

# IEEE r8 Robot Championship Malta 2022

*Conrad Attard*

*R8 meeting, April 2 2022*



## Design Build Compete

### WHAT ARE WE AIMING FOR?

1. Teamwork
2. STEM Communication
3. Problem Solving
4. Entrepreneurship
5. Creativity
6. To strive to achieve



# Malta AUTUMN 2022

TIME TO FALL | WEIGHT GAME  
DEATH CLOCK | HANGING HAZARD

STEM COMMUNICATION | TEAMWORK | PROBLEM SOLVING | CREATIVITY

APPLICATIONS OPEN FROM 1ST APRIL TILL 1ST JUNE

DESIGN, BUILD & COMPETE



inviting all  
IEEE  
STUDENT  
BRANCHES



Website: [www.ieeemalta.org/robotchampionship](http://www.ieeemalta.org/robotchampionship).  
Email: [robotchampionship@ieeemalta.org](mailto:robotchampionship@ieeemalta.org)  
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## IEEE R8 Robot Championship – Committees



### Technical Consultative Committee and Regulations

Coordinator Conrad Attard  
Gloriaanne Ellul  
Alison Baldaccino  
Andrea Mifsud  
Lawrence Chetcuti  
Nick Attard  
Daniel Camilleri  
Tracey Camilleri  
Clifford De Raffaele  
Edward Gatt  
Paul Zammit

### Organising Committee

Chair Conrad Attard  
Lawrence Chetcuti  
Daniel Camilleri  
Tracey Camilleri  
Clifford De Raffaele  
Edward Gatt  
Paul Zammit

### PEA STEM ROBOT Program Student Outreach Committee

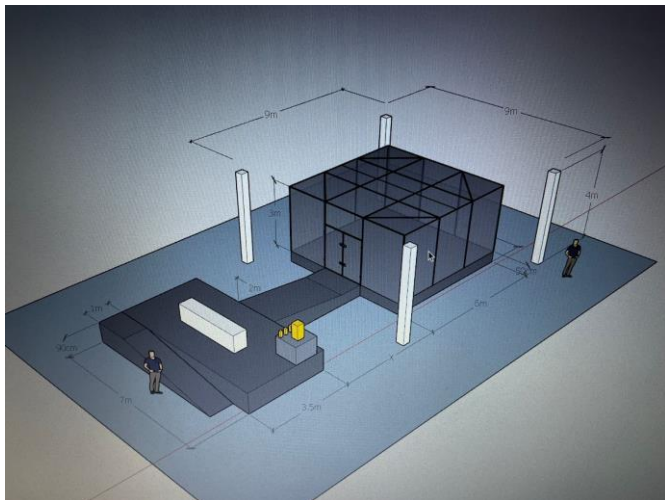
Chair Conrad Attard  
Igor Matias  
Tracey Camilleri  
Edward Gatt  
Davide Morgado  
Vildana Hrnjic  
Daniel Camilleri

### Arena Design and Build Committee

Coordinator Conrad Attard  
Andrea Mifsud  
Lawrence Chetcuti  
Nick Attard  
Paul Zammit  
Vincent Camilleri  
Andrea Cassar



# IEEE R8 Robot Championship Specs



Sketchup Design of proposed arena

- 6m by 6m arena
- 20kg max weight of robot at anytime
  - 80cm by 80cm max size
- Three (3) members (plus one mentor)
  - Member of Student branch
- Or Past students having finished their studies in the previous scholastic year
- 1 and a half day of competitions





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# THE GAMES

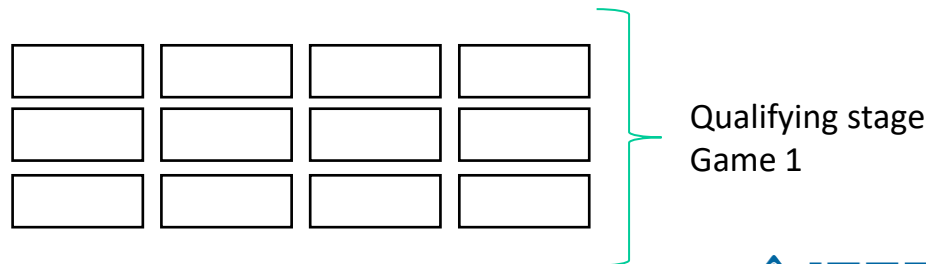
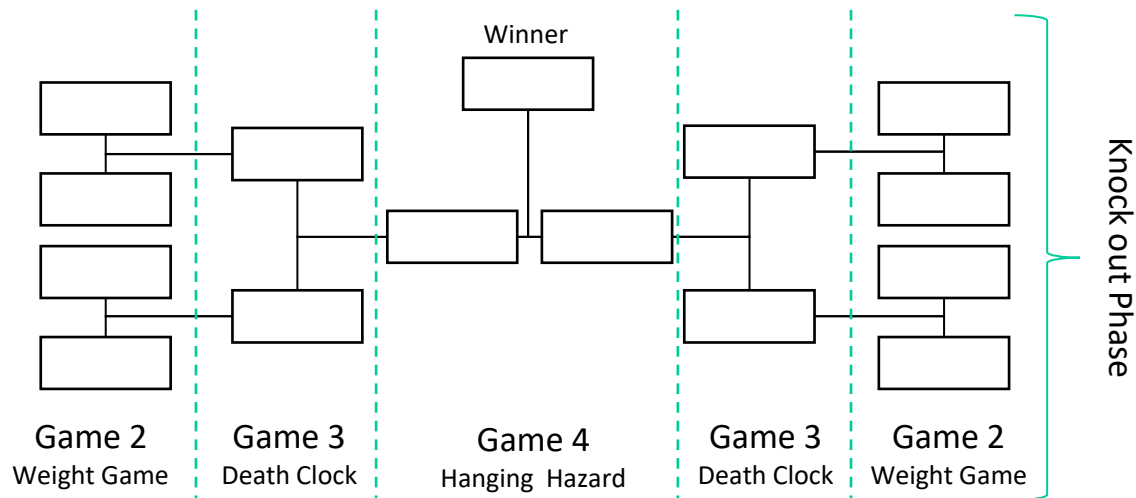
The final official rules and games will be published once the organising committee will know the type of robots and amount competing.

Only for reference

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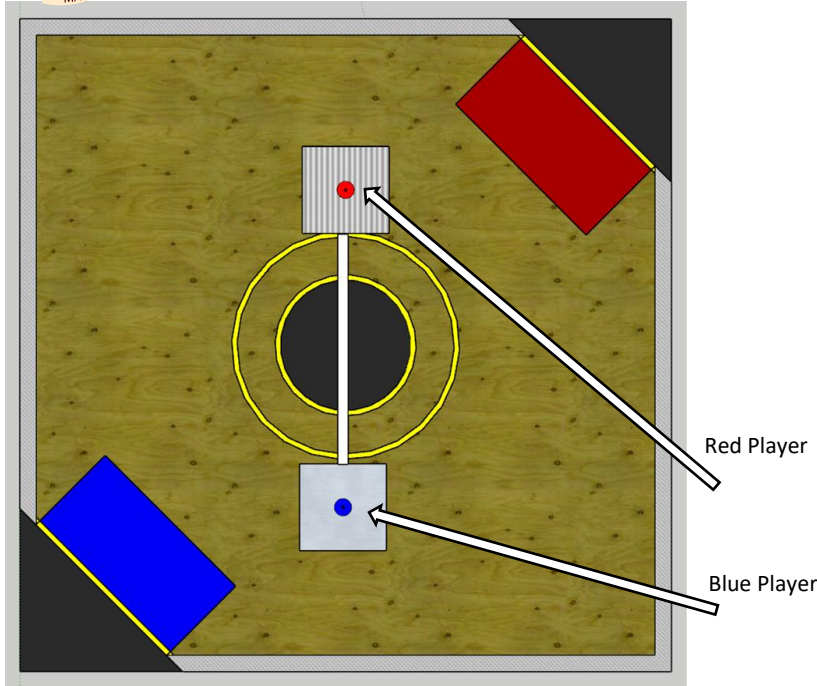


Game1 : Time to Fall  
This game can be used to qualify robots for the Knockout phase of the championship.





# Game 1: Time to Fall



**OBJECTIVE:** To pull the opponent off the edge as soon as possible.

**RULES:**

Players start the game tied to each other and equidistant from a pit/fall.

When the game starts, a timer begins. Both players need to try to pull their opponents off over the edge. The player that succeeds wins the match.

As soon as a player falls, the timer stops.

No add-ons (cf. Section 3.1) are allowed to be used in this game.

The game ends whenever one of these criteria is met:

X minutes since the start (to be defined after the full championship is drawn — this will be informed prior to the event), or

Whenever a player manages to pull the opponent off the edge.



## Game 2: Weight Game

**OBJECTIVE:** A red/blue player scores red/blue weights, respectively, by dragging and dropping them in their respective corner pits.

**POINTS:** Each weight corresponds to its respective point value.  
*E.g., 20 Kg is 20 points, and 1.25 Kg is 1.25 points.* (The exact weight sets for the game will be defined closer to the event).

### RULES:

Pushing/minor physical contact with the opponent is allowed.

The usage of active add-ons are **ONLY** allowed to be used on the weights.

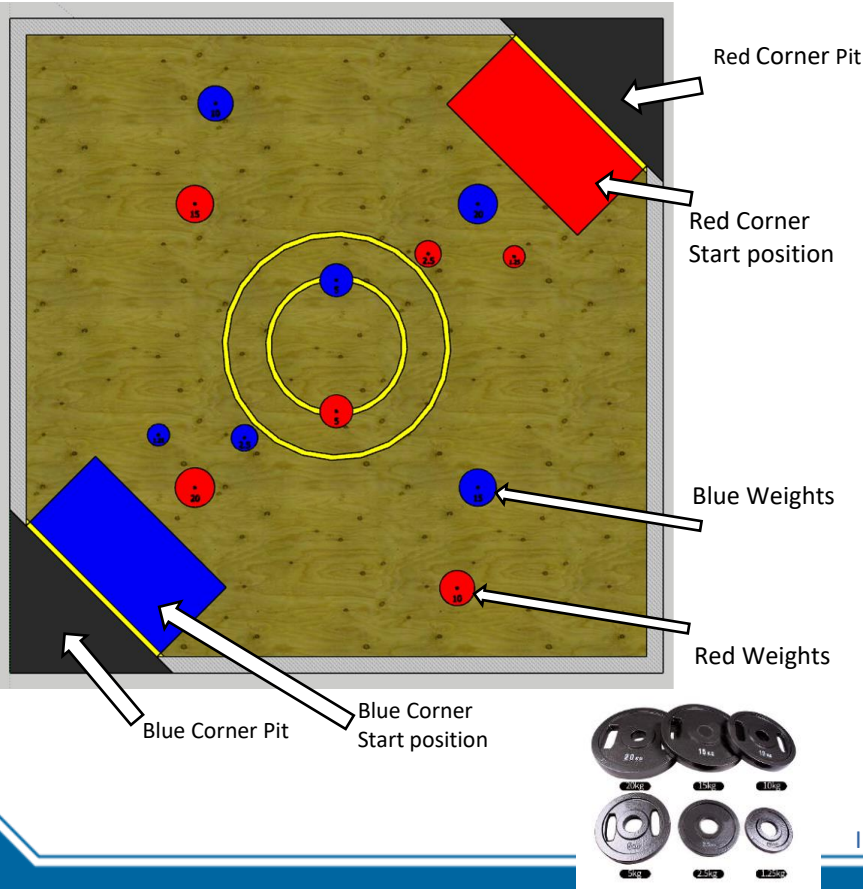
The game ends either after one of the players falls into the pit, or after X minutes since the start (to be defined after the full championship is drawn — this will be informed prior to the event). The player with the most points scored wins the match.

If a player manages to score ALL the available weights in time (refer to point 14.2.3.8 below), they can move on to attempt to drop their opponent in their pit for 100 points or in the opposing pit for 0 points, and the game ends. At this stage, the use of active add-ons on the opponent is now allowed.

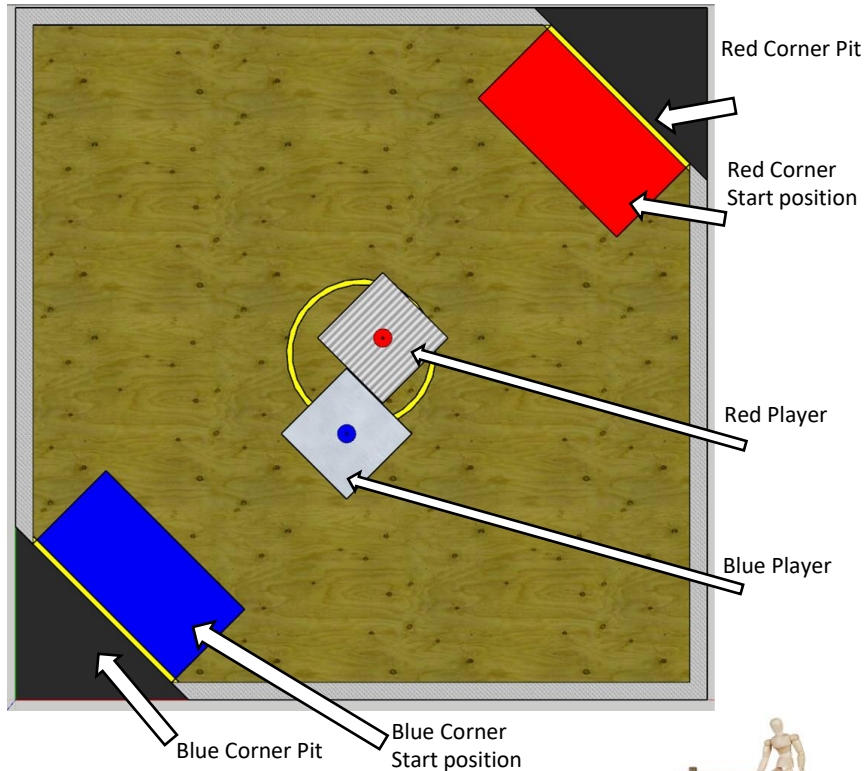


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## Game 3: Death Clock



**OBJECTIVE:** to control random areas until the opponent's Death Clock runs out of time.

### RULES:

Both players need to compete to control the active area at the time. A player controls the area while having most of their robot inside the circle. This state (most of the robot inside, or not) will be defined by a referee assigned to that task.

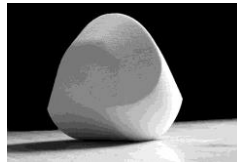
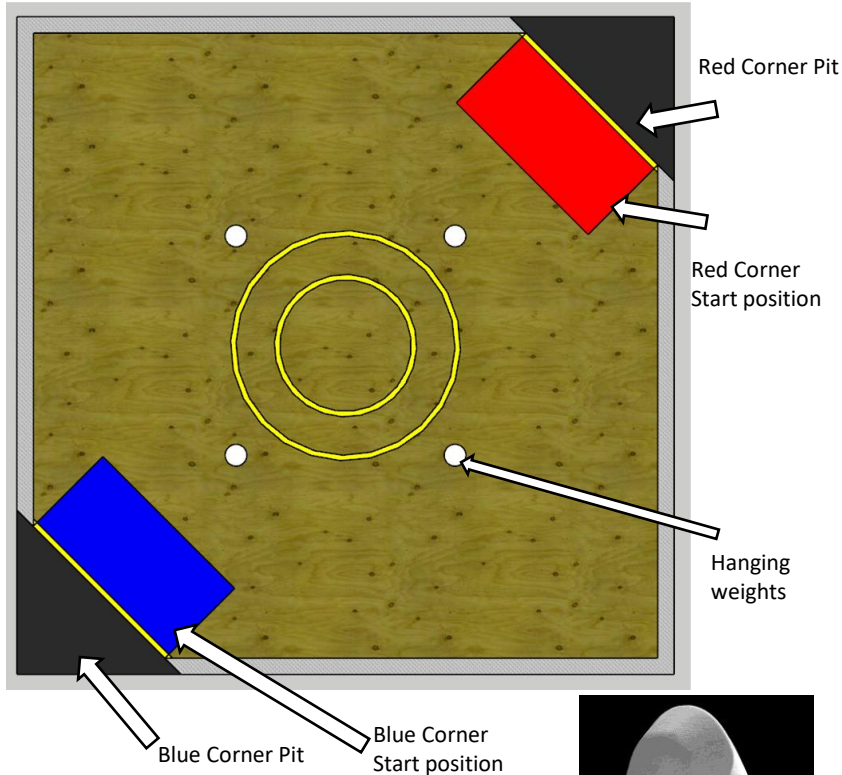
*E.g., the red player is currently controlling the area as most of the robot is within the yellow circle. The blue player does not control the area even though some of the robot is in the area and the majority is out.*

As soon as a player controls the area, a referee triggers the timer on the opponent's Death Clock, counting downward. When neither opponent controls the area, both players' clocks freeze. The referee triggers the respective Death Clock once a player controls the area again.





## Game 4: Hanging Hazard



OBJECTIVE: to move the *Gömböks* to a defined pit.

### RULES:

When the game starts, several *Gömböks* are dropped in the arena, one at a time.

There will be hanging weights above the arena. These act as an arena hazard for both robots.

All effective and active add-ons (cf. Section 3.5) are allowed in this game.

The pits are both replaced with goals/pockets for this game.

The game ends whenever one of these criterion is met:

X minutes since the start (to be defined after the full championship is drawn — this will be informed prior to the event), or

If a player manages to score a predefined number of *Gömböks* to the opposing area.



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THANKYOU!

All sections. We need your support

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