

1<sup>st</sup> announcement

## Workshop

# Setting standards for low-cost Air Quality sensors

Thursday, April 11, 2019 @ BAM in Berlin

### Why this workshop?

Recent years have seen various activities worldwide aimed at introducing low-cost sensors for monitoring of air pollution and air quality (AQ). These cover sensors for particulate matter (PM) as well as for hazardous gases like CO, NO<sub>x</sub>, ozone, SO<sub>2</sub> as well as carcinogenic VOCs like formaldehyde and benzene, but also odour nuisance monitoring and indicator gases for air quality such as CO<sub>2</sub>, H<sub>2</sub> or tVOC (total VOC), the latter especially for indoor air quality (IAQ).

A primary concern in this field is the data quality or simply the question: can low-cost sensors actually provide relevant information? This fundamental problem has to be addressed with respect to the different fields of application, i.e. outdoor air quality, indoor air quality and odour monitoring, due to the different references available today.

The organizers of this workshop believe that low-cost sensors can indeed provide additional insights, information and services if certain standards are met. The aim of this workshop is to reflect current standardization activities, identify gaps and to potentially initiate new activities for addressing critical gaps.

### Outline of the workshop

The workshop will set the scene by reflecting the state-of-the-art in low-cost AQ sensors, the importance of standardization as well as existing standards (European AQ directive, ISO 16000 for IAQ). It will then present current activities and first results of various working groups:

- CEN TC 264 (Air Quality), WG42: Ambient air - Air quality sensors
- CEN TC 264, WG41: Emissions and ambient air - Instrumental odour monitoring
- VDI/VDE GMA FA2.62: Fachausschuss Multigassensorik

A specific focus of the workshop will be the discussion of standards for IAQ sensors. This field has seen a tremendous effort from many industrial players to provide novel “digital” gas sensors allowing ubiquitous AQ monitoring using mobile phones and IoT devices. However, tests outlined in ISO 16000 part 29 (test methods for VOC detectors) seem inadequate for providing a suitable frame of reference for manufacturers and end users alike.

In the discussion, we want to reflect similarities and differences between the various application fields to identify possible common goals and requirements, but also specific standards which should allow developers and manufacturers a common frame of reference. Finally, a quality standard helping users – not only companies but especially citizens – understand the value and limitations better to make full use of low-cost sensor data is required for achieving better acceptance and to open up new markets for AQ sensor systems.

### Participation in the workshop

To register, send an email to: [info@lmt.uni-saarland.de](mailto:info@lmt.uni-saarland.de) before April 1, 2019.

*This workshop is organized in conjunction with the international training course “Low-cost Environmental Monitoring – from sensor principles to novel services”, April 9-10, 2019 @ BAM. Further information: <http://netmon.eurice.eu/>*

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