



 **cost**
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



 **cost**
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

COST Office
Avenue Louise 149
1050 Brussels, Belgium
t: +32 (0)2 533 3800
f: +32 (0)2 533 3890
office@cost.eu

www.cost.eu

COST Action TD1105
***European Network on New Sensing Technologies for Air-Pollution Control
and Environmental Sustainability – EuNetAir***

TRAINING SCHOOL
on Environmental Technologies and Air-Quality Monitoring

Barcelona, 13 - 15 June 2013

**UNIVERSITAT de BARCELONA (UB), MIND-IN2UB - Departament
d'Electrònica, c/ Martí i Franquès, 1 - E-08028 Barcelona, Spain
and CSIC-IDAEA, c/ Jordi Girona, 18 - E-08034 Barcelona, Spain**



COST is supported
by the EU Framework Programme



ESF provides the COST Office
through a European Commission contract



Background and goals

About COST Action TD1105 EuNetAir

COST Action TD 1105 EuNetAir (www.cost.eunetair.it), a Concerted Action on *New Sensing Technologies for Air-Pollution Control and Environmental Sustainability*, is a running Networking funded in the framework *European Cooperation in the field of Scientific and Technical Research* (COST) during 2012-2016.

The main objective of the Concerted Action is to develop new sensing technologies for Air Quality Control at integrated and multidisciplinary scale by coordinated research on nanomaterials, sensor-systems, air-quality modelling and standardised methods for supporting environmental sustainability with a special focus on Small and Medium Enterprises.

This international Networking, coordinated by ENEA (Italy), includes over 75 large institutions from 27 COST Countries (EU-zone: *Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom*) and 5 Non-COST Countries (extra-Europe: *Australia, Canada, China, Russia, USA*) to create a S&T critical mass in the environmental issues.

About the Training School at Barcelona, 13 - 15 June 2013

The *three-day* Training School from Thursday to Saturday, will be organized towards at least 20 reimbursed trainees and at least 4 reimbursed trainers, mainly from COST partnership. The Training School will be devoted to specific core-issues of COST Action TD1105 such as nanostructures, sensor materials, sensing technologies, environmental modeling of air-pollution, models, standards and protocols. Graduated students, PhD students, Post-Doc, Early Stage Researchers will be involved from COST partnership and COST Countries signing Memorandum of Understanding (MoU) in open way. A fruitful exchange of knowledge and research experiences from senior teachers to young trainees is highly expected.

The Training School will be organized under supervision of Universitat de Barcelona (Department of Electronics, MIND-IN2UB group), in collaboration with CSIC-IDAEA, Barcelona, both Action TD1105 partners, and is strongly connected to Action Workshop 1 to be organized *embedded* in *Transducers 2013* conference (Barcelona, 16-20 June 2013) under General Chair as Prof. Juan Ramon Morante (Universitat de Barcelona and IREC), that is MC Member. The *Transducers 2013* edition will be jointly organized with *Euroensors 2013* (European Conference on Sensors held annually in Europe). Furthermore, this one-day Action Workshop 1 is organized as satellite event to *Transducers 2013*, probably on *day before Action MC* (20 June 2013).

Additionally, the Training School is connected not only to Action Workshop 1 but also to MC Meeting 2 to be held at Barcelona as well (tentatively on 21 June 2013).

The Training School of the COST Action TD1105 EuNetAir has been labelled as “**Green Week 2013 Satellite Event**” (<http://ec.europa.eu/environment/greenweek/>) by the Directorate-General for the Environment of the European Commission.

More Information

- Dr. Michele Penza, MC Chair/Proposer of *COST Action TD1105 EuNetAir*
ENEA - PO BOX 51 Br-4, I-72100 Brindisi - ITALY - michele.penza@enea.it
- Prof. Albert Romano-Rodriguez, Coordinator of Action Training School Committee
UNIVERSITAT DE BARCELONA (UB), c/ Martí i Franquès, 1 - E-08028 Barcelona - SPAIN
- aromano@el.ub.es





TRAINING SCHOOL **on Environmental Technologies and Air-Quality Monitoring**

Barcelona, 13 - 15 June 2013

UNIVERSITAT de BARCELONA (UB), MIND-IN2UB - Departament d'Electrònica
c/ Martí i Franquès, 1 - E-08028 Barcelona, Spain
and CSIC-IDAEA, c/ Jordi Girona, 18 - E-08034 Barcelona, Spain

| AGENDA | |
|---|--|
| 13 June 2013 - Thursday | |
| 08:30 - 17:00 | REGISTRATION |
| 09:00 - 09:45 | Welcome Address (A. Romano-Rodríguez, U. Barcelona, Spain) |
| ACTIVE MATERIALS FOR SENSOR FABRICATION | |
| 09:45 - 11:00 | Metal Oxides (J.R. Morante, IREC and U. Barcelona, Spain) |
| 11:00 - 11:30 | Break |
| 11:30 - 13:00 | Carbon-based Materials (E. Llobet, U. Rovira i Virgili, Spain) |
| 13:00 - 15:00 | Lunch |
| SENSORS AND TRANSDUCERS - PART 1 | |
| 15:00 - 17:30 | Conductometric Sensors, Capacitive Sensors and Other Sensing Platforms (J. Hernández-Ramírez, IREC and U. Barcelona, Spain; O. Casals, J.D. Prades and A. Romano-Rodríguez, U. Barcelona, Spain) |
| 14 June 2013 – Friday SENSORS AND TRANSDUCERS - PART 2 | |
| 09:30 - 11:00 | Optical Detection Methods (J. Wöllenstein, U. Freiburg and Fraunhofer Gesellschaft, Germany) |
| 11:00 - 11:30 | Break |
| 11:30 - 13:00 | Sensors for indoor air quality and health (T. Tran-Thi, CEA-Saclay, France) |
| 13:00 - 15:00 | Lunch |
| 15:00 - 16:00 | Electrochemical Sensors (J. Wöllenstein, U. Freiburg and Fraunhofer Gesellschaft, Germany) |
| 16:00 - 16:30 | Break |
| SMART SENSING TECHNOLOGIES AND ALGORITHMS | |
| 16:30 - 17:30 | Signal Processing (A. Pardo, U. Barcelona, Spain) |
| 17:30 - 18:30 | Computational Intelligence for Smart Sensors and Sensor Network (S. De Vito, ENEA, Italy) |
| 20:30 | School dinner (place to be announced) |
| 15 June 2013 – Saturday ENVIRONMENTAL MONITORING | |
| 09:30 - 10:30 | Overview of environmental measurements (M. Viana, CSIC, Spain) |
| 10:30 - 11:30 | Black carbon measurements (G. Mocnik, Aerosol doo, Slovenia) |
| 11:30 - 12:00 | Break and walk to the air quality monitoring station (10 min walking from lecture room) |
| 12:00 - 13:00 | Visit to the AQC monitoring station at CSIC-IDAEA (M. Viana and M.C. Minguillón, CSIC, Spain) |
| 13:00 - 15:00 | Lunch |
| 15:00 - 15:30 | Gas sensors: Principle of Operations and Sensor Parameters (M. Penza, ENEA, Italy) |
| 15:30 - 18:00 | Presentation of own research activities by the trainees |
| 18:00 - 18:30 | Certificate of Attendance Ceremony and Farewell |



TRAINING SCHOOL on Environmental Technologies and Air-Quality Monitoring

Barcelona, 13 - 15 June 2013

UNIVERSITAT de BARCELONA (UB), MIND-IN2UB - Departament d'Electrònica
c/ Martí i Franquès, 1 - E-08028 Barcelona, Spain
and CSIC-IDAEA, c/ Jordi Girona, 18 - E-08034 Barcelona, Spain

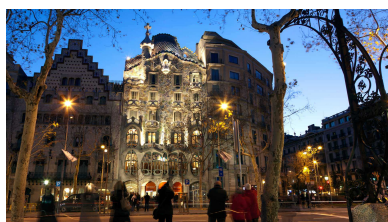


Green Week 2013 - Brussels 4-7 June

Green Week 2013
satellite event



<http://ec.europa.eu/environment/greenweek/>



Training School Programme Committee

Albert Romano-Rodriguez - Universitat de Barcelona (UB), Spain
Juan Daniel Prades - Universitat de Barcelona (UB), Spain
Mar Viana, CSIC-IDAEA, Barcelona, Spain
Mariacruz Minguillon, CSIC-IDAEA, Barcelona, Spain
Eduard Llobet, Universitat Roviri i Virgili, Tarragona, Spain
Annamaria Demarinis Lioiote, University of Bari, Italy
Michele Penza, ENEA, Brindisi, Italy

URL: www.cost.eunetair.it

Training School Action Committee

Albert Romano-Rodriguez - Universitat de Barcelona (UB), Spain
Juan Daniel Prades - Universitat de Barcelona (UB), Spain
Mar Viana, CSIC-IDAEA, Barcelona, Spain
Mariacruz Minguillon, CSIC-IDAEA, Barcelona, Spain
George Kiriakidis, FORTH, Crete, Greece
Philippe Schneider, NILU, Norway
Monika Kwoka, Silesian University of Technology, Gliwice, Poland
Rahela Zabkar, University of Ljubljana, Slovenia
Francisco Hernandez-Ramirez, IREC, Barcelona, Spain
Zafer Ziya Ozturk, Gebze Institute of Technology, Kocaeli, Turkey
Julian Gardner, University of Warwick, United Kingdom