



ISTI (Institute of Information Science and Technologies "Alessandro Faedo") is the largest institute for Computer Science of the National Research Council of Italy (CNR). The Institute was founded in 2000 by merging the CNUCE and IEI institutes. The main aim of ISTI is to advance science and achieve important results in many Computer Science subdomains. ISTI is organized in the following thematic areas.

### **Networking Area**

This Area focuses on designing new algorithms and tools ranging from Smart Cities to Intelligent Transportation Systems and from Ambient Assisted Living to monitor systems.

#### **Software Area**

The Software Area performs third-party evaluation and certification of ICT processes and products, according to given requirements and standards and to meet the needs of users, industry, and public administrations. Industrial challenges, demands, and needs in systems and software development processes drive this thematic area.

## **Knowledge Area**

The mission of this Area is to investigate and advance the state-of-the-art in the Artificial Intelligence field, investigating applications to digital media and digital humanities and considering scalability issues. The Area addresses fundamental questions about the interaction between people and technologies and contributes to the evolution of science practices by researching, experimenting, and closely connecting research and development of innovative digital infrastructures, information systems, and intelligent (smart) solutions for fostering and empowering data-centred research.

# **High Performance Computing Area**

The High-Performance Computing Area researches information indexing and retrieval, large-scale distributed/ cloud systems, big data analytics, machine learning and artificial intelligence, mobility analysis, and semantic enrichment.

#### Visual Area

The goal of the Visual Area is to increase knowledge in signal processing, image understanding, and artificial vision in theoretical and applicative contexts. The goal is achieved by studying and developing models, computer-based methods, intelligent systems, machines for forming, elaborating, analyzing, and recognizing images and signals and their application in society, design of new computer graphics techniques, with a particular focus on geometry processing, learning, acquisition, visualization, and physical reproduction.

# Flight and Structural Mechanics Area

Flight and structural mechanics Area conducts research, software development, and consulting in continuum mechanics, mainly focusing on structural engineering. The main research topics are Computational solid mechanics, Mechanics of masonry structures and Structural health monitoring of historic buildings. The Area is also active in orbital debris modelling, mitigation and remediation, reentry predictions of uncontrolled spacecraft and rocket bodies for civil protection applications, space experiments for fundamental physics, and mission analysis, including flight operational support and astrodynamics.

The ISTI Library was founded in 1954. Since 2000 is part of the Library and Scientific Documentation Center of the CNR Research Area in Pisa. The Library offers services supporting the scientific research of the CNR institutes located the CNR in Research Area of Pisa (approximately 2000 researchers and research support staff). The Library provides services to support the information needs of the scientific community. The Staff is responsible for the curation and enhancement of the institutes' heritage, facilitating access either traditional or digital resources.

Among the Library's principal activities are managing the researcher's scientific production, supporting the principles of Open Science, and promoting free and open access to knowledge. The Library is involved with national and international associations committees and collaborates with various partners in grey literature, digital libraries, institutional archives, open science, open access, and enhancement of bibliographic and documentary resources.

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