



WRO World Robot Olympiad – SOUTH AFRICA 24 April 2017

The **World Robot Olympiad** is a global robotics competition that brings together young people from all over the world to develop their creativity, design & problem solving skills through challenging & educational robot competitions. The World Robot Olympiad competition utilizes LEGO Mindstorms manufactured by LEGO Education.

South Africa was accepted as a participating country in WRO for the first time in 2010. From relatively small beginnings, the competition has grown in numbers and stature over the past 8 years.

To qualify for the international tournament, teams compete in Regional, Provincial and National Competitions. Winning teams that qualify at the National competition in the specific age groups, are invited to participate in the international WRO.

WRO South Africa – Numbers of Teams National								
REGIONS	2010	2011	2012	2013	2014	2015	2016	2017
Gauteng	40	31	69	65	69	83	113	-
Gauteng West Atteridgeville Township	-	-	-	50	58	57	63	-
Western Cape	-	2	8	10	9	18	42	-
Kwazulu Natal	-	-	-	-	-	13	22	-
Eastern Cape	-	-	-	-	-	-	-	New
Mpumalanga	-	3	9	10	2	-	-	New
CURRO Explorer	-	-	-	28	42	47	45	-
Totals	40	36	106	163	180	218	285	-

Results for 2010

National Participation – 40 teams

In 2010 the WRO was held in the Philippines. 3 teams represented South Africa – 2 teams in the regular category and 1 open category team.

Awards:

8th place in High School Open Category: Stuart Windram & Robin Beyl presented a robotic model called 'The Table Mountain Monkeys'. They received SA's first ever award at a WRO Championship. They were placed 8th in the High School Open Category.



Results for 2011

National Participation – 36 teams

In 2011 the WRO was held in the Abu Dhabi, UAE. 2 teams from both the regular and open category represented South Africa.

Awards:

3rd place in Junior High School Open Category: Team ROBOLUTION represented by Sybrand Botes, Dehan Lamprecht & Nico Wiese, received SA's first ever medal at any WRO Championship. They received 3rd place (bronze medal) in the Junior High School Open Category.



Results for 2012

National Participation – 106 teams

In 2012 the WRO was held in Kuala Lumpur, Malaysia. 12 teams from both the regular and open category represented South Africa. Although we did not win any awards, the teams competed well. Kaylee Harris & Martin Seedat with their team “Dogmatrix” made it through to the second round of the Open Category and missed a medal by 1 place.

The famous Crazy Divas a team from the newly established Atteridgeville Robotics project won the Silver Medal at the National competition and were sponsored by the LEGO Foundation to participate in Malaysia. It was an incredible learning experience and they made us proud as the frontrunners of outreach robotics in South Africa.

They have been mentoring and coaching their own robotics clubs at their respective secondary schools since with teams qualifying to participate at WRO Nationals.



Results for 2013

National Participation – 163 teams

In 2013 the WRO was held in Jakarta, Indonesia. A total of 45 countries and 400 teams participated in various categories.

South Africa sent 8 teams with children ranging in ages from 10 to 18 years old.

Awards:

2nd place High School Open Category: Dylan Rheeders and Marco Pretorius of CE3 Cave Explorer 3 won the silver medal in this category. The award is the highest level of achievement to date of any South African team in this competition.

4th place Elementary Open Category: Pieter Theron and Jako Theron of the Wetland Rangers were placed 4th. A very respectable and well deserved achievement.

CAVE EXPLORER 3 Silver Medal Senior High



WETLAND RANGERS 4th Place Elementary



WRO - 2014

National Participation – 180 teams

In 2014 the WRO was held in Sochi, Russia. A total of 50 countries and 450 teams participated in various categories.

South Africa sent 3 teams with children ranging in ages from 10 to 18 years old.

Awards:

4th place Junior High Open Category: Jared Rheeders, Reuben Pretorius, Matthew Whyte of team Space Invaders were placed 4th with a more deserving project.

The **Siyakha Evolution** Team from Tersia King Academy with Bonolo Seakamela and Kgotso Sebidi won the Gold medal Open Category Senior high at the National competition but were unfortunately not able to go to Russia as they were writing Matric final exams.

Space Invaders & Delta 3



Siyakha Evolution



Bonolo Seakamela, Kgotso Sebidi

WRO - 2015

National Participation – 218 teams

In 2015 the WRO was held in Doha, Qatar. A total of 53 countries and 500 teams participated in various categories.

South Africa sent 7 teams with children ranging in ages from 10 to 18 years old.

The teams were competitive and performed extremely well throughout the competition with two just missing the qualification into the top sixteen in the regular category.

WRO - 2016

National Participation – 285 teams

In 2016 the WRO was held in Delhi, India. A total of 57 countries and approximately 550 teams participated in various categories.

South Africa sent 13 teams with children ranging in ages from 10 to 18 years old. Two teams participated as guests in Advanced Robotics Category which is 19 to 25 years old.

6 teams finished in the top twenty in the world with 1 Football team placed 5th in the world.

Awards:

5th place WRO Football: Mecha Strikers with Cody Williams and Jarret Williams came forward with an exceptional performance to miss out on a semi-final by 1 goal.



The great news of 2016 was the eventual recognition of Mindsports SA to award National Colours to teams representing South Africa at the International World Robot Olympiads.

There are also the continued efforts through Care for Education to expand the base of participation to disadvantaged areas and a highlight of the year is the annual Atteridgeville township Robotics competition where approximately 200 learners compete to qualify for the National WRO event.



ASTEML : Association for STEML Olympiads and Competitions

In 2016 WRO became part of the steering committee of ASTEMI to create a community of practice around STEML Olympiads and Competitions.

In collaboration with SAASTA/NRF (South African Association for Science and Technology Advancement / National Research Foundation) a project unit of DST (Department of Science and Technology) this community of practice ASTEMI was established to broaden the base of learner participation in South Africa.

With some annual funding from NRF, WRO trainers travel the country to rural areas to provide robotics training to trainers, teachers and interns at Science Centres and schools with LEGO Mindstorms sets allocated by SAASTA and donated by Care for Education.

They in turn then have the required basic expertise to work with learners and prepare and include them for our robotics competitions, with the hope that they can qualify to be accommodated in the national WRO set up.

In 2016 a total of 91 prospective trainer/coaches were trained around the country.

Carnarvon Northern Cape

FOSST University Fort Hare ECape





The future of WRO in South Africa is promising as exposure to robotics increases through club, school and tertiary education involvement. It is exciting to see the development in the confidence levels of these bright young learners as they become ever more competent at mastering the particular skills needed to participate in the Robotics programs.

A new website was designed this year with better functionality and a more user friendly registration portal.

www.wrosa.co.za https://www.facebook.com/WROSouthAfrica/?ref=aymt_homepage_panel

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