RoboCupJunior Soccer 2023 - Bordeaux - Awards (draft)

General Overview

Number of Awards

No more than 40% of teams may be awarded each season.

Types of Awards

Trophies
Top rankings

Certificates
Judged Performances

Ranked Awards

Decided by scores for:

- Top competitor(s)
- Top Super-Team(s)
- Best Poster(s)*

Available trophies depends on number of teams
*posters are scored by judge's rubrics

Judged Awards

Decided by algorithm for:

- Exemplary Team
- Outstanding Design
- Outstanding Innovation
- Outstanding Achievement

Available certificates depends on how many qualify and how many teams may be awarded

Multiple Awards

Teams may earn both a trophy and a certificate which count as one award for the 40% rule.

Qualification Criteria

Based on:

- Rankings
- Judging rubrics
- Poster & Presentation

See the full awards document for details!

General Award Guidelines

These are the (draft of the) official Soccer League award guidelines for RoboCupJunior 2023. They are released by the RoboCupJunior Soccer Technical Committee. This English version has priority over any translations. Use the forum (https://junior.forum.robocup.org/c/robocupjunior-soccer) to ask questions or help us to improve these guidelines!

Qualifying for the international event is an achievement in itself; the committee would like to congratulate all the effort you put in to attend! We'd also like to recognize all the teams that put robots on the field this season anywhere in the world - your efforts are what keep RCJ going! Starting this season, we'd like to begin recognizing the outstanding achievement of teams through a digital hall of fame. To maintain a standard set of expectations across seasons, the judged awards will only be given if a team has met the qualifications detailed below; there is no guarantee that teams will qualify for every judged award each season.

The maximum amount of awards offered and teams inducted into the hall of fame each season will depend on the amount of teams attending the international event. In general, no more than 40% of the teams attending the international event should be recognized. The reasoning for this limit is that by definition not every team can be considered outstanding and allowing more award spots dilutes the value of every award. A team may be recognized for several achievements and the same judged award may be given to several teams. For example, a team earning the top score in competition may also be recognized as an exemplary team along with the team earning the third highest score; in this case, three awards are given but only two award spots are filled. The amount of trophies available for ranked awards is decided before the event; the number of judged award certificates available is undetermined until completion of the judged award selection.

Every team is judged via their robot performance, a presentation of their posters, and an interview with judges. Teams are highly encouraged to bring documentation as mentioned in rules 8.2.F.2 and 9.2.1 to help substantiate their claims made on posters and/or during interview(s). Documentation that demonstrates a team had a disciplined approach to archive and share their efforts throughout the season will be regarded higher than documentation that is created solely for presentation. For example, a team that has pictures or videos of original failed designs, has recorded and analyzed experimental data, and can show evidence of learning throughout a season will be given more credit than a team simply presenting a rendered CAD model made after the robot was built. During the interview, judges will ask questions to ensure every row in the rubrics was covered, that every team member had a technical role, and that all efforts of the team were student-centered. Efforts are only considered if made only by the students being interviewed and made during the current season.

Unlike the rules, these guidelines are not mandatory to follow. They are designed to be a useful resource for teams wanting to better understand the expectations of all the RoboCupJunior Soccer leagues. The rubrics are also designed so that it is unlikely a team will be able to be judged as "excellent" in all categories. The judged award selection algorithm is designed to promote the best examples of each category every season. The judge's scores and notes should

be kept private and not shared with any teams along with a team's qualification status for any award.

Judged Awards (certificates)

Exemplary Team Award

Exemplary teams are the best examples of the effective application of soft and hard engineering skills. These teams are amongst the top performers, have outstanding designs or innovations, and serve as community leaders for their league. To qualify, all of the follow must be met:

- Marked excellent in at least one category in all three rubrics.
- Marked proficient or better in all categories
- Ranked in the top 20% or top 3 whichever is larger.
- Scored at least 14 on poster & presentation rubric

Outstanding Design Award

Teams recognized for outstanding design have fielded robots that are great examples of what can be done through the application of the engineering design process. To qualify, all of the follow must be met:

- Marked excellent in at least one category in hard skills AND on-field performance rubrics.
- Marked proficient or better in all of the hard skills categories
- Marked satisfactory or better in all categories.
- Ranked in the top 30% or top 4 whichever is larger.
- Scored at least 14 on poster & presentation rubric

Outstanding Innovation Award

Teams recognized for an outstanding innovation created a design that is both novel and effective for others to learn from. To qualify, all of the follow must be met:

- Marked excellent in innovation category
- Marked satisfactory or better in all categories.
- Ranked in the top 50% or top 5 whichever is larger.

- Scored at least 12 on poster & presentation rubric with innovation clearly presented so others can learn from it.
- Innovation has not been recognized in previous seasons or the team has made significant improvements.

Outstanding Achievement Award

Teams recognized as outstanding achievement serve as an example of what it means to be excellent in any category. To qualify:

- Marked excellent in the respective category.
- Marked satisfactory or better in all categories.
- Ranked in the top 50% or top 5 whichever is larger.
- Scored at least 12 on poster & presentation rubric.
- Team has not been recognized for the same category in previous seasons or has made significant improvements.

Judged Award Rubrics

Hard Skills Rubric

	Basic	Satisfactory	Proficient	Excellent
Software design	Cannot explain their game strategy OR cannot explain the logic used in their game strategy OR cannot explain basic use of high level libraries/functions (e.g. digitalWrite()).	Has a basic game strategy such as get to the ball, stay in bounds, and head to the opposing end AND can explain the logic used in their game strategy AND can explain how their software was written.	Employs a more advanced game strategy (for example, the robots can dynamically switch playing striker and goalie) AND can explain the logic used in their game strategy AND uses proper conventions in software design (e.g. comments, variable names)	Is proficient AND can demonstrate novel strategies (should be proven effective) OR team demonstrates advanced skills in programming by demonstrating more effective software, custom libraries, etc.
Electronic design	Limited sensor use and simplistic behavior (robot basically just follows the ball and knows the direction of the goal) OR cannot explain how their sensors function at the electronic level (e.g. a potentiometer on an ADC).	Limited sensor use with more advanced implementation (e.g. robot senses if it is out of bounds, simple localization, etc) AND can explain how their sensors function. Most sensors are commercial off-the-shelf (COTS) prebuilt PCBs without any schematics available.	Advanced use of sensors with appropriate algorithms (e.g., localization that functions well regardless of the position of other robots) AND the team can explain how their sensors work in more details such as describing communication protocols and analyzing schematics even if on a COTS part.	Is proficient AND the robot uses custom sensors/PCBs that are proven more effective than COTS parts.
Mechanical Design	Chassis is COTS kit with minimal modifications OR chassis is simply manufactured by hand out of sheet material OR wires are left unorganized.	Chassis is not robust OR has stability problems OR is a COTS kit that has been significantly modified OR a significant amount of wires are left unrouted/loose.	Chassis is robust and stable, self-designed, and self-built (i.e. a significant portion of the robot is designed using a CAD software) AND there is clear consideration for how every component is mounted and wires are routed.	Is proficient AND the chassis includes unique and/or novel mechanical or design features that add to its performance, dependability, and/or reparability.
Leadership & resourcefulness	The team hasn't stated any goals beyond doing well in the competition OR team has not discussed how resources were acquired OR team members were told what to do or had materials bought for them.	The team clearly communicates its goals AND is able to briefly discuss how they acquired materials and training to accomplish their goals.	Is satisfactory AND team is able to discuss how they manage themselves (e.g. allocation of tasks, conflict resolution). Teams may also consider creating a simple team charter and give examples of how it was adhered to throughout the season.	Is proficient AND the team demonstrated how it employs its resources to involve the community at large .

Soft Skills Rubric

	Basic	Satisfactory	Proficient	Excellent
Teamwork & Communication	Team demonstrates little understanding of how the work was done	Not all members have contributed OR all team members have contributed but the distribution of work was uneven OR a team member is not respectful of another team member (e.g. talking over another member)	All team members have contributed evenly AND all team members are respectful of the other team members	Is proficient AND team has an effective decision making model, makes communication a priority, and/or makes an effort to learn and grow from one another's mistakes.
Problem Solving & Critical Thinking	Members do not explain problems that had to be overcome during their process	Members identify problems that they faced, but did not explain effective solutions to those problems	Members identify problems that they faced AND explained effective solutions to those problems	Is proficient AND members demonstrated examples that problem solving is ongoing (e.g. can identify significant things they still need to work on)
Professionalism & Sportsmanship	Team fails to display friendly sportsmanship and cooperation with others *(e.g.*, opponents, referees, etc.)	The majority of the team members display friendly sportsmanship and cooperation with others all the time, even in negative situations.	All team members display friendly sportsmanship and cooperation with others all the time, even in negative situations	Is proficient AND all team members go out of their way to improve the experience of others
Innovation	Innovation is not very functional OR there is no evidence to how it was conceived.	Innovation is functional but incomplete evidence of design is presented.	Is satisfactory AND there is clear evidence of how the innovation was achieved and tested.	Is proficient AND innovation may be an inspiration for future competitors.

Performance Rubric

	Basic	Satisfactory	Proficient	Excellent
Movement & Durability	Has difficulty moving around the field but is still capable of playing.	Is capable of playing but is often penalized or deemed damaged	Active on the field and are rarely penalized or deemed damaged.	Are proficient AND actively adapt to field conditions (e.g. able to change roles, outmaneuver opponents, etc.).
Ball Handling & Scoring	Robot has difficulty locating the ball or maintaining control of the ball.	Robots can generally maintain possession of the ball through dribbling.	Robot is satisfactory AND can reliably shoot or push the ball into goal	Robots are proficient AND do not depend on pushing the ball to score.
Technical Challenges	Teams made no attempt at technical challenges.	Teams made an attempt of at least one technical challenge.	Team passed at least one challenge(s) OR two or more technical challenges were attempted.	Proficient and offered significant data for new ideas for the competition.
SuperTeam Challenge	Attempted challenge.	Basic and made basic modifications in an attempt to optimize gameplay for challenge.	Modifications made for the challenge were effective.	Proficient and made it to the final stages of the challenge.

Judged Award Selection Guidelines

Before the judges' interviews:

- All judges should meet to review these guidelines, discuss expectations, and schedule interviews.
- Teams should be made aware of when, where, and for how long their interviews are scheduled for.
- A decision is made final for how many award spots to offer based on actual number of participants and ranked award trophies available
- Every judge is given a copy of the rubric and ability to take notes for every team.

During the judges' interviews:

- Judges will take notes during every interview and ensure that all of the rubric categories are covered.
- Judges will score every team in every category. Any excellent mark must be accompanied by brief notes with details as to why the team was scored there.

After the judges' interviews are completed:

- Rubric scores and notes are reviewed and any team not considered excellent in any category are removed from judged award consideration.
- A list of qualified teams for each of the awards is created. A team may be listed multiple times if they qualify for multiple awards.
- Any and all records from previous seasons are checked to ensure teams listed under outstanding innovation or outstanding achievement are qualified

After the rankings are finalized:

- Any qualified team earning a ranked award (trophy) will automatically receive recognition (certificate) for the highest judged award they qualify for and may be crossed off all the lists for any other judged awards.
- The remaining list(s) of teams are organized according to rank. Continue the following in order and stop if all award spots are filled:
    - If no team has been recognized as exemplary, select the highest ranked team qualified for exemplary team award.
    - If no team has been recognized for outstanding design, select the highest ranked team qualified for outstanding design award.
    - If no team has been recognized for outstanding innovation, select the highest ranked team qualified for outstanding innovation.
    - OPTIONAL: The OC and judging panel may decide to recognize a team for any outstanding achievement (i.e. special judges' consideration).
- If spots and qualified teams remain, repeat the following until all award spots are filled or there are no more qualified teams to be recognized:
    - Select any and all remaining teams still qualified as an exemplary team
    - Select any and all remaining teams still qualified for outstanding design
    - Select any and all remaining teams still qualified for outstanding innovation
    - Select any and all teams still qualified for outstanding achievement

Ranked Awards (trophies)

Top Competition Score

This award is given to the highest ranked team(s) as determined by the tournament manager.

Top SuperTeam Challenge Score

This award is given to the highest ranked team(s) as determined by the criteria of the superTeam challenge.

Top Poster & Presentation Score

This award is given to the highest ranked team(s) as determined by the poster & presentation judges.

Posters are an important part of Science, Technology, Engineering and Mathematics fields in that they are designed to share knowledge of a project or experiment on a single page (albeit a large one), rather than a multi-page document.

Posters at RoboCupJunior Soccer are designed to be a way to meet one of our primary goals: to grow the community's knowledge by sharing your design data and learning from one another. Each year new developments in design, construction, and programming are made by teams which, when shared, help other teams in subsequent years design and build better robots. Meeting this goal makes for more challenging and interesting events. Every team should consider how they will inspire future competitors that will study these posters.

Poster Requirements

- **Poster Size** – at most 36” (91.4cm) high x 48” (121.9) wide (landscape).
- **Title / Identification** – team name, country, sub-league.
- **Abstract** – A concise summary of the entire project. The abstract should summarize the critical elements of the poster, but should avoid repeating what is stated elsewhere in the poster.
- **Method / Robot Production / Design** – A description of the choices made during the robots’ production, including the rationale underlying those choices. Production includes the design, construction, programming, component selection, and overall process. Teams should indicate the programming language, sensors used, time and cost of development.
- **Data / Results / Discussion** - The poster has details of the team’s development and testing of the robot including any relevant data and modifications made as part of the robot’s creation. Teams should include data with testing methods when possible especially for novel designs that others can use to compare and improve upon.
- **Photos / Images** – The poster should have plenty of photographs and images detailing their robots’ designs, schematics, algorithms, etc. All images, including graphics for styling, should either be original or available for non-commercial reuse with modification as per the creative commons license (http://creativecommons.org/). Any photo or image should be labeled and cited especially if not original.
- All information in the poster should be in English.

Your team’s poster will be marked by Members of the Soccer Organizational Committee or Local Committee Members and volunteers under their guidance using the poster rubric. The team earning the highest score is awarded. Ties are broken by first eliminating teams that have already earned recognition followed by rank in competition.

Poster & Presentation Rubric

Category	1	2	3	4
Abstract	*Abstract is missing, unclear or wholy incomplete (i.e omits many critical elements of the poster).*	*Abstract is somewhat incomplete (i.e. omits some critical aspects of the poster) OR repeats detailed information already in the poster.*	*Abstract clearly summarizes each critical component AND uses appropriate scientific language.*	*Rubric 3 is satisfied AND there is a clear intent to share actionable knowledge.*
Method / Production / Design	*Very little to no information about production (i.e. design, construction, programming, component selection, and overall process).*	*Some information about production (i.e. those listed in rubric 1) OR complete information is supplied but descriptions are not clear and concise.*	*Complete information about production . (i.e.those listed in rubric 1). AND the information is clear and concise*	*Rubric 3 is satisfied AND there is a clear intent to share all actionable knowledge.*
Data / Results / Discussion	*No data is displayed OR data analysis is not relevant to project development.*	*Minor data resulting from testing is displayed OR significant data resulting from testing is displayed but no major modifications based upon the testing are mentioned.*	*Significant data resulting from testing is displayed AND major modifications were made on the robot as a result of testing AND data and results are displayed clearly (e.g. using graphs or tables).*	*Rubric 3 is satisfied AND the poster demonstrates a clear understanding of the link between testing, evaluation and modification based upon the testing AND method of testing is described so it may be repeated by others.*
Photos / Graphics	*Several photos and graphics of a poor quality OR are not relevant to the related section of the poster*	*Photos and graphics are relevant to the related section of the poster but some are not labeled or cited.*	*Photos and graphics are relevant AND excellent quality AND appropriately labeled and cited.*	*Rubric 3 is satisfied AND the amount of images are appropriate to the content being presented.*
Layout / Design	*The poster does not follow a logical layout OR contains many spelling or grammatical errors*	*The poster follows a somewhat, but not wholly, logical layout OR the poster contains a few spelling or grammatical errors.*	*The poster has a clear and logical layout (i.e.Information is easy to access for the viewer, with graphics, images and text appropriately positioned and font size consistent). Spelling and grammar are error free.*	*Rubric 3 under "Layout/ Design" AND has an original design that effectively highlights the team's creativity and professionalism.*
Presentation	*Team not present during poster presentation session*	*Team was absent for significant portion of poster session OR is not able to answer any questions adequately*	*Team was present during poster session but was regularly absent OR did not actively engage OR did not adequately answer questions*	*Team present during the entire poster session AND actively engaged with judges, participants, and guests AND did their best to answer any/all questions.*