Digital Academy

Digitization facilitates many scientific activities, from research and text editing to open access publication. However, it cannot replace the established methods of scientific work. Today, digital tools can be used to capture large amounts of data, make them searchable, present them clearly, and secure them permanently. Especially with regard to long-term projects that are typical of academies, this is of central importance.

Within the IT department, a central service unit deals with issues of digitization, i.e., retro-digitization, digital publication, long-term archiving, and providing computer technology-based work environments. The team also benefits from cooperation with partners such as the competence centre at the University of Trier. Publications are archived long-term in collaboration with the Bavarian State Library (BSB) and the Academy’s Leibniz Supercomputing Centre (LRZ). In order to open up long-term prospects for the cooperation between the BSB and the Academy, both institutions founded the Centre for Digital Humanities in 2013.

The Academy offers top scientists a forum for interdisciplinary exchanges, meetings, exchange of experience and cooperation between representatives of various subjects and research sectors.

Membership

According to its charter, members of the Academy must have contributed towards a “significant furtherment of knowledge” in their field. New members are co-opted, and self-nomination is not possible. Ordinary members have their place of work or residence in Bavaria. They are entitled to vote, and obliged to participate in the work and meetings at the Academy. Currently, the Academy has 380 ordinary and 96 corresponding (residing outside Bavaria) members, and two honorary members.

Universal approach

The members of the academy cover the entire scientific spectrum. The have included and still include many famous researchers and scholars, such as Justus von Liebig, Therese von Bayern and Max Planck.

Promoting Young People

Scientific dialogue, interdisciplinary cooperation and intergenerational collaboration: The Academy is pursuing these objectives with its Young Scholars Programme, founded in 2010. It offers the following to outstanding junior scientists from Bavaria:

• scientific room to be creative and innovative,
• financial support in the form of grants (12,000 euros a year) and
• a high-level forum for exchanges, also with Academy members.

The research projects at the Young Scholars Programme are characterized by their focus on important issues—especially those on the cutting edge of conventional science—and are innovative and creative in character. The graduate students regularly take part in events or organize them by themselves. These include lectures, interdisciplinary workshops and freestyle discussions on current scientific topics.
At a Glance

The Bavarian Academy of Sciences and Humanities is the largest of the eight German state academies. For over 250 years it has been committed to its tasks as an extramural research institute, a Learned Society, and a place of vibrant scientific dialogue.

Long-term basic research

The Academy carries out fundamental research in the humanities and natural sciences. The focus here is on projects that form the basis of further research, safeguard cultural tradition, and document or our habitat.

Learned Society

The Academy provides top researchers with a forum for regular interdisciplinary exchanges. The Young Scholars Programme was founded in 2010 by the Academy and the Bavarian Ministry of Science for the excellent young scientists in Bavaria.

Research

The Academy is an extramural research institute of international standing. Its 450 staff are employed in long-term basic research. The duration of the projects results from the collection, gathering and preparation of the extensive material, and also from observation periods which extend over decades so that scientifically reliable conclusions may be drawn.

From archaeology to ecology

Research focuses on classical studies, musicology, historical sciences, social sciences, philosophy, theology, and language and literature studies. This includes critical editions of the works of great scholars and composers (e.g. the Max Weber Complete Edition, dictionaries and encyclopaedias (e.g. the Theaurus Linguar Latinae), and directories and catalogues (e.g. the Corpus Vasorum Antiquorum). In technology, engineering and the natural sciences, the focus is on computer science, ecology, the geosciences, and cryogenic research. The work here centres primarily on series processing measurements e.g. in glacier research and satellite geodony.

The Academy also advises politics and society, especially on the latest ecological and engineering science issues.

Walter-Meissner-Institute for Low Temperature Research

This major international centre for low temperature research and technology forms the nucleus of numerous scientific and technical developments in areas such as superconductivity, magnetism, or pioneering quantum information systems.

Joint ventures

Many projects are created in cooperation with universities and research institutes. International networking and years of experience often make the jobs in the Academy into centres of excellence, and they have special libraries. Numerous experts from abroad are involved in the projects.

Funding

The Bavarian Free State is primarily responsible for funding the Academy. Beyond this, around one third of the annual budget comes from third-party funds, in particular from the Academy program of the federal and state governments.

Leibniz Supercomputing Centre

The Leibniz Supercomputing Centre (LRZ) is one of the most important data centres in Europe. With the Munich Scientific Network (MWN), it provides a powerful communications infrastructure, and is a competence centre for data communication networks. It also serves as headquarters for archiving large amounts of data and is a competence centre for technical and scientific supercomputing. In 2012 the supercomputer “SuperMUC,” Europe’s fastest computer at that time, began operations at the LRZ, as did the Centre of Virtual Reality and Visualization (VRZ). The LRZ offers a wide range of application programs as well as an extensive range of advisory and training options. This also includes procurement of software licenses at university rates.

The LRZ carries out research and development in applied computer science, in particular for innovative data processing supply structures and for the efficient use of supercomputers.

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