Remote FPGA Based Laboratory to Foster Microelectronic

Workshop – one page overview

- WS Title:

Remote FPGA based laboratory to foster microelectronic

- Purpose/Objectives:

Throughout this workshop you will see how digital circuits are described using the VHDL language. We will also record the result of the description in an FPGA using LabsLand's remote FPGA lab. First, we will work with basic circuits to learn the peculiarities of these devices and the description of hardware. Later we will make more complex circuits.

- Duration:

The duration of the workshop is 1 hour, the list of topics and estimated duration for each are:

Topic	***Duration (h)***
Background	*0.2*
Connecting to LabsLand's remote FPGA lab	*0.2*
First description of a circuit	*0.2*
Description of more complex circuits	*0.2*
Discussion	*0.2*

- Presenter(s):

Dr. Pedro Plaza

Researcher, UNED, DIEECQTAI, Spain.

He has a Ph.D. degree in Industrial Engineering at the ETSII (Industrial Engineering School) of the Spanish University for Distance Education (UNED). He is currently R&D Systems engineering professional at Siemens Mobility. Pedro Plaza is Editorial Board Member in International Journal of Automation and Robotic Technology in Inderscience. He is the author of several publications in prestigious conferences and journals. Pedro Plaza has collaborated on several research projects. He is IEEE Senior Member. Also, he is Chair in the IEEE student branch of UNED and the chapters WIE (Women in Engineering) and Education in the student branch..

- Short description/Abstract:

Through this workshop, the aim is to provide attendees with a tool to be used in subjects in microelectronic area of knowledge. This tool is very inexpensive and allow teachers to adapt different types of content due to their potential scalability.

Likewise, throughout the workshop, simple examples of educational content are shown using this tool. The workshop also works on different tips and tricks to encourage students during a training session.

Finally, presenters open a discussion session where attendees and presenters exchange opinions, best practices and lessons learned from the classroom experience.

- Equipment needed by participants:

Participants should not bring anything to the workshop, but it could be beneficial if they had a laptop.