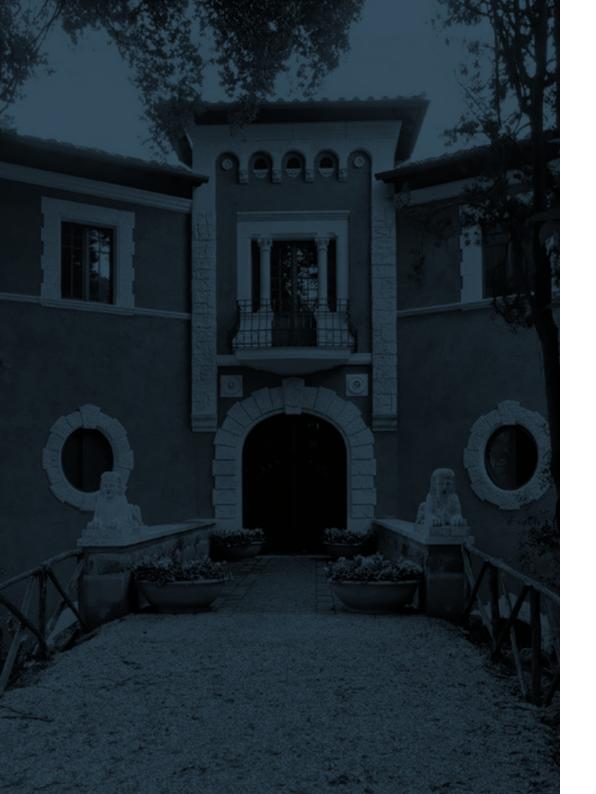
THE ACADEMY MEMORIES IDEAS PERSPECTIVES.





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01 Memories, ideas, perspectives

Founded in 1782 with the aim of promoting the advancement of knowledge and the diffusion of Italy's scientific culture. the Academy is the only Italian scientific academy of national character that has been operational without interruption since its foundation. Today it is based in Rome, at the Villa Torlonia complex.

The Academy operates through the skills and synergistic activity of its members, who ensure a permanent connection with the university and research system, both in Italy and abroad.

It promotes scientific knowledge in mathematical, physical and natural sciences, and fosters studies on the history of science, along with initiatives for the safeguarding of library and archival heritage.

The commitment of the Academy to public engagement is a contribution to fully developing scientific citizenship toward the prospect of looking at science as an essential part of human culture.





02 The Academy: a presence spanning four centuries

The Academy was founded in Verona under the name Società Italiana, on the initiative of hydraulic engineer Anton Mario Lorgna and 39 other distinguished scientific figures of the time - including Lazzaro Spallanzani, Alessandro Volta, Roger Joseph Boscovich - in a historical context in which the number of those who approached science was scanty, the number of scientists was very meager, none of the many then-existing academies were oriented exclusively toward science, and access to studies in general, and to scientific studies in particular, was elitist.

This "bringing together" took place through intense and continuous exchanges of letters, and through the printed publication of the Proceedings of the Academy, in which members presented their research and studies: a genuine scientific journal, written rigorously in Italian, since it was Lorgna's desire that the Italian language would return to being recognized among the primary international scientific languages, as it had been in the 17th century. Lorgna's aim was to promote and make visible Italian scientific production. beyond the boundaries of the individual states into which the peninsula was then divided. This includes the idea of forming a critical mass of scientists who could compete with the cultural and scientific thought of the great European Powers of the time.

It is also possible to trace an "educational" vocation of the Academy, present since the earliest years of its foundation: the second president, Antonio Cagnoli, published an "Almanacco con diverse notizie astronomiche adattate all'uso comune". in which he indicated, year after year, all the astronomical events that would occur, inserting from time to time a few pages of simply explained astronomy.

This experiment, which turned out to be a great success, inspired another member from among the Academy's Forty, Antonio Stoppani, to write *II Bel Paese* (1876), a work of vastly popular resonance, on the beauty of Italy's geomorphology. In the early 20th century, the Academy opened itself to the publication and dissemination of historical-scientific studies. This was fully developed many years later, in the 1980s, by President Giovanni Battista Marini Bettòlo Marconi. Another aspect of the Academy's institutional tradition, inextricably linked with the previous one, was related to initiatives in the fields of preservation and promotion of the historical-scientific archival and book heritage. The first initiatives of Emanuele Paternò

in the 1920s were followed by those of his student, Domenico Marotta, president of the Academy during the 1960s, primarily in the acquisition and publication of correspondence and papers of scientists. This tradition, then, has since been continued by Academy members and presidents: from Beniamino Segre, who brought together the institutional archive at a single location, to Giuseppe Penso, who was first to write a history of the Accademia dei XL, to Edoardo Amaldi, thanks to whom the Academy acquired Italy's only copy of the Archive of the History of Quantum Physics, and on to Giovanni Battista Marini Bettòlo Marconi, who ensured, the preservation of the archives of several members. and initiated the census of the archives for the history of science in Italy. Lastly, Gian Tommaso Scarascia Mugnozza initiated the digitization and web publishing of the archival and book heritage on the Internet, starting in the 1990s.

archives

experiment

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03 The Library

The book heritage accumulated over more than two centuries, through acquisitions, donations and exchanges, consists of about 10,000 volumes.

Exhibited at the library's headquarters, which are open to the public, are, in addition to the complete series of *Memorie* dell'Accademia, the two main collections of 18th–20th century monographs on the history of science and of works by members, or concerning their lives and works, as well as collections of miscellaneous volumes from the 20th century. Some of the major and most valuable collections of 19th century academic periodicals are also available for consultation: the proceedings of the Accademia delle Scienze, the St. Petersburg Astronomical Observatory, the Smithsonian Institution of Washington, the Royal Society of London, the Royal Irish Academy, the Akademie der Wissenschaften of Berlin, and Astronomical Observations of the Royal Observatory at Greenwich, to name some of the most prestigious foreign institutions.

The complete collections of Proceedings from the major Italian scientific academies are also available.

Search the **catalog on line**. The library is open Monday to Friday from 9.00am to 1.00pm **biblioteca@accademiaxl.it**

04 Archival collections

Over the course of more than two centuries, the Academy has collected a treasurable archival heritage, of primary importance for the history of Italian science.

The institutional archives document the activities of the Academy since its foundation in 1782. In addition, the Academy collected and also the personal papers of numerous scientists: Enrico Bompiani, Giovanni Battista Bonino, Vincenzo Caglioti, Damiano Macaluso, Giovanni Battista Marini Bettòlo Marconi. Domenico Marotta, Arturo Miolati, Nicola Parravano, Pasquale Pasquini, Emanuele Paternò, Gian Tommaso Scarascia Mugnozza, Giovanni Semerano; there are also documents related to Amedeo Avogadro, Federico Millosevich, Guglielmo Marconi, and Carlo Matteucci.

The Academy also holds the only copy of the collection *Sources* for the History of Quantum Physics, available in Italy. This collectionn was curated, starting from the 1960s, by a team of American scholars, by means of interviews with protagonists and partners in the development of quantum physics. It relates, among other things, to the works and activity of Niels Bohr, Wolfgang Pauli's correspondence with Werner Heisenberg, Johannes Stark's correspondence at the Deutsches Museum, Louis De Broglie's notes, Albert Einstein's correspondence with Henrik Lorentz.

Search the **inventories on line**. The Archive can be consulted from Monday to Friday from 9.00am to 1.00pm **biblioteca@accademiaxl.it**

05 Studies in the history of science

Promoting and supporting research on the history of scientific disciplines is one of the Academy's institutional aims, including the collection of records of protagonists of scientific contemporary research in Italy. In recent years, the Academy has promoted and coordinated several programs of in-depth analysis that are completely original from the point of view of historiography: "La Scienza nel Mezzogiorno dall'Unità d'Italia ad oggi" (Science in Southern Italy from the Unification of Italy to today); "Le Scienze e la Grande Guerra" (The Sciences and the Great War); the Bicentennial Celebrations of the Birth of Angelo Secchi SJ, the father of modern astrophysics.

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Strategies and tools for the dissemination of scientific culture

The Academy is responsible for the development of multimedia tools for dissemination and scientific teaching. It organizes training courses for schools, and studies the problems inherent to the organisation of scientific-technological and historical-scientific knowledge for the communication to diverse audiences.

The Academy is commitment to consolidating the National Italian Group of Citizen Science, similarly to what is already occurring in a number of European countries. In fact, it has been confirmed that Citizen Science not only represents a contribution potentially significant to research activities, but also is an important tool for the dissemination of research results among citizens.

In addition, there are various initiatives aimed at the school world: from seminars for teachers, to public debates with students, to educational activities through scientific gaming and the development and use of interactive multimedia guides for plant identification.

The Academy's action is aimed at establishing a permanent and enduring dialogue between teachers of science in schools, to counter the inevitable lapse of time necessary before current topics of scientific research appear in textbooks.

07

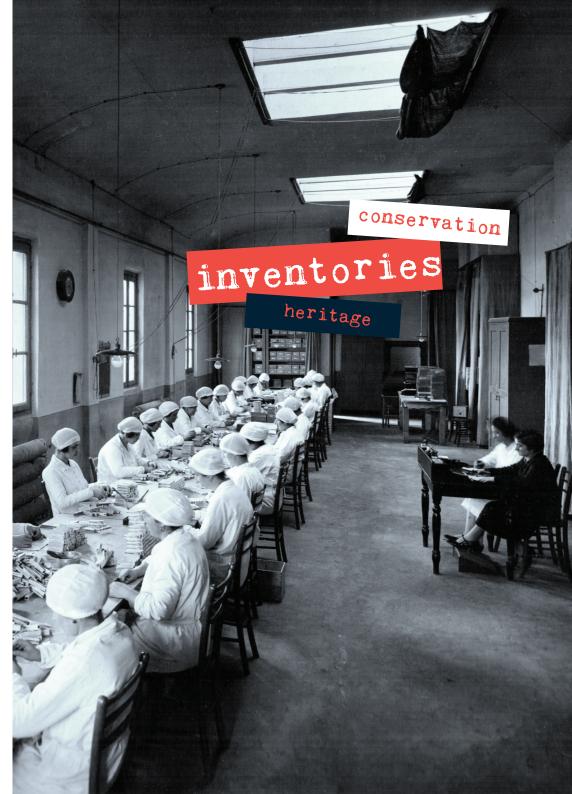
Technologies for preservation and promotion of historical scientific heritage

Since the 1990s, the Academy has been taking responsibility for the systematic survey of the archival heritage of science and technology of the 19th and 20th centuries. existing in Italy. Through the development of advanced access tools to its archival and book heritage, the Academy also aimed at fostering best practices in the field.

By adhering to the European Network DiCultHer (Digital Cultural Heritage), the Academy also promoted initiatives on digital management of cultural heritage to guarantee "the right of every citizen to be educated in the knowledge and responsible use of digital technology, for the safeguarding and showcasing of cultural heritage and cultural sites."

For more than twenty years the Academy has been working on computerized management of inventories and archival documents, ensuring online access to the collections.

The website **www.accademiaxl.it** also offers the opportunity of searching the library digital catalog, and of searching and reading a rich digitized bibliographic heritage of Academic publications from 1782.





archives

documents

08 The portal



PORTAL FOR THE ARCHIVES OF SCIENCE AND TECHNOLOGY IN ITALY

Technological-scientific documentation constitutes a considerable part of the Italian archival heritage. It includes not only materials from the Middle Ages and early modern age, but also from before and after Unification, with special reference to the roles played by the scientific and technological communities in the construction of the national identity and of the unitary state.

Bringing together over 30 years of inventories, studies and research on this documentation, the Accademia Nazionale delle Scienze detta dei XL, in collaboration with the Museo Nazionale Scienza e Tecnologia Leonardo da Vinci, set up the Portal for the Archives of Science and Technology in Italy. The Portal, developed in collaboration with ICAR (Central Institute for Archives) makes it possible to:

 find over 1,500 collections of scientific research institutions, and personal papers of scientists, held in over 200 institutes throughout Italy, with information on content, chronological details, research tools, and accessibility;

- read stories on the people and institutions who played a fundamental role in the history of science in Italy. These stories are useful for understanding the contribution of the Italian research system not only to scientific progress understood as a supranational competitive enterprise, but also to the social and economic development of the country;
- consult a wealth of bibliographic resources, curated by the Museo Galileo in Florence, which offers the possibility of exploring new perspectives for research and reflection;
- learn more about best archival practices, with a view to encourage scientific communities and individual researchers to safeguard not only their own documentation, but also the material produced by their organizations, public and private;
- signal and propose archival collections for inclusion in the portal, and the result of research work for publication.

09 The members

The Academy, through its members, promotes learning in different fields of science through specific initiatives on topics related to advanced research. The mathematical, physical, and natural sciences are represented in the composition of the academic membership: mathematics and applications, physics, astrophysics, meteorology, electronics and information technology, chemistry and biochemistry, geological sciences, engineering sciences, energy sources and environmental safety, biological and natural sciences, neurosciences, animal and plant genetics, health biotechnologies. The Academy awards scientific prizes, organises conferences and seminars, publishes series and periodicals, provides advice for public administration, and is part of a network of relations and collaborations involving Italian and international academies, scientific societies, organizations, and institutions.

Contact the Accademia Nazionale delle Scienze, detta dei XL segreteria@accademiaxl.it www.accademiaxl.it

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Library

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