

## WORLD ROBOT OLYMPIAD – 2016

We are very happy to inform you that, this year **World Robot Olympiad(WRO)** 2016 is going to be held first time in India. This prestigious event is being jointly organized by **National Council of Science Museums** and India STEM Foundation. WRO is a competition for science, technology and education which brings together the young people all over the world to develop their creativity and problem solving skills through challenging and educational robotics competitions. The WRO Competition is a multi-tier event organised progressively at Regional level, National level and finally at International level.

The last WRO was held in Qatar in 2015; Russia in 2014; Indonesia in 2013, .....

The Regional Level of WRO in North Eastern region is going to be held in Guwahati on 3<sup>rd</sup> and 4<sup>th</sup> September 2016. Regional Science Centre, Guwahati will conduct this event in Guwahati.

- RSC, Guwahati shall sponsor five teams from its Innovation Hub for participating in the WRO competition. RSC, Guwahati will provide necessary robotic kits and guidance to members of Innovation Hub including registration fee for WRO competition. For more details for membership in Innovation Hub and WRO, Please contact-

Regional Science Centre,  
Khanapara,  
Guwahati-781022  
Ph. 0361-2363218 / 2361699

- Regional Level of World Robot Olympiad for NE Region= September 3-4, 2016
- National Level = October 22-23, 2016
- International Level= November 26-27, 2016

**Last date of Registration: 10<sup>th</sup> August 2016**

## **Brief about the World Robot Olympiad (WRO) 2016**

World Robot Olympiad India (WRO India) is one of the largest Robotics competition in India for students between the age group of 10 to 25 years. It is a not-for-profit competition. This year, the theme for WRO is “**Rap the Scrap**”. This is a national campaign by the government of India, covering 4,041 statutory cities and towns, to clean the roads and infrastructure of the country. The theme Rap the Scrap is a step towards involving educationist, teachers, parents, mentors, Government and local bodies, NGOs, Waste Management Companies to come together and enable students to come out with innovative practical solution using Robots technologies to reduce, recycle and manage waste.

### **A) Game Category with age limit:**

1. Elementary (Primary) School Age: Participants up to 12 years old in the year of competition.
2. Junior High (Middle) School Age: Participants 13 - 15 years old in the year of competition.
3. High (Secondary) School Age: Participants 16 - 19 years old in the year of competition.
4. WRO Football: Participants 10 - 19 years old in the year of competition.
5. Advanced Robotics Challenge: Participants 17 - 25 years old in the year of the competition.
5. Open Category – Teams are required to think of a real world problem related to the theme and come out with an innovative solution for the same.

### **B) Team Definition**

The WRO is a team-based challenge. To participate in each category of competition, students must work in teams. A team consists of one coach and two or three team members.

### **C) Coaches**

The minimum age of a coach in an international WRO tournament is age 20 at the time of registration for the WRO final. Coaches may work with more than one team. Coaches may offer students advice and guidance prior to the competition, however during the actual Olympiad competition, all work and preparation must be performed by the student members of the team.

### **D) Robotic Kits**

The Controller, Motors and Sensors used to assemble robots must be from LEGO MINDSTORMS (NXT or EV3) and the HiTechnic Color Sensor. Other LEGO branded elements may be used to construct the remaining parts of the robot. WRO recommends use of Education versions of LEGO MINDSTORMS.

**\*\* For more details of WRO competition, please log on [www.wro2016india.org](http://www.wro2016india.org)**



Jointly organised by



National Council of Science Museums  
Ministry of Culture, Govt. of India

# Participate in World Robot Olympiad 2016

World Robot Olympiad™ is an event for science, technology and education which brings together the young people all over the world to develop their creativity and problem solving skills through challenging and educational robotics competitions. This year the theme is all about Waste Management.

Over 6 billion people live on planet earth today, producing approximately 1.9 billion tons of Domestic, Municipal, Industrial, Medical, Electronic, Radioactive, Toxic and Hazardous waste every year. 30% of the waste generated remains uncollected and rest 70% gets dumped in oceans, landfills and dumpsites thus polluting and clogging our ecosystem, causing numerous health and environmental hazards. We have to find ways to reduce, manage and recycle waste.

This year, World Robot Olympiad (WRO™) challenges you to design, build and program autonomous Robots to solve exciting challenges and come out with innovative solutions to **Reduce, Manage and Recycle Waste using Robotics Technology!**

Let's get together and Rap the Scrap!

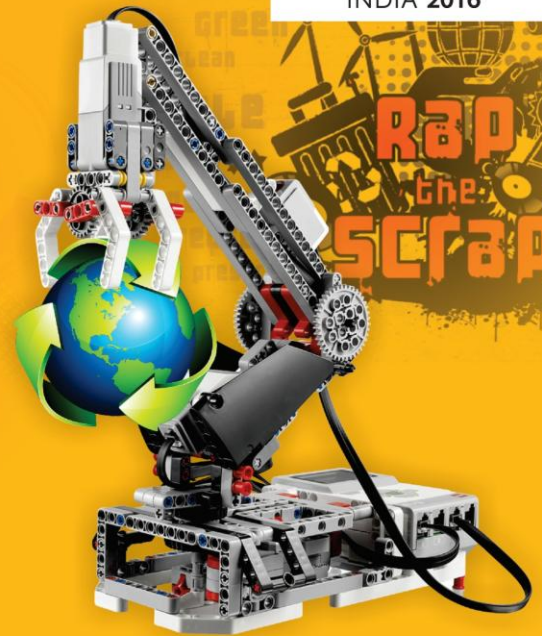
|                   |  |
|-------------------|--|
| <b>Categories</b> | <b>Elementary</b> (9-12 years)   <b>Junior High</b> (13-15 years)   <b>Senior High</b> (16-19 years)   <b>WRO™ Football</b> (10-19 years)   <b>Open Category</b> (9-25 years)   <b>Advanced Robotics Challenge</b> (17-25 years) |
|-------------------|--|

|                 |  |   |  |
|-----------------|--|---|--|
| <b>Schedule</b> | <b>Regional Tournaments</b><br>August - September 2016 | <b>National Competition</b><br>October 2016 | <b>International Championship</b><br>November 2016 |
|-----------------|--|---|--|

For team registration, participation details and rules contact your nearest science center/science museum or log on to:  
[www.wroindia.org](http://www.wroindia.org)  
[www.ncsm.gov.in/wroindia](http://www.ncsm.gov.in/wroindia), [www.indiastemfoundation.org/wroindia](http://www.indiastemfoundation.org/wroindia)

 /wroindia  @wroindia

**Last date for  
Registration  
10<sup>th</sup> August 2016**



For Sponsorship/exhibition/branding related query,  
write to: [wro@indiastemfoundation.org](mailto:wro@indiastemfoundation.org)

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# वर्ल्ड रोबोट ओलंपियाड 2016 में भाग लें

वर्ल्ड रोबोट ओलंपियाड (World Robot Olympiad™) विज्ञान, प्रौद्योगिकी और शिक्षा के क्षेत्र में एक ऐसा कार्यक्रम है जो विश्व भर के युवा वर्ग को एक स्थान पर लाता है ताकि चुनौतीपूर्ण और शैक्षिक रोबोटिक्स प्रतियोगिता के माध्यम से उनकी रचनात्मकता और विभिन्न समस्याओं को सुलझाने के कौशल का विकास हो सके। इस वर्ष का विषय कचरा प्रबंधन (Waste Management) से संबंधित है।

आज पृथ्वी पर 6 अरब से ज्यादा लोग हैं जो हर साल लगभग 1.9 अरब टन के घरेलू, नगर-निगम, औद्योगिक, मेडिकल, इलेक्ट्रॉनिक, रेडियोधर्मी, जहरीला और खतरनाक कूड़ा और मलबा उत्पन्न करते हैं। इनमें से 30 प्रतिशत कूड़े एकत्र नहीं हो पाते हैं और बाकी के 70 प्रतिशत या तो समुद्र में, भराव क्षेत्रों या कचरे के मैदानों में फेंक दिए जाते हैं। इसकी वजह से हमारा पर्यावरण प्रदूषित होता है और स्वास्थ्य तथा वातावरण के लिए अनेक खतरे उत्पन्न होते हैं। हमें कचरों और मलबों को कम करने तथा उनके प्रबंधन और पुनर्चक्रण के अच्छे उपाय ढूँढने चाहिए।

इस साल, वर्ल्ड रोबोट ओलंपियाड (World Robot Olympiad™) आपको स्वायत्त रोबोट का डिजाइन, निर्माण और प्रोग्रामिंग कर कई रोचक चुनौतियों का समाधान निकालने और **रोबोटिक्स टेक्नोलॉजी की मदद से मलबों को कम करने, उनके प्रबंधन और पुनर्चक्रण के रचनात्मक उपाय** निकालने की चुनौती दे रहा है।

चलिए हम मिलकर मलबों के ढेर को ढेर कर दें! **Let's get together and Rap the Scrap!**

## श्रेणियाँ

प्राथमिक (9-12 वर्ष) | जूनियर हाई (13-15 वर्ष) | सीनियर हाई (16-19 वर्ष) | डब्ल्यूआरओ फुटबॉल (10-19 वर्ष) | स्वतंत्र श्रेणी (9-25 वर्ष) | उन्नत रोबोटिक चुनौती (17-25 वर्ष)

## कार्यक्रम

क्षेत्रीय टूर्नामेंट | राष्ट्रीय प्रतियोगिता | अंतरराष्ट्रीय चैम्पियनशिप  
अगस्त-सितम्बर 2016 | 22-23 अक्टूबर 2016 | नवम्बर 2016

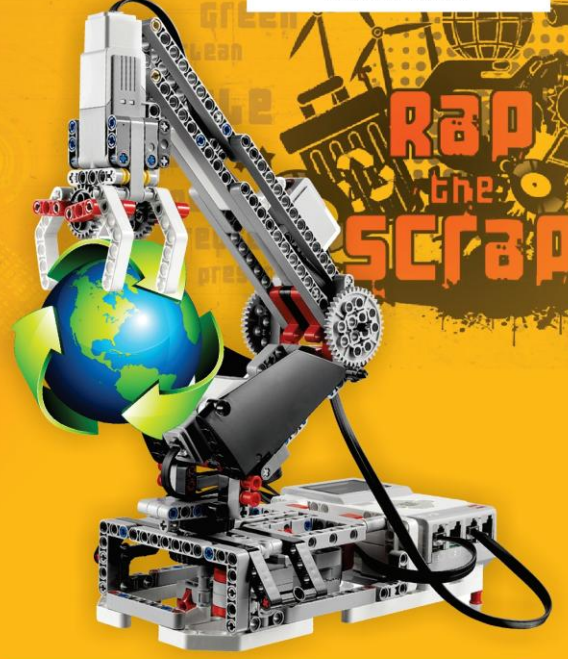
टीम पंजीकरण, भागीदारी के विवरण और नियमों के लिए अपने नजदीकी साइंस सेंटर या साइंस म्यूजियम से संपर्क करें या लॉगऑन करें:

[www.wroindia.org](http://www.wroindia.org)

[www.ncsm.gov.in/wroindia](http://www.ncsm.gov.in/wroindia), [www.indiastemfoundation.org/wroindia](http://www.indiastemfoundation.org/wroindia)

f /wroindia @wroindia

पंजीकरण की  
अंतिम तिथि  
10 अगस्त 2016



प्रायोजन/प्रदर्शनी/ब्रांडिंग से संबंधित जानकारी के लिए मेल करें:  
[wro@indiastemfoundation.org](mailto:wro@indiastemfoundation.org)

संयुक्त आयोजक:



National Council of Science Museums  
Ministry of Culture, Govt of India



समर्थन:



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
SCIENCE & TECHNOLOGY

प्रशिक्षण सहभाग:



मीडिया पार्टनर:

