

Announcement and Call for Participation



IEEE Sensors Council announces an IEEE International MYOSA Students Contest

About MYOSA ver 2.0 Mega Platform

MYOSA stands for “Make Your Own Sensors Application”. It is IEEE Sensors Council’s (<http://ieee-sensors.org/>) educational initiative with an objective to make students of std. 11-12th familiar with sensors which are the backbone of today’s smart cities. In this age of “Internet of Everything” where we are surrounded by so many sensors, it becomes imperative to understand how these sensors function to make our life easy.

MYOSA platform is developed using Arduino’s open source environment with the concept of Lego games. This platform is developed keeping in mind the exposure of pre-university kids and young undergrad students. For this the design has taken care of sensors set up phase. Just plug-in the sensor board with the MYOSA mother board and the sensor data will start showing up on the OLED screen. We believe, in this way students would learn about sensors playfully at a young age. Think of any application and you can build an Android App in a couple of week’s effort. You don’t require wires for connections and bread-boards for drawing your circuits. Open source IDE for MYOSA is available and online support for application development is also available on <https://ieee-sensors.org/myosa/>.

A wide range of sensors and actuators can be connected, upto 128, to its motherboard. You can also sink it with your Android smartphone using the in-built Bluetooth. If your application needs a wi-fi, you can connect a Lego unit of wi-fi module using one of the four UART ports. You may keep all your data of the application on cloud to access and monitor them from anywhere.

About IEEE International MYOSA Students Contest

Welcome to the IEEE International MYOSA Students Contest!

What is the aim of this competition?

It aims to excite submissions of innovative ideas followed by live demonstrations of intuitive applications in the area of sensors. Some of the examples could be:

- automated lighting system of your room,
- triggering some healthcare action based on gesture sensor etc.

Contest Category

Category 1: 11th – 12th grade students (team or individual)

Category 2: Undergrad engineering students (team or individual)

Phases of Contest

Ideation Phase: Submit your idea of application that the team intends to develop explaining the following:

- how MYOSA board will be used,
- which all sensor boards will be used (select the sensors from <https://iee-sensors.org/myosa/sensorboards/> and/or actuators from <https://iee-sensors.org/myosa/the-actuators/>, you can select maximum 5 sensors/actuators from the listed ones to build your idea),
- what additional circuit and/or software will be created around the MYOSA board to make your application work.

Document length: Not exceeding 4 pages (A4 size, 11 pt, arial font, single line spacing, single column).

Acceptance Phase: A team of international reviewers will review the submission to shortlist the submissions based on its technical merit and uniqueness in exploiting MYOSA platform. A maximum of 15 proposals will be selected and intimated if found suitable.

Development Phase: Selected teams will be sent the MYOSA mother board (<https://iee-sensors.org/myosa/specification/>) along with the sensor boards (<https://iee-sensors.org/myosa/sensorboards/>) that are planned to be used in the proposed application. Participating members of the selected teams will develop their proposed applications in their respective school's Lab.

Demonstration Phase: These teams will be invited to demonstrate their developed applications on 28 October, 2018 in IEEE SENSORS 2018 conference (<http://iee-sensors2018.org/>), being held in New Delhi (India) at Pullman Hotel, Aerocity.

What constitutes a team?

Not more than 4 students, preferably from the same school (category 1)/institute (category 2). Participating teams will include a maximum of four student members and must identify a faculty mentor at their School who will act as the supervisor and the point of contact with respect to the IEEE International MYOSA Students Contest Committee.

What is the prize?

Top two teams in each category will be awarded \$1000 (1st place) and \$500 (2nd place). In case of a tie, \$1500 will be divided equally among the top teams.

All participating teams (selected for live demonstration) will receive a Participation Certificate signed by the President of the IEEE Sensors Council and the Chair of the IEEE International MYOSA Students Contest Committee.

These Awards will be given to the two best projects/teams in each category on 28 October, 2018 during the Welcome Reception ceremony of IEEE SENSORS 2018.

Final Submission

Submission package must include:

- technical project proposal

- Bonafide certificate from the school duly signed by your school principal/headmaster for its authenticity. Name of your teacher (not more than one) who has guided the team should also be there.
- a one-page short resume of all the team members
- a one-page presentation letter, signed by the supervising faculty, in which it is confirmed that the School laboratories will be available for the development of the project
- the address and contact info of the mentor teacher who will be the point of contact with the contest organization committee (this is the address where the MYOSA platform will be shipped if the team gets selected)
- a letter in which the team members state that the live demonstration of the MYOSA project will be made at the venue of the IEEE SENSORS 2018 and declare that at least one team member will attend the event.

The submission package should be emailed to myosa_sensors2018_contest@daiict.ac.in with copy to Prof. Sanjay Srivastava (sanjay_srivastava@daiict.ac.in), Chair, IEEE International MYOSA Students Contest Committee and to Rachel Brockhoff (rbrockhoff@conferencecatalysts.com).

Who will take care of team's expenses?

The cost of the MYOSA board is sponsored by the IEEE Sensors Council.

The IEEE Sensors Council or the organizing committee of IEEE SENSORS 2018 is unable to cover the travel and subsistence expenses for the contest participants; therefore members of the teams will have to independently secure funding for this.

Students participating in the live demonstration session of the IEEE International MYOSA Students Contest will receive a free one-day pass for attending the conference for 28 Oct 2018; a reduced student registration fee will be available for those participants interested in attending the whole conference but not presenting papers.

IEEE International MYOSA Students Contest Committee

Chair

Prof. Sanjay Srivastava, DA-IICT, Gandhinagar (sanjay_srivastava@daiict.ac.in)

Other members of the committee

Prof. Deepak Uttamchandani, University of Strathclyde, Glasgow, UK (d.uttamchandani@strath.ac.uk)

Prof. Yu-Cheng Lin, National Cheng Kung University, Tainan City, Taiwan (yuclin@mail.ncku.edu.tw)

Prof. H. Troy Nagle, NC State University Raleigh, NC, USA (nagle@ncsu.edu)

Prof. Srinivas Tadigadappa, Northeastern University, USA (srinivas@northeastern.edu)

Prof. Rudra Pratap, IISc Bangalore (pratap@iisc.ac.in)

Deadlines and important dates

Submission of proposals deadlines:	15 August, 2018
Invitation to the shortlisted team announcement:	15 September, 2018
Demonstration at Pullman Hotel, Aerocity, New Delhi:	28 October, 2018