



POLITECNICO  
DI TORINO

POLITO

July 17<sup>th</sup> - 21<sup>th</sup> 2017

SUMMER SCHOOL

## Building tomorrow society: IoT applications & data management

*Internet of things, smart homes, smart buildings, smart cities, big data... these increasingly popular words describe the future ahead of us. All these application domains require handling an incredible amount of data and interacting with an incredible amount of devices (sensors and actuators), with sufficient intelligence and power to select information and actions relevant to the end-user.*

*The Summer School introduces the fundamental aspects of the new breed of smart applications, and will cover their full design cycle: distributed wireless sensors, data sensing, data transmission, and collection and management, intelligent behaviors, data visualization and user interaction.*

*The teaching approach will be practical, with theoretical lectures intertwined with hands-on experimental activities. Students will develop simple Smart Environment applications.*

*All the activities will be held in English.*

**Location:** Politecnico di Torino

**Requirements:** the program is designed for undergraduate students who have completed at least two years of a Bachelor program in ICT (Computer Science, Computer Engineering, Electronics, Telecommunications).

**Application and fees:**

The total fee of 500 euros covers:

- 1-week intensive Summer School with lectures and labs experiences (40 hours);
- PoliTo tutoring for the whole academic activity;
- Visit to a research lab/company;
- Welcome cocktail and "arrivederci" dinner;
- Insurance coverage for accidents occurring on the university premises;
- Wi-Fi connection.

Flight tickets, visa fees, accommodation, meals and travel/medical insurance are not included.

Students will receive 4 ECTS credits upon successful completion of a final exam.

Please visit the Summer Schools website for detailed information on modalities and timing for the online application:

[http://international.polito.it/courses/summer\\_schools](http://international.polito.it/courses/summer_schools)

Application deadline: May 31<sup>st</sup>, 2017.

### Program

**Day 1**

Lecture: ICT for tomorrow society: smart society, biomedical applications, industry 4.0, ...

Lab: Wireless transmission

**Day 2**

Lecture: sensor networks;

Lab: experiments on sensor networks

**Day 3**

Lecture: data science for sensor data;

Lab: mobile application for sensor data

**Day 4**

Lecture: Internet of Things (IoT) and ambient intelligence (Aml);

Lab: Lab on IoT and Aml to build a complete prototype combining custom sensors, off-the-shelf devices, and mobile apps

**Day 5**

Visit to a research lab or a HighTech Company.

Exam, grading and final ceremony.

