The Italian National Research Council (CNR) is the main public research body of Italy, carrying out, promoting and transferring multidisciplinary research through a network of more than one hundred institutes all over the Country. The NESSoS project will involve groups from the two main CNR institutes in ICT, both located in the CNR Research Area of Pisa: the *Institute of Informatics and Telematics (IIT)*
and the
Institute of Information Science and Technologies (ISTI)
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The *IIT* performs research in pervasive computing and communication, computational mathematics and systems and network security. IIT has also an outstanding capability on administrating ICT services and research projects; in particular it acts as the registry of the ".it" Internet domain (with financial contracts yearly with 2500 Internet Services Providers) and is one of the partners of the EURid consortium that manages the ".eu" registry. In addition, IIT has an excellent experience on technology transfer and the technology developed in the project will be very useful also with respect to such activities.

Constituted in 2002 as a merger between the two internationally renowned former Institutes CNUCE and IEI, *ISTI* is committed to producing scientific excellence and to playing an active role in technology transfer. The domain of competence covers Information Science, related technologies and a wide range of applications. The backbone of ISTI organization is constituted by fourteen Research Laboratories (RLs) and three Technology Centres (TCs), which focus on complementary and outstanding research fields, and actively participate to national and international research projects.

Research and networking expertise

The **IIT Information** Security **(IS-IIT) group** performs research and development activities on secure distributed systems and services as well as on foundations of security and trust in pervasive computing. It consists of about 20 members ranging from PhD students and researchers to software engineers and associate university researchers. The main research activities involve network and systems security, secure software engineering, access/usage control, language-based security, formal analysis based on specification languages, PKI & trust management, policies and enforcing mechanisms. The group has a relevant experience on running national and FP6-7 EU projects, including
ARTIST2, BIONETS, CONNECT, CONSEQUENCE, GRIDTrust, S3MS, SENSORIA.

The **Software Engineering RL** , led by Antonia Bertolino, brings in a solid expertise and a long outstanding research curriculum in software verification, testing and analysis. Currently,

research is strongly focused in the development of methodologies and tools for component-based systems and Service-oriented Architectures, especially testing methodologies based on a formal description of software architecture and approaches for the automatic generation of test cases starting from XML schema and UML models. Also, monitoring approaches to the on-line validation of Service-oriented Architectures are under development. Recently concluded or current research projects particularly relevant to NESSoS include the FP6 STREP TELCERT, the FP6 STREP PLASTIC and the FP7 IP TAS3. In addition to research projects, members of the group are actively involved in dissemination, by direct involvement in the flagship scientific events in software engineering and testing (ICSE, ESEC/FSE, ISSTA), and in organizing small focused workshop on frontier topics. The group is also part of the PISATEL laboratory, a Joint academic/industrial research and training laboratory, established in 2001 with Ericsson Lab Italy, aimed at exploring innovative research directions and common interest topics for potentiality and feasibility, and at training of young researchers and personnel on strategic themes.

Key scientific staff

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