This workshop aims to bring together European academic and industrial actors in the field of air and water quality monitoring.

These 2 days are dedicated to highlight the state of the art in miniaturized sensors (micro- and nanotechnologies) for pollutants detection in air and in water, and/or associated embedded microsystems, both in academic prototypes and commercial products. The existing field measurement campaigns (urban and rural sites) will also be addressed. Special emphasis will be put on improvements for addressing the issues that generate measurement errors (calibration, cross-sensitivity, aging ...).

Topics:
- Improvement of sensitive materials
- Gas micro- and nanosensors
- Chemical microsensors in liquid phase
- Communicating embedded microsystems
- Calibration and cross-sensitivities (selectivity)
- Trends on low-cost sensors deployment
- Field measurement campaigns and current standards

Registration Fees

<table>
<thead>
<tr>
<th></th>
<th>Early bird (before May 3rd 2019)</th>
<th>Full rates (after May 3rd 2019)</th>
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<tbody>
<tr>
<td>Students</td>
<td>190 €</td>
<td>250 €</td>
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<tr>
<td>Academic</td>
<td>280 €</td>
<td>335 €</td>
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<tr>
<td>Non Academic</td>
<td>385 €</td>
<td>445 €</td>
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Key Dates!

- **February 15th, 2019**: Opening call for abstracts and announcement of confirmed invited speakers and scientific committee
- **April 30th, 2019**: Deadline for abstract submission
- **May 2nd, 2019**: Notification of acceptance
- **May 3rd, 2019**: Deadline for early bird registration
- **May 13th, 2019**: Closing registrations

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Confirmed invited speakers:

- Eduard LLOBET (Full Professor, Univ. Rovira i Virgili, Tarragona, Spain): "2D nanomaterials beyond graphene: opportunities and challenges for selective gas sensing"
- Laurent SPINELLE (Engineer R&D, INERIS Pôle CARA- Unit ASUR, France): "Sensors and air quality: an assessment of what we can expect today from low-cost sensors"
- Giorgio SBERVEGLIERI (Professor Emeritus, Univ.of Brescia, Italy; President of NANO SENSOR SYSTEMS SRL): "Nano MOX chemical sensors applied to agri-food field"
- Jean-Christophe MIFSUD (President and founder of RUBIX SI, Toulouse, France): "Sensors selectivity versus sensors orthogonality: The human being as the ultimate example of sensors fusion"
- Adrian ARFIRE (Metrology Engineer, Airparif, France): "A Holistic Approach to Low-Cost Air Quality Sensor Evaluation: The AIRLAB Microsensors Challenge"

Scientific committee:

<table>
<thead>
<tr>
<th>Khalifa Aguir</th>
<th>Christophe Pijolat</th>
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<tbody>
<tr>
<td>(CMC2, IM2NP, Marseille, France)</td>
<td>(CMC2, EMSE, St-Etienne, France)</td>
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<tr>
<td>Marcel Bouvet</td>
<td>Eduardo Pinilla-Gil</td>
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<tr>
<td>(CMC2, ICMUB, Dijon, France)</td>
<td>(Nanosen-AQM, IACYS, Badajoz, Spain)</td>
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<tr>
<td>Hélène Débéda</td>
<td>Lionel Presmanes</td>
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<tr>
<td>(CMC2, IMS, Bordeaux, France)</td>
<td>(Nanosen-AQM, CIRIMAT, Toulouse, France)</td>
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<tr>
<td>Esther Hantanon</td>
<td>Jean-Paul Viricelle</td>
</tr>
<tr>
<td>(NanoSen-AQM, CSIC-ITFI, Madrid, Spain)</td>
<td>(CMC2, EMSE, St-Etienne, France)</td>
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<td>Philippe Menini</td>
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<td>(NanoSen-AQM, LAAS, Toulouse, France)</td>
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Workshop program overview:

**Monday, May 20th, 2019**

- 08:45-09:30 ➔ Registration opening, welcome
- 09:30-10:15 ➔ Workshop opening
- 10:15-11:00 ➔ Keynote
- 11:00-12:30 ➔ Improvement in sensing materials (Sess.1)
- 12:30-14:00 ➔ Lunch
- 14:00-16:00 ➔ Micro-nano gas sensors / trends on low cost sensors (Sess.2)
- 16:00-17:00 ➔ Poster & coffee break
- 17:00-19:00 ➔ (bio)Chemical sensors in liquid phase (Sess.3)
- 20:30-23:00 ➔ Gala dinner

**Tuesday, May 21st, 2019**

- 08:30-10:30 ➔ Embedded microsystems (Sess.4)
- 10:30-11:30 ➔ Poster & coffee break
- 11:30-13:30 ➔ Calibration and cross sensitivity (Sess.5)
- 13:30-14:30 ➔ Lunch (buffet)
- 14:30-16:15 ➔ Field measurements (Sess. 6)
- 16:15-16:30 ➔ Closing

Sponsors/Exhibitors:

**Workshop Venue: MERCURE Hotel Compan**
8 Espl. Compans Caffarelli, 31000 Toulouse Tel.: +33 561 11 09 09
Contact: nanosen-aqm@laas.fr