

2017 Alice Springs



Northern Territory



Information Pack

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Welcome

Welcome to the very first RoboCup Junior for Alice Springs!

Firstly, we want to put your mind at ease, none of us are experts in robotics. Our main objective is to LEARN and to HAVE FUN doing it!

Secondly, this is the first year for us too! RoboCup Junior Alice Springs will be coordinated by staff at the Alice Springs Public Library, Arid Lands Environment Centre and volunteer teachers and parents. We're being guided by RoboCup Junior mentors in Darwin and beyond, but ultimately we need to create a challenge that suits the unique needs and wants of Alice Springs students.

Lastly, whether your team members have had experience with robotics and coding or not, we believe that they will get something out of the challenge.

RoboCup Junior Objectives

1. To encourage young people to take an interest in scientific and technological fields, to cultivate their interest through robotic competitions through hands on creation.
2. RoboCup Junior Australia will help young people to expand their social, intellectual and problem solving skills, helping them to develop into creative and independent adults.
3. To provide a forum, which will allow more people to appreciate the co-existence between science, technology and human kind.
4. To create an environment that will encourage people from all over the world to share their experience with science and technology, thereby contributing to its development.
5. To use robotics as a vehicle to foster the development of an internationally-based intellectual cooperative.
6. The emphasis will be on learning and enjoyment rather than competing to win.
7. Participants will be required to share technological developments in order to ensure the improved quality of the competition rather than allow an individual team's dominance.
8. RoboCup Junior Australia is an educational activity, which will nurture understanding between different nationalities via the opportunity to compete in an educational robotics competition.

This is such an exciting opportunity for local kids and we hope to grow and improve RoboCup Junior Alice Springs with each year. Join us for the ride!



Clare Fisher
RoboCup Junior NT
Alice Springs Sub-Committee

Important Information

| | | | | | | | | | | | |
|-------------------------|---|----------|----------------------|--------------|---------------------------|--------------|-------|----------|---|---------|--------------------------------|
| Eligibility | Open to all primary and secondary aged students. Parents, teachers and friends are welcome to mentor teams and attend on the day. (Cheering encouraged!) | | | | | | | | | | |
| Date | Thursday 22 June 2017 | | | | | | | | | | |
| Schedule | <table> <tr> <td>9am-10am</td> <td>Registration & Setup</td> </tr> <tr> <td>10am-11.30am</td> <td>Soccer & Rescue workshops</td> </tr> <tr> <td>11.30pm-12pm</td> <td>Lunch</td> </tr> <tr> <td>12pm-3pm</td> <td>Primary and Secondary Dance, Soccer & Rescue Competitions</td> </tr> <tr> <td>3pm-4pm</td> <td>Awards, feedback and pack down</td> </tr> </table> | 9am-10am | Registration & Setup | 10am-11.30am | Soccer & Rescue workshops | 11.30pm-12pm | Lunch | 12pm-3pm | Primary and Secondary Dance, Soccer & Rescue Competitions | 3pm-4pm | Awards, feedback and pack down |
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| 3pm-4pm | Awards, feedback and pack down | | | | | | | | | | |
| Venue | Alice Springs Convention Centre 93 Barrett Drive, Alice Springs, NT http://lasseters.com.au/convention-centre/ | | | | | | | | | | |
| Access | <ul style="list-style-type: none"> • Ample on-site parking for cars and buses • Easy access for those with disabilities (ground floor event space) | | | | | | | | | | |
| Food & Drink | <ul style="list-style-type: none"> • Students, parents and teachers will need to bring their own snacks and lunch • Juice, bottled water, tea and coffee will be available for sale at the Ticket desk • Water coolers are also available – please encourage kids to BYO bottles as Unsecured water + excited kids + robots = not good! | | | | | | | | | | |
| Teams | <ul style="list-style-type: none"> • 2-5 kids per team • 1+ robots per team • Adult team mentor/s | | | | | | | | | | |
| Competition | <ul style="list-style-type: none"> • Dance: Primary & Secondary • Rescue: Primary & Secondary • Simple Simon Soccer: Primary & Secondary | | | | | | | | | | |
| Registration | <ul style="list-style-type: none"> • Each team will be required to register to enter the competition • Teams are encouraged to come up with a funky name for themselves • Head to the http://www.robocupjunior.org.au/nt for the Online Registration Form • Registration and involvement is completely free | | | | | | | | | | |
| Robots | <ul style="list-style-type: none"> • RoboCup Junior recommends using Ev3 or NXT LEGO Mindstorm robots but any robot can be used to enter the competition • The Alice Springs Public Library has 10 Ev3 LEGO Mindstorms that can be loaned out to schools or community groups. (See Contacts for more information) • Alternatively, you can purchase them here: http://www.teaching.com.au | | | | | | | | | | |
| What to Bring | <ul style="list-style-type: none"> • Food and drinks • Laptop/s with fully charged batteries • Robot/s with fully charged battery • Chargers (in case you run out of robot-juice) • Team Mentor and any parents/volunteers who would like to assist/cheer • Dance music saved to a USB in MP3 format | | | | | | | | | | |

Dance Workshop – 19 May 2017



Our sponsors have very generously offered us the opportunity to host a free workshop for Primary, High School Teachers and Students in Alice Springs!

This Introductory RobocupJunior Dance workshop is conducted by Joanna Burk from Modern Teaching Aids.

Teachers are invited to bring 2 student mentors on the day (not essential).

Participants will have the opportunity to program with the EV3 software. EV3 robots will be available for use on the day or you may bring your own equipment.

Date: Friday 19 May

Time: 9.30am-2.30pm

Venue: Andy McNeill Room, 93 Todd Street, Alice Springs 0871
(Next to the Alice Springs Town Council Civic Centre)

Cost: FREE

Registrations required - find the registration form at the back of this pack.

Dance Competition (Nice and easy!)

NB: The first step to being a RoboCup pro – Dance is a simple and fun way to teach kids coding AND they get to dress their robot, ready to dazzle the judges!

The RoboCup Junior Dance is a stunning integration of Science, Technology and the Arts.

Participants program their robots to dance to music. Competitors are encouraged to decorate their entries and to motorise robot limb movements, to give their robots real personality.

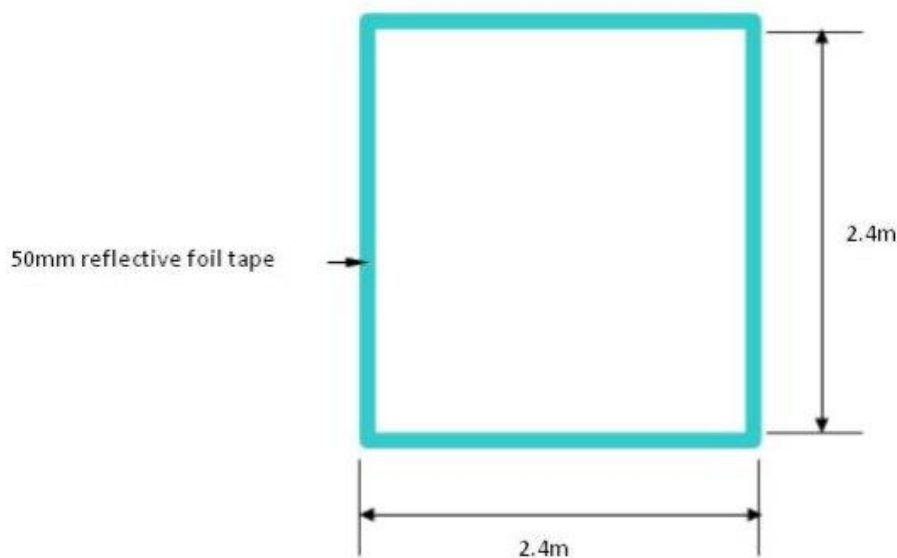
RoboCup Junior Dance can be approached in a number of ways with creative new ideas appearing every year. Some previous ideas have been students interacting with their robots while they were dancing, students creating their own music to dance to and students telling a story while the robots act it out to the music.

The Dance Challenge is a real team effort where students can design their own t-shirts, prepare themselves for the team interview and create their costumes, on top of the programming and building.

Performing

Robots will perform on a HARD, FLAT SURFACE. This may include mdf, vinyl, gym flooring etc

The Stage will include a marked square of 2.4m x 2.4m which is the Dance Floor for robots. The outside boundary of the Dance Floor will be marked with 50mm reflective aluminium foil tape.



Dance Tips, Tricks and Tutorials - <http://robocupjunior.org.au/tutorials>

Check out <http://www.robocupjunior.org.au/dance> for Rules and Performance Sheets

Rescue Competition (A little trickier!)

NB: Trickier than Dance but easier than Soccer, Rescue allows kids to hone their problem-solving skills while "rescuing" a "victim" with their robot!

Artificial intelligence at its best! The Rescue competition mirrors the real life use of robots that rescue people from life-threatening situations.

Divisions

Primary Rescue is designed for primary aged students.

Robots compete by following a winding line on a series of tiles to a designated rescue area. On the way the robot could encounter obstacles, bridges and short cut opportunities that will challenge the most intrepid programmer. After negotiating the randomly selected path, the robot arrives at a green coloured area which indicates a chemical spill. While the clock is still ticking the robot must find "the victim" before pushing them out of the quicksand to safety.

Secondary Rescue suits Secondary aged students.

Robots compete on the same field as the Primary Rescue and play under the same rules, however, when Secondary Rescue teams reach the chemical spill they need to find "the victim" and control it (contain or lift) and then manoeuvre it out of the chemical spill. Finally they need to save the robot and exit the chemical spill from where they entered.

Rescuing

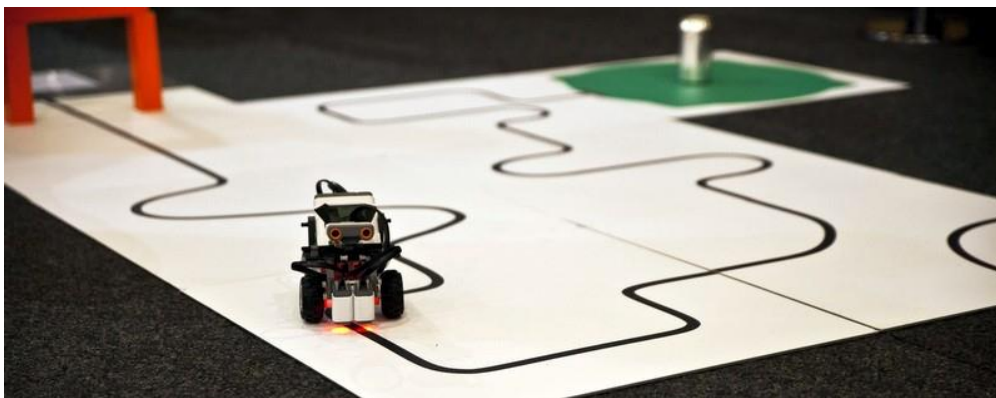
RCJA Rescue requires a rescue field comprising 15 different tiles that are used in various combinations to create the rescue courses used in competition.

Check the Rescue rules for dimensions of the Open Rescue Platform and the dimensions and construction method of the Bridge and Speed Humps.

The paint colour for the Rescue Platform, Mounting Blocks and Doorways is Dulux Raw Sunset

P07H8 Raw Sunset

Check out the Info, Tips & Tricks chapter of this pack for links to construction sheets.



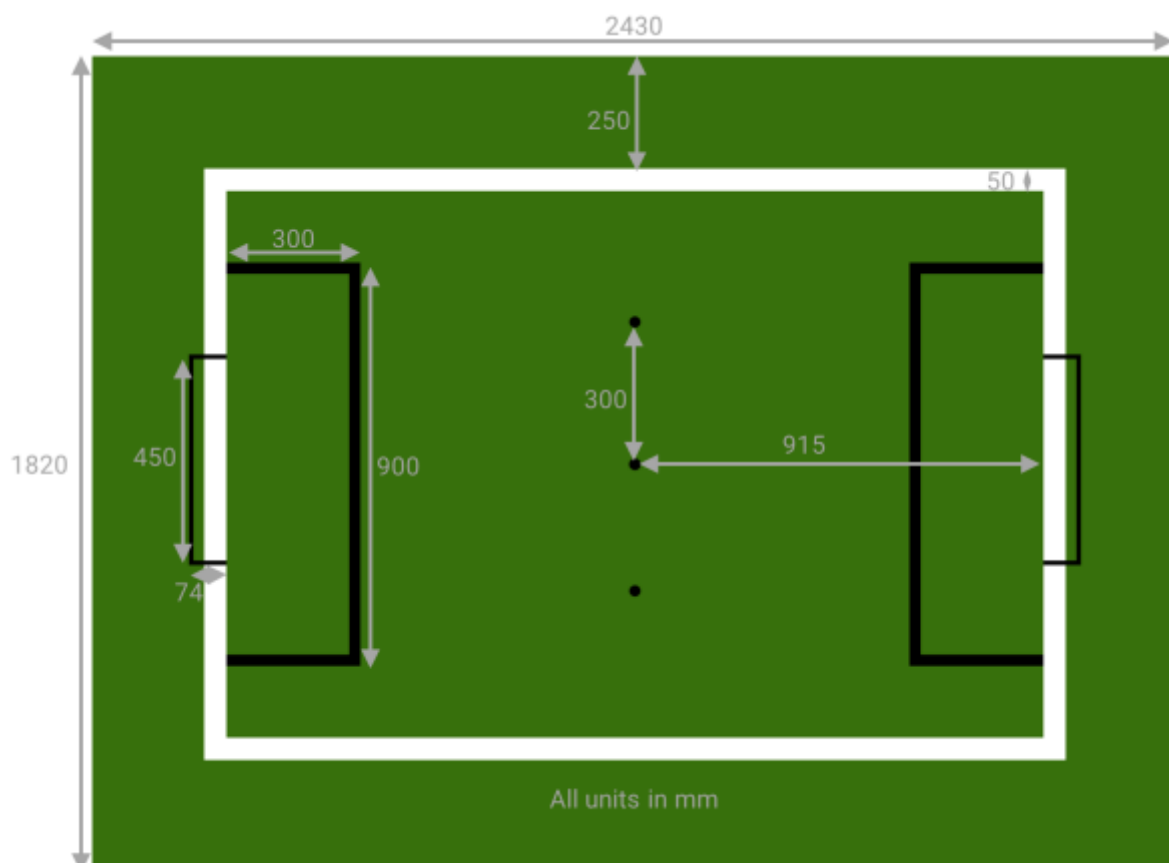
Simple Simon Soccer Competition (More advanced!)

NB: Soccer is one of the more advanced competitions – workshops on programming robots for Soccer will be available during the RoboCup Junior Competition, so please don't stress about learning about compasses and sensors if you don't feel up to it!

Students are required to design and program two robots to compete against an opposing pair of robots by kicking an infra-red transmitting ball into their designated goal.

Teams have a choice of using two attacking robots or an attacker teamed with a goalie. The field is the size of a table tennis table. The field is white, shades of green and black to allow for navigation through the use of light sensors.

Due to its ease of introduction to the uninitiated, most students choose to use LEGO Mindstorms to build and program their robots. Although the LEGO Mindstorms set can continue to be very competitive while being modified to high degree of complexity, other students select alternative platforms and even build their own microprocessor robots from basic electronic components. A range of sensors can be attached to all of the robotic platforms. These include: electronic compasses, sonar, modified light sensors and motor rotation sensors.



Photos & Media

RoboCup Junior Australia, local media and the Alice Springs Public Library will be taking photos on the day of the competition for promotional purposes.

RoboCup Junior requires all participants, volunteers and mentors to sign a Media Release form prior to the competition.

Children's forms must be signed by a parent or guardian.

A copy of this form is available at the back of this pack, or can be downloaded from:

http://www.robocupjunior.org.au/sites/default/files/RCJA_Media_Release_Deed.pdf

Info, Tips & Tricks

The RoboCup Junior webpage <http://robocupjunior.org.au> has a huge range of information, tips & tricks for novice RoboCup. Below are some helpful links.

Rules

Dance: <http://www.robocupjunior.org.au/dance>

Rescue: <http://www.robocupjunior.org.au/rescue>

Soccer: <http://www.robocupjunior.org.au/soccer>

Tutorials

All of the links below can be found on the Tutorials page: <http://robocupjunior.org.au/tutorials>

Dance:

- [Robocup Dance Theatre Hints and Tips 2014 - Paulette Tolonen](#)

Rescue:

- [RoboCup Rescue EV3 Beginners Workshop - G. Tardiani](#)
- [Webinar: Introduction to Line Following - Dr Damien Kee \(90mins\)](#)

Soccer:

- [Getting Started with RCJA Soccer - Dr Damien Kee](#)
- [GEN II EV3 Simple Simon Soccer Player and Goalie HT - Brian Thomas](#)

Resources

The information below can be found on the Resources page: <http://robocupjunior.org.au/resources>

- Recommended Competition Resources
- Websites for learning LEGO Mindstorms Programming
- Generic Robot Designs
- Standard mat sizes and scoring systems

Contact Details

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RoboCup Junior: <http://robocupjunior.org.au>

Facebook: <https://www.facebook.com/robocupjuniorNT>

Mailing List: [RoboCup Junior Alice Springs - http://eepurl.com/cJnqEL](http://eepurl.com/cJnqEL)

RoboCupJunior Dance Workshop

Attention: Primary, High School
Teachers and Students



Full Day
Workshop

RobocupJunior Dance

RoboCupJunior Australia (RCJA) is a project-oriented educational initiative that supports local, regional & international robotic events for Primary & High school students. Teams work in a cooperative & supportive environment developed by volunteer groups of teacher, past competitors & industry members in three distinct challenges; **Dance, Rescue & Soccer**. The focus of RoboCupJunior is the development of teamwork skills as well as technical skills in an environment of participation, fun & excitement. For more information on RobocupJunior Australia please refer to the website www.robocupjunior.org.au

The following Introductory RobocupJunior Dance workshop is available to all Primary and High School Teachers conducted by Joanna Burk from Modern Teaching Aids.

Teachers are invited to bring 2 student mentors on the day (not essential). Participants will have the opportunity to program with the EV3 software. EV3 robots will be available for use on the day or you may bring your own equipment.

Getting started is always a challenge so this day will give teachers and students the opportunity to prepare for the RobocupJunior Dance event. Participants will be introduced to the Dance rules for 2017 & judging criteria and tips and hints for the Dance challenge. Participants will build and program a simple Dance robot for a performance at the end of the day.

Workshop Details

When:

Friday 19th May 2017
9.30am – 2.30pm

Where:

Andy McNeill Room, 93 Todd Street,
Alice Springs 0871 (Next to the Alice
Springs Town Council Civic Centre)

Workshop Fee:

Free

BYOD and robots if you have them.

Places limited so bookings essential.

Teachers and students are to bring their
own food for the day.

Inaugural Alice Springs RobocupJunior Competition Thursday 22nd June 2017

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Computer Science
& Engineering
Faculty of Engineering



National Supporter of RCJA



To register for this workshop please email workshops@teaching.com.au or fax bookings to (02) 9938 0495

An email will be sent to confirm your booking.

Booking Contact Name:

School:

Email:

Phone:

No. of students:

Address:

Robots required yes no please circle

All enquiries please email workshops@teaching.com.au. Bookings are essential as numbers are limited. Visit us online at teaching.com.au
MTA ABN: 98000628786. If you don't wish to receive further emails from MTA please email workshops@teaching.com.au or fax back opt out faxes.

FORM: RCJA Media Release

RCJA MEDIA RELEASE DEED

NOTE: You must complete this deed and submit it when you register at a RoboCup Junior Australia (RCJA) event otherwise RCJA will not permit your child/ward to enter the RCJA event and venue.

1. By competing in a RCJA competition, I understand that it is likely that I and my child/ward may be photographed or filmed by the media or other individuals at the competition.
2. I grant permission to RCJA and its agents, to use my name and image and the name and image of my child/ward in any RCJA materials, including, but not limited to, official RCJA newsletters, websites, marketing material, televised broadcasts and major sponsors web sites (RCJA Materials).
3. I waive any right to:
 - (a) inspect or approve any RCJA Materials which contain my name and image or the name and image of my child/ward, whether in draft or the final product;
 - (b) royalties or other compensation in respect of the use of my name and image and my child/ward’s name and image in the RCJA Materials, now or in the future and whether I know of the RCJA Materials or not.
4. I agree to release and discharge RCJA and its agents, including, but not limited to, any organisation publishing and/or distributing the RCJA Materials in whole or in part, whether on paper or via electronic media, from any and all claims for damages, loss, liability or other relief that I or my child/ward may have against any of them in respect of the use of my name and image or the name and image of my child/ward in any RCJA Materials.

School

.....

Student’s Name

.....

Parent’s/Guardian’s Signature

Date