

COST Action no. IC1004

2011 | 2015

Cooperative Radio Communications for Green Smart Environments

Objectives

- Increase the knowledge on **Radio Communication Systems and Networks** within the framework of **Energy Efficiency and Smart Environments**
- Play a supporting role to European **Industry**, contribute to the deployment of **Future Wireless Systems** (beyond 4G)
- Train **Early Stage Researchers** in the field of Cooperative Radio Communications for Green Smart Environments.

Working Groups

- WG1 – Radio Channel modelling
 - SWG 1.1 – Antenna systems
- WG2 – Radio Signalling
 - SWG 2.1 – Cooperative Communications
- WG3 – Radio Access Networks
- Topical Working Groups:
 - TWGB - Body Environment Networks
 - TWGV – Vehicular Communications
 - TWGI – Indoor Communications
 - TWGU – Urban Area Networks
 - TWGO - OTA (Over-the-air Testing)

Main Achievements

- Multi-link MIMO Radio Channel Model published, public code made available
- IC1004 is pioneer in the modelling of the Dense / Diffuse Multipath Component
- Vehicular Radio Channel Model for 5 GHz band, for Traffic Safety Applications
- Methods for Complex Radio Wave Propagation Simulation in Enclosed Spaces
- Passive Indoor Localization Techniques for Security and Safety Measures
- Harmonisation of Radio Access Network Simulation Platforms mainly for LTE-A
- Energy Consumption Model for Multi-RAT Networks
- New Channel modelling approach for Body-Centric applications
- Algorithms for Femtocells Interference Management and Mobility Optimization
- Real-time Ultra-wideband Multi-antenna Channel Sounding at 60 GHz
- Alignment and calibration of Methods for MIMO OTA testing for User Equipment

Gender Balance and Early Stage Researchers

- 58% of COST IC1004 participants are ESRs, as they are in the centre of IC1004 strategy. 5 of the Topical Working Group Chairs are ESRs
- ESRs have also been supported by COST IC1004 with 10 STSMs per year and more than 50 grants to attend the 2 Training Schools organised every year
- 17% of COST participants are female, two of them are Chairs of Working Groups

Dissemination

- **Training Schools** on "Vehicular Connectivity", "Wireless Body Area Networks", "Propagation Measurement, Modelling, and OTA-Emulation", and "Tools for cooperative communications"
- **Contributions** to 3GPP RAN4. ETSI ITS and CTIA MOSG
- **Newsletter** issues, Position Paper on COST Actions role in **Horizon2020**
- **Special issues** in Journals, +100 joint publications, +20 special sessions organised at major conferences, above 300 references in scholar databases.

www.cost.eu/ict

Information and
Communication
Technologies
(ICT)



Participating countries: 28

AT, BE, BG, CH, CY, CZ, DE, DK, ES, FI, FR, GR, HR, IE, IL, IT, LU, MK, NL, NO, PL, PT, RO, RS, SI, SK, SE, UK

International Collaboration:

AU, CA, CN, CO, JP, ME, US

Contact details

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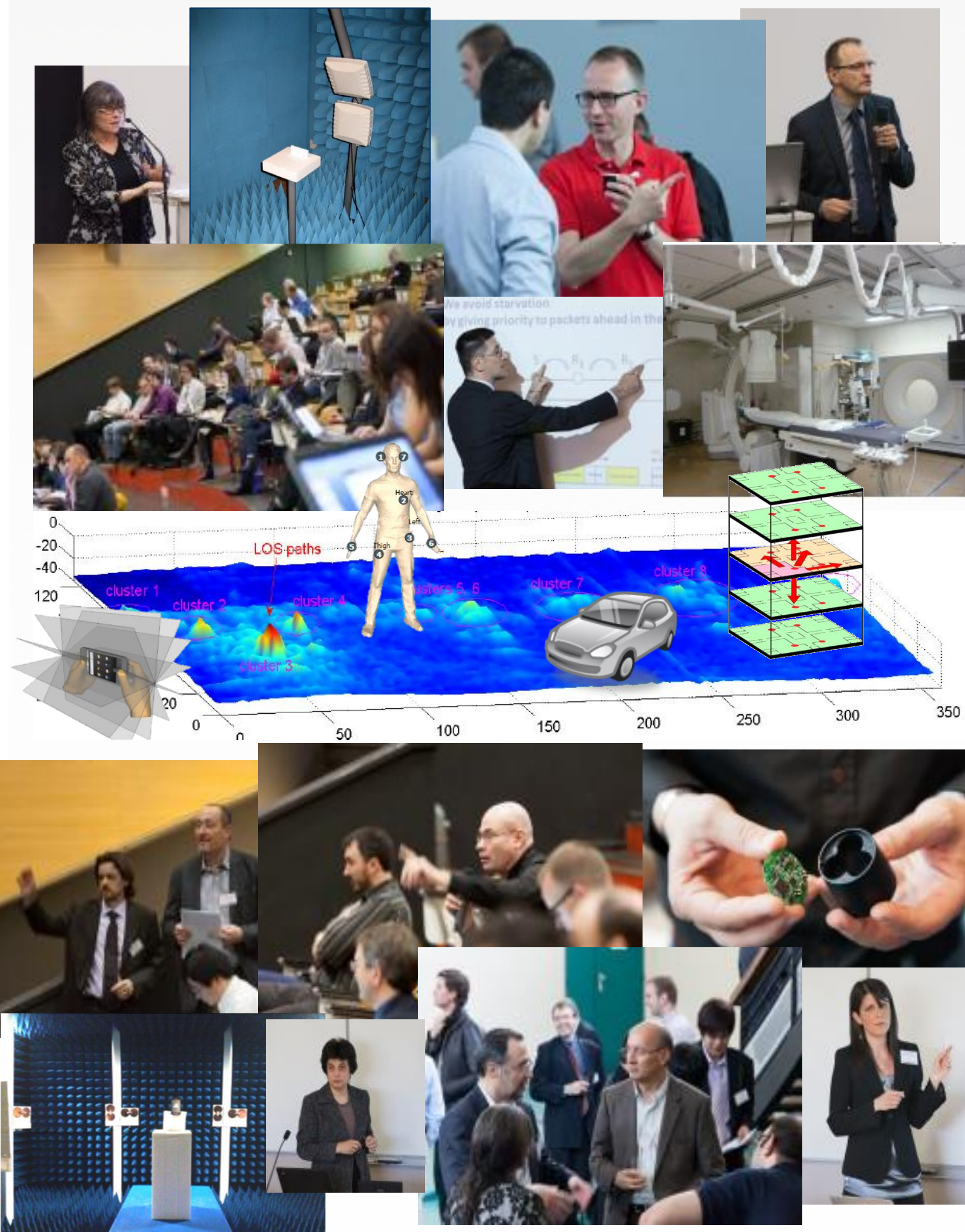
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COST IC1004 is an Inclusive Scientific Network of Knowledge, where Academia meets Industry to discuss on the new Wireless Communications Challenges



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