

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


COST Action TD1105

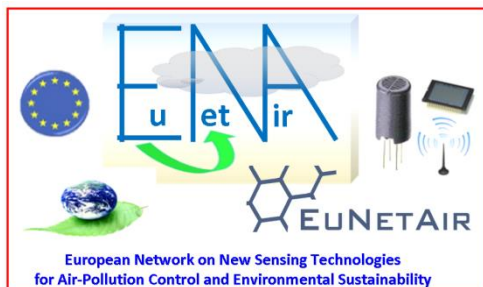
8th MC Meeting at *Bulgarian Academy of Sciences* *organized and hosted by BAS*

Conference Hall, Sofia (Bulgaria), 18 December 2015

Action Start date: 01/07/2012 - Action End date: 15/11/2016

Year 4: 1 July 2015 - 15 November 2016 (*EXTENDED Action*)

 **cost**
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



Michele PENZA

Function in the Action: Chair
ENEA / Italy



1. Welcome to Participants

Friday, 18 December 2015

Action TD1105 MANAGEMENT COMMITTEE Meeting

Conference Hall

- **Action Parties: 31**
 - MCM Participants: 25+
- Russia NNC Observer**

Action TD1105 8th MANAGEMENT COMMITTEE MEETING

09:30 - 13:00

Chairman: Michele Penza, Action Chair

Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA, Brindisi, Italy

09:30 - 10:00

Model Estimates of Regional Climate Changes and Its Impact on the Air Quality of Bulgaria

Dimiter Syrakov, Action MC Member, NIMH-BAS, Sofia, Bulgaria

10:00 : 13:00

8th Management Committee Meeting

Michele Penza, Action Chair, ENEA, Brindisi, Italy

- **DISCUSSION** (see MCM AGENDA)
- **Coffee-Break** (timely scheduled)
- **End of the 8th MCM of the COST Action TD1105 - EuNetAir**
- **Lunch offered by the Conference Organization**
- **Meeting Closing**

13:00

13:00 - 14:30

14:30

2. Adoption of Agenda

Draft Agenda
8th Management Committee Meeting
COST Action TD1105

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

FIFTH SCIENTIFIC MEETING
Working Groups and Management Committee

New Sensing Technologies for Indoor Air Quality Monitoring: Trends and Challenges

Sofia (Bulgaria), 16 - 18 December 2015

hosted at Bulgarian Academy of Sciences - Conference Hall
11 November Street, 1 - 1000 Sofia, Bulgaria

Management Committee Meeting, 18 December 2015, 9:30 - 14:30

To be completed by the meeting secretary and circulated to the MC and the COST Association (Science and Administrative Officer)

**Any new Topics to be
introduced in Agenda ?**

Planned Single Session

1. Welcome to participants
2. Adoption of agenda
3. Approval of minutes and matters arising of last meeting
4. Update from the Action Chair
 - a. Status of Action, including participating countries
 - b. Action budget status
 - c. STSM status and new applications
5. Promotion of gender balance and of Early Stage Researchers (ESR)
6. Update from the Grant Holder
7. Update from the COST Office
8. Update from the DC Rapporteur
9. Annual Progress Conference (preparation and/or feedback from DC)
10. Follow-up of MoU objectives
 - a. Progress report of working groups
11. Scientific planning
 - a. Scientific strategy
 - b. Action Budget Planning
 - c. Long-term planning (including anticipated locations and dates of future activities)
 - d. Dissemination planning (Publications and outreach activities)
12. Requests for new members
13. Non-COST applications to the Actions
14. AOB
15. Location and date of next meeting
16. Summary of MC decisions
17. Closing

3. Approval of minutes and matters arising of last meeting

ACTION TD1105 OFFICIALLY EXTENDED to

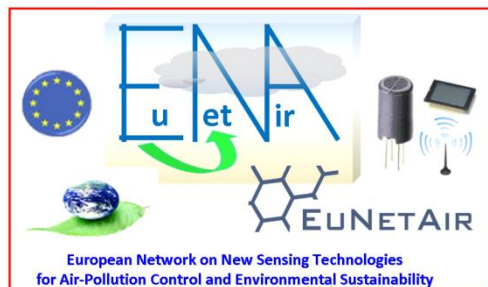
15 NOVEMBER 2016

approved by Steering Committee of COST Association

(SC Meeting October 2015)

**At the moment, NO EXTRA BUDGET !
We could ask extra-budget with new initiatives/activities !**

Contact Details



CSO Approval: 01 Dec. 2011
Kick-off Meeting: 16 May 2012
Start of Grant: 01 July 2012
End of Grant: 15 Nov. 2016

www.cost.eunetair.it

MC Chair:

Dr. Michele Penza, ENEA, IT
michele.penza@enea.it

MC Vice Chair:

Prof. Anita Lloyd Spetz
Linköping University, SE
spetz@ifm.liu.se

Grant Holder:

Dr. Corinna Hahn, Dr. Juliane Rossbach
Eurice GmbH, DE
c.hahn@eurice.eu; j.rossbach@eurice.eu

Scientific Secretary:

Dr. Annamaria Demarinis Loiotile
annamaria.demarinis@uniba.it

Science Officer:

Dr. Deniz Karaca
deniz.karaca@cost.eu

Administrative Officer:

Dr. Andrea Tortajada
andrea.tortajada@cost.eu

http://www.cost.eu/domains_actions/essem/Actions/TD1105

Top Story 
▶ all stories

***TD1105 selected as Top-Story
by COST Association***



Taking charge of air quality control in Europe's smart, green cities



A COST funded network of European spin-offs, SMEs, agencies, research centres and universities is working on developing cheaper and energy efficient sensors for air quality control in Europe's future smart cities.

▶ full story

4. Update from the Action Chair

a. **Status** (December 2015) of Action, including participating Countries

PARTIES

Already accepted MoU: 31 Countries

Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Luxembourg, The Former Yugoslav Republic of Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

7 Non-COST Countries

Australia, Canada, China, Morocco, Russia, Ukraine, USA

Country

MC Members (58): Male (69%) - Female (31%)

Austria	Dr. Anton KOCK
Belgium	Dr Jan THEUNIS; Dr Anne-Claude ROMAIN
Bulgaria	Dr Dimiter SYRAKOV; Dr Ivan NEDKOV
Croatia	Dr. Irena CIGLENECKI-JUSIC; Prof. Vedran BILAS
Czech Republic	Dr. Vera KURKOVA; Dr. Zdenek ZELINGER
Denmark	Prof. Ole HERTEL
Estonia	Prof. Raivo Jaaniso
Finland	Prof. Kaarle HAMERI; Prof. Jyrki LAPPALAINEN
France	Prof. Marcel BOUVET; Prof. Jerome BRUNET
Germany	Prof. Andreas SCHUETZE; Dr Corinna HAHN
Greece	Prof. George PAPAPOPOULOS; Prof. Kostas KARATZAS
Hungary	Ms Krisztina LABANCZ; Dr Zita FERENCZI
Iceland	Dr Arngrimur THORLACIUS
Ireland	Dr. Francesco PILLA; Prof. John WENGER
Israel	Dr. Liad ORTAR; Prof. Hossam HAICK
Italy	Dr. Michele PENZA; Prof. G. SBERVEGLIERI; Dr. G. DE GENNARO
Latvia	Dr. Iveta STEINBERGA; Dr. Gita SAKALE
Luxembourg	Dr. Arno GUTLEB
Macedonia Rep.	Dr. Igor ATASANOV; Dr. Ljupcho GROZDANOVSKI
Netherlands	Dr Sywert BRONGERSMA; Dr. Ernie WEIJERS
Norway	Dr Nuria CASTELL BALAGUER; Dr. Philipp SCHENEIDER
Poland	Dr Monika KWOKA; Prof. Janislaw GAWRONSKI
Portugal	Prof. Bernadete RIBEIRO; Prof. Carlos BORREGO
Romania	Dr Marcel IONICA; Dr Roxana Mioara PITICESCU
Serbia	Dr. Anka CVETKOVIC; Dr. Milena JOVASEVIC-STOJANOVIC
Slovenia	Dr Grisa MOCNIK; Dr Rahela ZABKAR
Spain	Prof. Juan Ramon MORANTE; Prof. Eduard LLOBET VALERO
Sweden	Prof. Anita LLOYD SPETZ; Prof. Ingrid BRYNTSE
Switzerland	Dr Danick BRIAND; Dr. Nicolas MOSER
United Kingdom	Dr John SAFFELL; Prof. Roderic JONES
Turkey	Prof. Zafer ZIYA OZTURK; Prof. Mehmet Fatih DANISMAN

**Kick-off Meeting
Brussels
16 May 2012**

**MANAGEMENT
COMMITTEE**

MC Chair: Michele Penza, ENEA, IT

MC Vice Chair: Anita Lloyd Spetz, Linkoping University, SE

Grant Holder: Eurice GmbH, Saarbrucken, DE

Country

MC Substitutes (33)

Austria	Dr Stefan DEFREGGER
Belgium	Dr Julien DELVA
Czech Republic	Dr. Roman NERUDA
Denmark	Dr. Lise Lotte SORENSEN
Finland	Prof. Jorma KESKINEN
France	Dr Jean SUISSSE; Prof. Alain PAULY Dr. Daniela SCHONAUER-KAMIN
Germany	Dr. Thomas KUHMBUSCH Dr. Juliane ROSSBACH
Greece	Prof. George KIRIKIADIS Dr. Christos KOULAMAS
Hungary	Prof. Zoltan HORVATH
Italy	Dr. Roberto SIMMARANO Dr. Marco ALVISI; Dr. Saverio DE VITO
Macedonia Rep.	Dr. Beti ANGELEVSKA
Netherlands	Dr. Rene OTJES
Poland	Prof. Jacek SZUBER
Portugal	Dr. Joao Paulo TEIXEIRA Dr. Ana Margarida COSTA
Romania	Dr. Cristina RUSTI; Dr. Marcel Adrian IONICA
Slovenia	Prof. Andrej DOBNIKAR
Spain	Prof. Albert ROMANO-RODRIGUEZ Dr. Jordi LLOSA
Sweden	Dr Mike ANDERSSON; Dr. Marina VOINOVA
Switzerland	Dr Christoph HUEGLIN
Turkey	Prof. Necmettin KILINC
UK	Prof. Julian GARDNER Dr Robin NORTH; Prof. Florin UDREA

COST Action TD1105 EuNetAir: WORKING GROUPS

WG1: Sensor materials and nanotechnology	Sub-WG1.1: Metal oxides nanostructures for AQC fas sensors
	Sub-WG1.2: Carbon nanomaterials for AQC gas sensors
	Sub-WG1.3: Emerging sensor materials (organic/inorganic, hybrid, nanocomposites, polymers, functional)
WG2: Sensors, devices and systems for AQC	Sub-WG2.1: Gas nanosensors and new transducers
	Sub-WG2.2: Portable gas sensor-systems
	Sub-WG2.3: Wireless technology and AQC sensors network
	Sub-WG2.4: Intelligence algorithms and distributed computing for networked AQC gas sensors
WG3: Environmental measurements and air-pollution modelling	Sub-WG3.1: Environmental measurements at laboratory and in field air-quality stations
	Sub-WG3.2: Air-quality modeling and chemical weather forecasting
	Sub-WG3.3: Harmonisation of environmental measurements
WG4: Protocols and standardisation methods	Sub-WG4.1: Protocols, standards and methods for AQC by analyzers/instruments (no-sensors) technologies
	Sub-WG4.2: Protocols, standards and methods for AQC by sensors (no-analyzers) technologies
	Sub-WG4.3: Benchmarking of new products and market of commercial AQC sensors

4. Update from the Action Chair - a. **Status** of Action

- **SIG 1**: *Network of Spin-offs*
- **SIG 2**: *Smart Sensors for Urban Air Monitoring in Cities*
- **SIG 3**: *Guidelines for Best Coupling Air Pollutant-Transducer*
- **SIG 4**: *Expert comments for the Revision of the Air Quality EU Directive*



Special Interest Groups

Ad-Hoc Groups



MANAGEMENT COMMITTEE:

CORE-GROUP & STEERING COMMITTEE

- *Editorial Board*
- *Dissemination Committee*
- *Training Schools Committee*
- *Gender Balance Committee*
- *Short-Term Scientific Mission (STSM) - Early Stage Researchers (ESR) Committee*
 - *Intellectual Property Rights (IPR)*
 - *Local Organizing Committee (LOC)*
 - *International Stakeholders*

4. Update from the Action Chair

a. Status of Action, including participating Countries

Grant Holder:

Eurice GmbH, Saarbrücken, Germany

GH Scientific Representatives:

Corinna Hahn, MC Member

Juliane Rossbach, MC Substitute

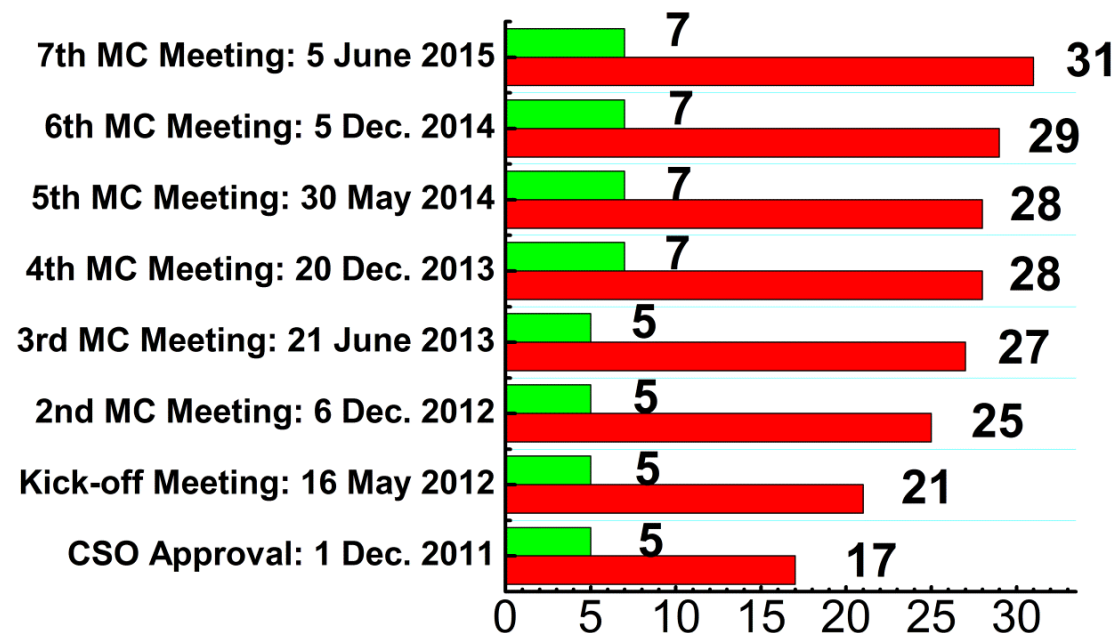
EuNetAir is growing up

Action (2012-2016) Size:

200 Experts

120 Teams

31 Countries



4. Update from the Action Chair

August-October 2015:
GH involved with COST
Association to sign GA
for W&B Plan Year 4

b. Action Budget Status

Work & Budget Plan Year 4: 1 July 2015 - 15 November 2016

Approved by COST Association

Work and Budget Plan Summary

A. COST Networking Tools	EUR
(1) Meetings	90,000.00
(2) Training Schools	15,000.00
(3) STSMs	15,300.00
(4) Dissemination	2,700.00
(5) Other Expenses Related to Scientific Activities	666.00
B. Total Science Expenditure (sum of (1) to (5))	123,666.00
C. FSAC (max. of 15% of B)	18,005.77
D. Total Expenditure (B+C)	141,671.77

STSM – Year 4

Year 1: 11 Approved STSMs

Year 2: 15 Approved STSMs

Year 3: 13 Approved STSMs

TOTAL STSMs: 39

YEAR 4

Target : 9 STSM

Budget : 15 300 €

Two applications – 5 000 €

Balance : 10 300 €

Orhan Sisman	Investigation of CO and NH3 sensing of CuO nanowires and their	Gebze Technical University,Kocaeli(TR)	University of Barcelona,Barcelona(ES)
Uri Lerner	Development of performance-analysis framework for small air quality sensors in real world scenarios	Technion - Israel Institute of Technology,HAIFA(IL)	Norwegian Institute for Air Research (NILU),Kjeller(NO)



STSM – Year 4

- Timing and deadlines: The Call for STSMs is Open for the whole Action Fourth Period (1 July 2015 – **15 November 2016**).
- Assignment of the grants will be grouped :
 - 1. applications submitted before 01/03/2016**
 - Earliest start : 01/04/2016
 - 2. applications submitted before 15/05/2016**
 - Earliest start : 15/06/2016
 - 3. (Depending on balance on the budget) applications submitted before 01/08/2016**
 - Earliest start : 01/09/2016

4. Update from the Action Chair

c. **STSM status** and new applications

CALL for Short Exchange Visits (STSM - Short Term Scientific Mission)

- **4° Call launched September 2015 (YEAR 4)**

- Period: **1 July 2015 - 15 November 2016**

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- functional nanomaterials, advanced gas sensors, sensor-systems, artificial intelligence for gas sensing, air-quality modeling, environmental measurements, chemical weather forecasting, standards, methods and protocols for air quality control

- **Who ?**

- **1. Early Stage Researchers (High Priority)**

- 2. Experienced scientists

- assure gender balance, promote “women in science and technology”

4. Update from the Action Chair

Dr. Jan Theunis
STSM Coordinator EuNetAir

c. **STSM status** and new applications

CALL for Short Exchange Visits (STSM - Short Term Scientific Mission)

- **Where ?**
 - a) *To an Institution in another COST participating Country or formally approved host institution in a Non-COST Country*
 - b) *From a formally approved Home Institution in a Near Neighbour Country (NNC) to another COST participating Country.*

Examples STSM

Additional resources from Action Budget to fund more STSMs (> 13).

- Travelling costs and subsistence:
- Travel: 300 EUR recommended not obligatory
- Subsistence: 60 to 90 EUR / day
- **max. 2500 EUR for PhD students**
- **max 3500 EUR for Post-Doc**
- Paid after approval scientific report

<u>1 month visits</u>	
30 days at 60 €/day	2.100 €
travel	300 €
total	2.400 €
2 visits	4.800 €
<u>1 week (5 days) visits</u>	
5 days at 90 €/day	450 €
travel	300 €
total	750 €
4 visits	3.000 €
<u>total</u>	<u>7.800 €</u>
Total budget	8.000 €

Inputs from Action GB Committee (1/4)

In the action (TD1105) **about 25% of the participants are female**, which is in line with the fact that technological and scientific sector of this action is male-dominated. In order to approach a 50% gender balance, for example the Management Committee Vice-Chair, Prof. Anita Lloyd Spetz, is female.

To achieve better gender balance in Working Groups women researchers are encouraged to participate in Short Term Scientific Missions, Training Schools and the overall COST actions.

During **Rome meeting** (Dec. 2012) only 20% of speakers were females. Also, the Rome SIG4 session were composed by 60% female speakers. Finally, significant progress in gender balance at Duisburg meeting (March 2013) was achieved with 45% of female speakers.

In last meeting **at EEA in Copenhagen** (October, 3-4, 2013), a substantial number of female speakers participated. Sessions were chaired to almost 45% by females, and 34% of session presenters were female speakers. The highest numbers of female speakers were in sessions concerning **Environmental Measurements and Modelling** (Session 7) and **Standardization of Methods for Air-Pollution Commercial Sensors** (Session 9).

Inputs from Action GB Committee (2/4)

During **Cambridge meeting** (18 - 20 Dec. 2013) only 31% of speakers were females (17). Also, the Cambridge SIG4 session were composed by 50% female speakers.

During **Brindisi meeting** (25 - 26 March 2014) only 28% of speakers were females (11). Also, an Interview at Dr. Thu-Hoa TRAN-THI, CEA-CNRS, on Indoor Sensors Applications was performed. Video coming soon on EuNetAir webpages (*VIDEO section*). Moreover, a 35% of participants were Early Stage Researchers (14). Most of them (40%) were females.

Gender Balance

WGs Meeting, Aveiro, 13-15 October 2014

I. Steinberga, MC member & GB coordinator, University of Latvia, Latvia

During the last (13-15 October, 2014) workgroup meeting at IDAD, University of Aveiro (Portugal) within 9 sessions totally 27 scientific presentations were presented. The overall balance between female and male presenters reflects the dominating male situation in this COST action - 26

% presentations were given by female action members. In general, the tendency is positive – during the last half-year, new female members from Latvia joined the actions and a female representative from Croatia is in the acceptance process.

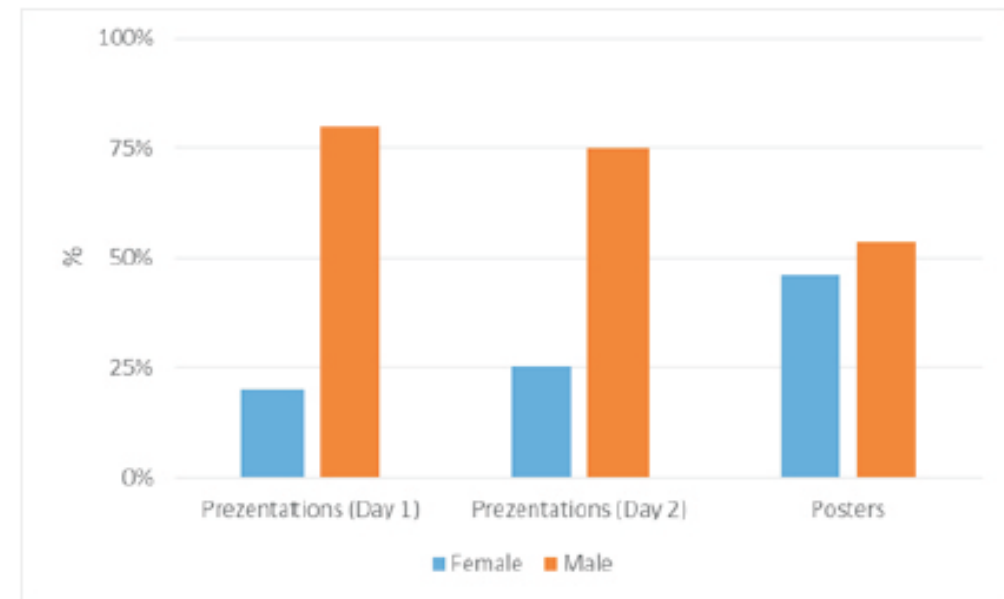
Inputs from Action GB Committee (3/4)

Workshop, Riga, 26-27 March 2015

Gender Balance

I. Steinberga, MC member & GB coordinator, University of Latvia, Latvia

During the last (26 – 27 March 2015) international scientific workshop on New Trends and Challenges for Air Quality Control in Riga, 37 % of 55 participants were female, reflecting a positive tendency. Balance of female presenters varies from 20 % to 46 %. A detailed distribution of male and female speakers in the Riga meeting is shown in the figure.



Inputs from Action GB Committee (4/4)

Updating 2015

During the period from 2012 to 2015, in the COST action meetings and in the leading positions, the percentage of female members substantially grew, from 20 % of female members at the beginning of the Action (2012) until now, where in some cases female members in meetings achieve 46 %. This indicates a strong positive tendency.

Of course, the number of female members varies from topic to topic. While in some Special Interest Groups (e.g. SIG4: Expert Comments for the Revision of the Air Quality Directive (2008/50/EC)) even 60 % of the speakers in meetings are female, this number is rather low in other groups.

5b. Promotion of Early Stage Researchers (ESRs)

Social Scientific ESRs Network (SSEN) by LinkedIn

- Open Group on [LinkedIn "EuNetAir"](#), launched in October 2012.
- Aim: to promote connections between EuNetAir COST Action's ESRs, to create a community connecting ESRs for current and future Science and Technology activities on AQC Technologies, **not only from inside Action but also outside Action community.**
- Invitations sent out to Action participants and members.
- **> 80 Participants** to date.

The screenshot shows the LinkedIn interface for the 'EuNetAir' group. At the top, the LinkedIn logo and navigation menu are visible. The group name 'EuNetAir' is prominently displayed. Below the name, there are tabs for 'Discussions', 'Members', 'Promotions', 'Jobs', 'Search', 'Manage', and 'More...'. The 'Members' tab is selected, showing a list of 9 members. The members listed are: Maria del Mar Viana (YOU), Michele Penza (1st), Nuria Castell-Balaguer (1st), Annamaria Demarinis (2nd), Thomas Kuhbusch (2nd), Gallium L., and Marco A. Each member profile includes a small profile picture, name, and a brief description of their research or location. On the left side of the group page, there is a 'Search members' section with a search bar and a 'Search' button. Below that is a 'Group Statistics' section with a blue banner that says 'CHECK OUT INSIGHTFUL STATISTICS ON THIS GROUP' and a large number '759' representing the number of members. There is also a 'New Members: Last 7 Days' section showing a list of new members, including Marco Alvisi.

MORE ESRs TO BE LINKED !

Mar Viana and Mariacruz Minguillon
Early Stage Researcher Evaluation Committee
Social Scientific ESRs Network Moderator

5. Update from the Grant Holder

Action finalization third year (I)

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Finalization of the Third Year (01 July 2014 - 30 June 2015)

- Total budget granted: 190,800.00 EUR
- Total budget used: 186,944.75 EUR (~ 98.0%)
- Recovery of funds: 3,855.25 EUR

5. Update from the Grant Holder

Action finalization third year (II)

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Third Year 01/07/2014 - 30/06/2015	APPROVED Budget	SPENT Budget	UNSPENT Budget	UNSPENT Budget (%)
Meetings	114,500.00	121,140.54	-6,640.54	-5.80
Training Schools	21,500.00	17,850.00	3,650.00	16.98
Short Term Scientific Missions	25,800.00	22,430.00	3,370.00	13.06
Dissemination	4,000.00	1,094.88	2,905.12	72.62
Other Expenses Related To Scientific Activities	1,000.00	914.27	85.73	8.73
Total Science Expenditure	166,800.00	163,429.69	3,370.31	2.02
FSAC	24,000.00	23,515.06	484.94	2.02
TOTAL EXPENDITURES	190,800.00	186,944.75	3,855.25	2.02

Best utilization of funds in Third Year for EuNetAir

5. Update from the Grant Holder

Action finalization in comparison: second year (III)

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Second Year 01/07/2013 - 30/06/2014	APPROVED Budget	SPENT Budget	UNSPENT Budget	UNSPENT Budget (%)
Meetings	105,500.00	101,793.48	3,706.52	3.51
Training Schools	24,000.00	19,994.42	4,005.58	16.69
Short Term Scientific Missions	30,700.00	24,690.00	6,010.00	19.58
Dissemination	4,000.00	3,652.34	347.66	8.69
Other Expenses Related To Scientific Activities	1,000.00	458.77	541.23	54.12
Total Science Expenditure	165,200.00	150,589.01	14,610.99	8.84
FSAC	22,000.00	20,054.23	1,945.77	8.84
TOTAL EXPENDITURES	187,200.00	170,643.24	16,556.76	8.84

5. Update from the Grant Holder

Action budget status fourth year (I)

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Status of the Fourth Year

01 July 2015 - 15 November 2016 → extension!

- **First instalment from COST Office: 88,231.40 EUR**
= 65% of approved **Action Budget of 141,671.77 EUR** - remaining funds from **Year 3** paid end-November 2015

5. Update from the Grant Holder

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Action budget status fourth year (II)

Fourth Year 01/07/2015 - 18/12/2015	APPROVED BUDGET	Payment	Planned payment	Remaining budget
Meetings	90,000.00	13,195.51	-	76,804.49
Training Schools	15,000.00	-	-	15,000.00
Short Term Scientific Missions	15,300.00	-	-	15,300.00
Dissemination	2,700.00	1054.42	-	1,645.58
Other Expenses Related To Scientific Activities	666.00	181.99	-	484.01
Total Science Expenditure	123,666.00	14,431.92	-	109,234.08
FSAC	18,005.77	-	-	18,005.77
TOTAL EXPENDITURES	141,671.77	14,431.92	-	127,239.85

5. Update from the Grant Holder

Status of Payments – Meetings

Juliane Roßbach
 Manager Grant Holder
 Eurice GmbH, Germany

Meetings

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

Start	End	City	Type†	Title	Participants*				Status**	L.O.S.‡	Options
					Forecast	Estimation	Claims	Payments			
Sep 09	Sep 09	Freiburg	CG	New Sensing Technologies...	[5/6]	[4/4]	[4/4]	[4/4]	Paid	No 📍	📄 👤 💰 📁 +
Oct 13	Oct 14	Belgrade	WG	Air Quality Monitoring and...	[30/50]	[13/13]	[13/13]	[13/13]	Paid	Yes 📍	📄 👤 💰 📁 +
Dec 16	Dec 18	Sofia	MC,WG	New Sensing Technologies...	[35/50]	[32/32]	[1/32]	[0/1]	TBR	Yes 📍	📄 👤 💰 📁 +
Mar 17	Mar 18	Wien	W/C	Innovations and Challenges...	[30/40]	[0/0]	[0/0]	[0/0]	Planned	No 📍	📄 👤 ❌ 💰 📁 +
May 11	May 13	Prague	MC,WG	New Sensing Technologies...	[30/50]	[0/0]	[0/0]	[0/0]	Planned	No 📍	📄 👤 ❌ 💰 📁 +

All past activities paid

5. Update from the Grant Holder

Status of Payments – Training School & STSMs

Juliane Roßbach
Manager Grant Holder
Eurice GmbH, Germany

Training Schools

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

Start	End	City	Title	Trainers/Trainees	Claims	Payments	Status	L.O.S.**	Options
2016-04-19	2016-04-22	Copenhagen	Modelling, Methods and Technologies for Air Quality Control	[5 / 20]	[0 / 0]	[0 / 0]	Planned	No	

** Local Organiser Support requested (yes/no).

Short-Term Scientific Missions

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

[Revise forecast for the activity](#)

ID	Participant	Start	End	Duration	Letter	Report	Payment	Options
No STSMs for this action.								

No Training School & STSMs yet

7. Update from the COST Office

Science Officer: Deniz Karaka, ESSEM

Administrative Officer (AdO): Andrea Tortajada, ESSEM

- **Deniz Karaca**

COST Science Officer of Action TD1105

Inputs from Science Officer:

This Action TD1105 is excellent and no need any Officer !

8. Update from the DC Rapporteur(s)

ESSEM Rapporteur: Kostantinos Kourtidis, EL - Demokritos University of Thrace

MPNS Rapporteur: Joaquim Manuel Vieira, PT - University of Aveiro

CMST Rapporteur: Antonio Laganà, IT - Università di Perugia

ESSEM Rapporteur: Not attending

MPNS Rapporteur: Not Attending

CMST Rapporteur: Not Attending

The DC Rapporteurs ceased the Action monitoring from 30 September 2014.



www.cost.eunetair.it



MC Chair:	Dr. Michele Penza, ENEA, IT michele.penza@enea.it
MC Vice Chair:	Prof. Anita Lloyd Spetz Linköping University, SE; spetz@ifm.liu.se
Grant Holder:	Dr. Corinna Hahn, Dr. Juliane Rossbach Eurice GmbH, DE c.hahn@eurice.eu ; j.rossbach@eurice.eu
Science Officer:	Dr. Deniz Karaca deniz.karaca@cost.eu
Adm. Officer:	Dr. Andrea Tortajada andrea.tortajada@cost.eu
Rapporteur ESSEM:	Prof. Kostantinos Kourtidis (GR) kourtidi@env.duth.gr
Rapporteur MPNS:	Prof. Joaquim Manuel Vieira (PT) jvieira@cv.ua.pt
Rapporteur CMST:	Prof. Antonio Lagana (IT) lagana05@gmail.com

CEASED from 30 Sept 2014

9. Annual Progress Conference - Preparation and/or feedback from DC

11:30 – 12:00 11:40 – 12:10 TD1105 | European Network on New Sensing Technologies for Air-
Pollution Control and Environmental Sustainability - EuNetAir | Michele Penza (Chair)

Konstantinos Kourtidis (Rapporteur)

12:00 – 12:30 ES 1006 | Evaluation, improvement and guidance for the use of local-scale emergenc
prediction and response tools for airborne hazards in built environments | Bernd Leitl
(Chair) | Vidmantas Ulevicius (Rapporteur)

12:30-13:30 Lunch

Moderator: Dick Blaauboer

13:30 – 14:00 ES1207 | A European BREWer NETwork – EUBREWNET | John Rimmer (Chair) | Niels
Larsen (Rapporteur)

13:50 – 14:10 ES1305 | European Network for the Radar surveillance of Animal Movement (ENRAM) |
Jason Chapman | Teresa Abrantes (Rapporteur)

14:10 – 14:40 ES1206 | Advanced Global Navigation Satellite Systems tropospheric products for
monitoring severe weather events and climate (GNSS4SWEC) | Jonathan Jones (Chair) |
Anders Lindroth (Rapporteur)

14:40 – 15:00 ES1303 | Towards operational ground based profiling with ceilometers, doppler lidars
and microwave radiometers for improving weather forecasts (TOPROF) | Anthony
Illingworth (Chair) | Hugo De Backer (Rapporteur)

15:00 - 15:20 Coffee break (including poster review)

Moderator: Ipek Erzi

15:20 – 15:40 ES1304 | European network on invasive parakeets: Understanding invasion dynamics
and risks to agriculture and society (ParrotNet) | Jim Groombridge (Chair) | Zorica
Svircev (Rapporteur)

15:40 – 16:10 ES1005 | Towards a more complete assessment of the impact of solar variability on the
Earth's climate | Thierry Dudok De Wit (Vice-Chair) | Hugo De Backer (Rapporteur)

16:10 – 16:40 ES1002 | Weather Intelligence for Renewable Energies | Anna Maria Semprevia (Vice-
Chair) | Zoltan Dunkel (Rapporteur)

16:40 – 16:50 Closing remarks – Ipek Erzi

Earth System Science and Environmental Management

Annual Progress Conference 2014

Hotel Valamar Lacroma Dubrovnik

34 Iva Dulčića - 20000 Dubrovnik, Croatia

12th and 13th May 2014

**Monitoring Progress Report
submitted to COST Office
by 1 April 2014 (Year 2)**

**TD1105 APC 2014:
Dubrovnik, Croatia
12-13 May 2014**

9. Annual Progress Conference - Preparation and/or feedback from DC

Earth System Science and Environmental Management

Annual Progress Conference 2014

Hotel Valamar Lacroma Dubrovnik

34 Iva Dulčića - 20000 Dubrovnik, Croatia

12th and 13th May 2014

[TD1105 APC 2014:](#)
Dubrovnik, Croatia
12-13 May 2014

**Monitoring Progress Report
submitted to COST Office
by 1 April 2014 (Year 2)**



2. Results versus objectives

The main objective of the trans-domain Action TD1105 *EuNetAir* is the development of new sensitive nanostructured materials, low-cost gas sensors, low-powered sensor-systems, wireless sensor network, air-quality modelling, environmental measurements, methods, protocols and standards for air quality monitoring in lab-tests and real-world practice. The results achieved and S&T joint activities from the Action are referenced in the list of the published/submitted papers (**>17 records**), conference/workshop communications (**>19 records**) and ongoing research collaborations between *EuNetAir* partners (**> 28 records**).

They all reflect the objectives set by the Action.

6. Coordination and management

The Cambridge meeting was successful and the work in the WGs is moving forward with the definition of scientific updating of the future research agenda. The management structures are well-established, including the procedures for assigning STSMs, meetings support, organization of Training Schools. Overall, the coordination and management work very effectively.

7. Strengths and weaknesses

A critical administrative issue has been the mismatch between national fiscal/administrative rules and EC rules/procedures applied to manage the Action grant. These are generating delays in the reimbursements and payments, despite the efforts of the Grant Holder. At the 3rd MCM in Barcelona (21 June 2013), the MC decided to elect Eurice GmbH (Saarbrücken, Germany), a qualified company in project management, as new GH because the German fiscal rules fit better the EU fiscal rules, as requested by COST Office.

At the current stage, no significant problems have been encountered in the Action and the project is progressing according to the approved plan without noteworthy deviations.

10. Follow-up of MoU Objectives - List of Meetings

COST ACTION TD1105 MEETINGS 2012-13 (Year 1)

COST ACTION TD1105 *EuNetAir*

Kick-off Meeting of Action Management Committee

COST Office, 16 May 2012, Brussels (BE)



COST ACTION TD1105 *EuNetAir*

First Meeting and 2nd Management Committee and Working Groups

ENEA Headquarters, 4-6 December 2012, Rome (IT)



COST ACTION TD1105 *EuNetAir*

WG3-WG4 Meeting joined to AirMonTech project

Fraunhofer Inhaus Zentrum, 4-6 March 2013, Duisburg (DE)



COST ACTION TD1105 *EuNetAir*

3rd Management Committee Meeting (21 June 2013)

Training School (13-15 June 2013)

Open Satellite Workshop (20 June 13)

inside *Transducers-2013*, 16-20 June 2013, Barcelona (ES)



9. Follow-up of MoU Objectives – Dissemination Events

COST ACTION TD1105 DISSEMINATION EVENTS



IMCS 2012
The 14th International Meeting on Chemical Sensors
May 20 - 23, 2012, Nürnberg/Nuremberg



Special Session: Chemical Sensors and New Technologies for Air-Pollution Control

COST Action TD1105 EuNetAir

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

IMCS 2012 - The 14th International Meeting on Chemical Sensors, May 20-23, 2012 - Nuremberg, Germany



SGS 2012

VIII International Workshop on
Semiconductor Gas Sensors
September 11 - 15, 2012, Cracow, Poland



3th Intelligent Systems for Quality of Life information
Services Workshop (ISQL 2012)
8th AIAI Conference, September 27- 30, 2012,
Halkidiki, Greece



TCM 2012
The 4th International Symposium on Transparent
Conductive Materials
October 21- 26, 2012, Hersonissos, Crete, Greece



IN SCIE



10. Follow-up of MoU Objectives:

INTERNATIONAL WG1-WG4 MEETING on

New Sensing Technologies and Methods for Air-Pollution Monitoring

European Environment Agency - EEA

Copenhagen, Denmark, 3 - 4 October 2013



European Environment Agency



**Meeting Proceedings
at Action webpages:**

www.cost.eunetair.it

*50+ Speakers involved
from 21 COST Countries*

**Letter of Support
from COST Office Director
Dr. Monica Dietl**

10. Follow-up of MoU Objectives: **WGs Meeting at EEA**

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- **Special Issue Urban Climate (Elsevier)**

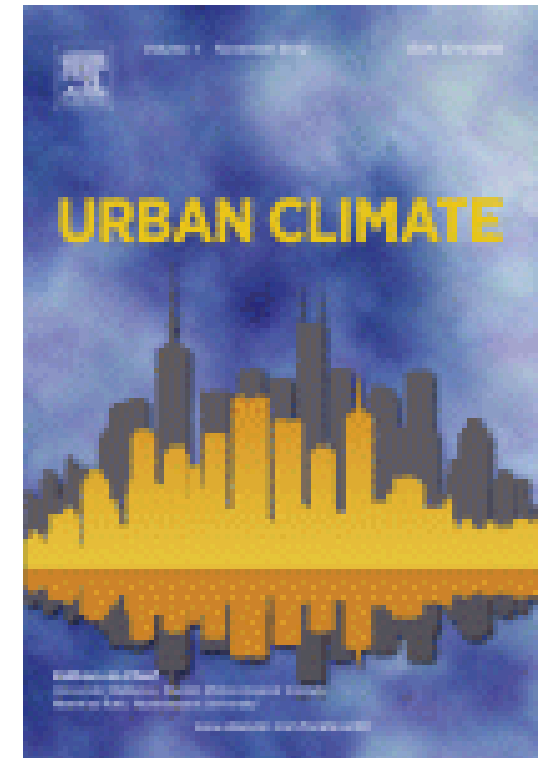
New Sensing Technologies and Methods for Air-Pollution Monitoring

Proceedings of the Action EEA Meeting open to external contributors.

Peer-review process (<http://ees.elsevier.com/uclim/>)

- **Guest Editors:**

- ✓ Michele Penza, ENEA, Italy
- ✓ Anita Lloyd Spetz, Linkoping University, Sweden
- ✓ Ole Hertel, Aarhus University, Denmark
- ✓ Ulrich Quass, IUTA eV, Germany
- Deadline for submission: 28 February 2014 (**Close**)
- Number of Submissions: **22 Manuscripts**
- Publication: *December 2015* (**online**)



9. Follow-up of MoU Objectives – a8. International Workshop

COST Action TD1105 at FP7 Project MACPoll WORKSHOP:

Metrology of Sensors for Air-Quality Monitoring

JRC-Ispra, Italy, 19 November 2013

09:00 Welcome & Introduction: The MACPoll project –A. Borowiak/M. Gerboles/J. Walden

Micro-Sensors & Air Pollution – (WP 4 of MACPoll)

Chair: Michele Penza. Rapporteur: Jan Theunis

09:15 *EuNetAir* – Michele Penza, ENEA, IT

09:35 *Sensor principles and sensor system performance* – Andreas Schuetze, Saarland University, DE

10:05 *On the use of Sensors* – Jan Theunis (VITO)

10:35 COFFEE BREAK

11:00 *The graphene sensor* – Serguei Novikov, University of Aalto, FI

11:30 *Calibration of Small Resistive Commercial Sensors to measure O₃*, Manuel Aleixandre, CSIC, ES

11:45 *O₃ and NO₂ sensor validation* – Laurent Spinelle, JRC, EC

12:15 *Summary and discussion* – Michele Penza, Jan Theunis, Michel Gerboles

12:45 LUNCH BREAK

10. Follow-up of MoU Objectives: **SECOND SCIENTIFIC MEETING**

University of Cambridge, Queens' College, Cambridge, 18-20 Dec. 2013

Letter of Commitment

to host 4th MC Meeting
and *WG1-WG4 Meeting*
from Prof. Rod Jones, Cambridge
Action SIG2 Leader and UK MC Member

18 - 20 Dec. 2013, Cambridge, UK

*60+ Speakers involved
from 22 COST Countries and 1 IPC
Invited Speaker from US EPA*

**Research & Innovation Needs
discussed and defined
by Action TD1105**

Location and date:

4rd MC Meeting, 20 December 2013, and
WG1-WG4 Meeting, 18-19 December 2013
Queens' College, Cambridge, UK



10. Follow-up of MoU Objectives:

**2ND INTERNATIONAL WORKSHOP *EuNetAir* on
New Sensing Technologies for Indoor and Outdoor Air Quality Control
organized by ENEA, Brindisi Research Center
Palazzo Granafei-Nervegna - Headquarters of Municipality of City Brindisi
Brindisi, Italy, 25 - 26 March 2014**



**Workshop Booklet
at Action webpages:**

www.cost.eunetair.it

*30+ Speakers involved
from 14 COST Countries*

**Focus on
Clean Air for Smart Cities
*Local Municipality interested***

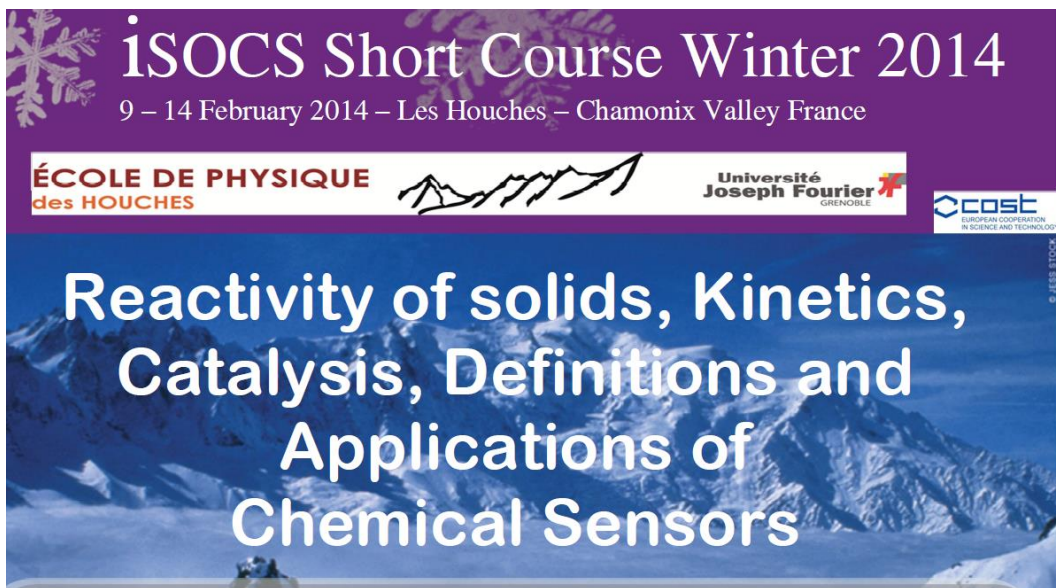


COST Action TD1105 EuNetAir at ISOCS 2014 in Les Houches

Les Houches (France), 9 - 14 February 2014

Call for Participation of the Trainees:

5 Grants for Trainees assigned to 5 ESRs from 5 COST Countries



ISOCS Short Course Winter 2014
9 – 14 February 2014 – Les Houches – Chamonix Valley France

ÉCOLE DE PHYSIQUE
des HOUCHES

Université
Joseph Fourier
GRENOBLE

COST
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

**Reactivity of solids, Kinetics,
Catalysis, Definitions and
Applications of
Chemical Sensors**

© JESS ET/COOK



(3/4)

Develop your knowledge on chemical sensors systems and applications at the ISOCS Short Course in Les Houches (Chamonix Valley), France

This Short Course will cover topics including:

- Adsorption and kinetics of transformation in solids
- Catalysis for gas-solid interactions
- Point defects in solids
- Biosensors
- Electronic Noses and their application
- Definition of sensors
- Nano-sensor preparation
- Automotive gas sensors
- Food application of Electronic Nose
- Practical demonstrations
- Presentation COST Action EuNetAir

Speakers

- Prof. Michèle Pijolat, EMSE St-Etienne
- Dr. Philippe Vernoux, Institute of Catalysis Lyon
- Dr. Jean-Paul Viricelle, EMSE St-Etienne
- Prof. Krishna Persaud SCEAS University of Manchester
- Prof. Julian Gardner, University of Warwick
- Prof. Corrado Di Natale, University Tor Vergata, Roma
- Prof. Elisabetta Comini, University of Brescia
- Prof. Christophe Pijolat, EMSE St-Etienne
- Dr. Veronica Sberveglieri, University Modena e Reggio Emilia
- Dr. Jan Mitrovics, JLM Innovation, Tübingen, Germany
- Dr. Michele Penza, ENEA, Brindisi, Italy

Who should attend?

The Short Course is ideal for anyone with an interest in chemical sensors and olfaction, and is new to the field; for example, PhD students, researchers, technologists and industrialists.

Short Courses organized by ISOCS are a unique combination of fundamental theory lectures and practical application exercises. They provide an introduction into selected topics of current research and new developments in the area of chemical sensing and olfaction. Most lecturers will be present throughout the duration of the course. Ample opportunity is given for discussion and networking.



Register now! Limited places available only!

For more information please visit www.olfactionsociety.org/wintercourse2014

10. Follow-up of MoU Objectives:

(1/4)

2nd Training School at Saarland University, Saarbrücken, Germany, 31 March - 2 April 2014

Open Call for Participation of the Trainees

Deadline for Application of Grants: 14 February 2014

More info at Action webpages - Section *Training Schools*



*24 Trainees and 5 Trainers (1 from USA)
involved from 15 COST Countries*



**Director of Training School:
Prof. Andreas Schuetze**

10. Follow-up of MoU objectives

Training School, **31 March - 2 April 2014 (TBC)**, Saarbrücken, Germany

(2/4)



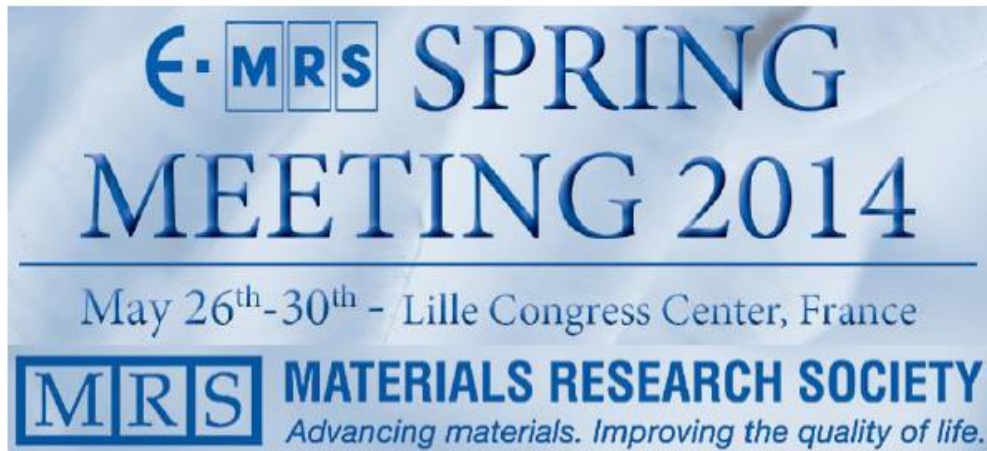
2nd EuNetAir training school



Focus topic:

**Optimized operation of solid state gas sensors,
especially for low concentrations**

- 2nd **TRAINING SCHOOL** COST Action TD1105, Saarbrücken, March-April 2014, and hosted by **Prof. Andreas Schuetze**, Saarland University, Germany.



Call for Abstracts and Papers

Symposium B: Advanced Functional Materials for Environmental Monitoring and Applications

E-MRS - Spring Meeting 2014, May 26 - 30, Lille Congress Center, France

Symposium Organizers and Guest Editors

Michele Penza
Technologies for Materials
ENEA
I-72100, Brindisi, Italy
michele.penza@enea.it

Anita Lloyd Spetz
Dept. of Physics, Chemistry & Biology
Linköping / Oulu University
SE-581 83 Linköping, Sweden
spetz@ifm.liu.se

Albert Romano-Rodriguez
Department of Electronics
University of Barcelona
08028 Barcelona, Spain
aromano@el.ub.es

Yongxiang Li
Shanghai Institute of Ceramics
Chinese Academy of Sciences
1295 Shanghai, China
yxli@mail.sic.ac.cn

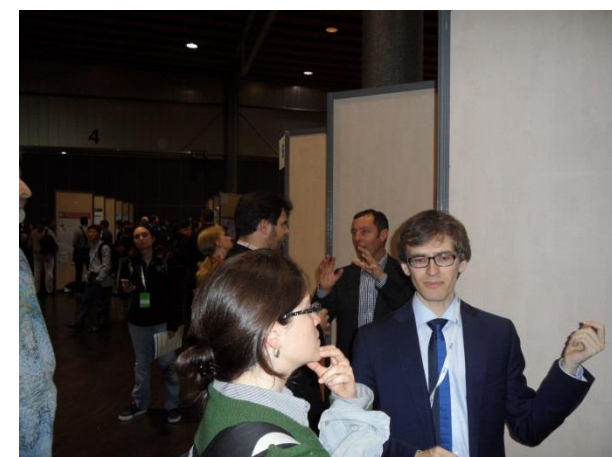
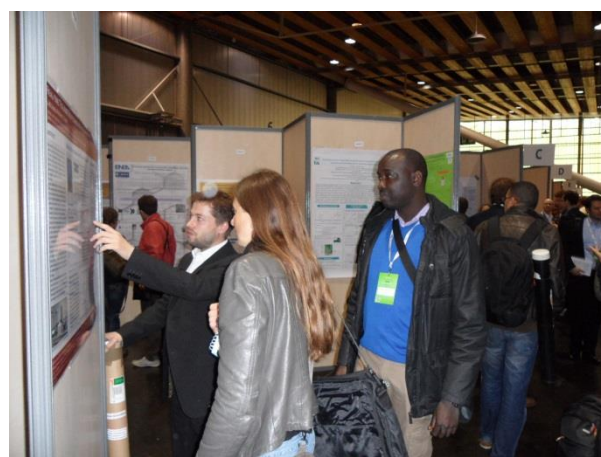
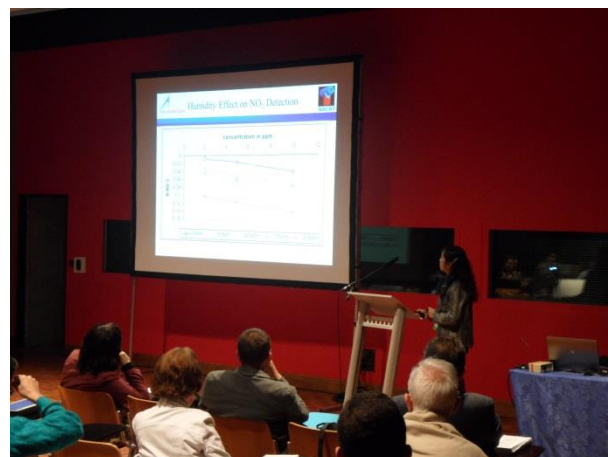
Meyya Meyyappan
Ames Research Center
NASA
94035 Moffett Field, CA, USA
m.meyyappan@nasa.gov

**EMRS-2014 Symposium B Proceedings
In Special Issue JSSS
Journal of Sensors and Sensor Systems**

Number of EMRS Submissions:

202 Abstracts

EMRS-2014 Symposium B - Lille, 26 - 30 May 2014



11. Scientific planning - b. Action Budget Planning for Year 3 - MC Approved

DESCRIPTION OF ACTIVITIES	Budget (€)
15 STSMs: 9 STSMs (5 days) and 6 STSMs (30 days), <i>or equivalently</i>	25.800
EuNetAir Core-Group Meeting at EUROSENSORS 2014 , Session Action, Brescia, Italy, 10 Sept. 2014	2.000
WG1-WG4 Meeting , IDAD and University of Aveiro, Aveiro, Portugal, 13 - 15 Oct. 2013	20.000
WG1-WG4 Meeting , Istanbul, 3 - 4 Dec. 2014 (joined to 6 th MC Meeting)	13.000
3rd Action Workshop on <i>New Trends and Challenges on Air Quality Control</i> , 26-27 Mar 2015, Riga Latvia	20.000
3rd Training School of Action , 2 - 8 May 2015 (tbc), Hyytiala (Helsinki), Finland	19.000
ISOCS 2015 Short Course Winter School . Ponte di Legno (Brescia), Italy Grants: 3 Trainees	2.500
Focus Group Meeting Data Analysis Aveiro Joint-Exercise . WHO CC, Berlin (Germany), 17 Apr 2014	2.000
Focus Group Meeting Innovation on Environmental Sensor Technologies . Siemens, Munich, 29 Apr 2014	2.000
16th ISOEN 2015 International Symposium on Olfaction and Electronic Nose: 3-4 Speakers	2.500
WG1-WG4 Meeting , Linkoping, 3 - 4 June 2015 (joined to 7 th MC Meeting)	13.000
NEWSLETTER: Issue 5 (Nov-Dec. 2014); Issue 6 (May-June 2015) LEAFLET/BROCHURE: Updating	2.000
6th MC Meeting: 5 Dec. 2014, Istanbul, Turkey, organized by GEBZE at University	20.000
7th MC Meeting: 5 June 2015, Linkoping, Sweden, organized by Linkoping University	20.000
DISSEMINATION & OUTREACH ACTIVITIES	2.000
OTHER	1.000
TOTAL SCIENCE EXPENDITURE	166.800
Financial & Scientific Administration and Coordination (max 15%)	24.000
TOTAL EXPENDITURE	190.800

COST Session & Core-Group Meeting at *EUROSENSORS 2014*



*The 28th European Conference
on Solid-State Transducers*

**Brescia, Italy
September 7-10, 2014**



09:30 - 12:30 **Open Session COST: New Sensing Technologies for Air-Quality Monitoring**
Chairperson: Michele Penza, ENEA, Brindisi, Italy

09:30 - 10:00 **COST Action TD1105: European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability. Overview of Sensor-Systems for Air Quality Monitoring**
Michele Penza, Action Chair, ENEA, Brindisi, Italy

10:00 - 10:30 **Performance Analysis of Low-Cost Gas Sensors for Air Quality Control**
Michel Gerboles and Laurent Spinelle, JRC, EC DG ENV, Institute for Environment and Sustainability, Ispra, Italy

10:30 - 11:00

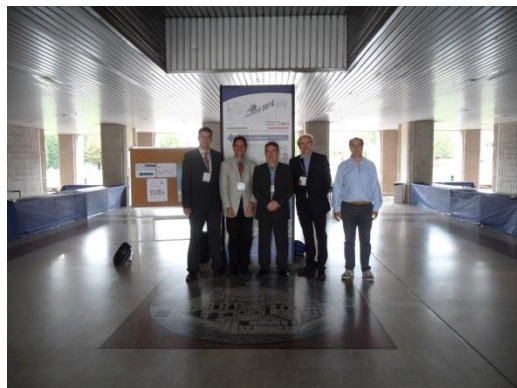
Break

11:00 - 11:20 **Gas and Particle Sensors for Air Quality Monitoring**
Anita Lloyd Spetz, Action Vice-Chair, Linköping University, Linköping, Sweden

11:20 - 11:40 **Nanostructured Metal Oxides Low-Cost Gas Sensors: Trends and Challenges**
Juan Ramon Morante, Action WG1 Leader, IREC, Barcelona, Spain

11:40 - 12:00 **Highly Sensitive and Selective VOC Detection for Indoor Air Quality Applications**
Andreas Schuetze, Action WG2 Leader, Saarland University, Saarbrücken, Germany

12:00 - 12:20 **Smart Sensors in Mobile Phones for Environmental Monitoring Applications**
Julian W. Gardner, Action MC Substitute, University of Warwick, Coventry, UK



Special Session Smart Cities Sensors at IEEE SENSORS 2014



10:00 - 11:30 **Special Session: Smart Cities Sensors**
Chairperson: Michele Penza, ENEA, Brindisi, Italy

10:00 - 10:30 **INVITED TALK: COST Action TD1105 - New Sensing Technologies for Environmental Sustainability in Smart Cities**
Michele Penza, Action Chair, ENEA, Brindisi, Italy

10:30 - 10:45 **Analysis of Efficient Dense Wireless Sensor Network Deployment in Smart City Environments**
Peio López-Iturri, Erik Aguirre, Leire Azpilicueta, Carlos Fernández-Valdivielso, Ignacio Raúl Matías, Francisco Falcone Universidad Pública de Navarra, Spain

10:45 - 11:00 **A Maker Friendly Mobile and Social Sensing Approach to Urban Air Quality Monitoring**
Luca Capezzuto², Luigi Abbamonte², Saverio De Vito¹, Ettore Massera¹, Fabrizio Formisano¹, Grazia Fattoruso¹, Girolamo Di Francia¹; ¹ Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Italy; ² Università degli Studi di Napoli Federico II, Italy

11:00 - 11:15 **vCity Map: Crowdsensing Towards Visible Cities**
Yoshito Tobe¹, Itaru Usami¹, Yusuke Kobana¹, Junji Takahashi¹, Guillaume Lopez¹, Niwat Thepvilojanapong²; ¹ Aoyama Gakuin University, Japan; ² Mie University, Japan

11:15 - 11:30 **Calibration of a Cluster of Low-Cost Sensors for the Measurement of Air Pollution in Ambient Air**
Laurent Spinelle³, Michel Gerboles³, Maria Gabriella Villani², Manuel Aleixandre¹, Fausto Bonavitacola⁴; ¹ Consejo Superior de Investigaciones Científicas, Spain; ² ENEA, Italy; ³ Joint Research Center, Italy; ⁴ Phoenix Sistemi & Automazione s.a.g.l., Switzerland

Session Numbers:

- 5 Speakers
- 150+ Participants
- 700+ Delegates

Aveiro Joint-Exercise Intercomparison & WG Meeting

13 - 27 October 2014: Starting Joint-Exercise (2 weeks duration)

14 - 15 October 2014: EuNetAir WG1-WG4 Meeting

EuNetAir Air Quality Joint-Exercise Intercomparison 2014

Local Organizers: Prof. Carlos Borrego and Dr. Ana Margarida Costa (IDAD)

Air Quality Monitoring campaign at Aveiro (Portugal) city centre 2014



Continuous measurements: CO, benzene, NO_x, SO₂, PM₁₀, VOC

Temperature, humidity, wind velocity, wind direction, solar radiation, precipitation

COST partners (15 teams joined from 12 COST Countries) installed their microsensors side-by-side to compare performance with referenced equipment in the Air-Quality Mobile Laboratory

COST Action TD1105 *EuNetAir: Aveiro* INTERCOMPARISON

New Sensing Technologies and Modelling for Air-Pollution Monitoring



THIRD SCIENTIFIC MEETING: WG & 6th MC Meeting

New Sensing Technologies for Indoor Air-Pollution

Bahcesehir University, Istanbul (Turkey), 3 - 5 December 2014

Multidisciplinary Meeting:

International Experts and Coordinators of FP7 and H2020 research projects related to the IEQ Cluster



Local Organizers:
Prof. Zafer Ziya Ozturk,
GEBZE, Istanbul (Turkey)

Prof. Ali Gungor,
Bahcesehir University,
Istanbul (Turkey)

Participation:

- **60+ Participants**
- **21 COST Countries**

3rd International WORKSHOP *EuNetAir*

New Trends and Challenges for Air Quality Control

hosted by University of Latvia, **Riga** (Latvia), 26 - 27 March 2015



Local Organizer:

Dr. Iveta Steinberga
University of Latvia
Riga (Latvia)

Local Co-Organizer:

Dr. Gita Sakale
Riga Technical University
Riga (Latvia)

Participation:

- 50+ Participants
- 18 COST Countries



Focus Group Meeting *EuNetAir*

Data Analysis of Aveiro Air Quality Sensors Intercomparison

hosted by WHO CC - Federal Environment Agency, **Berlin** (Germany), 17 April 2015



Local Organizer:

Dr. Hans-Guido Muecke
WHO CC - FEA
Berlin (Germany)

Participation:

- 9 Participants
- 8 COST Countries

Output:

Planned Joint-Publication
on AQ Sensors Aveiro Database



Focus Group Meeting *EuNetAir*

Innovation on Environmental Sensor Technologies

hosted by Siemens, **Munich** (Germany), 29 April 2015

SIEMENS

Local Organizer:

Dr. Olivier von Sicard
Siemens AG
Munich (Germany)



Participation:

- 15 Participants
- 10 COST Countries

Output:

Planned Report on
Innovation on Environmental Sensor Technologies



3rd TRAINING SCHOOL *EuNetAir* at Hyytiala Forestry Field Station

Atmospheric Aerosol Physics, Measurements and Sampling

hosted by University of Helsinki, **Hyytiala** (Helsinki), 2 - 8 May 2015

Local Organizer:

Prof. Kaarle Hameri,
University of Helsinki,
Helsinki (Finland)



Participation:

- 13 COST Trainees
- 3 Trainers
- 1 COST Trainer



11. Scientific planning - approved event Year 3

ISOCS 2015 Short Course Winter Course

Electronic Noses and their Panorama of Sensors

8 - 13 March 2015, Ponte di Legno (Brescia), Italy

Funding 3 Young Trainees to Training Course

EuNetAir would finance 3 Young Trainees and 1 Trainer

Type: Grant (Example: 750 euro x 3 trainees)

Granted Trainees: 3 ESRs from Italy, Spain, Germany. Trainer no funded.

Estimated/Approved Budget: 2250/2500 Euro

FOURTH SCIENTIFIC MEETING: WG & 7th MC Meeting

hosted by Linköping University, **Linköping** (Sweden), 3 - 5 June 2015

Local Organizer:

Prof. Anita Lloyd Spetz,
Linköping University,
Linköping (Sweden)



FOCUS ON:

Outdoor Applications

- 4 June 2015: Roundtable on the *European Sensor-Systems Cluster (ESSC)*
- 5 June 2015: *World Environment Day 2015, 5 June* - Global Day by UNEP
- 22 June 2015: *AMA Science Proceedings* - Published Sept. 2015 with DOI
- 28 February 2016: *Special Issue JSSS (Copernicus)* - Peer Review Process

11. Scientific planning - approved event Year 3

16th ISOEN 2015

International Symposium on Olfaction and Electronic Nose

28 June - 1 July 2015, Dijon, France

Funding 3-4 Speakers to attend Symposium ISOEN

2 Speakers for Talks and Flash Presentations to promote

EuNetAir

Speaker: Prof. Andreas Schuetze

Speaker: Prof. Julian W. Gardner

Co-Chair ISOEN 2015: Prof. Anne-Claude Romain

Year 4: Scientific Planning of *EuNetAir* (1/2)

Meetings/Workshops/Training Schools planned for upcoming year
(Year 4: 1 July 2015 - 15 May 2016): EXTENSION: 15 Nov. 2016

- **WG1-WG4 Meeting** on *Air Quality Monitoring and Calibration: Horizons in Sensing Technologies, Methods and Modelling - Start of the 2nd EuNetAir Air Quality Joint-Exercise Intercomparison* organized by the VINCA Institute, Belgrade (**Serbia**), 13 - 14 Oct. 2015. Local organizer: Dr. Milena Jovasevic-Stojanovic, VINCA and Anka Cvetkovic, Public Health Institute of Belgrade
- The **4th International Workshop of the COST Action TD1105** on *Innovations and Challenges for Air Quality Control Sensors* at FFG (National AT COST Office), Wien (**Austria**), 25 - 26 February 2016. Local organizer: Dr. Anton Kock, MCL
- The **Action 4th International Training School** on *Modelling, Methods and Technologies for Air Quality Control* at Emdrup Campus in Copenhagen, by Aarhus University (**Denmark**), 19 - 22 April 2016. Local organizer: Prof. Ole Hertel, Aarhus University. Trainees: 13-15 expected. Trainers: 3-4 expected.

Year 4: Scientific Planning of *EuNetAir* (2/2)

MC/WG Meetings planned for the upcoming year

(Year 4: 1 July 2015 - 15 May 2016): EXTENSION: 15 Nov. 2016

- **5th SCIENTIFIC MEETING: WGs Meeting and 8th MC Meeting on New Sensing Technologies for Indoor Air Pollution Monitoring and Environmental Measurements** at Bulgarian Academy of Sciences, Sofia (**Bulgaria**), 16 - 18 Dec. 2015. Local organizers: Prof. Ivan Nedkov and Prof. Dimiter Syrakov, BAS
- **6th SCIENTIFIC MEETING: WGs Meeting and 9th MC Meeting on New Sensing Technologies for Outdoor Air Quality Monitoring** at Czech Academy of Sciences, Prague (**Czech Republic**), 5 - 7 October 2016. Local Organizers: Prof. Zdenek Zelinger, Dr. Vera Kurkova, Dr. Roman Neruda, CAS
- **Special Session EuNetAir / Core-Group Meeting** to **EUROSENSORS 2015**, Freiburg (**Germany**), 6 - 10 September 2015

COST Session & Core-Group Meeting at **EUROSENSORS 2015**



The 29th European Conference on Solid-State Transducers

10:30 - 12:30 **Open Session COST: New Sensing Technologies for Air Quality Monitoring**
Chairperson: Michele Penza, ENEA, Brindisi, Italy

10:30 - 10:50 **COST Action TD1105: European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability. Overview and Plans**
Michele Penza, Action Chair, ENEA, Brindisi, Italy

10:50 - 11:10 **Performance Evaluation of Amperometric Sensors for the Monitoring of O₃ and NO₂ in Ambient Air at ppb Level**
Laurent Spinelle, Manuel Aleixandre, Michel Gerboles, JRC, EC DG ENV, Institute for Environment and Sustainability, Ispra, Italy

11:10 - 11:30 **LTCC, New Packaging Approach for Toxic Gas and Particle Detection**
Anita Lloyd Spetz, M. Sobocinski, N. Halonen, D. Puglisi, J. Juuti, H. Jantunen, M. Andersson, Action Vice-Chair, Linköping University, Linköping, Sweden

11:30 - 11:50 **Low-Cost Fabrication of Zero-Power Metal Oxide Nanowire Gas Sensors: Trends and Challenges**
Jordi Samà^a, Juan Daniel Prades^a, Olga Casals^a, Guillem Domènech-Gil^a, Sven Barth^b, Isabel Gracia^c, Carles Cané^c, Francisco Hernández-Ramírez^{a,d}, Albert Romano-Rodríguez^a, Action MC Substitute, ^aUniversitat de Barcelona, Barcelona, Spain; ^bTechnical University Vienna (TUW), Institut für Material Chemistry, Vienna, Austria; ^cConsejo Superior de Investigaciones Científicas (CSIC), Institut de Microelectrònica de Barcelona (IMB-CNM), Bellaterra, Spain; ^dCatalonia Institute for Energy Research (IREC), Barcelona, Spain

11:50 - 12:10 **Integrated Sensor Systems for Indoor Applications: Ubiquitous Monitoring for Improved Health, Comfort and Safety**
Andreas Schuetze, WG2 Leader and MC Member, Saarland University, Saarbrücken, Germany

12:10 - 12:30 **Towards Disposable Sensing Platforms and Analytical Instruments for Air Quality Monitoring**
Danick Briand, Action MC Member, EPFL, Neuchâtel, Switzerland



WGs MEETING:

Air Quality Monitoring: Horizons in Sensing Technologies, Methods and Modelling

VINCA Institute & Public Institute of Health, **Belgrade** (Serbia), 13 - 14 Oct. 2015



Joint-Exercise Sensors-vs-Analyzers
Belgrade, October 2015 - running 2016



Local Co-Organizers:

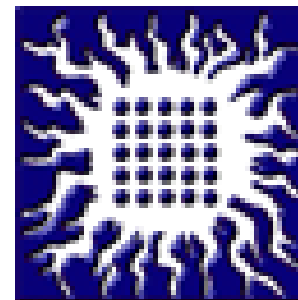
Dr. Milena Jovasevic-Stojanovic, RS MC Member,

Dr. Anka Cvetkovic, RS MC Member,

VINCA Institute and Public Institute of Health

Belgrade - (Serbia)

joined to WeBIOPATR 2015 Conference



FIFTH SCIENTIFIC MEETING (1/2): WG & 8th MC Meeting

New Sensing Technologies for Indoor Air-Pollution and Environmental Measurements

Bulgarian Academy of Sciences, Sofia (Bulgaria), 16-18 Dec. 2015



Local Co-Organizers:

Prof. Ivan Nedkov, BG MC Member,

Prof. Dimiter Syrakov, BG MC Member,

Bulgarian Academy of Sciences - Sofia (Bulgaria)

FIFTH SCIENTIFIC MEETING (1/2): WG & 8th MC Meeting

New Sensing Technologies for Indoor Air-Pollution and Environmental Measurements

Bulgarian Academy of Sciences, Sofia (Bulgaria), 16-18 Dec. 2015

Letter of invitation to host a COST Action TD1105 meeting at
Sofia, Bulgaria, in December 2015

Dear Dr. Penza,

It is our pleasure to offer Bulgarian Academy of Sciences, Sofia, Bulgaria as the venue for the COST Action TD1105 meeting (Working Group and the Management Committee) to be held in Sofia in December 2015.

The intention is that this meeting will be formally hosted by us, but local arrangements will be made through the specialized internal Organization.

This invitation is based on the assumption that the main costs will be covered by the COST Action TD1105 *EuNetAir*, with administrative management as ruled by COST Vademecum. We will come back with details regarding meeting room, food and accommodation.

We are looking forward to a very successful meeting in highly conducive surroundings.

Best wishes

Prof. DrSc D. Syrakov

Prof. DrSc I. Nedkov



Local Co-Organizers:

Prof. Ivan Nedkov, BG MC Member,

Prof. Dimiter Syrakov, BG MC Member,

Bulgarian Academy of Sciences - Sofia (Bulgaria)

11. Scientific planning

c3: **4th International WORKSHOP EuNetAir:**

Innovations and Challenges for Air Quality Control Sensors

organized by MCL, hosted at **Wien** (Austria), 25 - 26 February 2016

Local Organizer:

Dr. Anton Kock
MCL

Leoben (Austria)



Letter of intention to organize Workshop EuNetAir, Wien, 17-18 March 2016

by Anton Kock, MCL, Leoben, Austria - Action MC Member

Email received from Anton Kock on 1 June 2015

Dear Michele!

I cannot send an official letter of comittment for organizing the COST workshop in March 2016 in Vienna before June 4th, because I am on holidays.

However, I just talked with Prof. Ebner (boss of MCL) and he agreed that we will support the organization of the COST workshop in Vienna and we will do our best to keep the costs low.

Is this enough comittment from our side so that you can include the Vienna worshop in your timetable?

Best regards Anton

11. Scientific planning

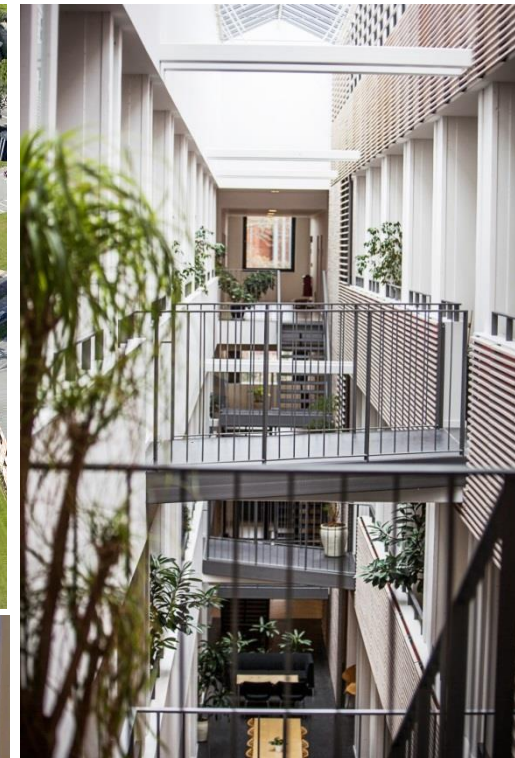
c4: **4th TRAINING SCHOOL *EuNetAir*** at Emdrup Campus - Copenhagen

Modelling, Methods and Technologies for Air Quality Control

organized by Aarhus University, **Copenhagen** (Denmark), 19 - 22 April 2016 (1/2)

Local Organizer:

Prof. Ole Hertel,
Aarhus University,
Aarhus (Denmark)



11. Scientific planning

c4: **4th TRAINING SCHOOL *EuNetAir*** at Emdrup Campus - Copenhagen

Modelling, Methods and Technologies for Air Quality Control

organized by Aarhus University, **Copenhagen** (Denmark), 19 - 22 April 2016 **(2/2)**

Host for PhD course in connection with COST Action TD1105 EuNetAir

Local Organizer:

**Prof. Ole Hertel,
Aarhus University,
Aarhus (Denmark)**



Dear Michele,

Our Department of Environmental Science will be delighted to host the COST Action TD1105 PhD course to be held in Copenhagen on 19-22 April 2016.

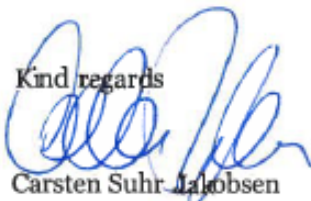
The course will be hosted by Professor Ole Hertel who is also steering group member of the COST Action. The course will take place in Copenhagen, which will allow the participants to experience the great cultural offerings, green areas and Scandinavian culture in the city that was Green Capital of Europe in 2014. The course will most likely take place at the AU Campus Emdrup in Copenhagen, but this will be settled before the announcement of the course.

This invitation is based on the assumption that the main costs will be covered by the COST Action TD1105, with administrative management as ruled by COST Vademecum by activation of the Local Organizing Support (LOS) tool, if needed.

We are looking forward to a very successful course carried out in close cooperation with partners in the successful COST Action!

Best wishes

Kind regards

A handwritten signature in blue ink, appearing to read 'Carsten Suhr-Jakobsen'.

Carsten Suhr-Jakobsen

Head of Department of Environmental Science, Aarhus University

SIXTH SCIENTIFIC MEETING: WG & 9th MC Meeting

New Sensing Technologies for Outdoor Air-Pollution

Czech Republic Academy of Sciences

Prague (Czech Republic), 5 - 7 October 2016

Local Organizers:

Dr. Vera Kurkova, MC Member

Dr. Zdenek Zelinger, MC Member

Dr. Roman Neruda, MC Substitute

CZ Academy of Sciences

Prague (CZ)



www.shutterstock.com · 166747631



SIXTH SCIENTIFIC MEETING: WG & 9th MC Meeting

New Sensing Technologies for Outdoor Air-Pollution

Czech Republic Academy of Sciences

Prague (Czech Republic), 5 - 7 October 2016

Local Organizers:

Dr. Vera Kurkova, MC Member

Dr. Zdenek Zelinger, MC Member

Dr. Roman Neruda, MC Substitute

CZ Academy of Sciences

Prague (CZ)



Letter of invitation to host a COST Action TD1105 WG meeting and MC meeting in Prague, Czech Republic, on 8-10 June, 2016

Dear Michele,

I am delighted to be able to offer the J. Heyrovský Institute of Physical Chemistry of the Czech Academy of Sciences, Prague as the host for a COST Action TD1105 WG and MC meeting to be held in Prague on 8-10, June 2016.

The intention is that this meeting will be formally hosted by me in collaboration with V. Kůrková and R. Neruda, but local arrangements will be made through the J. Heyrovský Institute of Physical Chemistry of the Czech Academy of Sciences, Prague.

This invitation is based on the assumption that the main costs will be covered by the COST Action TD1105, with administrative management as ruled by COST Vademecum by activation of the Local Organizing Support (LOS) tool, if needed.

I look forward to a very successful meeting in highly conducive surroundings, matching those of Action EuNetAir last years.

Best wishes



*Prof. Ing. Zdeněk Zelinger, CSc.
Czech Republic MC Member
J. Heyrovský Institute of Physical Chemistry
of the Czech Academy of Sciences,
Dolejškova 3
182 26 Prague
Czech Republic*



EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

Academy of Sciences of the Czech Republic
The J. Heyrovský Inst. of Physical Chemistry, v.v.i.
182 23 Prague 8, Dolejškova 3
CZECH REPUBLIC

11. Scientific planning

d. Dissemination Planning (Publications and outreach activities).

d1: Action website: www.cost.eunetair.it



Action website:

www.cost.eunetair.it

hosted by ENEA

Dr. Marco Alvisi, Webmaster Coordinator

Sebastiano Dipinto, Valerio Pfister, Gianfranco Zingarelli, Webmaster Team

OUTREACH ACTIVITIES from Action TD1105

COST Action TD1105 - EuNetAir

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir

Action website:

www.cost.eunetair.it

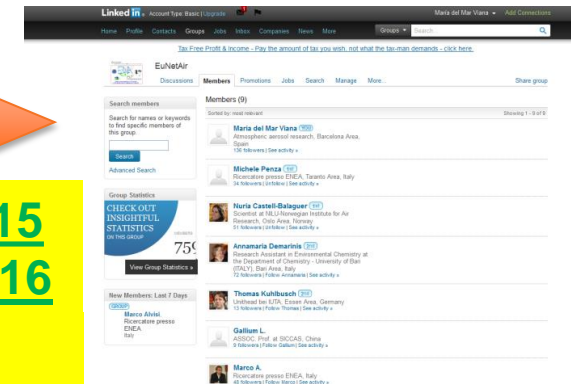
hosted by ENEA

Dr. Marco Alvisi, Webmaster Coordinator

Sebastiano Dipinto, Valerio Pfister, Gianfranco Zingarelli, Webmaster Team

Social Scientific ESRs Network (SSEN) by LinkedIn

Members: >80 - Moderators: M. Viana, M. Minguillon



4° CALL for Short Exchange Visits launched on September 2015
Short Term Scientific Mission: **9 TO BE FUNDED** by 30 April 2016

Dr. Jan Theunis, STSM Coordinator EuNetAir



EuNetAir Newsletter

COST Action TD1105 Iss. 1/Dec 2012

Opening Editorial

- Issue 1: published on Dec. 2012 ✓
- Issue 2: published on June 2013 ✓
- Issue 3: published on Dec. 2013 ✓
- Issue 4: published on June 2014 ✓
- Issue 5: published on Dec. 2014 ✓
- Issue 6: published on June 2015 ✓
- Issue 7: published on Dec. 2015 ✓

Prof. Ralf Moos, Editor-in-Chief

Dr. Daniela Schonauer-Kamin, Editorial Board Manager

Video/Interview: www.cost.eunetair.it - Section VIDEO

- **Alena Bartonova**, Coordinator FP7 Project CITI-SENSE, NILU, Kjeller, Norway
- **Margurite Nyhan**, The Senseable City Lab, MIT, Boston, USA
- **Hans-Guido Muecke**, Manager at WHO CC and Federal Environment Agency
- **Oliver von Sicard**, Researcher at Siemens AG, Munich
- **Thu-Hoa Tran-Thi**, Research Director on Indoor Sensors, CEA-CNRS, France
- **Tim Watkins**, Deputy Director US EPA Air, Climate & Energy Programme, USA
- **Andrea C. Ferrari**, Chairman of Executive Board of Graphene Flagship, UK
- **Cristina Guerreiro**, Coordinator of EEA AQ Report 2012-2013, Norway
- **Meyya Meyyappan**, Chief Scientist, NASA Ames Research Center, USA
- **Michele Penza**, Action Chair at RAI3 Italian TV Show GeO&GeO, Italy



11. Scientific planning

d. Dissemination Planning (Publications and outreach activities).

d2: NEWSLETTER, LEAFLET, BROCHURE (1/2)



- Issue 1: published on Dec. 2012 ✓
- Issue 2: published on June 2013 ✓
- Issue 3: published on Dec. 2013 ✓
- Issue 4: published on June 2014 ✓
- Issue 5: published on Dec. 2014 ✓
- Issue 6: published on June 2015 ✓
- Issue 7: published on Dec. 2015 ✓

Brochure

Leaflet

Release 1:
published on January 2013

Release 2:
to be published Spring 2016
Final Edition



11. Scientific planning - d4: DISSEMINATION PLAN

Dr. Fabio Galatioto

Chair of Dissemination Committee

Upcoming Events

4th International Workshop of the COST Action TD1105 on Innovations and Challenges for Air Quality Control Sensors
February 25-26, 2016, FFG (National AT COST Office), Wien, Austria

4th International Training School on Modelling, Methods and Technologies for Air Quality Control
April 19-22, 2016, Emdrup Campus, Aarhus University, Copenhagen, Denmark

EMRS Spring Meeting and Exhibit 2016

Symposium by Action: Functional Materials for Environmental Sensors and Energy Systems Applications
May 2-6, 2016, Lille, France.
<http://www.emrs-strasbourg.com/>

IMCS 2016, International Meeting on Chemical Sensors

July 10-13, 2016, Jeju Island, Korea.
<http://www.imcs2016.org/>

The International Meeting on Chemical Sensors (IMCS) is the world's largest interdisciplinary forum for all aspects of Chemical Sensors. It is the mission of the IMCS not only to be an interdisciplinary forum in the field of Chemical Sensors that includes physics, chemistry, materials science, and engineering disciplines (including biomedical engineering) or to boost research and application in the field of Chemical Sensors, but it is also the leading international platform for discussion and exchange between experienced researchers and younger students. Therefore, it is a must for researchers working in the field of Chemical Sensors, which greatly overlaps with the aims and scope of EuNetAir!

In 2016, IMCS will be held in Jeju, Korea, from July 10 – July 13. Chaired by Prof. Chong Ook Park and co-chaired by Prof. Jong-Heun Lee, who both are renowned experts in the field of gas sensing, theory and application of gas sensors for Air Quality measurement and control will be a key topic. The list of plenary and invited focused session speakers is already available on the web site. It shows the great coincidence with EuNetAir's topics. Important: Deadline will be 31. December 2015. For more information, please go to <http://www.imcs2016.org/>

Ralf Moos, Chair of the Executive Steering Committee of IMCS

6th SCIENTIFIC MEETING: WGs Meeting and 9th MC Meeting on New Sensing Technologies for Outdoor Air Quality Monitoring

October 5-7, 2016, Czech Academy of Sciences, Prague, Czech Republic

COST Action TD1105: Past Related EVENTS

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- **COST Domain-Specific CMST Strategic Event**

COST Actions: A Great Opportunity as Incubators for Molecular Science and Technology

Brussels (Belgium), 27-28 March 2014

Action TD1105 represented as **Invited Speaker** by Dr. Marco Alvisi, MC Substitute and SIG1 (*Network of Spin-offs*) Leader, ENEA, Brindisi, Italy.

- **COST Domain ESSEM, ISCH, ICT Strategic Event**

Cities of Tomorrow

Turin (Italy), 24-27 September 2014

Action TD1105 represented as **Invited Speaker** by Prof. Anita Lloyd-Spetz, Action Vice-Chair, Linköping University (Sweden) and Oulu University (Finland).

COST Action TD1105: Past Related EVENTS

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- **Air Sensors 2014: A New Frontier**

Workshop Series US EPA: Workshop in the Next Generation Air Monitoring (NGAM)

EPA Campus in Research Triangle Park, North Carolina (USA), 9-10 June 2014

Action TD1105 represented as **Invited Speaker** by Dr. Michele Penza, Action Chair, ENEA, Brindisi, Italy.

- **NATO Advanced Research Workshop**

NATO ARW on Nanotechnology to Aid Chemical and Biological Defense

organized by Prof. Terri A. Camesano, Chemical Engineering, Worcester Polytechnic Institute, USA

Antalya (Turkey), 22-26 September 2014

Action TD1105 represented as **Invited Speaker** by Dr. Michele Penza, Action Chair, ENEA, Brindisi, Italy.

Prof. G. Sberveglieri, University of Brescia, Invited Speaker.

COST Action TD1105: Past Related EVENTS

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- **Eurosensors 2014**

XXVIII Edition of Conference Series: *European Forum to cover the entire field of Sensors, Actuators, Microsystems and Nanosystems*

Brescia, (Italy), 7-10 September 2014

General Conference Chair: Prof. G. Sberveglieri

Action TD1105 represented as **Technical Program Committee (TPC) Member** by Dr. Michele Penza, Action Chair, ENEA, Brindisi, Italy

- **IEEE SENSORS 2014**

2014 Edition of Conference Series: *Worldwide Forum*

Valencia (Spain), 2-5 November 2014

Technical Program Chair: Prof. Ignacio R. Matias

Action TD1105 represented as **Track Co-Chair for Europe/Africa (Track 9: Materials, Processes, Circuits, Signals & Interfaces)** by Dr. Michele Penza, Action Chair, ENEA, Brindisi, Italy.

Track 4 Chemical Sensors Co-Chair: Prof. Eduard Llobet, MC Member.

COST Action TD1105: Past Related EVENTS

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- **ECTP 2014 - Brussels, 17-19 June 2014**

COST Action TD1105 **EuNetAir** and FP7 project **SensIndoor** represented Prof. Anita Lloyd-Spetz, Action Vice-Chair, Linköping University (Sweden) and Oulu University (Finland), and Partner of SensIndoor project.

Thursday 19th June 2014, 09:00 to 10:30

PARALLEL SESSIONS: How the Built Environment will meet Europe Needs and its Societal Challenges - Foreseen Innovation & Future Horizons

09:00 to 10:30 INDOOR ENVIRONMENT QUALITY (Parallel Session)

Chairs: Jürgen Frick (MPA University of Stuttgart), Monique Levy - Maria Yeroyanni - Ugo Guarnacci (EC DG Research and Innovation)

ECTP Construction and Built Environment: Future Horizons
17-19 June 2014, Brussels

Organized by: **ECTP** **encord** **ENBRI** Supported by: **ECCREDI** Co-located with: **BUILDING TEST EXPO**

<http://www.ectp.org/Conference2014.asp>

After Paris, Versailles, Amsterdam, Brussels and Warsaw, the European Construction Technology Platform is organizing its 6th Conference at SQUARE BRUSSELS Meeting Centre in central Brussels, jointly with ENCORN (European Network of Construction Companies for Research and Development) and ENBRI (European Network of Building Research Institutes), and with the support of ECCREDI (European Council for Construction Research, Development and Innovation).

This event co-locates with Building Test Expo 2014. ECTP Conference delegates and Expo Exhibitors will thus benefit from exclusive networking opportunities.

Other Past Related Events

- **European Cluster CHARACTERIZATION - Sensors Kick-off MEETING: Brussels, 27 November 2014**
European Commission - DG Research & Innovation
Directorate Key Enabling Technologies
Unit Advanced Materials and Nanotechnologies
EuNetAir Participants: Michele Penza, Andreas Schuetze, Corinna Hahn
Nominated Chair of the EU Cluster SENSORS: Michele Penza, ENEA, Italy
- **European Conference**
Renaturing Cities: Systemic Urban Governance for Social Cohesion
Milan, 1 - 2 December 2014
Under the auspices of the *2014 Italian Presidency of the Council of the EU*
European Commission - DG Research & Innovation
Unit Sustainable Management of Natural Resources
***EuNetAir* Participants as Main Discussants:** Jurgen Frick, Michele Penza

Upcoming Event: EuroNanoForum 2015 - *Riga, 10 - 12 June 2015*

Invited Speaker: Michele Penza, ENEA, Brindisi, Italy

The European Sensor-Systems Cluster (ESSC):

High Impact EC Initiative on Sensor Technologies for Sustainable Applications



10-12 June 2015, Riga, Latvia

www.euronanoforum2015.eu

The seventh ENF is Europe's largest conference on nanotechnologies, advanced materials science, innovations and business.

3 days of conference and networking:

1000 Delegates

100 Speakers

50 Countries

**under Latvian Presidency of the EU Council
hosted and organized by University of Latvia
supported by EC DG R&I**

**EuNetAir at 2nd Consultation Meeting on
the Global Platform on Air Quality and Health**

WHO Geneva, 18-20 August 2015, *Meeting Report - DRAFT 23.09.2015*



Session 3, cont. Low cost AQ monitoring

- Portable Sensor-Systems for Air Quality Monitoring: The case-study of EuNetAir (*M. Penza – remote presentation*)
- Experiences of USEPA (*T. Watkins – remote presentation*)

Discussion: Perspectives for application of low cost sensors for AQ monitoring

EuNetAir at **WEBINAR on CLIMATE ADAPT**

Copenhagen, **16 Dec. 2015**, 11:30-13:00 (CET) **Webinar**

European Environment Agency



Hereby I would like to invite the European climate change adaptation research community and related funding organisations to a second webinar on the progress in and the development of the European Climate Adaptation Platform (Climate-ADAPT). I would also like to invite the national reference centres on climate change impacts, vulnerability and adaptation in EEA member countries and experts from the European Commission, international organisations, transnational initiatives and cities networks on adaptation.

André Jol

EEA Head of Group Climate change impacts, vulnerability and adaptation

EU funded research initiatives:

Climate-KIC (Innovation Pillar, Policy), Cost Action (Actions ES1404, **TD 1105**, ES1102, ES1106)

Symposium planned at EMRS Spring Meeting 2016

Lille (France), 2-6 May 2016

Advanced Functional Materials for Environmental Monitoring Sensors and Energy Systems Applications

*Proceedings of Symposium EMRS Spring Meeting 2016 to be published under peer-review process in **Beilstein Journal of Nanotechnologies** (IF 2014: 2.3)*

- **Peer-review process** Open Access journal without publication fee (<http://www.beilstein-journals.org/bjnano>).
- **Symposium Organizers**:
 - ✓ Michele Penza, ENEA, Italy
 - ✓ Anita Lloyd Spetz, Linkoping University, Sweden
 - ✓ Albert Romano-Rodriguez, Barcelona University, Spain
 - ✓ Meyya Meyyappan, NASA Ames Research Center, USA
- **Deadline for abstract submission: **15 January 2016****



<http://www.emrs-strasbourg.com>



Symposium PM4 at 2016 MRS Fall Meeting & Exhibit **Boston (USA), 27 November - 2 December 2016**

Novel Materials, Fabrication Routes and Devices for Environmental Monitoring

• *Symposium Organizers:* <http://www.mrs.org/fall2016>

- ✓ Michele Penza, ENEA, Italy
- ✓ Ruby Ghosh, Michigan State University, USA
- ✓ Albert Romano-Rodriguez, Barcelona University, Spain
- ✓ Meyya Meyyappan, NASA Ames Research Center, USA

• **Deadline for abstract submission: 16 June 2016**



PROPOSALS FOR NEW INITIATIVES

..... DISCUSSION

- **SENSOR+TEST, Nuremberg, Germany**

EuNetAir event joined to SENSIndoor, ESSC, other FP7 projects

Proposer: Prof. Andreas Schuetze, Germany

- **H2020 Call SC5-2017**

Open Call: October 2016 (announced!)

Proposer: Prof. Kostas Karatzas, Greece

12. Requests for new members - List of New WGs Members (1/2)

- **Prof. Klaus Schierbaum**, University of Dusseldorf, Germany
WG1: Sensor Materials; WG2: Sensors
- **Dr. Brian Coffey**, Analog Devices, Ireland
WG2: Sensors
- Other Expressions of Interest not reported here !

12. Requests for new members - List of New WGs Members (2/2)



COST Action TD1105 Affiliation/Information Form

Photo is optional.

COST Action TD1105 Information Form for New Action Participants and New Working Group Members

Personal Details	
1. Surname	
2. First name(s)	
3. Email	
4. Institute/company	
5. Address	
6. Postal address	
7. Telephone	
8. Fax	
9. Mobile	
Background related to the COST Action (research activities, institute/company background in relation to COST Action, etc) (Max 10 lines)	
Personal Activities related to the COST Action (Max 10 lines)	
Planned contribution to the COST Action (Max 10 lines)	
Involved member of:	
MC	<input type="checkbox"/>
CG	<input type="checkbox"/>
SC	<input type="checkbox"/>
WG 1	<input type="checkbox"/>
WG 2	<input type="checkbox"/>
WG 3	<input type="checkbox"/>
WG 4	<input type="checkbox"/>
SIG 1	<input type="checkbox"/>
SIG 2	<input type="checkbox"/>
SIG 3	<input type="checkbox"/>
SIG 4	<input type="checkbox"/>
OTHER	<input type="checkbox"/>
Remarks (Max 10 lines)	

**Application Form
filled by New Members
asked by email and replied filled.**

Please, New WG Member and/or Action Participant should provide own CV (max 1 page)

13. Non-COST applications to the Action

(1/2)

List of Non-COST Members: New NNC and IPC

EuNetAir: List of Experts from NNC and IPC



200 EXPERTS from **31** COST Countries and **7** Non-COST Countries



AU - Australia

Dr. Phil MARTIN



MA - Morocco

Dr. Radouane LEGHRIB
Dr. Houda LAHLOU



CA - Canada

Prof. John YEOW



UA - Ukraine

Dr. Olena TUROS
Dr. Arina PETROSIAN
Dr. Oksana ANANYEVA
Dr. Liudmyla MYKHINA
Dr. Liliia PETRUK
Dr. Tetiana MAREMUKHA



CN - China

Dr. Yongxiang LI
Dr. Zhifu LIU



RU - Russian Federation

Dr. Alexey VASILIEV



US - United States

Prof. Andrei KOLMAKOV
Dr. Meyya MEYYAPPAN

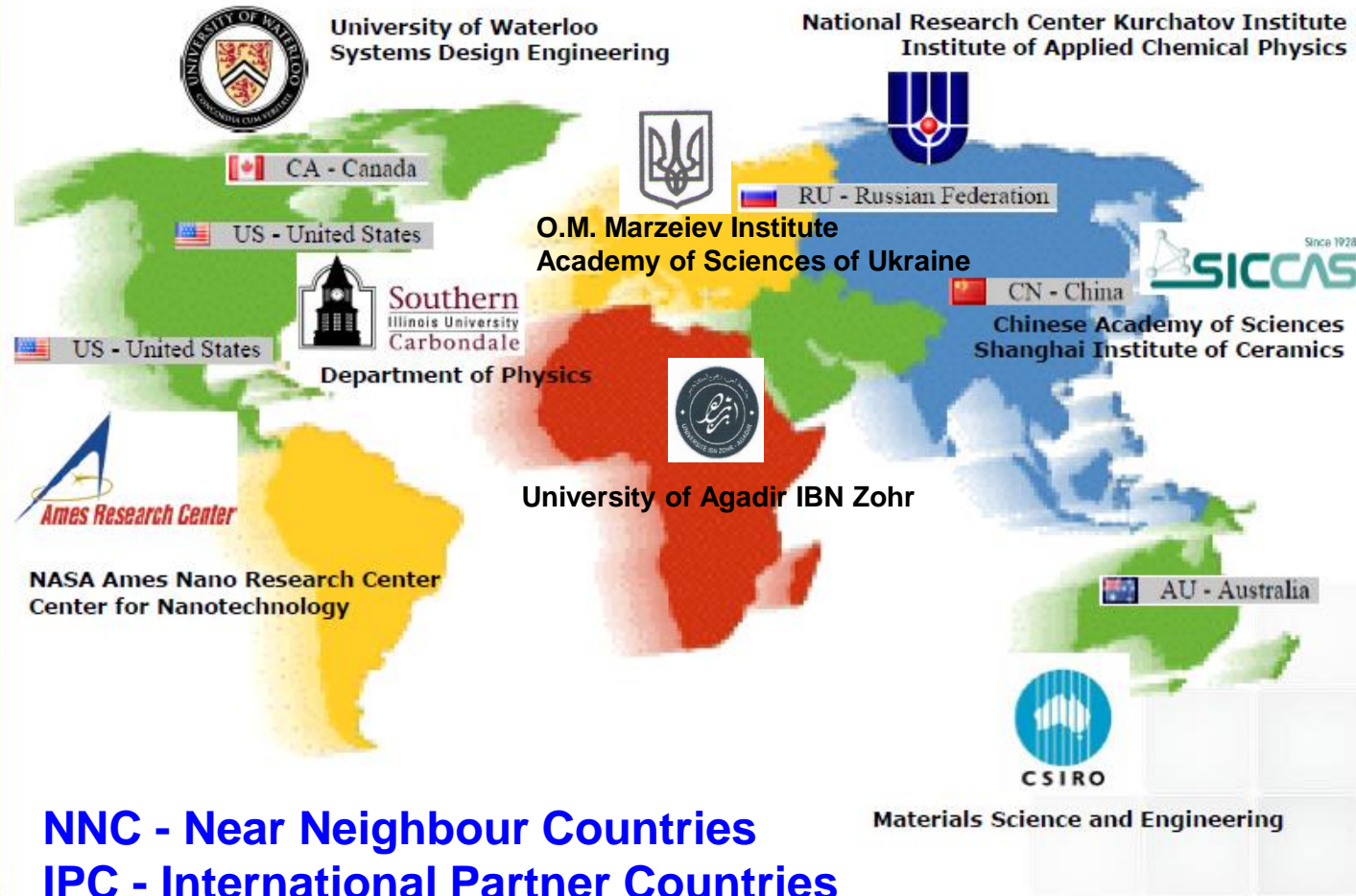
7 Non-COST Countries and 8 Non-COST Institutions

GEORGIA as NNC is interested to join EuNetAir

Non-COST Countries:
Australia, Canada, China,
Morocco, Russia, **Ukraine**,
USA

Non-COST Institutions:
CSIRO (**Australia**);
University of Waterloo
(**Canada**); Chinese Academy
of Sciences, Shanghai
Institute of Ceramics
(**China**); University of Agadir
IBN Zohr (**Morocco**);
National Research Center
Kurchatov Institute (**Russia**);
O.M. Marzeiev Institute for
Hygiene and Medical
Ecology of Academy of
Science of Ukraine
(**Ukraine**); Southern Illinois
University Carbondale,
NASA Ames Research
Center (**USA**).

Non-COST EuNetAir PARTICIPANTS



NNC - Near Neighbour Countries
IPC - International Partner Countries

14. AOB of the Action - List of AOB

- **Joint-Publications** should be encouraged more.
 - PAPERS
 - A **List of Joint-Publications** (Year 2: 2013-14) from Action is downloadable at Action webpages (www.cost.eunetair.it) in the Section **LIBRARY - Publications**
 - A **List of Joint-Publications** (Year 3: 2014-15) from Action is downloadable at Action webpages (www.cost.eunetair.it) in the Section **LIBRARY - Publications**
 - **Other JOINT-PUBLICATIONS are HIGHLY welcomed !**

List of publications related to EuNetAir

M.C. Mingullón, M. Viana, C. Reche, X. Querol, J. García Vidal, O. Trullols, J.M. Barceló, M. Viader, P. Speranza
Is the performance of sensor technologies for air quality monitoring improving?
European Aerosol Conference EAC 2015
Milan, Italy, 6-11 September 2015

R. Popek, H. Gawrońska, S.W. Gawroński
The level of particulate matter on foliage depends on the distance from the source of emission
International Journal of Phytoremediation 17 (2015) 1262-1268

N. Weyens, S. Thijs, R. Popek, N. Witters, A. Przybysz, J. Espenshade, H. Gawronska, J. Vangonveld, S.W. Gawronski
The role of plant-microbe interactions and their exploitation for phytoremediation of air pollutants
International Journal of Molecular Sciences 16 (2015) 1-x

C. Borrego, M. Coutinho, A.M. Costa, J. Ginja, C. Ribeiro, A. Monteiro, I. Ribeiro, J. Valente, J.H. Amorim, H. Martins, D. Lopes, A.J. Miranda
Challenges for a New Air Quality Directive: The role of monitoring and modelling technique
Urban Climate 14 (2015) 328-341

C. Hummelgard, I. Bryntse, M. Bryzgalov, J. Henning, H. Martin, M. Norén, H. Rödjegard
Low-cost NDIR based sensor platform for sub-ppm gas detection
Urban Climate 14 (2015) 342-350

M. Penza, D. Suriano, G. Cassano, V. Pfister, M. Amodio, L. Trizio, M. Brattoli, G. De Gennaro
A case-study of microsensors for landfill air-pollution monitoring applications
Urban Climate 14 (2015) 351-369

N. Castell, M. Kobernus, H.-Y. Liu, P. Schneider, W. Lahoz, A. J. Berre, J. Noll
Mobile technologies and services for environmental monitoring: The Citi-Sense-MOB approach
Urban Climate 14 (2015) 370-382

J. Brink
Boundary tracking and estimation of pollutant plumes with a mobile sensor in a low-density static sensor network
Urban Climate 14 (2015) 383-395

S. N. Behera, M. Sharma, P.K. Mishra, P. Nayak, B. Damez-Fontaine, R. Tahon
Passive measurement of NO₂ and application of GIS to generate spatially-distributed air monitoring network in urban environment
Urban Climate 14 (2015) 396-413

C.A. Skjath, P. Baker, M. Sadyś, B. Adams-Groom
Pollen from alder (*Alnus* sp.), birch (*Betula* sp.) and oak (*Quercus* sp.) in the UK originate from small woodlands
Urban Climate 14 (2015) 414-428

M. Sadyś, C.A. Skjath, R. Kennedy
Determination of *Alternaria* spp. habitats using 7-day volumetric spore trap, Hybrid Single Particle Lagrangian Integrated Trajectory model and geographic information system
Urban Climate 14 (2015) 429-440

A. Järvinen, H. Kuuluvainen, J.V. Niemi, S. Saari, M. Dal Maso, L. Pirjola, R. Hillamo, K. Janka, J. Keskinen, T. Rönkkö
Monitoring urban air quality with a diffusion charger based electrical particle sensor
Urban Climate 14 (2015) 441-456

P.V. Ørby, R.G. Peel, C. Skjath, V. Schlüssen, J.H. Bønløkke, T. Ellermann, A. Brændholt, T. Sigsgaard, O. Hertel
An assessment of the potential for co-exposure to allergenic pollen and air pollution in Copenhagen, Denmark
Urban Climate 14 (2015) 457-474

G.G. Mandayo, J. Gonzalez-Chavari, E. Hammes, H. Newton, I. Castro-Hurtado, I. Ayerdi, H. Knapp, A. Sweetman, C.N. Hewitt, E. Castaño
System to control indoor air quality in energy efficient buildings
Urban Climate 14 (2015) 475-485

A. Mendes, S. Bonassi, L. Aguiar, C. Pereira, P. Neves, S. Silva, D. Mendes, L. Guimarães, R. Moroni, J.P. Teixeira
Indoor air quality and thermal comfort in elderly care centers
Urban Climate 14 (2015) 486-501

B. de Fonseca, J. Rossignol, D. Stuerger, P. Pribetich
Microwave signature for gas sensing: 2005 to present
Urban Climate 14 (2015) 502-515

- **5 Special Issues:**
- **JSSS, Copernicus - 2014**
- **Urban Climate, Elsevier**
- **AMA Science Proceedings**
- **JSSS, Copernicus - 2016**
- **Beilstein Journal**
- **of Nanotechnology - 2016**

NEXT MC MEETING:

SIXTH SCIENTIFIC MEETING: WG & 9th MC Meeting

New Sensing Technologies for Outdoor Air-Pollution

Czech Republic Academy of Sciences, Prague (CZ), 5 - 7 October 2016

Local Organizers:

Dr. Vera Kurkova, MC Member

Dr. Zdenek Zelinger, MC Member

Dr. Roman Neruda, MC Substitute

CZ Academy of Sciences

Prague (CZ)



Letter of invitation to host a COST Action TD1105 WG meeting and MC meeting in Prague, Czech Republic, on 8-10 June, 2016

Dear Michele,

I am delighted to be able to offer the J. Heyrovský Institute of Physical Chemistry of the Czech Academy of Sciences, Prague as the host for a COST Action TD1105 WG and MC meeting to be held in Prague on 8-10, June 2016.

The intention is that this meeting will be formally hosted by me in collaboration with V. Kůrková and R. Neruda, but local arrangements will be made through the J. Heyrovský Institute of Physical Chemistry of the Czech Academy of Sciences, Prague.

This invitation is based on the assumption that the main costs will be covered by the COST Action TD1105, with administrative management as ruled by COST Vademecum by activation of the Local Organizing Support (LOS) tool, if needed.

I look forward to a very successful meeting in highly conducive surroundings, matching those of Action EuNetAir last years.

Best wishes



*Prof. Ing. Zdeněk Zelinger, CSc.
Czech Republic MC Member
J. Heyrovský Institute of Physical Chemistry
of the Czech Academy of Sciences,
Dolejškova 3
182 26 Prague
Czech Republic*

16. Summary of MC decisions 7th MC Meeting, 5 June 2015, Linköping, SE

DESCRIPTION OF DECISIONS DISCUSSED BY ACTION TD1105 MC	APPROVED
MC7D01. Action EXTENSION till 31 December 2016	YES/NO
MC7D02. 13 STSMs : from 5 days to 90 days, or equivalently	YES/NO
MC7D03. WG1-WG4 Meeting , VINCA Institute and Public Health Institute, Belgrade, Serbia, 13 - 14 Oct. 2015	YES/NO
MC7D04. WG1-WG4 Meeting , Sofia, Bulgaria, 16 - 17 December 2015 (joined to 8 th MC Meeting)	YES/NO
MC7D05. 4th Action Workshop on <i>Innovations and Challenges for Air Quality Control Sensors</i> , 25 - 26 February 2016, Wien, Austria	YES/NO
MC7D06. 4th Training School of Action , 19 - 22 April 2016, Copenhagen, Denmark	YES/NO
MC7D07. WG1-WG4 Meeting , Prague, CZ, 5 - 6 October 2016 (joined to 9 th MC Meeting)	YES/NO
MC7D08. NEWSLETTER: Issue 7 (Nov-Dec. 2015); Issue 8 (May-June 2016) LEAFLET/BROCHURE : UPDATED Issues	YES/NO
MC7D09. 8th MC Meeting : 18 Dec. 2015, Sofia, Bulgaria, by BG Academy of Sciences	YES/NO
MC7D10. 9th MC Meeting : 7 October 2016, Prague, CZ, by CZ Academy of Sciences	YES/NO
MC7D11. DISSEMINATION & OUTREACH ACTIVITIES:	YES/NO
<u>Budget Year 4</u>: 141.6 k€ (estimated by COST): 123.6 k€ (Science) + 18 k€ (max 15% FSAC)	

17. Closing

8th MC Meeting, 18 December 2015, Sofia, Bulgaria, hosted at BAS

WELCOME from Chair addressing the 8th MC Meeting, Sofia

SEE YOU in PRAGUE, 5 - 7 October 2016

Czech Republic Academy of Sciences



www.shutterstock.com · 166747631



Contact Details



CSO Approval: 01 Dec. 2011
Kick-off Meeting: 16 May 2012
Start of Grant: 01 July 2012
End of Grant: 15 Nov. 2016

www.cost.eunetair.it

MC Chair:

Dr. Michele Penza, ENEA, IT
michele.penza@enea.it

MC Vice Chair:

Prof. Anita Lloyd Spetz
Linköping University, SE
spetz@ifm.liu.se

Grant Holder:

Dr. Corinna Hahn, Dr. Juliane Rossbach
Eurice GmbH, DE
c.hahn@eurice.eu; j.rossbach@eurice.eu

Scientific Secretary:

Dr. Annamaria Demarinis Loiotile
annamaria.demarinis@uniba.it

Science Officer:

Dr. Deniz Karaca
deniz.karaca@cost.eu

Administrative Officer:

Dr. Andrea Tortajada
andrea.tortajada@cost.eu

http://www.cost.eu/domains_actions/essem/Actions/TD1105

Top Story 

▶ all stories

***TD1105 selected as Top-Story
by COST Association***



Taking charge of air quality control in Europe's smart, green cities



A COST funded network of European spin-offs, SMEs, agencies, research centres and universities is working on developing cheaper and energy efficient sensors for air quality control in Europe's future smart cities.

▶ full story

ACKNOWLEDGEMENTS

Sofia, Bulgaria, 16 - 18 December 2015



THANK YOU VERY MUCH FOR YOUR KIND ATTENTION !



**BULGARIAN
ACADEMY
of SCIENCES**
— 1869 —



BAS - Institute of Electronics

**BAS - National Institute for
Meteorology and Hydrology**

