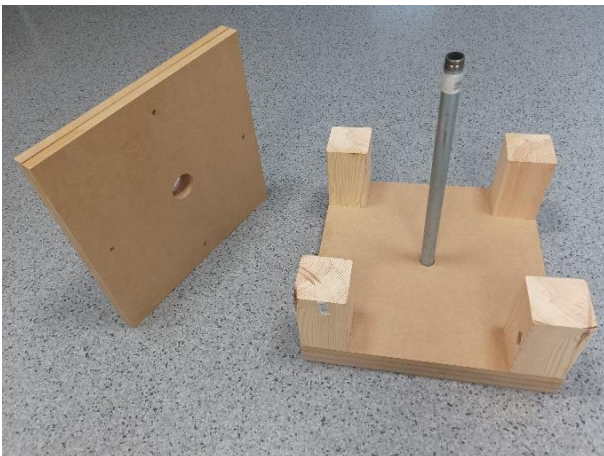
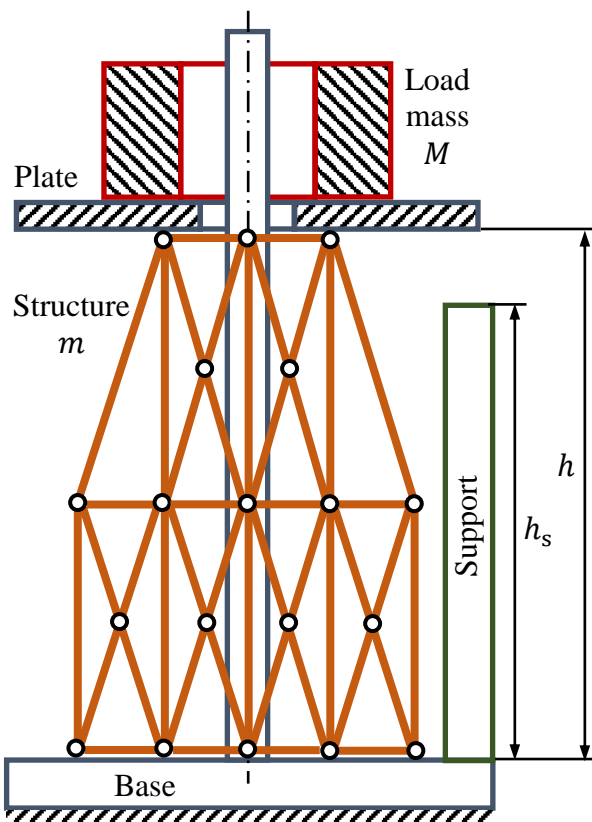
(Oleksii Nosko, bridge category)

General rules of the contest:

1. The contest participant is a team of 1 to 3 people.
2. Each team presents one structure.
3. The structure must be a truss comprising at least 6 bar elements.
4. The structure must be made of wood, paper and glue exclusively.
5. The structure must have mass m not exceeding 20 g.
6. The winning place in each category is awarded to the team that presented the structure with the highest specific load-carrying capacity M/m , where M is the load mass.
7. The organisation committee has the right to disqualify/penalise a team for violation of the contest rules or unsporting behaviour.

Tower category

1. The structure must have height h from 20 to 22 cm and axial hole of diameter larger than 6 cm.
2. The structure is tested by placing it on a plane horizontal base and loading axially from the top with a plane horizontal plate.
3. The total load mass M is increased by adding weights on the plate until the structure collapses, i.e. the plate touches a support of height $h_s=16$ cm.



Bridge category

1. The structure must have length l from 32 to 36 cm and vertical hole in its exact horizontal middle of diameter from 3 to 4 cm.
2. The structure is tested by placing it on two aluminium supports of width $t=2$ cm located at distance $b=30$ cm from each other and loading from the top with a cylindrical plate of diameter $d=5$ cm connected to a vertical rod.
3. The total load mass M is increased by adding weights to the rod until the structure collapses, i.e. the rod touches the base.

