



PARC 2019

Pan-African Robotics Competition

Solvable Challenges – The Making of African Smart Cities

A call to STEM teams around Africa and the diaspora, to compete at the Pan-African Robotics Competition, July 2019 in Accra, Ghana.

www.parcrobotics.org



The Pan-African Robotics Competition is an annual event hosted by SenEcole and supported by incredible organizations committed to the empowerment of youth and the development of Africa.



INTRODUCTION

The Pan-African Robotics Competition, PARC, is an all-African robotics competition created to inspire the youth while promoting STEM education within the African community. The goal of PARC is to prepare young Africans and entice them to use Science and Technology to address solvable African challenges, while exposing them to related careers.

PARC brings together middle school, high school, and university robotics teams to engage in challenges based on real-world topics relevant to science, and the sustainable development of Africa. Competing teams are judged on poster and oral presentations, as well as Robotics. PARC teams can compete in one of four categories: Stars, Techs, Engineers, & Makers League. The winners in the various categories are awarded with prizes and scholarships.

The 2019 Pan-African Robotics Competition will be held at Central University in Accra, Ghana, July 2019. The theme for the year is *Solvable Challenges - The Making of African Smart Cities*. The application to apply for PARC 2019 will be available online December 15, 2018 - January 15, 2019 at www.parcrobotics.org. Visit the website to find more information on the timeline, fees, and stay up to date with latest PARC announcements.



PARC 2019: SOLVABLE CHALLENGES - THE MAKING OF AFRICAN SMART CITIES

According to the UN, the world became predominantly urban in the last decade; largely due to the extreme accelerated urbanization process of emerging economies. The development of modern and smart African cities is essential for the sustained growth of African economies and the well-being of their citizens. As drivers of growth, African cities need to adapt their physical, digital and environmental elements to better respond to dynamic and constantly evolving challenges such as Health, Resilience, Mobility and the Sustainability of cities.



Today, the Fourth Industrial Revolution is changing the way in which African cities provide services to their residents and find effective solutions to these **solvable problems**. PARC 2019 challenges African students to devise solutions for the planning, design, management and transformation of future African cities in an increasingly complex urban environment using science and technology. Student projects will explore topics such as:

- IoT and connectivity
- Data science & cloud technology
- Data visualization & simulation
(e.g., Augmented and Virtual Reality)
- Citizen design & cognitive computing
- Artificial Intelligence
- Cybersecurity
- Personal alert systems
- Driverless cars
- Human-machine interaction
- Smart transportation
- Responsive and flexible infrastructure
- Smart & renewable energy

REQUEST TO PARTICIPATE

The Pan-African Robotics Competition consists of four leagues, the Techs, Stars, Makers and Engineers. Each league has a challenge for teams to solve around the improvement of cities. For each league, one robotics team from every country in Africa and its diaspora will be selected to compete. A team comprises of 4-6 students with 1-2 adult coaches. Participating teams work on their robots and projects in advance and bring their final design to compete at PARC 2019.



TECHS

Middle School

Smart Cities



STARS

High School

Resilient Cities



MAKERS

High School

Agile Cities



ENGINEERS

University Undergrad

Healthy Cities

Request to Participate

To be eligible to compete at PARC 2019, organizations must complete a Request to Participate form describing why their team should be selected to represent their country. The statement should include the organization's STEM experience, the plans to raise the funds needed to travel to the competition, and a description of the organization's efforts of diversity and inclusivity. Finalists will be based on the most qualifying applications. The Request to Participate form will be available to all interested teams from Dec 15, 2018 - Jan 15, 2019.

A maximum of eighty (80) African robotics teams will be selected to participate in PARC 2019. The finalists selected to participate will be announced Feb 1, 2019 and at that time the game rules for each league will be posted and the robot kits will be shipped. Teams have until July of 2019 to prepare their robots and presentations for the PARC competition in Accra, Ghana. If your team is interested in competing in the 2019 Pan-African Robotics Competition, visit www.parcrobotics.org.

Team Expenses

Each team is required to pay a \$250 registration fee and pay for their travel to Accra, Ghana.

The Makers & Engineers league have additional expenses specific to their challenge.

- Makers League: Expenses for this league varies per student project but there is a maximum limit of \$200 that can be spent on supplies. Teams must purchase their own supplies, expenses will not be reimbursed. Teams must submit their receipts to PARC as proof of not exceeding the challenge limit.
- Engineers League: Expenses for this league varies per student project. There is no maximum limit that a team can spend on supplies. Teams must purchase their own supplies, expenses will not be reimbursed.

The robot kits for the Tech & Stars league will be provided to participating teams at no cost.

- Tech League Robot Kit: The robot kit for this league cost \$350 but participating teams will receive the kit for free. The kits will be shipped to the teams directly. Upon completion of the competition, teams can keep the robots to further experiment and continue their robotics education.
- Stars League Robot Kit: The robot kit for this league cost \$2,000 but participating teams will receive the kit for free. The kits will be shipped to the teams directly. Upon completion of the competition, teams can keep the robots to further experiment and continue their robotics education.

The following expenses are organized and funded by PARC:

- Lodging for students and coaches.
- Daily meals (breakfast, lunch and dinner).
- Transportation to and from the airport.
- Transportation to and from the hostels to the competition arena.

Stay Up-to-Date

Join our e-mailing list at www.parcrobotics.org to receive updates on the competition dates, facility location, and other PARC announcements. If you have any questions email parcrobotics@senecole.com. We look forward to receiving your application to participate in the 2019 Pan-African Robotics Competition!

CONTACT

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