



Institute of Electrical and Electronics Engineers (IEEE)
Region 9 (Latin America and Caribbean)
Andean Council
Ecuador Section
Universidad de las Fuerzas Armadas - ESPE

# Technical Workshops







# IEEE ESPE Student Branch - Secretariat Organization of Technical Workshops

## Objectives:

- Encourage, train and train student members, as well as the rest of the university community on issues of relevance to engineering careers
- Develop training programs so that they can take regularly

### Web Trainings: Rapid Prototyping - ROS - Python

To provide ongoing training to its members and the university community at large, the IEEE ESPE Student Branch organized the ROS (Robotic Operating System), Rapid Prototyping and Python training courses. Thanks to the support of the Mechatronics and Dynamic Systems laboratory, in this way, it was also possible to promote the activities of the student branch and the tools that the university has available to students to motivate the creation of projects.

For the web training courses, the items were planned to cover all the expenses of this (trainer, certificates, breaks) and to contribute to the professional growth of the students of Universidad de las Fuerzas Armadas.

Former IEEE ESPE student members, currently professionals, were considered for being trainers. Course planning in extension and topics was developed according to the needs of university students and members of the student branch.

**Date:** June 16 – 17, 2020

**Time:** 18h00













Figure 1 Advertising of the ROS and Python

#### EMBiography Competition:

The EMBS technical chapter of IEEE ESPE developed the EMBiography contest, the first edition of the scientific infographic contest, where the objective was to test the creativity and passion for research of IEEE members and the university community in general. The contest consisted of designing an infographic of your topic that falls within the following categories:

#### 1. Technologies

- Physiological signal processing
- Smart prosthetics and orthoses
- Medical devices
- Biomaterials
- Telemedicine

#### 2. Life Sciences

- Pandemics
- Gene therapy
- Bioremediation
- Bioinformatics
- Nanomedicine

Registration was free and free for the entire community but with a restriction of 10 places per theme. It was held from May 4 to 8 and there were 75 participating infographics.





Figure 2 Advertising of the EMBiography Contest

#### Robot Builder Workshop

The RAS Technical Chapters of the Student Branches IEEE-ESPE, IEEE-UTN, IEEE-ESPOL, IEEE-UPS Cuenca, together with the affinity group WIE and with our collaborator STEEL STORE, organized the workshop "Robotic Builder", a series of courses that provided you with basic knowledge in the main categories of robot skills. The first course developed was "Basic Arduino" where they explained the bases of electronics and programming necessary to enter the world of robotics. The courses were limited and took place from May 25 to June 5 through the meet platform and google classroom.t



Figure 3 Advertising of the Arduino Course





#### Iron Kids Competition

The RAS technical chapter and the Women In Engineering WIE affinity group of the IEEE-ESPE Student Branch organized the "Iron Kids" contest in celebration of International Children's Day. The objective was the development of imagination and creativity by building a Robot with recycled materials that can be found at home. It consists of three categories in which you can participate which were: Schools, Colleges and University. The event took place on May 28, 2020 and had the participation of 24 children and youth from Ecuador. The awards were purchase orders and IEEE memberships.



Figure 4 Advertising of the Iron Kids Competition

#### WIE Science Quiz

The IEEE ESPE Student Branch and the ASME ESPE Student Section bring you the WIE SCIENCE QUIZ contest where the objective was to test the knowledge of outstanding women in the Engineering - Science branch throughout history and today. Through this event, it was possible to promote the recognition, motivation and retention of Women in Engineering. The participation was carried out in pairs made up of a woman and a man. It was held on June 23 in commemoration of the day of women in engineering, there were more than 20 participants and the prizes were purchase orders and student memberships.



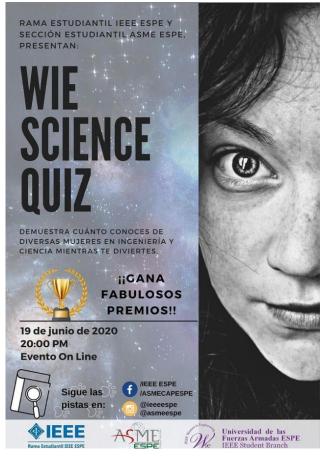


Figure 5 Advertising of the WIE Science Quiz