



UNIVERSITÀ  
DI PAVIA

**Ph.D. Program in Electronics, Computer Science and Electrical Engineering**

## **COURSE**

### **Embedded systems design, communication and data acquisition**

***F. Leporati, E. Marenzi, E. Torti***

**OBJECTIVES:** The course addresses the design of digital embedded systems for all those applications into which processing performance should be combined with low power consuming, small footprint and customised resources. Due to the strong interactions with the environments into which these systems are “embedded” these themes are very hot and feature huge connections with several industrial fields (avionics, medicine and bioengineering, food and agriculture, ...) allowing students to have a thorough vision of many disciplines tackled during the MD and PhD studies.

#### **PROGRAM**

- General characteristics of embedded systems
- Embedded systems hardware and software
- Technologies for data acquisition in embedded systems
- Introduction to field buses for embedded industrial applications
- Can bus characteristics
- Implementing Can bus on a microcontroller

**EVALUATION:** Test-questionnaire with multiple answers.

**ATTENDANCE:** The course will take place in the GREEN Seminar Room. Students who are not currently in Pavia can contact the professors to receive a ZOOM link

**LECTURES:** 20h; **CREDITS:** 4,5 CFU

**DATES:** July 24-25-26; September 9-10-11-12-13

**Ph.D. Coordinator**

Prof.ssa Ilaria Cristiani

Seminar will be held in English

EMAIL: {francesco.leporati, elisa.marenzi, emanuele.torti}@unipv.it