



**ISTITUTO SUPERIORE
MARIO BOELLA**


I S M B
Istituto Superiore Mario Boella

EXPRESSION OF INTEREST TO 5G PPP

STRAND 3: NETWORK MANAGEMENT

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60
SECONDS



TO PRESENT
ISMB

135

RESEARCHERS & STAFF



ONGOING PROJECTS

19 EU FUNDED
(FP7)

36 INDUSTRIAL
R&D

18 NATIONAL AND
REGIONAL



7 RESEARCH AREAS

4 FUNCTIONS

3 STRATEGIC PROGRAMS

PUBLICATIONS

960 TOTAL

167 IN 2013

WORKFORCE COMPOSITION

80% MASTER DEGREE

70% ENGINEERS

30% PhD



OVERALL TURNOVER (IN 2013)

10,5 MLN €

5 MLN €
CdSP FUNDING

5,5 MLN €
COMPETITIVE BUDGET

STRAND 3: NETWORK MANAGEMENT

- **P11: Cognitive Network Management**

- Cognitive network management for **automatic RAT configuration and off-load**
 - Optimization based on service requirements, congestion and state economic constraints
- Advanced **distributed network administration** solutions to monitor network performance in a **IoT Multi-RAT environment**
 - **Novel cognitive approaches** for adapting the system behavior to achieve global optimization goals

- **P12: Service Level Management & Metrics for QoS & QoE**

- **User-centred design and development of services and applications**
 - Use cases analysis and development, requirements elicitation
- Improving the **quality of the user experience**
 - **Impact assessment** on users, processes, services, communities and environment (usability, accessibility, user-centred design and experience design)
- **QoS and QoE metrics** for different traffic types: M2M and sensors, future media, augmented reality, cloud traffic.
 - Integration of the metrics in network **simulators** and networks **probes**

STRAND 3: NETWORK MANAGEMENT

- **P13: 5G Network Security and Integrity**
 - **Use cases study, design, development and requirements elicitation** in scenarios where **privacy and security** (both real and perceived) represent an important key factor (e. g. mobile sensing, disasters and crisis situations and emergency planner, social networking, e-Call, big and open Data,...)
 - Identification of potential **risks and vulnerabilities** in the novel envisioned ecosystem where **smart IoT objects** are also integrated.
 - Holistic solutions for ensuring **security, dependability and privacy for IoT smart objects** operating within/across multiple virtualized/SDN domains and heterogeneous networks

CONTACTS

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