



# PortASAP

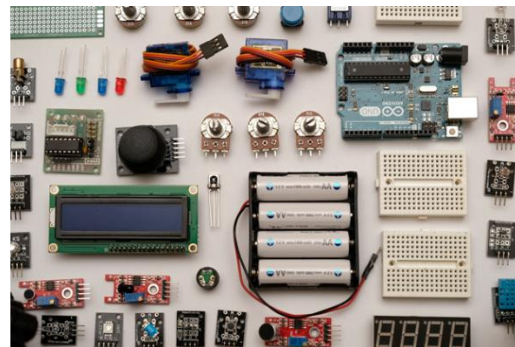
COST Action CA16215 - European Network for the Promotion of PORTable, AFFordable and SIMple Analytical Platforms

## Training school – DIY Arduino-based platform for monitoring Indoor Air Quality (IAQ)

### July 1-2 & September 20 - Virtual School



Photos by INL and Robin Glauser on Unsplash



**Dear PortASAP community,**

You can now apply to the Training School - DIY Arduino-based platform for monitoring Indoor Air Quality (IAQ) through the form available in [this link](#). The deadline for application is the June 6<sup>th</sup> 2021.

The organizing committee and the PortASAP Chair will select the participants. The following criteria will be considered: motivation letter, geographic diversity, and gender balance. Twenty-five candidates will be selected for the virtual training school and will receive, free of charge, the kit.

#### **Objectives:**

The monitoring of environmental parameters using open-source low-cost portable instrumentation is a key tool to expand the currently-available information. Hence, this training school aims to drive researchers with different backgrounds in the process of building and operate an Arduino-based platform for monitoring Indoor Air Quality.

The trainees will build a DIY platform containing multiple sensors for monitoring different chemical and physical parameters used to assess the Indoor Air Quality (e.g PM, VOCs, eCO<sub>2</sub>, temperature, humidity, pressure, luminosity). The Training School will include lectures and hands-on sessions on:

- Introduction to Arduino-based electronics
- Indoor Air Quality
- Arduino IAQ monitoring system assembly and operation
- Data recording and analytics



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The activities of the first two days of the Training School (July 1<sup>st</sup> and 2<sup>nd</sup> 2021) will include the assembly of the different sensors, the installation of the firmware and its operation, as well the parametrization of the data collection. At the end of this first part of the workshop, trainees are expected to record IAQ parameters at specific locations (e.g. offices, laboratories, etc.) for a prolonged period of time (final details will be communicated during the sessions of the Training School). Data will be stored in a cloud repository and analyzed in follow-up session school (attempt date September 20<sup>th</sup> 2021). In this last session, the collected data will be inspected and analyzed by adopting basic tools within the data science framework, in order to introduce the trainees to problems and methodologies relevant to data analytics and data-driven machine learning.

**Support:** Trainees will receive prior to the Training School a kit free of charge with all the components to build the IAQ monitoring platform.

Best regards,

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