

Dance Rules (2007)

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Note:

- *Changes from 2006 rules are highlighted in red.*
- The most important rule for RoboCup Junior Dance is 6.5.3!
- These rules to be read in conjunction with Appendix 1: 'RoboCup Junior (International) DANCE – Atlanta, 2007.

1. STAGE.

1.1. Size.

1.1.1. See also Appendix 1. Robots that move outside **the marked boundary of the performance area** are not disqualified, but will receive a score penalty. Human performers may be outside this marked area. Any performance involving a height greater than 4m vertically from the stage floor must be discussed with the judges and permission sought. The boundary of **the performance area** will be marked with a 50mm **black tape line, surrounded by a 20mm red tape line. This will enable programming to be used to identify which side of the boundary a robot finds itself.** The floor provided shall be made of **flat (non-glossy) white painted MDF** (compressed wood fibre). Teams are encouraged to practice on the same flooring type to reduce set-up time at the International competition. While floor joints will be taped to make them as smooth as possible, robots must be prepared for irregularities of up to 3 mm in the floor.

1.1.2. The dance stage will be made available for teams to practice on. In fairness to all teams who may wish to practice, a booking sheet will be used to reserve the stage for short periods of time.

1.2. Lighting.

1.2.1. The organisers may make variable lighting including spotlights available, but teams should not expect the performance area to always be able to be darkened, with direct, intense spotlights available. (**Hint:** It is recommended that teams design their robots to cope with variations in lighting conditions, as lighting naturally varies from venue to venue. If necessary, teams should come prepared to calibrate their robots based on the lighting conditions at the venue.)

1.3. Scenery.

1.3.1. Teams are encouraged to provide their own scenery. **Organisers will endeavour to provide a projection screen and projector for teams wishing to use images from a digital source (e.g., computer) at the rear of the performance area as part of their performance.**

2. ROBOTS.

2.1. Size.

2.1.1. Robots may be of any size.

2.2. Team.

2.2.1. There may be any number of robots on a team.

2.2.2. Each team may perform one and only one routine, though the performance of that same routine will be repeated if they proceed to the finals for their division. See also 4.4.2.

2.3. Control.

2.3.1. Robots must be controlled autonomously. No member of the team may make physical contact with the robot while it performs, unless this forms part of the performance and has been discussed and approved by the judges PRIOR to the performance. Robots must also be 'wirefree' in that they must not be connected to a computer or other management device while performing.

2.3.2. Robots may be started by humans, either manually or with remote control. See also 6.1.3.

2.4. Costumes.

2.4.1. Costumes for robots and/or human performers are encouraged, and will be awarded points.

3. ROUTINE.

3.1. Duration.

3.1.1. Each team will have a total of 5 minutes for their **presentation**. NOTE that this time includes the time for set –up, a possible and encouraged introduction and the performance, **including any re–starts due to factors under the team's control. It does not include time needed for packing up and clearing the stage.**

3.1.2. The duration of a performance routine is no more than two (2) minutes and no less than one (1) minute.

3.1.3. If a team exceeds the time limits explained in 3.1.1 and 3.1.2 in any way by reasons that are their only fault, it will be penalized in assessment.

3.2. Music.

3.2.1. Teams must provide their own audio source in a Compact Disc (CD–R, CD–RW) in one of the following formats: Audio track; MP3 file; These will be the only accepted audio sources with one (and only one!) file or audio track for the entire routine. **Music should be given to the sound technicians at least two hours prior to the start of the tournament.**

3.2.2. Teams are strongly encouraged to bring a good quality audio source, since their evaluation depends also on the music quality.

3.2.3. The music should commence at the beginning of the audio source, after a silent leader of a few seconds.

3.2.4. The audio source should be clearly labelled with the team's name.

3.3. Humans.

3.3.1. Human team members may perform along with their robots, and will be considered a 'prop.' There is no penalty for humans not performing with their robots.

3.3.2. However, human team members must not touch the robots (except to start them). See 2.3.1.

3.4. Start of Routine.

3.4.1. An official will start the music for the routine.

3.4.2. One human team member will start each robot, either by hand or remote control. (Hint: Teams are very strongly encouraged to program their robot to begin the routine a few seconds after the music starts. This is because it is extremely difficult to judge precisely when the music will sound after the audio source is started, and it is hard to time the robot's choreography without knowing exactly when the music will begin. Also, depending on the configuration of the dance stage and the sound system at the venue, it is possible that the human starting the robot will not be able to see the official starting the audio source; and vice versa. Teams should come prepared for these conditions.)

3.5. Re–starts and repeats.

3.5.1. Teams are allowed to restart their routine if necessary, at the discretion of the officials. Any re–start, unless due to a problem which is not the fault of the team, will result in a score penalty. A maximum of two re–starts will be allowed.

3.5.2. Teams are allowed to repeat their routine, at the discretion of the officials.

3.6. Security.

3.6.1. In order to avoid hazardous situations such as routines including explosions, smoke or flame, each team whose routine includes any situation that could be deemed hazardous must submit a report to the chief judge before the competition, outlining the content of their dance routine. At his/her discretion, the Chief Judge could request a demonstration of the activity. Teams not conforming to this request may not be allowed to present their routine, at the discretion of the Chief Judge.

4. JUDGING.

(Refer also to Appendix 2)

4.1 Authenticity and Originality.

4.1.1. All teams will be assessed through an interview, and performance of a dance routine. Each team's overall score will be decided by the total of their (best) performance and their interview.

4.1.2. **The performance is to be unique. Teams who, in the opinion of the judges, have knowingly produced duplicate robots, costume or performance movement (duplicate music is allowed) will be interviewed by a panel of 3 Dance officials. Penalties for close duplication of another team range from a possible 10% score penalty to a maximum penalty of exclusion from the competition.**

4.2 Officials.

Refer to Appendix 1.

4.3. Categories.

Refer to Appendix 1.

4.4. Awards

Refer to Appendix 1.

4.5. Collegiality.

Refer to Appendix 1.

5. CREATIVITY.

5.1. The Dance challenge is intended to be very open-ended! Teams are encouraged to be as creative and entertaining as they can. Teams who show creativity and innovation will be rewarded by the judges with high point scores in the relevant sections.

6. CODE OF CONDUCT.

6.1. Fair Play.

6.1.1. Humans in any way that cause deliberate interference with robots or damage to the stage will be disqualified, if part of a team. If not part of a team they will be asked to leave the venue.

6.1.2. The team is responsible for removing all debris left from their routine that may interfere with the performance of subsequent activities.

6.1.3. While performing, any robot on stage may communicate with another robot from the same team that is also on stage. Teams should take great care that their use of devices with infrared (IR) communication (such as the Lego RCX) does not affect other teams. An exception to this rule is if the communication involves radio frequencies. No team is permitted to use radio signals as part of their performance or preparation, as this may interfere with robots in other leagues.

6.1.4. It is expected that the aim of all teams is to participate in a fair and clean competition.

6.1.5. Remember: "Help those in need, as tomorrow it could be your team needing help!"

6.2. Behaviour.

6.2.1. All movement and behaviour is to be of a subdued nature within the tournament venue.

6.2.2. Competitors are not to enter set-up areas of other leagues or other teams, unless expressly invited to do so by team members.

6.2.3. Participants who misbehave may be asked to leave the building and risk being disqualified from the tournament.

6.2.4. These rules will be enforced at the discretion of the referees, officials, conference organizers and local law enforcement authorities.

6.3. Mentors.

Refer to Appendix 1.

6.4. Sharing.

6.4.1. An understanding that has been a part of World RoboCup Competitions is that any technological and curricular developments should be shared with other participants after the competition.

6.4.2. Any developments may be published on the RoboCup Junior Web site after the event.

6.4.3. This furthers the mission of RoboCup Junior as an educational initiative.

6.5. Spirit.

6.5.1. It is expected that all participants, students and mentors, will respect the RoboCup Junior mission. In addition, participants should keep in mind the values and goals of RoboCup Junior. Any presentations that include violent, military, threatening or criminal elements will be excluded. Any team using an inappropriate name or logo will also be excluded. Participants are asked to carefully consider the wording and messages communicated in their presentations: what seems acceptable to them may be offensive to friends from a different country or culture.

6.5.2. The referees and officials will act within the spirit of the event.

6.5.3. It is not whether you win or lose, but how much you learn that counts. You will really lose if you don't take this opportunity to fraternize with students and mentors from all over the world. Remember this is a unique moment!

7. DOCUMENTATION.

7.1.

Refer to Appendix 1.

Appendix 1

RoboCup Junior (International) DANCE – Atlanta, 2007

Note:

- The following information applies specifically to the International RCJ event to be held in **July, 2007 in Atlanta, USA**.
- *Changes from 2006 rules are highlighted in red.*
- These rules to be read in conjunction with the document: 'RoboCup Junior (International) DANCE Rules – Atlanta 2007.'

1. STAGE.

1.1.1. The dance stage will be a flat area. **The size of the performance area for Atlanta will be a marked rectangular area of 3 x 3m for both robots and human beings.**

4. JUDGING.

4.2 Officials.

4.2.1. Performances will be judged by a panel of four officials, two of whom will judge all performances. This panel may be different to that assessing the interviews.

4.2.2. The four officials will be designated prior to the tournament.

4.2.3. The officials shall not have any close relationship with any of the teams entered in the tournament.

4.3. Categories.

4.3.1 Performances will be judged according to the following categories:

- Programming (eg: use of loops, jumps, sub-routines, type of programming language used, etc)
- Construction (eg: robots should be of sound construction, components should not fall off, appropriate use of gearing, smooth and reliable operation, interesting movements, effective use of mechanics to achieve a purpose, etc)
- Using Sensors effectively (eg: to trigger different parts of the program, for detection of boundary line, etc. This category also includes 'other technologies' apart from sensors.)
- Choreography (eg: robots to move in time with music, and change actions as music changes tempo or rhythm. Choreography of humans and robots will be scored separately, etc)
- Costume (Costume of humans and robots will be scored separately)
- Entertainment Value (eg: How much does the performance entertain or delight the audience? Originality and creativity of the presentation, etc)

4.3.2 Each section will be given approximately equal weighting.

4.3.3 A standard scoresheet will be used for judging the interviews and dance performances: see Appendix 2 for scoresheets.

4.4. Awards

4.4.1. Awards will be made to individual teams that achieve the highest total score in the respective categories for:

- Programming;
- Construction;
- Using sensors;
- Choreography;
- Costume;
- Entertainment Value;

There will be also some special awards for the following categories:

- Collegiality (the team who, by popular vote, has given the greatest support to other teams). This support can be in a number of ways, such as assistance with components, or friendship and encouragement). See 4.5.1
- Best poster or best electronic demonstration
- Best placed international team. The RCJ Committee encourages the formation of such teams that are the result of a co-

operative project **where students and mentors come from schools in two or more different countries**. The team must have students from each school/country present in the team and at the competition, to be eligible to win this special award

- ASIMOV award. See 4.4.2
- Novice team: the primary and the secondary team who place highest in the competition overall, and **where all members of the team are** competing at RCJI for the first time.

4.4.2. All teams, regardless of whether they are in the primary or secondary division, who are excluded from competition after the main rounds due to significant or complete failure of **some aspect of their performance routine (such as equipment failure, programming malfunction, illness or absence)**, will be eligible to perform again as members of the ASIMOV class in a new and separate competition. An award will be made to the winner of this division and will be decided by popular vote from the audience.

4.4.3 There will be three RCJI Dance Champion teams for the primary section, and three RCJI Dance Champion teams for the secondary section. The winners of each of these two sections are the teams (or group) that achieves the highest total score summing performance in all categories: (Programming, Construction, Using sensors, Choreography, Costume and Entertainment Value, as determined by combining the interview and **their best** performance score).

4.4.4. Recipients of all awards will be presented with a trophy for their school, and a medallion for each team member. Any further awards are at the discretion of the organising committee

4.4.5 Ties are allowed

4.4.6 RoboCup Junior is an educational project. In keeping with this, it is important that team members learn from their experiences with RCJI, and have the opportunity to improve for later years if they so choose. The organisers will provide feedback on each team's performance by providing a modified score sheet to each team Captain after presentations are made at the conclusion of competition. This sheet will indicate to the team their areas of strength and also possible improvement, as rated by the event judges. It is important to note that **these sheets are not to** be used to debate positions, decisions or competition scores with the judges.

4.5. Collegiality.

4.5.1 Each participating team will have one vote to nominate the team that displayed the greatest cooperative interaction with other teams. The score will be calculated by the following equation: $\text{score} = 10 \times (\text{number of votes received}) / (\text{number of participating teams})$

4.5.2 In keeping with the spirit and collegiality aspects of RCJI, a party will be provided by the organisers for all team members, mentors and supporters. It is strongly requested that all such individuals delay their departure sufficiently to attend, even if the party is held after the finals and presentations. The organisers request all team members bring business-sized cards to share with other teams at the party: these cards could include the team's name, the team members' name(s) and contact details, so students can remain in contact with each other after the event. This is optional, but encouraged. It is also requested, but not compulsory, for team members to wear either national dress, or some icon that identifies them with their country. This can be done in a humorous manner, such as an animal mascot from their country or other creative idea.

6. CODE OF CONDUCT.

6.3. Mentors.

6.3.1. Mentors (teachers, parents, chaperones and other adult team-members) are not allowed in the student work area, except to assist carrying equipment in or out of the area as teams arrive or depart, and to assist with moving equipment on or off the stage. **If a problem is encountered with a computer or other device that is clearly beyond the reasonable ability level of a student to repair, a mentor may request permission from the organisers to enter the work area for the sole purpose of attending to that repair. They must leave the work area immediately this is completed. Rule 6.3.3 still applies at these times.** Mentors may not set up such equipment on stage, as this should be the responsibility of the team members. A mentor found in the student work area without acceptable reason will be shown a yellow card. A second breach will result in a red card, and the team(s) for which they are mentor **or associated** shall receive a scoring penalty. Should a further breach occur, the team may be disqualified.

6.3.2. Organisers will endeavour to provide sufficient **seating for Mentors** to remain in a supervisory capacity around the student work area.

6.3.3. Mentors are not to repair robots or be involved in programming of students' robots. See 6.3.1

7. DOCUMENTATION.

7.1 Authentication

7.1.1 All teams must bring written and/or photographic documentation describing their preparation efforts. This documentation must be present during the interview, and may be called upon to help establish the authenticity of a team's entry.

7.2 Displays

7.2.1 Teams will be given some public space to display their materials on a poster board. Since the space available could be limited by the local organisers, teams are encouraged as an alternative to bring some kind of electronic presentation in Power Point format that will be displayed in the venue. The organisers will provide screening equipment.

7.2.2 Posters or electronic presentations should be made in an interesting and entertaining format, as they will be viewed not only

by the judges, but by other teams and the visiting members of the public. Presentations will be judged, and an award made to the Primary and Secondary team with the best presentation. The presentation should provide information about the team and how you prepared for Atlanta. Areas that could be covered include:

- Team name, division (primary or secondary), team members' names (and perhaps a picture of the team members)
- Your country, your location in your country, and a little about your district and school
- Pictures of the robot under development
- Information about your robot and team
- What you hope to achieve in robotics
- Why made you decide to come to RCJI **this year**?
- Who/what helped you to get to **RCJI**?
- Any interesting or unusual feature about the team, robot, your background or your entry.

7.2.3 Officials will review the documentation and may discuss the contents with team members. A prize will be awarded to the team with the overall most outstanding presentation.

7.2.4 Teams are encouraged to visit each other's posters.

7.2.5 Teams are encouraged to have a Web site where they describe their projects to the RCJ community.