Robocup Junior Humanoid Soccer Challenge

Introduced by Russian National Robocup Committee
(based on the 2007 version of the rules Humanoid Soccer)
Admissible robot types

Kondo robot upgraded with smart camera

Bioloid robot upgraded with smart camera

Any other type robot meeting size and weight requirements
Admissible robots data

- Weight - below 2 kg
- Maximum Height 50cm
- Proportions of Arms span, center of mass, foot size - according to RC HL kid size rules.
Ball

SIZE – diameter 80mm

Weight – 28 g

Color - orange
The Field of Play

Floor: Green carpet with 3 mm pile height.
Goals: White color sanitary 50 mm pipe with yellow and blue masking
Field marking: 50mm white color adhesive tape
The Field of Play
History of tournaments

• Robofinist St.Petersbourg 2018. Demo game.( 2 teams)
• Robocup Moscow regional competition. 2019. Demo game.( 2 teams)
• Robocup Russia Open April 2019 . Tomsk. (3 teams)
• Robocup Asia Pacific November 2019. Moscow. (5 teams)
• Robocup Robofest Challenge. March 2020 (postponed to September 2020). 6 teams were registered for participation.
History of tournaments

• Robofinist St.Petersbourg 2018. Demo game.
History of tournaments

• Robocup Moscow regional competition. 2019. Demo game. (2 teams)
History of tournaments

• Robocup Russia Open April 2019. Tomsk. (3 teams)

Video: [https://youtu.be/OkY0hhDKXvk](https://youtu.be/OkY0hhDKXvk)
History of tournaments

- Robocup Asia Pacific November 2019. Moscow. (5 teams)

Video: https://youtu.be/ARHARfGjdKo
Contactless competition

Video: https://youtu.be/pu6SD5pA9P4
## Robot size comparison

The maximum size of the robots is 1 meter, the maximum weight is 10 kg

<table>
<thead>
<tr>
<th>ROBOT</th>
<th>Weight</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioloid</td>
<td>1.5 kg</td>
<td>40 cm</td>
</tr>
<tr>
<td>Kondo</td>
<td>1.7 kg</td>
<td>45 cm</td>
</tr>
<tr>
<td>Bioloid GP</td>
<td>1.6 kg</td>
<td>35 cm</td>
</tr>
<tr>
<td>Darwin</td>
<td>3 kg</td>
<td>46 cm</td>
</tr>
<tr>
<td>NAO</td>
<td>5.5 kg</td>
<td>57 cm</td>
</tr>
</tbody>
</table>

The maximum size of the robots is 0.5 meter, the maximum weight is 2 kg
## Ball comparison

<table>
<thead>
<tr>
<th></th>
<th>FIFA size 1</th>
<th>Sponge ball</th>
<th>Plastic ball</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>150 mm</td>
<td>80 mm</td>
<td>70 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>205 g</td>
<td>28 g</td>
<td>60 g</td>
</tr>
<tr>
<td>Rolling distance after kick by Bioloid</td>
<td>0.10 m (estimation)</td>
<td>0.8 m</td>
<td>0.4 m</td>
</tr>
<tr>
<td>Rolling distance after kick by Kondo</td>
<td>0.24 m (estimation)</td>
<td>1.6 m</td>
<td>0.8 m</td>
</tr>
</tbody>
</table>
## Turf pile height

<table>
<thead>
<tr>
<th></th>
<th>Maximum foot elevation in customized gait</th>
<th>Maximum adaptable pile height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioloid</td>
<td>15</td>
<td>8 (evaluation)</td>
</tr>
<tr>
<td>Kondo</td>
<td>30 mm</td>
<td>15 (evaluation)</td>
</tr>
</tbody>
</table>

maximum leaf length of 30 mm | Maximum pile height 3 – 8 mm
<table>
<thead>
<tr>
<th>Drop-in games</th>
<th>Solid team games</th>
</tr>
</thead>
</table>

Drop-in teams vs solid teams?
Related material location

www.robocup.ru