

Innovative Teaching Approaches in development of Software Designed Instrumentation and its application in real-time systems



9th Balkan Open Competition in Software- designed Instrumentation

PART I – team competition (hackathon)

TOPIC: Produce music by sensors or mechanics

Location: **Center from promotion of science (CPN)**, Kralja Petra 46, Belgrade
Date: **25.** and **26.** of October 2019.

Each team is equipped with two laptops with **Arduino IDE** and **LabVIEW 2015** with LEGO Mindstorm toolkit installed. *Note: You may need to install Arduino libraries mandatory for the usage of different sensors and actuators (i.e. Servo library).*

Each team will have:

- LEGO Mindstorm robot
- Arduino UNO microcontroller
- Arduino sensors and actuators: four-digit seven-segment displays, reflective optical sensors, servo motors, capacitive touch sensors, ultrasonic sensors, RFID readers, accelerometer, RF 433MHz Transmitter/Receiver Module, buttons, LED

In Makers Space in CPN you have **3D printers** and different kind of tools at your disposal.

The presentation of your solution must have **Power Point presentation** to describe your experiment. Also, you'll have to make a little **video** to demonstrate the experiment.

If have any question or you need anything feel free to ask someone on duty. **Don't forget to have fun! :)**