



# ETH ZURICH

Annual report 2007

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# Many thanks!

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DFG Deutsche Forschungsgemeinschaft  
Eawag  
EMBO European Molecular Biology Organization  
Emil Barell Stiftung  
Erdöl-Vereinigung  
Ernst Göhner Stiftung  
ESF European Science Foundation  
Esperanza Medicines Foundation  
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Forschungstiftung Mobilkommunikation  
FWF Der Wissenschaftsfonds  
Gebert Rüt Stiftung  
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GIAN – Geneva International Academic Network  
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of Scientific Research  
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JDRF Juvenile Diabetes Research Foundation  
Jubiläumstiftung der Schweizerischen Mobiliar  
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NIH National Institute of Diabetes, Digestive and  
Kidney Diseases  
Novartis Institutes for Biomedical Research  
Novartis Stiftung  
Oncosuisse  
OPO Stiftung  
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<sup>1</sup> This list includes all donations known to ETH transfer and the ETH Zurich Foundation.

## ETH Zurich

ETH Zurich stands for world-class scientific expertise, research that benefits industry and society and the education of highly qualified specialists. As a globally leading technical and scientific university, ETH Zurich opens up wide and diverse horizons to students of natural sciences and engineering. Furthermore, as a premier international research university, it also provides a stimulating environment for top-flight research. The university's outstanding reputation is confirmed by the fact that no fewer than 21 Nobel Prize Laureates have studied, taught or carried out their research here.

Now, with the Science City campus project, ETH Zurich is helping to develop Zurich into a lively knowledge hub. Its long-established partnerships with industry, its location in the heart of Europe and its relationships with other world-class universities and research institutions combine to foster a unique regional and networked knowledge environment that is rooted in the multilingual and rich cultural tradition of Switzerland.



# A combination of large and small

## Dear Reader,

It is something we often observe in business: small and medium-sized enterprises can operate more flexibly than large international companies. By contrast, major corporations have the critical mass and also the financial resources that small and medium-sized enterprises (SME) lack to undertake large-scale projects. In its academic endeavors, ETH Zurich tries to combine both approaches and to be not only flexible but also effective. To this end, it offers individual professorships on the one hand, for tackling the unimaginable and the fundamental, and on the other hand various networks of competence that attempt to find solutions to complex problems.

## Award-winning research groups

The honors awarded this year to outstanding scientists are good examples of the successes of individual professorships. Particularly worthy of note are Professor Peter Seeberger, who won the renowned Körber Prize, and Professor Ari Helenius, who won the Marcel Benoist Prize, the “Swiss Nobel Prize”. Both scientists have achieved remarkable results with their groups. Another excellent performance was that of our student team at the International Micro Robot Maze Contest in the USA, where they won first prize. A larger network of competence is the Department of Environmental Sciences, which was founded 20 years ago. At a small ceremony, the speakers paid tribute to the department’s achievements in education and networked research. The contribution made by ETH to the IPCC report on the highly complex subject of climate change is also noteworthy, with the climate researchers who worked on it being awarded the Nobel Peace Prize. Striking the right balance between supporting individual projects and the theme-based networks was and remains the long-term duty of the ETH Executive Board.

## Pooling expertise

Research is increasingly networked and responds to globalization. This is why the newly established competence centers in the ETH domain are encouraging research into important problems that we will face in the future. ETH Zurich plays a major role here in combining knowledge in the fields of energy, mobility, the environment, materials sciences and biomedical imaging to achieve the best possible results and innovations. ETH enjoys equally successful partnerships with the neighboring University of Zurich and the University Hospital. They work together on numerous

areas of research such as neurosciences and environmental risk research, greatly strengthening Zurich’s importance as a knowledge hub.

## New faces on the Executive Board

The unsettled and politically turbulent time that followed the resignation of former President Ernst Hafen in November 2006 is now over. With Konrad Osterwalder, who took on the demanding dual role of interim President and Rector until his retirement at the end of August 2007, the affairs of ETH were in capable hands. He has now been given the honor of becoming President of the UN University in Tokyo. Since September, ETH has once again had a full executive team, including three new faces: President Ralph Eichler (a physicist), Rector Heidi Wunderli-Allenspach (a biologist) and Peter Chen (a chemist), Vice President Research and Business Relations. Gerhard Schmitt (an architect) was already part of the previous board as Vice President Planning and Logistics.

Student numbers have risen again. It is particularly pleasing to see a reversal in the decline in numbers of engineers, especially the increase in mechanical and process engineers. Nevertheless, industry still requires many more such highly qualified professionals from ETH. That is why efforts to encourage schoolchildren to go on to study engineering or natural sciences continue to be a high priority.

## Record 21 spin-offs founded

Not all ETH graduates wish to stay in academic research or use their knowledge in an existing company. A growing number of them are interested in setting up their own companies. Last year we set a new record with 21 companies being established. All these young entrepreneurs receive professional assistance from experienced people from the world of business, who make their expertise available to help produce an effective business plan. For the first two years, spin-offs can rent premises at ETH, so as to be able to continue to benefit from the knowledge and networking of the alma mater.

It was pleasing to see the approval of the “Dispatch on the Promotion of Education, Research and Innovation for the period 2008–2011” by the Swiss Parliament. This allows for annual growth of 3.6 percent in funding by the Federal Government to the ETH domain.

This period also covers our three major strategic undertakings: the establishment of an ETH site in Basel, focusing on



Ralph Eichler, President of ETH Zurich

research in systems biology, the ETH contribution to the Swiss systems biology initiative SystemsX.ch and our contribution to the Swiss research program Nano-Tera.ch, the aim of which is to strengthen the cutting-edge research field of miniaturized communication systems in engineering sciences.

#### **Importance of forward thinkers**

In view of the salary adjustments due to inflation and the changeover to the new system for calculating benefits of the Publica pension fund, there is virtually nothing left of the federal budget for increases in any other specialist fields. To an ever greater extent, funding for research must therefore be sought from the considerably replenished Swiss National Science Foundation, from EU research programs and from third-party sources in industry. We are confident that our researchers in established fields will continue to hold their own in competition with other universities in Switzerland and elsewhere. What is important is that sufficient resources are reserved for unconventional ideas. A university must always be a place for forward thinkers.

A long-term goal is to set up capital reserves in the form of a foundation, the ETH Zurich Foundation. Following the American model, in future part of our university should be funded by the interest from our capital. We are still in the early stages – both in building up the capital and as

regards awareness and acceptance of this type of financing in Switzerland. There is no shortage of ideas worthy of support – including, for example, new professorships in integrated risk research, electrical energy research and medical technology, as well as investing in new and therefore risky projects. Some of these plans are about to come to fruition and will be made public in the course of 2008.

I would like to express my gratitude for the goodwill of the general public and the kind support we receive from the worlds of politics and business. Finally, for their great commitment to teaching and research, my warmest thanks go to the lecturers and all other ETH staff.

Ralph Eichler  
President of ETH Zurich

# Fascinatingly diverse

Following the introduction of the different levels of degree program, in 2007 the focus was on consolidation and a comprehensive review with regard to the content and quality of the courses offered by ETH. The aim has been to create the medium- and long-term prerequisites to further enhance the appeal of the range of courses. This year, once again, ETH Zurich has continued to strengthen its commitment to education, in order to improve the starting conditions for new students.

Educating young people is one of the key tasks of ETH Zurich, and one to which it dedicates itself with great commitment. The figures speak for themselves: ETH attracts young people from all over the world. In fall 2007, the number of new students rose by nearly 18 percent compared with the previous year and the number of doctoral students by 4 percent.

## **Bologna Reform largely implemented**

ETH Zurich played a leading role in Europe in the introduction of the Bologna Reform. In fall 2007, ETH Zurich began another four new specialized and interdisciplinary Master programs. These programs in Computational Biology and Bioinformatics, Energy Science and Technology, Medical and Industrial Pharmaceutical Sciences and Statistics are highly relevant to science, industry and society. ETH Zurich currently offers a total of 23 Bachelor and 34 Master programs. At this point, the implementation phase can be considered to be over, and a period of consolidation now follows.

The Master programs at ETH Zurich, which are mostly conducted in English, equip Swiss graduates to work in an international environment. However, they are becoming ever more popular with highly qualified students from abroad. In 2007, for example, nearly 800 people from Switzerland and other countries applied for admission to our Master programs. That represents an increase of 66 percent over the previous year. 70 percent of the applicants were accepted, and about 250 began their studies in the fall. More than two-thirds of these new students had obtained their Bachelor degrees in other countries. The majority of these students come from Germany, China, India, Turkey, the USA, Greece and Great Britain. In view of the shortages in the labor market, especially in engineering, this influx gives a welcome boost to the Swiss employment market.

## **Flexible and diverse range of courses**

With the Bologna Reform, degree programs have become more flexible. Each of the programs has been based on a clear qualification profile. ETH Zurich sees the six-semester course at Bachelor level, which ends with students

being awarded the title of Bachelor, as the basis for a subsequent Master program, rather than as training that qualifies students for professional employment.

At Master level, students not only study in greater technical depth and with more specialization, but can also extend their studies in a transdisciplinary way, depending on the nature of the Master program they have chosen. While Bachelor programs are mainly taken by Swiss secondary school leavers, at Master level ETH not only accepts Swiss students but can also choose from the best candidates from all over the world. ETH Zurich took an important step in this regard during the past year with the introduction of the Excellence Scholarship and Opportunity Program for Master students. For the first time, grants were awarded solely on the basis of outstanding performance. Twelve grants were awarded, with four of the recipients coming from outside ETH. Initially, the program is to last for three years and does not affect traditional needs-based grants.

As a result of the Bologna Reform, the doctoral level has also been more clearly structured. The dissertation still remains at the heart of the doctorate. In addition, doctoral students attend lectures and courses (doctoral studies), either on an individual basis or alongside a structured doctoral program. In both cases, students have to collect a certain number of credit points. The purpose of doctoral studies is specialization on the one hand, and the acquisition of transferable skills on the other. In doctoral studies on an individual basis, credit points can be collected freely within the system. Doctoral programs, however, offer a complete package leading not only to specialization in a particular field but also to a broadening of socially relevant knowledge. Such programs have already been implemented in Mathematics and Life Sciences.

## **Quality assurance at all levels**

Providing teaching of the highest standard is one of the key quality objectives of ETH Zurich. The teaching performance of its lecturers has therefore been evaluated for many years now. In addition to regular evaluations of lectures by students, surveys are also carried out among graduates and reviewed in the Peer Review processes of



On September 1, 2007, Heidi Wunderli-Allenspach took over the position of Rector of ETH Zurich from her predecessor Konrad Osterwalder. This was the first time that a woman had been elected to the Executive Board. Heidi Wunderli studied Biology at ETH Zurich. She became an Assistant Professor in 1986 and an Associate Professor in 1992. She has been a Full Professor in Biopharmacy since 1995. Most recently, Heidi Wunderli was Head of the Department of Chemistry and Applied Biosciences.

Heidi Wunderli, Rector of ETH Zurich: "I have always been strongly committed to the reform of the courses of study. The implementation is proceeding extremely smoothly."

the departments. To further enhance quality, the "Roadmap: Measures to improve education and study programs at ETH Zurich" project has been set up. In 2007, the first phase entailed a comprehensive analysis of the quality management system and a lengthy consultation process, in which all of the ETH Zurich committees dealing with education issues could participate. Based on the findings, a strategy is now being worked on for further developments in education.

However, an equally important factor in achieving outstanding teaching performance at ETH is the knowledge and skills of newly enrolled students. This is where the "University entrance standards and ability to study" project run by ETH Zurich, the University of Zurich and grammar schools in Zurich comes in. Subject-specific working groups made up of secondary school teachers and university lecturers have devised notions and recommendations regarding the transition from secondary school to university. In summer 2008, following a period of consultation, these are to be submitted to Zurich's universities, grammar schools and politicians in the field of education.

ETH Zurich also plays an important role in ensuring that secondary school leavers are ready for university studies by training secondary school teachers who are qualified in their specialist subjects and in education. Working closely with the University of Zurich and the Zurich University of Teacher Education, ETH has developed and introduced

a new concept for training teachers at the level of the Swiss secondary school II. The new Master of Advanced Studies in Secondary and Higher Education was launched in the winter semester 2006/07. Similar initiatives by the Departments of Physics, Mathematics and Chemistry and the Life Science Learning Center also reflect their commitment to training secondary school teachers.

To make it easier for new students to select their program and commence their studies, ETH Zurich has tested a model for giving intensive advice and support to new students. The Academic Career and Advisory Program ACAP was run as a pilot project in two departments, and following evaluation over the course of the current year, it will be decided which elements of the pilot project should be introduced at ETH as a whole. Initial results suggest that this will prove to be an effective tool.

# Crossing boundaries

ETH Zurich has a tried and tested system for financing research. However, over the coming years, greater importance will be attached to interdisciplinary research – for example the polyproject Quantum Science and Technology, dealing with the basic principles of quantum computing. Together with other Swiss universities, ETH Zurich is also making special efforts in the field of systems biology.

ETH Zurich is now one of the world's leading research universities. This is due not least to the ways in which it uses its research resources. In a highly competitive internal award system, those projects are selected that satisfy the highest international standards. In distributing funds, the university relies on the expertise of the individual disciplines. Specifically which projects are supported is decided by the Executive Board, on the basis of recommendations by the Research Commission. This in turn calls on international experts in making its decisions, who take a close and critical look at the project proposals in order to provide an expert opinion. In this selection process, the ETH Executive Board does not consider itself to be the main decision-maker but instead the promoter and stimulator of projects. ETH Zurich intends to maintain this successful system in the years to come.

## **Towards quantum computers**

In promoting research, particular attention is paid to interdisciplinary projects, which will be of even greater importance in future. One such interdisciplinary project is the polyproject Quantum Science and Technology. In simple terms, this project is about creating systems and components for controlling, manipulating and ultimately using novel physical quantum effects. The long-term objective is to drive quantum research forward, technologically and conceptually, to such an extent that it becomes possible to build quantum computers. Scientists hope that such machines would open up entirely new options for information processing. In order to maintain its position as one of the world leaders in this highly competitive field in the future, ETH Zurich took the decision in October 2007 to sponsor the polyproject to the tune of 1.7 million francs over the next three years. The research project involves a total of twelve professors from the four ETH departments of Physics, Chemistry, Computer Science and Information Technology and Electrical Engineering.

## **A wise decision**

If cutting-edge research such as the Quantum Science and Technology project is to be possible at all, it requires ultra-modern, specialized infrastructure. ETH Zurich took an

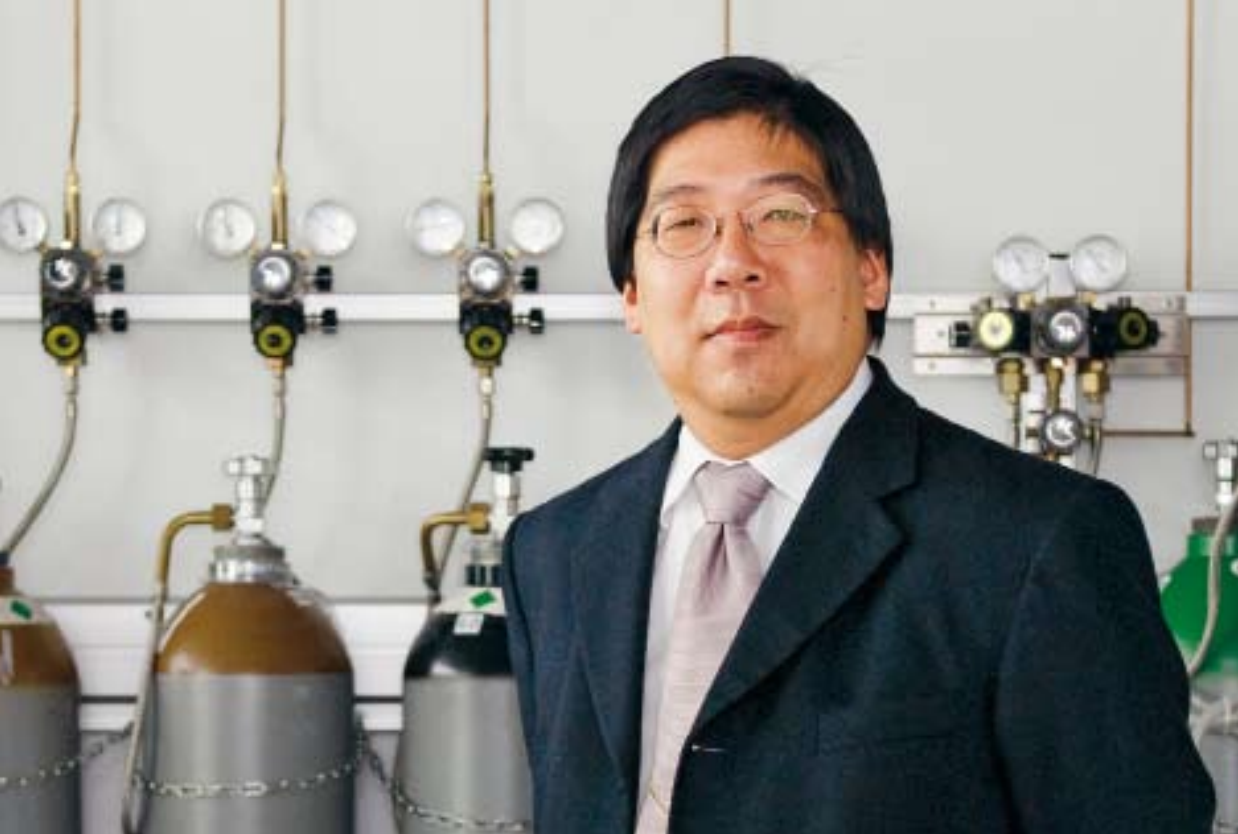
important step in this direction with the establishment of the FIRST Lab, the fifth anniversary of which was celebrated in November 2007 with a symposium. The FIRST Lab – the acronym FIRST stands for Frontiers In Research: Space & Time – is a center for micro and nano research on an 860 square meter site on the ETH Hönggerberg campus. The laboratory has a number of highly complex sets of equipment for producing nano-scale structures, and is available for use by scientists from all kinds of different disciplines. Initial results after the first five years show that the partnership between all the parties involved works very well on a day-to-day basis and that the decision that was made to promote the strategically important field of micro- and nanotechnology by setting up this kind of technology platform was a wise one.

## **Unique research investment**

Another crucial factor in successful research is collaboration with other universities. In this context, there has been an important major development in the field of systems biology: at the end of 2007, what was previously known as the research initiative SystemsX was extended to become a national initiative, SystemsX.ch. The partners in the research network include not only ETH Zurich and EPF Lausanne but also the Universities of Basel, Zurich, Lausanne, Geneva, Bern and Fribourg, the Paul Scherrer Institute in Villigen, the Friedrich Miescher Institute in Basel and the Swiss Institute of Bioinformatics. Counting all the third-party funding that can be expected, over the next four years Switzerland will invest a total of about 400 million francs in this promising area. This means that SystemsX.ch represents the biggest investment in research that Switzerland has ever made in one particular field. In specialist circles, systems biology is regarded as the major growth area for research in the future: now that the genetic makeup of countless organisms has been decoded, it is a question of understanding in greater depth how the various elements in organisms and cells interact.

## **Building new partnerships**

Within ETH, too, close cooperation between scientists from quite different disciplines makes a major contribu-



Peter Chen was born in Salt Lake City, USA, in 1960 and has been Full Professor of Physical-Organic Chemistry at ETH Zurich since September 1, 1994. His scientific credentials include over 90 publications in renowned professional journals and several patents. Peter Chen has many years of leadership experience on a number of committees in academia and private business: among other things he headed the Research Commission at ETH Zurich. Since September 1, 2007, he has been Vice President Research at ETH Zurich.

Peter Chen, Vice President Research at ETH Zurich: "ETH Zurich's research track record is outstanding, both on a national and international level. We are determined to keep it that way."

tion to the success of its research. With a view to facilitating interdisciplinary cooperation in the field of materials research, more than 50 professors from eight departments joined forces three years ago to form the Materials Research Center (MRC). Since then, the figure has risen to over 70. They work on projects in the fields of telecommunications, medicine (implants), building materials, food, transport and computer technology. In all these areas, the progress that has been achieved in recent years would have been inconceivable without the use of new materials. A key factor is the partnership with industry. The MRC endeavors to use appropriate instruments to set up new research partnerships between ETH Zurich and companies in Switzerland and abroad. For this reason, at the beginning of 2007, the MRC appointed its own industry coordinator. In December 2007, a new instrument was used for the first time: at an Ideas Lab on the subject of polymer chemistry and technology, 20 professors from ETH Zurich discussed possible new research projects with industry representatives.

#### **An exceptional honor**

The researchers at ETH Zurich can look back on a successful year. This is reflected not only in the fact that for the first time more than 20 spin-off companies were set up and a record number of new inventions were registered, but also in the fact that once again several scientists won

prestigious prizes. Particularly noteworthy in this context is the Marcel Benoist Prize, one of Switzerland's most distinguished research prizes, which in 2007 was awarded to Ari Helenius. Environmental research also received an exceptional honor: the awarding of the Nobel Peace Prize to the Intergovernmental Panel on Climate Change (IPCC) also indirectly honored the climate researchers at ETH Zurich, who have worked closely with this committee for many years.

# Defining strategic aims

ETH Zurich has defined its strategic aims for the coming years. Of particular importance are fields pertaining to research policy, including engineering and sustainability research, and the intensification of international activities, especially partnerships with Asian countries. The next phases of the project to further develop the Center and Science City sites have begun.

The year 2007 was entirely dedicated to developing the future strategy under the title “Shaping the Future – Strategy and Development Plan 2008–2011”. Here, ETH Zurich explains how it intends to develop over the next four years. The plan was produced in close cooperation with internal departments in the areas of education, research and services, and is based partly on the targets as set out in the Federal Council’s Dispatch on the Promotion of Education, Research and Innovation 2008–2011 and partly on the ETH Board’s strategy paper “Pushing the Limits”. The strategic aims that ETH Zurich is setting itself for the next planning period include the following:

## **Key areas of education and research, new professors**

ETH Zurich sees one of its key tasks as offering talented young people an excellent education. Over the next four years, the newly introduced structures of the Bologna Reform will be consolidated and further developed.

In the global competition for the best brains, ETH Zurich intends to build on its strong starting position. This includes offering researchers the best possible working conditions and development opportunities, thereby further enhancing its appeal to top scientists. At the same time, it will strive to attract the best students nationally and internationally at Master and doctoral level. To ensure that the high quality of teaching can be maintained in the future and new areas of research can be opened up, about 80 additional professorships are to be created by the year 2015.

## **New partnerships with Asia**

ETH Zurich has always had a global network of research relationships. Traditionally, the main areas have been Europe and North America. As well as this subject-based collaboration, participating in institutional networks is becoming of increasing importance for the purpose of international positioning. This includes long-standing partnerships within the IDEA League in Europe, the Alliance for Global Sustainability (AGS), UNITECH International and the International Alliance of Research Universities (IARU). In 2007, the first steps were taken to begin setting up another important partnership: the Singapore-ETH Centre for Global Environmental Sustainability (SEC) is intended to create a new

platform for scientific cooperation between researchers from Switzerland and Singapore. The new partnership will focus mainly on aspects of environmental and social sustainability such as energy, water, climate change, risk management, health and future cities. ETH Zurich also intends to build closer contacts in future with China, in its role as the leading house for scientific relationships between all Swiss universities and the most populous country of the world.

## **Focus on energy, environmental and sustainability research**

ETH Zurich views its commitment to socially relevant topics – for example climate change, energy and the ageing population – as one of its main tasks. It has set itself the target for the next few years of further building on its reputation as an international center of excellence and expertise for energy, environmental and sustainability research. The foundations for this were laid 20 years ago, with the establishment of the Department of Environmental Sciences. 1994 saw the establishment of the Alliance for Global Sustainability, followed in 2005 by the Energy Science Center ESC. Now the numerous players and diverse initiatives in this field are to be brought together, supplemented with new mandates, subject areas and activities, and further developed. Cooperation with other partners in the ETH domain is of critical importance here. With its own expertise in natural, engineering and applied sciences, ETH Zurich has unique potential to take on a pioneering role worldwide in the evidence-based development of sustainable new technologies.

## **Innovative location development**

Zurich’s role as a science hub is an important factor in the development and appeal of the whole region. ETH Zurich makes a major contribution to this, together with its neighboring education and research institutions, and in dialogue with surrounding districts, through the further urban development of its two locations in the Center and at Science City. Once again in 2007, important markers were put in place for the future. By modifying the structural plan in mid-December, the Zurich Cantonal Council



Gerhard Schmitt was Professor of Architecture and Computer Aided Architectural Design (CAAD) at ETH Zurich between 1992 and 1998. Since December 2005, he has been Professor of Information Architecture in the Department of Architecture. Since April 1, 1998, he has been Vice President Planning and Logistics on the Executive Board of ETH. It was under his leadership that the vision of Science City came into being, the further development of the university campus on the Hnggerberg.

Gerhard Schmitt, Vice President Planning and Logistics at ETH Zurich: "Planning ahead and shaping the future means laying the foundations today for tomorrow's developments."

has made it possible for the master plan for the university district in the Zurich city center to go ahead. The planning work, in which the canton and the city of Zurich, ETH, the University and the University Hospital are all involved, can thus be continued.

The Science City project has entered a decisive phase: with the "Student Housing" section of the project, ETH Zurich has come an important step closer to achieving its aim of offering students affordable and sustainable housing. The first stage of the development envisages the building of 300 residential units. The plans provide for fully furnished studio apartments, so-called mobility rooms, for students who are only in Zurich for a short time, and shared accommodation where several students can live together for longer periods. The "Student Housing" project was put out to tender at the end of 2007 and the process should be completed by summer 2008. With this project, ETH Zurich is breaking new ground in a number of ways. The new units are intended to set new international standards for energy consumption, i.e. they should be net energy producers. The financing will be mainly from third-party sources.

#### **Publica**

There has been a crucial change for ETH employees in their pension provision. In mid-2007, the Federal Council decided that the Publica pension fund, of which ETH employees are members, will switch from a defined benefit plan to

a defined contribution plan, with effect from July 1, 2008. Retirement pensions will therefore no longer be calculated at a fixed percentage rate of the final insured salary but will in future be based on the total contributions made. Publica also changed the technical interest rate, which is used to calculate long-term expected returns, from 4 to 3.5 percent. These measures are intended to put the pension fund on a stable financial footing for the long term.

Research for industry and research with industry:  
this approach is intrinsic to ETH Zurich.

A strategic partnership that benefits both sides:  
Prof. Wilhelm Krek, ETH Zurich, and Dr René Imhof, Head of Pharma  
Research at Roche, Basel, ensure that the scientists at Roche and  
at the Competence Center for Systems Physiology and Metabolic  
Diseases (CC-SPMD) coordinate their research into diabetes.



# Strengthening the economy

Last year ETH Zurich once again succeeded in setting up interesting new partnerships with industry and further strengthening existing cooperative ventures. These include, in particular, long-term collaborations with major companies in the field of diabetes research and materials development. ETH Zurich saw record figures for the numbers of inventions recorded and spin-off companies founded.

Ever since its foundation more than 150 years ago, ETH Zurich has been of considerable significance to the Swiss economy. It played a vital role in the transition from the agricultural economy of the 19<sup>th</sup> century to an industrialized economy and, later, to today's information- and service-based society. The university has always known how to adapt to changing circumstances over the years and how to adjust to new developments in the economy and in society. For the government, it is a matter of great importance that ETH Zurich continues in the decades to come in its role as an engine of innovation on which Swiss industry can rely: this is why, since 2004, utilization of the results of its research has been part of ETH Zurich's permanent mandate. On a day-to-day basis, the cooperation between ETH Zurich and industry can be seen in three specific ways: firstly, companies give substantial sums to provide long-term support for certain areas of research at ETH Zurich. While bearing in mind the autonomy of the university and its general research freedom that must always be guaranteed, these companies, by making such a major commitment, contribute extensively to the further development of the disciplines in question. In particular, thanks to these resources, projects can be accomplished that could otherwise not be financed. Secondly, the various departments, institutes, professors and competence centers of ETH Zurich work closely with a large number of companies on research projects, the scope and duration of which are clearly defined. How the results of this cooperation are utilized is governed by special contracts. Thirdly, ETH Zurich plays an important role in keeping industry innovative by



Inspire, the competence center for the Swiss mechanical engineering industry, headed by Prof. K. Wegener and closely associated with the university, prepares methods and processes so they are ready for application.

patenting inventions and actively supporting their utilization by third parties. One very important channel by which technologies developed at ETH Zurich can be utilized is the setting up of spin-off companies. A number of these new companies have enjoyed very pleasing success and have been able to establish themselves successfully in the market within just a few years.

For ETH Zurich, there is no doubt that all the different links to industry must be on a solid legal and commercial basis. This is the only way to avoid conflicts of interest and legal problems. In order to be able to handle all the various tasks associated with this, for a number of years now ETH Zurich has operated its own office for technology transfer, known as ETH transfer.

January



Since January 1, 2007, the Department of Biosystems Science and Engineering (D-B SSE) in Basel has officially counted as the 16<sup>th</sup> department of ETH Zurich.

February



On February 12, 2007, the Austrian Chancellor Dr Alfred Gusenbauer gave a public lecture on innovation policy at ETH Zurich during his first official visit to Switzerland.

### Long-term partnerships

ETH Zurich has agreed long-term research partnerships with a number of major companies. These include four collaborative ventures in particular:

- Since spring 2006, the pharmaceutical group Roche has been supporting the Competence Center for Systems Physiology and Metabolic Diseases (CC-SPMD) at ETH Zurich with over 2 million francs a year. This collaboration is shortly to be extended still further. The partnership focuses on researching and developing new methods of treating diabetes.
- In 2007, Bayer Schering Pharma AG extended for a further three years its framework research contract with the Center for Radiopharmaceutical Science, jointly sponsored by ETH Zurich, University Hospital Zurich and the Paul Scherrer Institute in Villigen. An additional 2.25 million francs will be made available over the coming years for further development of Positron Emission Tomography (PET).
- The building materials manufacturer Sika AG, which operates in the field of specialty chemicals, has been supporting strategic ETH projects in the field of materials technology since mid-2007, with sponsorship worth a total of 2 million francs.
- The Materials Research Center at ETH Zurich, in which by now over 70 professors from eight departments are involved, has been working with Ciba Specialty Chemicals since 2005. The Basel-based company supports materials research at ETH Zurich with sponsorship of 1 million francs a year.



In March, ETH Zurich acquired a new world champion: Simon Ammann, a ski jumper who won Gold on the large hill at the World Championships in Sapporo and Silver on the normal hill, is studying electrical engineering

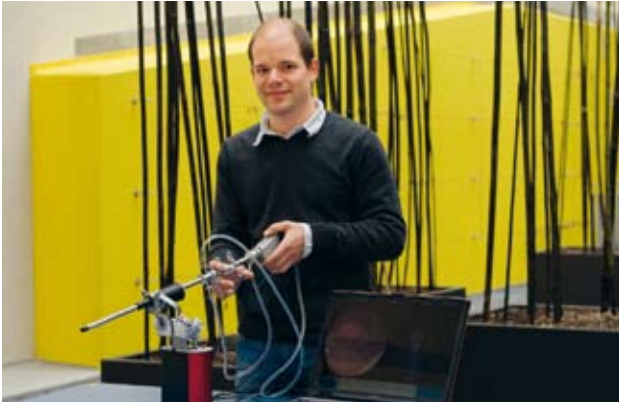
### Project-based partnerships

The research carried out at ETH Zurich is of direct benefit to a great many companies, large and small. They therefore deliberately seek out partnerships with professors, institutes or competence centers working in their field of interest. In some of these partnerships the aim is to devise new processes and technologies, or to develop the necessary scientific principles associated with them. For example, the Institute of Field Theory and High Frequency Engineering and the Measurement and Control Laboratory can point to a long list of partnerships with numerous big international companies. Among other things these collaborations entail the development of components and systems for electrical and optical interconnects or new technologies and pioneering approaches to vehicle construction.

A particularly important role in relation to cooperation between the university and industry is played by Inspire AG. This competence center, closely associated with the university, for the Swiss mechanical engineering industry was set up jointly by the industry association Swissmem, ETH Zurich and the Federal Office for Professional Education and Technology (OPET). The purpose of the enterprise is clear: Inspire carries out commissioned research for industry, provides project-based services in the field of research and development and actively supports know-how transfer from the university to industry. Inspire concentrates its activities on the three core areas of machinery, processes and methods.

## March

In mid-March, the government initiative "venturelab" awarded the 2007 prizes to 20 talented and innovative young Swiss entrepreneurs. The main criterion is the market potential of the technology or business idea. Eight of the prize winners were ETH graduates.



Stefan Tuchs Schmid, CEO of the ETH spin-off VirtaMed. The company works on simulating endoscopic operations.

**Successful start-ups**

One significant factor that plays a major role in the commercial importance of ETH Zurich is the setting up of new companies. The university works actively on a number of levels to ensure that the research results produced by its scientists can be utilized by newly established companies or that inventions by ETH researchers can be used commercially by third parties. It is particularly pleasing in this context that more and more scientists are taking the plunge into self-employment and setting up their own companies. In 2007, a total of 21 new spin-off companies with ETH involvement were set up – more than ever before in one year. This means that for the first time ETH Zurich can boast as many company start-ups as Stanford University or the MIT (Massachusetts Institute of Technology),

which also occupy leading positions in this field. It is worth noting that ETH researchers set up companies in all kinds of different areas of activity: for example, ETH spin-offs are developing special concrete for renovations, antibodies for cancer treatment, digital sensors for measuring equipment, a new type of visualization software for sports broadcasting and flexible thin-film solar cells to make photovoltaic technology more commercially attractive.

The two newest ETH spin-offs in 2007 are called VirtaMed and Procedural. VirtaMed works on simulating endoscopic surgery, where doctors treat patients as if through a key-hole. The company has developed a process whereby surgeons can practice these difficult operations in a simulator before they apply their skills in a real-life situation. Procedural is developing software for 3-D animation of buildings and towns. The ETH researchers who set up the company have developed a new calculating process whereby images can be created five to ten times faster than before. The application opens up interesting opportunities especially for computer games and feature films.

**April**



At the beginning of April, ETH Zurich inaugurated its new competence center, the Swiss Electromagnetics Research & Engineering Centre (SEREC). This is dedicated to issues relating to generating, processing and controlling electromagnetic fields for interdisciplinary applications.

To mark the 125<sup>th</sup> anniversary of the Gotthard Railway, the Museum of Transport in Lucerne opened its “Crossing the Alps” exhibition at the beginning of April. ETH Zurich is represented with its own section of the exhibition on human movement sciences.

On April 4, the Institute for Environmental Decisions (IED) opened its doors. Under the umbrella of this institute, researchers – political scientists, psychologists and economist – from three different ETH departments will be working together.



Herbert Bay and Till Quack, the two founders of the ETH spin-off kooaba, make the world “clickable” with their mobile phone camera.

### Award-winning young entrepreneurs

Several ETH spin-offs in recent years have been able to establish themselves successfully in the market, with some even went public. For example, the company u-blox made a stunning debut on the Swiss stock exchange SWX in October 2007. On the opening day, shares in the new company closed almost 20 percent up on the issue price. ETH spin-offs also keep doing well in business and innovation competitions.

For example, the companies LiberoVision and Redbiotec as well as the research group led by Prof. Andreas Hierlemann with its innovative microsensor for the non-invasive measurement of blood pressure were honored at the Swiss Technology Award 2007. And in the Venture Leaders 2007 competition, a number of ETH spin-offs were among the

prizewinners (Concretum, kooaba, Arktis Radiation Detectors, Redbiotec, PiKe Pharma). The ETH spin-offs LiberoVision and Advanced Metal Technology are also among this year’s winners of the Heuberger Winterthur Prize for Young Entrepreneurs. Both companies received prize money of 100,000 francs.

### New technologies

The figures for new inventions and patents at ETH Zurich are also very pleasing: in 2007, the university’s researchers registered over 120 inventions and software developments with the ETH transfer office. This is an increase of over one third compared with the previous year. Patent applications were made for 80 of the inventions that were registered. These include, for example, an innovative design like a pair of spectacles for observing the eye movements of patients, and carbon-coated metal nanoparticles. Scientists can see opportunities for using these new particles in sensor and RFID technology



Peter Seeberger, ETH Professor for Organic Chemistry, won the Körber Prize for 2007, worth 750,000 euros. The award was for his groundbreaking work in the field of sugar synthesis.

### May

On May 5, 2007, the foundation stone was laid for the new Sports Center in Science City.



Alexander Knohl from the Institute of Plant Sciences won a Marie Curie Excellence Grant in 2007. This provides 2.2 million francs in sponsorship for his research project on the interaction between water and carbon cycles in terrestrial ecosystems.

ETH Zurich takes its social responsibility seriously: research for the benefit of the environment and society is a high priority.



# Turbulent year for the climate

The fourth report by the UN IPCC is a milestone in climate research. In fact, though, reality has already overtaken some of the predictions. The ice at the polar ice caps is vanishing faster than the climate models predicted, and the CO<sub>2</sub> content in the atmosphere is growing rapidly.

Loss of biodiversity, dying coral, more hot summers like the record-breaking summer 2003 by 2040. Flooding due to storm rainfall or rising sea levels. The list of unpleasant consequences of climate change could go on forever. Many of them are included in the Fourth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC) that was published in three sections between February and May 2007. One of the most important findings is that there can be no other explanation for the global warming that is being observed apart from the influence of man, that if climate change continues at this rate it will have drastic consequences and that it is still within man's powers to avert disastrous changes.

The latest IPCC report was produced jointly by scientists from around the world, with numerous ETH researchers involved. One of them was Andreas Fischlin of the Institute of Integrative Biology, who was the coordinating lead author responsible for the chapter on ecosystems. Barely had the fourth IPCC report been published than it was threatened with being overtaken by reality. "The distinguishing feature about 2007 and the most interesting scientifically is the fact that climate change appears to be speeding up", says the researcher. Fischlin can point to more than two dozen new publications that could not be included in the UN report on climate but that confirm this trend.

## Rapidly melting ice

The ice at the polar ice caps, for example, says the ETH researcher, is melting faster than ever before. The Arctic pack ice melted away to a record extent in summer 2007.

In 2006, 200 billion tons of ice disappeared in Antarctica, whereas ten years earlier it was estimated to be 75 percent less. This creates a risk that sea levels could rise faster than predicted in the fourth IPCC report – some studies say by as much as several meters even in this century. That is why one thing is clear for Fischlin: "No model or simulation in the report can match actual observations." The models significantly underestimated the speed of the melting process.

Carbon dioxide emissions are also rising faster than previously thought and predicted. Whereas in the 1990s the annual increase in emissions was still only 1.1 percent, since 2000 it has risen to 3.3 percent. There are many reasons for this: the world's population is growing, as is the per capita consumption of fossil fuels. Developing countries are becoming newly industrializing countries that are increasing their production, including for export purposes. The growth rates are higher even than the most pessimistic scenarios described in the IPCC report published in 2000.

## Reduction in the sink effect

The research also showed that the sink effect of the seas is declining, and faster than previously thought. ETH researchers played an essential part in arriving at this important conclusion last year. By using modeling, scientists including Prof. Nicolas Gruber of the Institute of Biogeochemistry and Pollutant Dynamics showed that the sink effect of the southern oceans is continuously declining or has already been reversed.



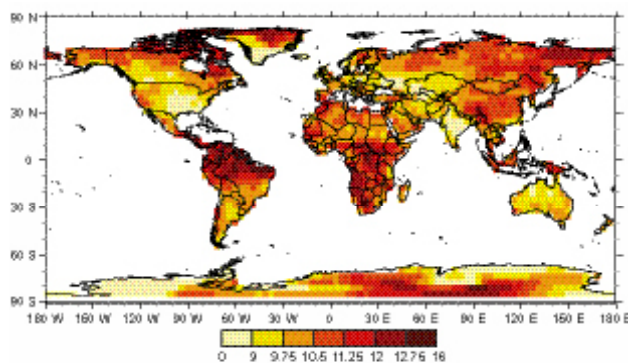
Markus Stoffel, ETH Professor at the Institute of Molecular Systems Biology, won one of six Scholar Awards from the Juvenile Diabetes Research Foundation International (JDRF) for his diabetes research.

The American Roderick McKinnon, winner of the Nobel Prize in Chemistry, gave the traditional Wolfgang Pauli lectures in mid-May. Under the title "Electricity in Biology", he talked about researching electrical phenomena in living creatures.



June

In mid-June, students on the Mechanical and Process Engineering course presented their racing car "Albula" and the monitoring robot "Cable Crawler". The project was part of the international design and racing competition "Formula Student".



ETH researchers have produced a map showing how the world's climate will change in the 21<sup>st</sup> century (from M. B. Bättig, M. Wild and D. M. Imboden, 2007).

Over the last 200 years, the oceans have absorbed from the atmosphere about 45 percent of the CO<sub>2</sub> produced by man from fossil fuels. If the oceans are absorbing less carbon dioxide, then more remains in the atmosphere. The same applies to land ecosystems. If the sink effect of both ecosystems is decreasing, then climate change will speed up yet more. "There are many indications that the climate is changing faster than was predicted in the forecasts", suggests Gruber. Although the changes are still within the predicted range, they are already at the upper end of it. Another study in which ETH was involved, which was published in "Nature" in the fall, supports Gruber's concern. The researchers compared the carbon content of the deep waters of the Pacific today with that of the last Ice Age. The study showed that these deep waters contained more CO<sub>2</sub> during the Ice Age than they do today. Scientists were also able to say where the carbon that was absorbed from the atmosphere during that cold period was stored. The researchers also showed how, during the transition from cold to warm periods, the CO<sub>2</sub> trapped in the ocean was released into the atmosphere and thus increased the warming that was already beginning. This means that the carbon cycle of the seas tended in the past to have a "positive" feedback effect on the atmosphere and the climate – which matches what we expect to happen in the future.

### New heat waves

Heat waves like that of summer 2003 may become more frequent in future. But what does it take for a heat wave

to occur? This was investigated by researchers in the group led by Prof. Christoph Schär of the Institute for Atmospheric and Climate Science, by studying the heat waves of the last 50 years, including the record-breaking summer 2003, using climate models. What they found was that the water stored underground plays a crucial role. If the ground is dry before the summer months, there is little water to evaporate. There is no cooling effect from the evaporation – creating ideal conditions for a heat wave. "However, for a heat wave to occur, there also have to be the 'right' conditions in the atmosphere", says Erich Fischer, leading author of the study. This was one reason why it did not become very hot in summer 2007. After an April when it was far too warm, drying out the ground, there was no stable area of high pressure during the summer, and so there was no heat wave. The latest findings also confirm earlier scenarios about the role of climate change, because in future the two factors referred to above will intensify, so heat waves will become more frequent.



In mid-June, the ETH Alumni Association organized the first Homecoming Day at ETH Zurich. The gathering was a big success, with over 1,200 people attending.

On June 29, ETH Zurich opened a new competence center, the North-South Centre, created by the merger of the Center for International Agriculture (ZIL) and the Network for International Development and Cooperation (NIDECO).



July

Dr Max Rössler (center) donated 10 million francs to the ETH Zurich Foundation. The interest from this will be used to support high-caliber research and educational projects in engineering and natural sciences. The sponsorship comes in the form of an annual prize.

# Scientists advise the politicians

It sometimes takes quite a while before scientific discoveries find their way into politics. Not so with climate change. The IPCC report had a considerable effect on public and political debate. And the climate researchers at ETH Zurich distinguished themselves as political advisers and lobbyists on the subject of climate change.



Prof. Renate Schubert is Head of the Institute for Environmental Decisions. As Chair of the German Advisory Council on Global Change (WBGU) she advises the German government.



Member of the WBGU: Prof. Nina Buchmann, specialist in terrestrial ecosystems.

Climate researchers at ETH are agreed: the fourth IPCC report is one of the milestones of last year. One of the report's chief findings was announced by scientists at an open climate symposium at ETH in the fall: there is no doubt that man is the main cause of climate change. At this symposium, researchers, including Thomas Stocker of the University of Bern and Andreas Fischlin and Renate Schubert from ETH Zurich, warned of the consequences of climate change. They also indicated the ways in which politicians could take action. The symposium clearly showed how global warming of an average of two degrees could still be sustained. That equates to an estimated carbon dioxide concentration in

the atmosphere of about 450 ppm. The CO<sub>2</sub> concentration currently stands at over 380 ppm. However, the annual increase is larger than ever before – despite climate agreements and targets for reductions to which governments committed themselves by signing the Kyoto Protocol. To be able to keep to the two degrees, greenhouse gas emissions must be reduced rapidly. At this symposium, Swiss Federal Councillor Doris Leuthard held out the prospect that Switzerland would strive to reduce its CO<sub>2</sub> emissions by 100 percent, mainly by offsetting abroad. This could be achieved, for example, by international trading in emissions certificates. However, Leuthard also stressed the importance of technology transfer.



A team from ETH Zurich won the gold medal at the RoboCup in Atlanta, the unofficial soccer world championship on a micro and nano scale. The picture shows the size of a robot and a fly for comparison.

On July 16, 2007, the world's largest Congress on Applied Mathematics took place in Zurich, organized by the International Council for Industrial and Applied Mathematics (CIAM). 3,200 mathematicians attended the event at ETH and the University of Zurich.

## September



On September 1, the new members of the Executive Board, Prof. Peter Chen, Vice President Research, Prof. Heidi Wunderli-Allenspach, Rector, Prof. Ralph Eichler, President, and Prof. Gerhard Schmitt, Vice President Planning and Logistics, took up their posts (l. to r.).

### WBGU: Interface between ETH and politics

An expert report by the German federal government's Advisory Council on Global Change (WBGU) was also aimed at politicians. Two ETH professors, Renate Schubert and Nina Buchmann, as members of the council, were involved in writing this. They handed the report "World in Transition – Climate Change as a Security Risk" to the German government at the start of the G8 summit in Heiligendamm (Germany).

The report showed how climate change could bring about great human suffering. Weak and fragile states could be at risk of being completely destroyed as a result of climate change. New conflicts over the allocation of resources would be expected and there would be increasing migratory pressure. International systems would be overwhelmed, because traditional security policies would not be able to react appropriately to these conflicts or to prevent them.

In its report, the WBGU advised reducing global CO<sub>2</sub> emissions by 2050 to half the 1990 level, reaching a peak in the next 10 to 15 years. In addition to protecting the climate, it was important to have a new type of security policy. The WBGU recommended introducing a process similar to the CSCE and amending the mandate of the UN Security Council so that the demands of climate change could be met.

### IPCC report: Guidelines for politicians

The IPCC report played an important role in the negotiations at the UN Climate Change Conference in Bali in December 2007. Leading scientists took part in this conference on protecting the climate, including climate researchers

from ETH Zurich. They were not merely there as observers. With a declaration, they called on the politicians to take steps immediately in order to "turn the tide" in the next ten years. The Bali Climate Declaration by Scientists demanded that the proportion of greenhouse gases in the atmosphere should be stabilized in the long term at below 450 ppm CO<sub>2</sub>. It was demanded of governments that they cut CO<sub>2</sub> emissions to at least 50 percent below the 1990 levels.

In October, the Nobel Prize Committee sent a strong signal to politicians and the general public: it awarded the Nobel Peace Prize in two parts, half to the Intergovernmental Panel on Climate Change and half to Al Gore for his film "An Inconvenient Truth". In this way, the Nobel Prize Committee underlined how important and urgent it is to take action against climate change. Some of the reflected glory of this Nobel Prize was also enjoyed by ETH researchers who were involved in the IPCC reports. They contributed a total of 17 papers to nine different sections of the fourth climate report.



Martin Schwab, Professor of Neurosciences, won the Betty and David Koetser Prize in 2007, worth 20,000 francs, for his research into nerve regeneration.

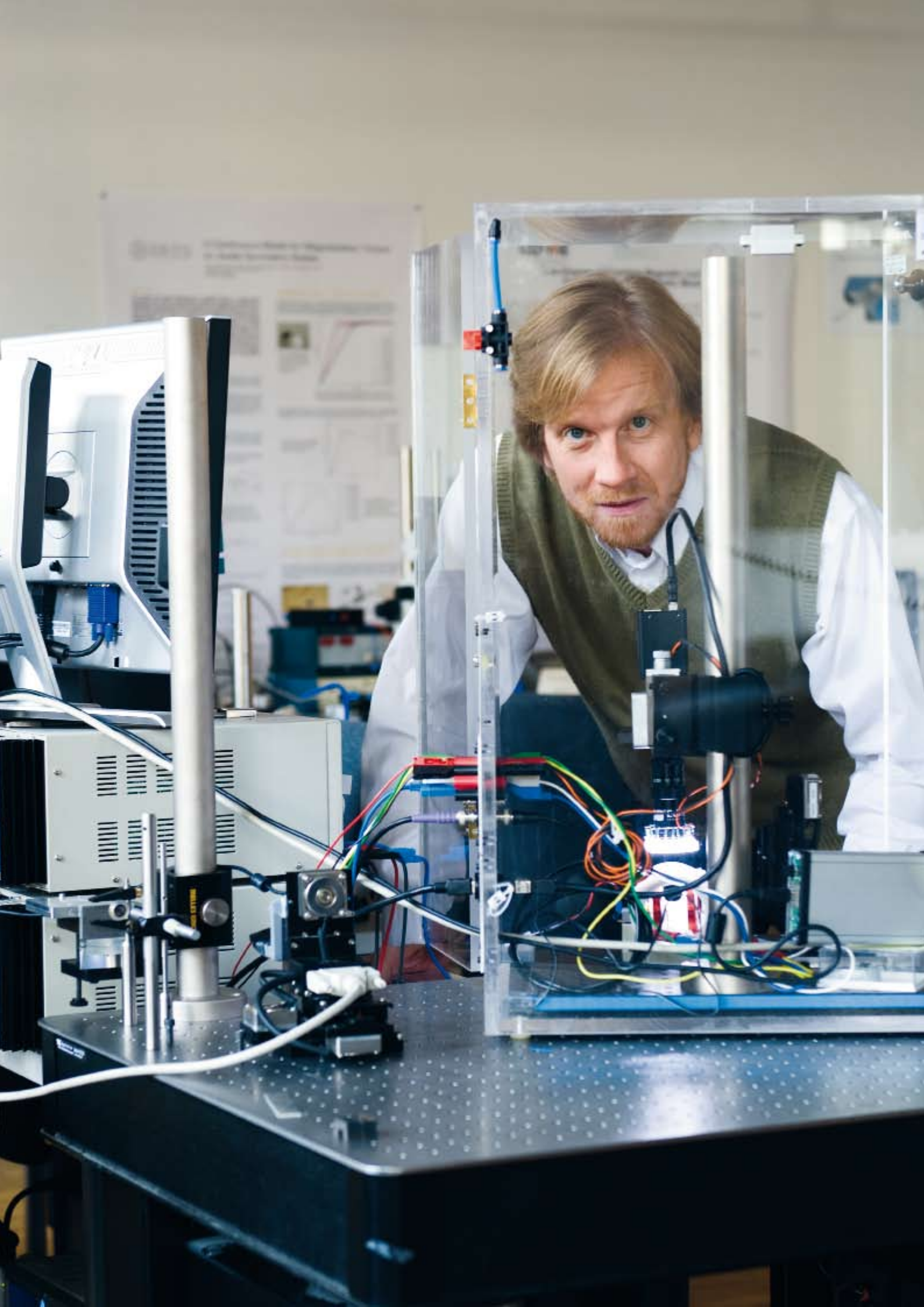
In September, ETH Zurich received a legacy of 16 million francs from Hanna Elsa Böhi-Meier. The money has been used to set up a Hanna Böhi Fund.



At the end of September, ETH staff enjoyed a joint celebration on the Hönggerberg, called togETHer 07. The Executive Board used this convivial event to thank the staff for all their hard work.

This year's Latsis Symposium took place at ETH Zurich on September 27. Representatives from different disciplines discussed the contribution science can make to bringing the world's most pressing problems on to the political agenda and solving them.

High-tech for medicine: the connections between engineering, natural sciences and medicine bring ETH Zurich closer to the people.



# High-tech for caring medicine

**Modern medicine demands ever more accurate yet gentle methods of diagnosing and treating illnesses. Research in this field is not restricted to those disciplines that are traditionally associated with medicine. At ETH, engineers, natural scientists and bioscientists work together to guarantee medical progress.**

Medical research has long since ceased to be merely about curing as many illnesses as possible and/or alleviating their symptoms. Treatments and diagnostic procedures also have to become ever more accurate, targeted and gentle, with the instruments ever more precise. Minimally invasive techniques and customized treatment methods are a global trend. Modern medicine does not depend only on biosciences and chemistry but also uses the latest findings from more technical disciplines. At ETH Zurich this area of work has become one of the research priorities. Partnership between engineers, natural scientists and bioscientists is what drives innovative research in medicine.

## Images from inside the body

A prime example of the achievements of medical-technical cooperation is magnetic resonance imaging or MRI, the further development of which decisively advanced at ETH Zurich. Physicists and chemists discovered how strong magnetic fields and stimulation with radio waves could be used to bring the body's own nuclei to process, thereby obtaining important information. One man who played a crucial role in refining this technique for use in medicine was ETH researcher Richard Ernst, who won the Nobel Prize in Chemistry in 1991. The development of this technology is far from complete. Imaging techniques are becoming ever more precise thanks to equipment with ever stronger magnetic fields. The areas of application are extending all the time and imaging techniques are also a vital resource for

research itself. On the initiative of, and led by, Prof. Peter Bösiger and Prof. Klaas Prüssmann, a widely used imaging center has been created at the Institute for Biomedical Engineering at ETH and the University of Zurich. Neurologists, cardiologists, gastroenterologists and radiologists as well as psychiatrists, psychologists, empirical economic researchers and physicists all work on the tomographs located in the basement of the University Hospital, with field strengths of 1.5, 3 and 7 Tesla.

## Microrobots and nanoshuttles

Last year, medical research at ETH Zurich really made a name for itself, especially in the fields of Chemistry, Biochemistry and Systems Biology. In 2007, no fewer than four researchers – Ari Helenius, Dario Neri, Peter Seeberger and Markus Stoffel – won prestigious prizes (see following two pages). People working in the technical disciplines have also carried out dedicated research leading to medical innovations, and continue to do so. At the Institute of Robotics and Intelligent Systems, Prof. Bradley Nelson builds biomicrorobots: tiny machines that can be injected into the human body, to explore places that are hard to reach and fulfill certain tasks. Among other things they can be used in retinal surgery. Pure research for medical applications is for example carried out by Viola Vogel, Professor of Biologically Oriented Materials Science. She builds tiny transport systems out of biomolecules, in order to use them to build nanocomponents artificially. Vogel's nanoshuttles are tiny trains that are loaded up at nano



Ari Helenius, Professor of Biochemistry at ETH Zurich, won the Marcel Benoist Prize in 2007, worth 100,000 francs. He was honored for his work on fundamental aspects of the physiology of living cells and viruses.



On September 25, the retired Rector and interim President of ETH Zurich, Konrad Osterwalder, gave his farewell lecture. At the beginning of September he became head of the United Nations University in Tokyo.



At the ETH Climate Symposium at the end of September, scientists and Federal Councillor Doris Leuthard discussed how the climate would look in future and the role of politics in this process.

At the European Researchers' Night, ETH Zurich, together with Euresearch Zurich, for the first time organized a 2007 Researchers' Night in Zurich. Several thousand interested members of the public took the opportunity to come into close contact with scientists.

stations. In future, they could perhaps be used as biosensors for the early detection of illnesses. Prof. Ralph Müller of the Institute for Biomechanics also shows how fruitful interdisciplinary cooperation can be. Together with the Computer Science Professor Peter Arbenz, the osteoporosis researcher used computer tomographs and a super-computer at the CSCS in Manno to develop a new procedure for calculating the load on bones faster and more efficiently. In 2007, Müller won the Prize for Bone Research awarded by the German Academy for Osteological and Rheumatological Sciences.

#### Marcel Benoist Prize goes to Ari Helenius

It sounds like a spy story when Ari Helenius talks about his work and relates how viruses sneak into cells, circumvent all the security checks and take control in the cell's nucleus. What the Professor of Biochemistry describes so vividly is the result of decades of hard work. Helenius was the first person to discover the mechanisms viruses use to penetrate cells. He discovered the endosome, a membrane-bound vesicle that allows a connection to be made between the virus and the cell membrane. He also found that cells have their own system of controls to ensure that only correctly folded and assembled proteins can enter them. Helenius' work is pioneering and allows new medicines to be developed to which viruses do not become resistant. In 2007, Ari Helenius was awarded the Marcel Benoist Prize. This is sometimes called the "Swiss Nobel Prize" and is worth 100,000 francs.



Ari Helenius, Professor of Biochemistry, makes life hard for viruses.

#### Körber Prize goes to Peter Seeberger

One of the most important German prizes for science, the Körber European Science Award, was won in 2007 by ETH researcher Peter Seeberger. The Professor for Organic Chemistry was honored for his many years of dedicated work that resulted in a machine for synthesizing carbohydrates. It is used to create complex sugars artificially in a relatively short time. These complex sugars can be used for vaccines against illnesses such as malaria, leishmaniasis, Aids, anthrax and tuberculosis. Seeberger's synthesizing machine speeds up pure research considerably. Before, it would often take months to synthesize a complex sugar in the laboratory. Development work is so far

#### October



At the beginning of October 2007, ETH Zurich and the German software manufacturer SAP opened a joint research center in Zurich. The picture shows Lutz Heuser, Vice President SAP Research, Prof. Elgar Fleisch and Prof. Peter Chen, Vice President Research (l. to r.).

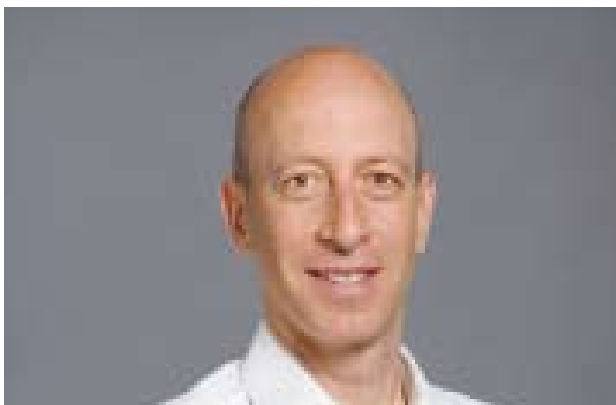


In 2007, the Nobel Peace Prize awarded the Nobel Peace Prize to the Intergovernmental Panel on Climate Change (IPCC) and to former US Vice President Al Gore. Researchers at ETH Zurich played a major part in the reports by the UN IPCC.

The speaker at the traditional ETH Presidential Lecture at the end of October was R. A. Mashelkar, President of the Indian National Science Academy and the Global Research Alliance. He talked about the problems and challenges facing India in the years to come.



Peter Seeberger, Professor for Organic Chemistry, makes vaccines from sugars.



Dario Neri, Professor of Biomacromolecules, develops antibodies to fight tumors.

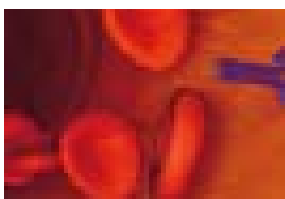
most advanced on a malaria vaccine that is currently being tested on humans. The Körber Prize is worth 750,000 euros. Peter Seeberger is particularly pleased because it will spur researchers on to tackle the main medical problems facing the poorest people in the world.

**Robert Wenner Prize goes to Dario Neri**

Some cancers can be beaten, but most existing therapies have the drawback that they also attack healthy tissues. Cancer researchers around the world are therefore searching for ways of fighting the illness in a more targeted way. One promising approach has been discovered by ETH researcher Dario Neri. The Professor of Biomacromolecules

is working on developing so-called monoclonal antibodies. These attack the blood supply to tumors and can prevent their growth. In order to grow, tumors constantly build new blood vessels to supply them with the necessary nutrients. Neri and his team have so far managed to produce three antibodies that can be used against cancer of the kidney or pancreas. The medicines are already being tested on humans. In 2007, Dario Neri won the Robert Wenner Prize, awarded by the Swiss Cancer League and worth 100,000 francs, for his work.

**November**



At the end of October, the Collegium Helveticum celebrated its tenth anniversary with a symposium on the subject "Knowledge: origins and relevance".

Dario Neri, ETH Professor of Biomacromolecules, won the Robert Wenner Prize awarded by the Swiss Cancer League, worth 100,000 francs. He was honored for his work on monoclonal antibodies that offer promising prospects for the fight against tumors.

At the beginning of November, the Department of Environmental Sciences celebrated its 20<sup>th</sup> anniversary with a big event for the general public and a party for former students.



Markus Stoffel, Professor of Molecular Systems Biology, is discovering the genetic causes of diabetes.

#### Scholar Award from the Juvenile Diabetes Research Foundation International goes to Markus Stoffel

About 200 million people around the world suffer from diabetes. Increasingly, children and adolescents are being affected. Type 1 diabetes is on the increase. It can be treated with artificial insulin, but this only fights the symptoms. In order to find better ways of combating diabetes, its causes must be identified. ETH researcher Markus Stoffel has made such a discovery. The Professor at the Institute of Molecular Systems Biology was the first to discover that certain forms of diabetes are genetic, and he succeeded in isolating one gene that causes the illness. Since then, it has been possible to test which type of diabetic

a patient is and the treatment can be targeted accordingly. However, the search for the genes continues. Now Stoffel will receive support of 250,000 dollars a year for the next five years from the Juvenile Diabetes Research Foundation International, the world's largest foundation for type 1 diabetes research. In 2007, it presented Stoffel with a Scholar Award.



On November 19, the traditional ETH Day was held, with guests from the worlds of politics, business and science. The 2007 event was hosted for the first time by the new Rector, Prof. Heidi Wunderli-Allenspach, and the new President, Prof. Ralph Eichler.

On November 28, the Personnel and Organizational Development unit at ETH Zurich celebrated its tenth anniversary. Since 1997, this independent office has dealt with the concerns of ETH staff relating to leadership, team and organizational development, projects or in relation to personal career planning.



#### December

On December 13, the new Executive Board welcomed members of ETH Zurich to the traditional Christmas reception. For the first time, the "Golden Tricycle" award was presented for a family-friendly management style. The prizewinner was Nina Buchmann, Professor at the Institute of Plant Science.

# Unexpected treasures

## Archive of Contemporary History

On September 1, 2007, after more than 40 years, Prof. Dr Klaus Urner handed over responsibility for the Archive of Contemporary History (AfZ) to the Basel historian Dr Gregor Spuhler. The archive, which was a private initiative and is funded to about 40 percent by third-party resources, has been part of the Institute of History at ETH



since 1974. It houses some 400 bequests from private individuals and the archives of over 40 institutions and associations of importance in the history of Switzerland in the 20<sup>th</sup> century.

The archive, with its store of documentation on Jewish and economic history, is well used by researchers from Switzerland and other countries. It has links with a number of different history departments that regularly organize courses at the archive building. Every year on Holocaust Memorial Day, the archive arranges for school groups to meet contemporary witnesses.

In this reporting year, seven out of the approximately 20 staff won the special award from the department for successfully completing major multi-year projects (securing and making available the archives of the Swiss Federation of Jewish Communities and the Swiss Jewish Welfare Association), and for setting up the virtual information center "AfZ Online Archives".

The exhibition "The Swiss in Berlin 1933–1945", part of Swiss Archive Day on November 17, 2007, presented interviews with contemporary witnesses conducted over the last 30 years.

## Collegium Helveticum

The activities of the Collegium Helveticum, a joint facility of the University of Zurich and ETH Zurich, focused on the theme of "Feelings". The series of public lectures in the spring semester called "Showing feelings: forms of manifestation of emotional processes" dealt with the question of how emotional processes are expressed and what is achieved by scientific and other – not least artistic – ways of expressing them. The series of lectures that followed in the fall semester, "Pragmatics of feelings", was mainly about how feelings can open up an area of social influence in which we may be either the manipulators or the manipulated. Advertisers, politicians, artists and scientists all know how emotions can be exploited. What does this knowledge consist of, to what extent are we at the mercy of it and how are feelings handled differently in science?

In 2007, the Collegium Helveticum celebrated its tenth anniversary. This was an occasion for looking forward. As part of the current discussion about knowledge production, on October 24 the Collegium ventured to host an exercise in taking stock in the main hall of the University of Zurich, a symposium called "Knowledge: origins and relevance" in which the speakers Prof. Günter Abel (TU Berlin), Dieter Imboden (SNF), Günter Stock (Berlin-Brandenburg Academy of Sciences and Humanities in Berlin), Gerd Folkers (Collegium Helveticum) and Helga Nowotny (ERC Brussels) also entered into dialogue with the audience.

The main focus for research at the Collegium is the project "The role of emotion: its share in human actions and setting social standards". The project, supported by the cogito foundation, involves three fellows from the University of Zurich (Ingolf U. Dalferth, Ernst Fehr and Jakob Tanner) and three from ETH Zurich (Hans Rudolf Heinemann, Hanns Möhler and Reinhard Nesper).

The Ludwik Fleck Zentrum, which administers the scientific legacy of the Polish microbiologist and scientific philosopher at the Collegium, is responsible for the Fleck Archive, in collaboration with the ETH Zurich Archive of Contemporary History, which prepares the unpublished documents and makes them available to the public.

### ETH-Bibliothek

In 2007, continued expansion of the electronic information resources was once again a top priority for the ETH Library. Now that using electronic journals has become routine, the same is set to happen for books. Scientific publishers are increasingly offering their books in electronic format. The demand for e-books has grown considerably. This is why the ETH Library has more than doubled its range of online books. Its scope of training has also been enhanced, because researching technically complex sources of information often requires some explanation. The NEBIS central library catalog still represents the main point of entry for any information research at the ETH Library. In 2007, intensive preliminary work was carried out to improve the scope of the catalog database. In collaboration with the Central Library in Zurich, a project was initiated with the aim of achieving the ongoing integration of tables of contents and other information. From January 2008, information about the contents of every newly acquired book will be routinely entered in the catalog. Especially in a big library like the ETH Library, this step is a clear benefit to anyone interested in using the library.

The projects on information and communications technology that have been developed as part of the ICT concept at ETH Zurich were also at the heart of the library's activities. Here four projects should be mentioned that will be largely completed in 2008: the extension of the E-Pics-project to include the scientific institutes of ETH Zurich, the upgrading and further technical development of the ETH Zurich document server (the E-Collection III project), the establishment and operation of a publication pool and the establishment of a so-called knowledge portal as a central point of entry for all information resources at ETH Zurich that are relevant to the library.

With the exhibition "It's all a game! Mathematics as entertainment in a historical context", the ETH Library used its books to give the general public a fun look at some mathematical issues.

### Exhibitions at the Institute gta

The monographic exhibition "Chair House City – Häfeli Moser Steiger" was the result of many years of research at the Institute gta (History and Theory of Architecture) and was presented in cooperation with the Museum of Design in Zurich.

Another research project gave rise to the exhibition "Gottfried Honegger. Public art work", which was held to mark the artist's 90th birthday. A doctoral thesis at the Institute of Landscape Architecture led to the first exhibition of the work of the important Japanese landscape architect Mirei Shigemori (1896–1975).

The Institute gta, in close cooperation with the architects, presented contemporary architecture in the exhibitions "von Ballmoos Krucker architects" and "Graber Pulver". The visiting exhibitions "Denmark: architecture and design today" and "Coletivo. Contemporary São Paulo architecture" gave an insight into modern architecture in other countries. There was an exhibition in honor of the master of Brazilian architecture, Oscar Niemeyer.

Exhibitions connected with the architecture competition "Life Science Platform" and "Guest house Science City" provided a vision of urban development at the ETH Hönggerberg campus.

Collaboration between the construction industry and trade associations led to the traveling exhibitions "Eternit Architecture Prize 2006", "International VELUX Award 2006", a competition for future-proof design "Umsicht Regards Sguardi" and the "Prix Acier 2005/2007".



### ETH Collection of Prints and Drawings

The Collection of Prints and Drawings put on no fewer than seven exhibitions in 2007. In addition to this, there was the “Italian Renaissance Prints from the Swiss Federal Institute of Technology Zurich” exhibition, organized by Shinsuke Watanabe of the National Museum of Western Art in Tokyo and Michael Matile of the ETH Zurich Collection of Prints and Drawings. This exhibition attracted a great deal of interest in Tokyo. It was seen by over 30,000 visitors, a figure seldom reached by exhibitions of prints anywhere in the world.

In the Collection’s first own exhibition, works from the extensive stocks of the Collection on the subject of “Gesture and Gesturing” were displayed. A selection of prints from Warhol to Guber were also presented for the first time in an overview entitled “From the Graphische Sammlung – American prints 1960–2005”.

A generous endowment made it possible to stage a detailed tribute to the work of Lenz Klotz. In parallel to the Lenz Klotz exhibition, drawings and etchings by Wilfrid Moser were displayed in the Collection’s corridor showcases. A separate exhibition was dedicated to Richard Paul Lohse and his art prints. The Collection’s holdings were augmented by loans from the archives of the Richard Paul Lohse Foundation, the Kunsthaus Zurich and Galerie Renée Ziegler. At the same time, prints by the Czech painter Zdenek Sykora (born in 1920) were shown in the Collection’s corridor exhibition space. This followed the recent purchase of a group of his works, which the artist supplemented by donating two works.

The museum kunst palast in Düsseldorf visited the ETH Zurich Collection of Prints and Drawings with over 60 roman baroque drawings from the collection of the Kunstakademie in Düsseldorf. The exhibition focused on the artist Pier Francesco Mola (1612–1666), a native of the canton of Ticino in Switzerland. Alongside his drawings were a selection of works by Roman contemporaries.

Important acquisitions: the Collection acquired a pen and wash drawing showing caricatures of clerics by Pier Francesco Mola (1612–1666). Thanks to a donation from the departing Rector, a large photograph by Candida Höfer was added to the Collection.

### Werner Oechslin Library Foundation

After a long period of construction, the Werner Oechslin Library, built according to plans by Mario Botta, opened in June 2006. The core of the library consists of source texts on architectural theory and associated fields covering five centuries.

The international Baroque Summer Course has been held with great success since 2000, and in 2007 was devoted to the subject of “Holy landscapes/Holy mountains”, Heaven and Earth, pilgrims, the importance of religion and nature in the Christian tradition, and also in Japan. A colloquium



in spring 2007 was on the subject of “Daniele Barbaro, theoretician of sciences and architecture” and concentrated on this patron of Palladio and probably the leading commentator on Vitruvius (1556 and 1567). In September, an interdisciplinary conference on the subject of “The basilica: an outstanding form of building in European architectural history” was organized in cooperation with Jürgen Krüger and Jürgen Rasch of the University of Karlsruhe. In association with this event, there was an exhibition in the library on the subject of “The basilica: from ‘aedes sacra’ to ‘new spatial art’”.

The library also serves as a conference center for visiting organizations. For example, in the spring and fall, the Carleton University School of Architecture, Ottawa, held three research seminars at the library. The library has also resumed its publishing activities: in spring 2008 the papers from the Baroque Summer Course “Systems of Knowledge” will be published along with an issue of the Werner Oechslin Library Foundation newsletter SCHOLION 5/2008.

### Thomas Mann Archive

2007 was an eventful and fruitful year for the Thomas Mann Archive (TMA). The museum opened its doors to nearly 1,000 visitors. There were 17 guided tours for groups. Thirty-three users worked in the archive on 64 days. Some 4,000 enquiries were received by phone, fax, letter and, mainly, e-mail. This reflects how, in accordance with the times, there is a gradual shift away from visiting the archive towards detailed electronic research supported by the TMA.

There were no changes to the core team from 2006. Marc von Moos and Monika Bussmann continued to be responsible for advising the publishers of the complete Frankfurt edition of text and commentary, the GKFA. Monika Bussmann continued to dedicate herself to the line by line commentary on Felix Krull. Thomas Sprecher worked on annotated essays on the novel. Publication is planned for spring 2009. Cornelia Bernini continued to work on annotations to the texts of letters. In particular, notes on letters for a number of years were supplemented and completed. In addition, all the known letters from Thomas Mann were checked again for any text that could be included. The volume is due to be published in spring 2009. Thomas Sprecher gave some lectures in Zurich, Geneva and Munich on "Medical aspects of Thomas Mann's work", and "Thomas Mann and hypochondria".

For the first time, the TMA took part in the Long Night of Museums. Reinhard Pabst entertained the audience from 7 p. m. until 2 a. m. with music samples that play a role in Thomas Mann's work or that the author himself listened to. Special guest for the evening was Prof. Frido Mann, who talked about the life of his family and read extracts from his new autobiography. There was so much interest in the event that many people were unable to find a seat. Further preparations were made for the 8<sup>th</sup> Davos Literature and Art Days. These are to be on the subject of "Exile as illness" and will take place from August 3 to 9, 2008. Volume 38 in the series of Thomas Mann studies was published, "Vom weltläufigen Erzählen. Die Vorträge des Kongresses in Zürich 2006" (World storytelling, the presentations from the conference in Zurich in 2006), and Volume 39 "Was war das Leben? Man wusste es nicht! Thomas Mann und die Wissenschaften vom Menschen. Die Davoser Literaturtage 2006" (What was life? We didn't know! Thomas Mann and the science of people. Davos Literature Days 2006).

### Villa Garbald

In Castasegna in the Bergell valley stands the historic Villa Garbald. It was built by Gottfried Semper, the famous 19<sup>th</sup> century architect. When ETH Zurich took over the Villa Garbald, it extended the premises by adding a modern residential tower block and creating the infrastructure for a seminar center. The valley and its breathtaking landscapes have produced famous artists and painters such as Alberto Giacometti and some such as Giovanni Segantini have lived here. Since ETH Zurich has been using the Villa Garbald as a conference center and retreat, research groups from all cultural regions of Switzerland have been coming here to enjoy the unique atmosphere.

For the Villa Garbald, there were some important milestones in 2007 that set the course for the future. In terms of overnight stays, the year saw the conference center being used more than in any year since it opened. The summer special offer was very popular, whereby members of ETH and the University were offered accommodation at preferential rates. The Villa Garbald also became part of the Collegium Helveticum. It is hoped this will strengthen its links with research communities still further.



The Villa Garbald is not only a venue for academic events. In August the radio stations DRS 1, La Première, Rete Uno and Radio Rumantsch came together here to conclude their radio tour 2007 on the theme of "Quellen! Sources! Fonti! Funtaunas!". A major exhibition about the artist Varlin, which opened in fall 2007 at the Villa Garbald, will be available to visit until fall 2008.

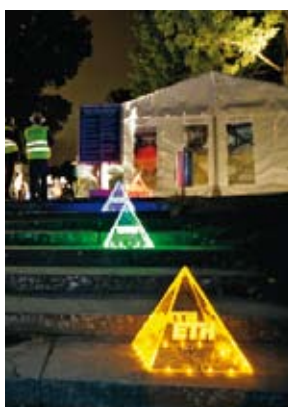
# Spotlights

When science meets the general public, it is exciting and informative – for both sides. ETH Zurich cultivates its contacts with the general population in many ways. Two particular highlights of 2007 were the Researchers' Night and the “Staunen, Forschen, Handeln” exhibition to mark the 20<sup>th</sup> anniversary of the Environmental Sciences course.



## “Staunen, Forschen, Handeln” exhibition

The “Staunen, Forschen, Handeln” (wonder, research, take action) exhibition to mark the 20<sup>th</sup> anniversary of the Environmental Sciences study program at the D-UWIS was a refreshing example of how complex research can be conveyed to the public in simple ways. In view of the topicality and practical relevance of the subject, there was no need to explain at length to the public how important environmental sciences are. From young kids to retired professors, 5,000 visitors were all equally enthusiastic about the diversity and real-life relevance of the D-UWIS research that they saw. There were about 30 exhibition stands where visitors could find out at first hand from representatives of all the institutes about subjects such as climate change, drinking water supplies, fine dust particles and biodiversity. At science workshops, the visitors could become researchers themselves and have a hands-on experience of the world of natural sciences.



**Researchers' Night**

At the first Researchers' Night in Zurich, several thousand people attended, curious to make contact with scientists. In the center of Zurich, a pavilion on the Bellevue Square invited passers-by to enter the realm of research and carry out experiments for themselves. Two free shuttle boats took visitors from the pavilion on the Bellevue to the main site of the exhibition in the Zürichhorn park. During the ride, scientists such as Nobel Prize Laureate Richard Ernst chatted to interested people and answered their questions. In the Zürichhorn park, a lakeside platform awaited visitors, with science shows and presentations, and more exhibition stands.

The Researcher's Night was a project forming part of the EU's Seventh Framework Program for Research and Technological Development. 2007 was the first time that Switzerland and ETH Zurich had taken part in this pan-European event.

# Applying Knowledge – Founding New Companies

## **Promoting an Entrepreneurial Mindset**

ETH Zurich stimulates and supports company start-ups by offering internal services such as those from ETH transfer and the Venture Business Plan (with McKinsey Switzerland) and by working in partnership with the federal government (KTI Startup, Venturelab) and external partners (B-Tools, Technopark). Additionally, there are internal on-going courses and consultancy.

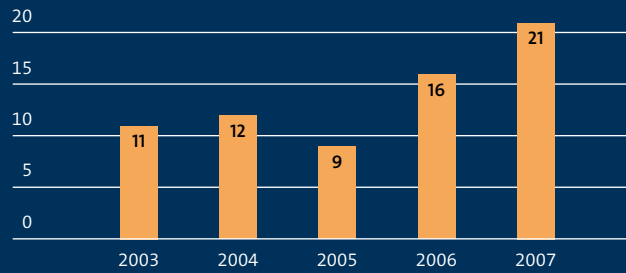
## **Lasting Success**

The survival rate for ETH Zurich spin-offs is remarkably high; in recent years, four out of five ETH Zurich spin-offs have succeeded in making themselves a part of the established business.

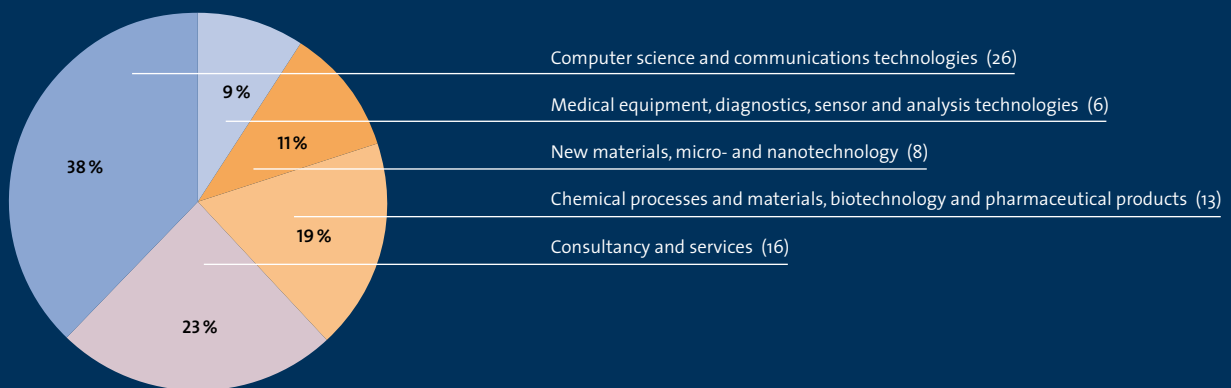
## **Stimulus for Future Entrepreneurs**

The many successes of ETH Zurich entrepreneurs have raised awareness among researchers, and led to a growing number of new start-up companies. In 2007 for the first time more than 20 new companies were registered in one year.

## 69 spin-off companies founded at ETH Zurich between 2003 and 2007



The 69 spin-off companies at ETH Zurich operate in many different fields



The 21 spin-off companies founded at ETH Zurich in 2007 come from all disciplines and are operating within a wide area of application

Areas of application	ETH disciplines			
	Architecture and Civil Engineering	Engineering Sciences	Natural Sciences and Mathematics	Management and Social Sciences
Computer science and communications technologies	zieta	Apex Optimization GmbH Celestrius AG Dybuster AG kooaba GmbH Procedural Inc.		Systemergonomie
Medical equipment, diagnostics, sensor and analysis technologies		NeMoDevices GmbH Virtamed AG	Arktis Radiation Detectors AG	
New materials, micro- and nanotechnology		Advanced Metal Technology AG FemtoTools GmbH kringlan composites AG	TurboBeads GmbH	
Chemical processes and materials, biotechnology and pharmaceutical products		RedElec Technologie SA	3-V Biosciences GmbH ChromaCon AG PiKe Pharma GmbH Procryotect	
Consultancy and services	Transoptima GmbH		exersciences.com GmbH	

# Attractive study and research location

That ETH Zurich is a world-class university is reflected in its ability to attract outstandingly well-qualified teachers, researchers and students from all over the world.

Traditionally, ETH Zurich has always had particular appeal for professors and doctoral students. The new Masters programs, taught in English, are now increasingly attracting students from abroad who are as yet not at the stage of doctoral study.

## Students by Country of Origin

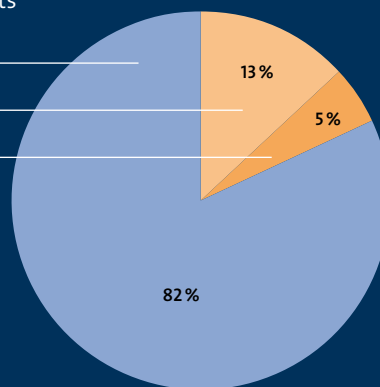
2007: Switzerland, EU and other countries

Bachelor, Master and undergraduate students

Switzerland (8808)

European Union (1338)

Other countries (481)

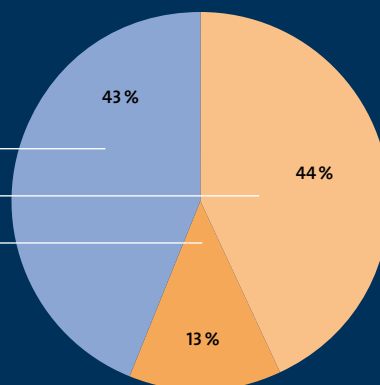


Doctoral candidates

Switzerland (1255)

European Union (1264)

Other countries (388)



## Professors by Country of Recruitment

2003–2007: Switzerland, Germany, USA and other countries

Switzerland (68)

Germany (42)

USA (33)

Others\* (14)

\* Great Britain (4)

France (2)

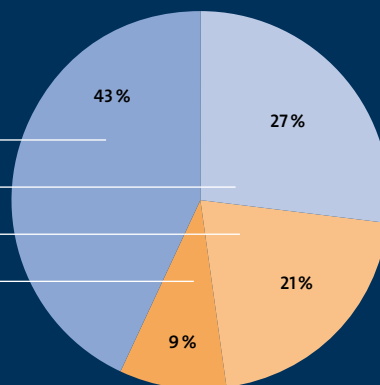
Scandinavia (2)

Greece (2)

Canada (2)

Benelux (1)

Austria (1)



# Development of ETH Zurich

	2001	2002	2003	2004	2005	2006	2007
<b>Graduations (details from page 56)</b>	<b>1884</b>	<b>1849</b>	<b>1769</b>	<b>1876</b>	<b>2001</b>	<b>2379</b>	<b>2932</b>
of which Bachelor	–	–	–	1	118	381	838
of which Master <sup>1</sup>	–	–	–	101	170	271	425
of which diplomas	1265	1190	1163	1066	974	932	884
of which doctorates	488	483	429	471	506	569	572
of which diplomas WMP <sup>2</sup> (MAS, MBA, NDS)	131	176	177	237	233	226	213
of which women	477	462	451	532	557	708	858
<b>Students (details from page 53)</b>	<b>11927</b>	<b>12390</b>	<b>12626</b>	<b>12505</b>	<b>12705</b>	<b>13412</b>	<b>13999</b>
of whom Bachelor students	–	–	2003	3703	5230	6320	6821
of whom Master students	–	–	–	–	514	1248	2284
of whom undergraduates	9311	9570	7701	5816	3928	2655	1522
of whom doctoral candidates	2300	2455	2529	2614	2674	2794	2907
of whom MAS/MBA students <sup>3</sup>	316	365	393	372	359	395	465
of whom women	3235	3486	3670	3656	3724	3977	4177
<b>New admissions (details from page 52)</b>	<b>3180</b>	<b>3289</b>	<b>3113</b>	<b>2816</b>	<b>3342</b>	<b>3917</b>	<b>4395</b>
of which Bachelor students	–	–	–	1694	2003	2002	1994
of which Master students <sup>4</sup>	–	–	–	–	222	729	1278
of which undergraduates <sup>5</sup>	2369	2352	2287	258	192	145	114
of which doctoral candidates	605	701	606	631	680	770	745
of which MAS/MBA students	206	236	220	233	245	271	264
of which women	905	1015	988	862	975	1252	1331
<b>Professorships (full-time equivalents)</b>	<b>343</b>	<b>340</b>	<b>356</b>	<b>358</b>	<b>349</b>	<b>359</b>	<b>368</b>
of which assistant professorships	57	59	64	57	53	50	54
of which women	24	23	25	25	25	28	34
Number of students per professorship	34.7	36.5	35.4	34.9	36.4	37.4	38.0
<b>Personnel (details from page 50)</b>							
<b>Staff<sup>6</sup></b>	<b>7705</b>	<b>7980</b>	<b>8068</b>	<b>8140</b>	<b>8190</b>	<b>8543</b>	<b>8594</b>
<b>Full-time equivalents</b>	<b>5513</b>	<b>5758</b>	<b>5891</b>	<b>5984</b>	<b>6009</b>	<b>6297</b>	<b>6408</b>
of which scientific staff for teaching and research <sup>7</sup>	3445	3617	3591	3619	3588	3820	3911
of which other staff for teaching and research	820	878	1014	1066	1116	1150	1166
of which women	1470	1591	1623	1703	1701	1825	1902
<b>Finances (details from page 45)</b>							
<b>Expenditure (in million CHF)</b>	<b>1069.7</b>	<b>1099.8</b>	<b>1119.6</b>	<b>1119.2</b>	<b>1157.1</b>	<b>1172.7</b>	<b>1217.1</b>
of which budget resources (in million CHF) <sup>8</sup>	938.9	960.3	966.4	959.2	977.2	988.6	1001.7
of which third party res. (in million CHF)	130.9	139.5	153.2	160.0	179.9	184.1	215.4

<sup>1</sup> Master degrees were already awarded from 2004 onwards in pilot programs.

<sup>2</sup> Postgraduate study programs.

<sup>3</sup> Including MAS in Secondary and Higher Education (2006: 71; 2007: 122). The MAS SHE certifies graduation from a teacher training course and was introduced at the beginning of the 2006/07 winter semester.

<sup>4</sup> Internal transfers from Bachelor to Masters level have been counted as newly matriculated Master students since 2005.

<sup>5</sup> Of which 127 (2006) and 112 (2007) were visiting students.

<sup>6</sup> Number of people not counting trainees and interns.

<sup>7</sup> Not counting professors, including teaching/research assistants.

<sup>8</sup> 2007 including CHF 93.5 million investment credit released to the Federal Office for Buildings and Logistics FBL (Bundesamt für Bauten und Logistik BBL).

# Finances

## Overall View of Expenditure

(in CHF 1000)

	2004	2005	2006	2007	Change from previous year	
					in 1000 CHF	in %
<b>Budget resources<sup>1</sup></b>	<b>959 221</b>	<b>977 175</b>	<b>988 578</b>	<b>1 001 715</b>	<b>13 137</b>	<b>1.3</b>
<b>Overall expenditure (excl. investments)</b>	<b>778 058</b>	<b>795 516</b>	<b>804 939</b>	<b>847 159</b>	<b>42 219</b>	<b>5.2</b>
of which personnel expenses	580 204	588 286	608 318	636 734	28 416	4.7
of which materials expenses	197 855	207 231	196 622	210 425	13 803	7.0
<b>Investments</b>	<b>181 163</b>	<b>181 659</b>	<b>183 638</b>	<b>154 556</b>	<b>-29 082</b>	<b>-15.8</b>
of which investments in building <sup>2</sup>	129 086	111 207	131 119	93 515	-37 603	-28.7
of which movables <sup>3</sup>	52 077	70 452	52 520	61 041	8 521	16.2
<b>Third-party funds</b>	<b>159 994</b>	<b>179 875</b>	<b>184 083</b>	<b>215 371</b>	<b>31 288</b>	<b>17.0</b>
<b>Overall expenditure (excl. investments)</b>	<b>154 226</b>	<b>165 263</b>	<b>175 154</b>	<b>188 859</b>	<b>13 705</b>	<b>7.8</b>
of which personnel expenses	125 408	128 450	131 968	135 307	3 339	2.5
of which materials expenses	28 818	36 812	43 186	53 552	10 366	24.0
<b>Investments</b>	<b>5 768</b>	<b>14 613</b>	<b>8 929</b>	<b>26 512</b>	<b>17 582</b>	<b>196.9</b>
of which investments in building	-	-	-	15 000	15 000	-
of which movables <sup>3</sup>	5 768	14 613	8 929	11 512	2 582	28.9
<b>Total expenditure</b>	<b>1 119 215</b>	<b>1 157 050</b>	<b>1 172 661</b>	<b>1 217 086</b>	<b>44 425</b>	<b>3.8</b>
<b>Overall expenditure (excl. investments)</b>	<b>932 285</b>	<b>960 779</b>	<b>980 094</b>	<b>1 036 018</b>	<b>55 925</b>	<b>5.7</b>
of which personnel expenses	705 612	716 736	740 285	772 041	31 755	4.3
of which materials expenses	226 673	244 043	239 808	263 977	24 169	10.1
<b>Investments</b>	<b>186 930</b>	<b>196 271</b>	<b>192 568</b>	<b>181 068</b>	<b>-11 500</b>	<b>-6.0</b>
of which investments in building	129 086	111 207	131 119	108 515	-22 603	-17.2
of which movables <sup>3</sup>	57 845	85 064	61 449	72 553	11 104	18.1

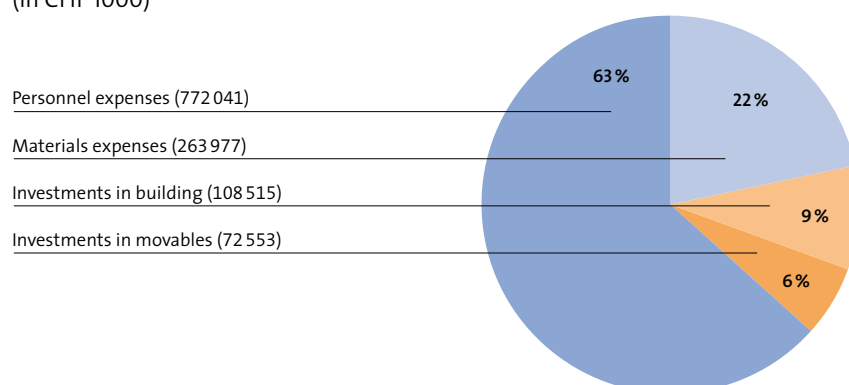
<sup>1</sup> Budget resources = funding from the federal government, tuition and other fees; from 2007 incl. investment credit released to the Federal Office for Buildings and Logistics FBL (Bundesamt für Bauten und Logistik BBL).

<sup>2</sup> New guidelines on accounting for building expenditure since 2007: investments now only include the investment credit transferred to the Federal Office for Buildings and Logistics FBL (Bundesamt für Bauten und Logistik BBL).

<sup>3</sup> Incl. donated properties.

## Breakdown of Expenditure

(in CHF 1000)



## Breakdown of Expenditure by Discipline

in CHF 1000 and on the basis of funding/budget responsibilities

	2007 Total	Source of funding/credit sources (financing)				Use of funds by type of expenditure		
		Core finance <sup>1</sup>	Add. finance <sup>2</sup>	Total budget funding	Third- party funding	Personnel	Materials	Invest- ments
<b>Architecture and Building Sciences</b>								
Architecture	42 073	33 530	3 044	36 574	5 499	36 633	5 189	250
Civil, Environmental and Geomatic Engineering	57 209	41 944	4 098	46 041	11 168	50 482	5 515	1 212
<b>Total</b>	<b>99 282</b>	<b>75 474</b>	<b>7 142</b>	<b>82 616</b>	<b>16 667</b>	<b>87 115</b>	<b>10 705</b>	<b>1 462</b>
<b>Engineering Sciences</b>								
Mechanical Engineering	63 125	38 296	8 674	46 970	16 155	50 765	6 161	6 199
Information Technology and Electrical Engineering	53 264	35 047	3 526	38 573	14 691	46 265	5 094	1 904
Computer Science	38 226	27 999	2 841	30 840	7 386	35 048	2 897	281
Material Science	29 379	17 771	4 883	22 654	6 724	22 591	3 821	2 966
Biosystems Science and Engineering	7 515	2 803	–	2 803	4 712	3 022	2 604	1 888
<b>Total</b>	<b>191 508</b>	<b>121 915</b>	<b>19 925</b>	<b>141 840</b>	<b>49 668</b>	<b>157 691</b>	<b>20 577</b>	<b>13 239</b>
<b>Natural Sciences and Mathematics</b>								
Mathematics	27 399	21 573	2 305	23 878	3 521	26 154	1 149	96
Physics	73 099	42 727	12 847	55 574	17 525	50 605	17 175	5 320
Chemistry and Applied Biosciences	92 380	57 776	15 746	73 522	18 859	65 698	13 567	13 115
Biology	83 302	45 277	16 520	61 797	21 505	58 581	14 409	10 312
<b>Total</b>	<b>276 180</b>	<b>167 353</b>	<b>47 417</b>	<b>214 770</b>	<b>61 410</b>	<b>201 037</b>	<b>46 300</b>	<b>28 843</b>
<b>System-Oriented Natural Sciences</b>								
Earth Sciences	36 160	20 902	5 096	25 998	10 162	30 224	3 254	2 682
Environmental Sciences	47 009	34 307	4 895	39 202	7 807	40 550	5 219	1 240
Agricultural and Food Sciences	37 976	25 302	2 678	27 980	9 996	31 421	4 717	1 837
<b>Total</b>	<b>121 144</b>	<b>80 511</b>	<b>12 668</b>	<b>93 179</b>	<b>27 965</b>	<b>102 195</b>	<b>13 189</b>	<b>5 760</b>
<b>Management and Social Sciences</b>								
Management, Technology, and Economics	20 644	13 774	1 083	14 857	5 787	19 111	1 473	59
Humanities, Social and Political Sciences	26 692	13 401	2 196	15 598	11 094	22 257	4 028	407
<b>Total</b>	<b>47 336</b>	<b>27 176</b>	<b>3 279</b>	<b>30 455</b>	<b>16 881</b>	<b>41 368</b>	<b>5 501</b>	<b>467</b>
<b>Total departments</b>	<b>735 451</b>	<b>472 429</b>	<b>90 431</b>	<b>562 860</b>	<b>172 591</b>	<b>589 406</b>	<b>96 273</b>	<b>49 771</b>
Projects and centers	11 022	–	3 543	3 543	7 480	7 124	3 749	150
Extra-departmental teaching and research units	37 809	24 795	6 096	30 891	6 917	17 580	12 127	8 102
<b>Total teaching and research</b>	<b>784 282</b>	<b>497 224</b>	<b>100 070</b>	<b>597 294</b>	<b>186 988</b>	<b>614 110</b>	<b>112 149</b>	<b>58 022</b>
Executive Board and central authorities	324 289	245 190	65 716	310 906	13 383	157 931	151 828	14 530
Investments in buildings	108 515	93 515	–	93 515	15 000	–	–	108 515
<b>Total executive board, central authorities and building investments</b>	<b>432 804</b>	<b>338 706</b>	<b>65 716</b>	<b>404 421</b>	<b>28 383</b>	<b>157 931</b>	<b>151 828</b>	<b>123 046</b>
<b>Grand total, expenditure</b>	<b>1 217 086</b>	<b>835 930</b>	<b>165 786</b>	<b>1 001 715</b>	<b>215 371</b>	<b>772 041</b>	<b>263 977</b>	<b>181 068</b>

<sup>1</sup> Funds to meet core remit in teaching and research, to provide services and to support infrastructure projects.

<sup>2</sup> Funds for department-specific, temporary projects in teaching, research and infrastructure not covered by basic financing.

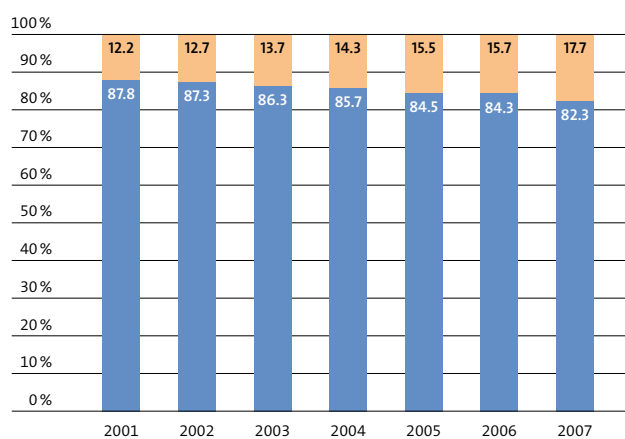
## Breakdown of Expenditure by Discipline

in CHF 1000

	2004	2005	2006	2007	Change in 2007 from 2006 in absolute terms	Structure 2007 in %
<b>Origin expenditure of third-party resources</b>						
Funding agencies national	55 300	57 200	63 892	70 876	6 984	32.9
International organizations (EU research programs)	15 266	16 449	21 039	26 929	5 890	12.5
Federal contracts; other public offices	29 172	36 713	32 165	29 216	-2 949	13.6
Business-oriented research, other third-party funds	52 033	49 632	52 202	48 908	-3 294	22.7
Endowments, bequests, special funds	8 223	19 881	14 785	39 443	24 658	18.3
<b>Total expenditure of third-party resources</b>	<b>159 994</b>	<b>179 875</b>	<b>184 083</b>	<b>215 371</b>	<b>31 288</b>	<b>100.0</b>

## Development of Budget and Third-Party Expenditure 2001–2007

in %



- Proportion of budget resources
- Proportion of third-party funding

## Income Statement

in CHF 1000

	2006	2007	Change from previous year	
			absolute	in %
<b>Funding</b>				
<b>Swiss Confederation funding</b>	<b>1 179 516</b>	<b>1 074 145</b>	<b>-105 371</b>	<b>-8.9</b>
Third-party resources	983 550	965 470		
Transfer of investment credit to Federal Office for Buildings and Logistics <sup>1</sup>		-93 515		
Third-party resources	195 966	202 190		
<b>Miscellaneous revenue</b>	<b>60 401</b>	<b>228 179</b>	<b>167 778</b>	<b>277.8</b>
Settlement of estimated rental expenses for buildings owned by the federal government <sup>2</sup>		158 119		
Proceeds from sales	25 961	25 601		
Fees and revenue from services	15 363	15 742		
Other revenue <sup>3</sup>	11 327	17 999		
Financial income	7 750	10 718		
<b>Total income</b>	<b>1 239 917</b>	<b>1 302 324</b>	<b>62 407</b>	<b>5.0</b>
<b>Expenditure</b>				
<b>Materials expenditure</b>	<b>49 496</b>	<b>55 469</b>	<b>5 973</b>	<b>12.1</b>
Expenditure on materials	38 561	42 439		
Movables (without capital goods)	10 935	13 030		
<b>Personnel expenditure</b>	<b>740 430</b>	<b>773 959</b>	<b>33 529</b>	<b>4.5</b>
Wages and salaries	610 949	629 961		
Social security benefits	91 939	103 673		
Other personnel expenditure	37 542	40 325		
<b>Materials expenditure</b>	<b>440 882</b>	<b>458 946</b>	<b>18 064</b>	<b>4.1</b>
Estimated rental expenses for buildings owned by the federal government <sup>2</sup>		158 119		
Premises	16 892	17 879		
Maintenance, repairs, leasing	24 825	39 325		
Water, energy, operating material, waste disposal	24 278	20 506		
Administration	8 862	8 302		
IT and telecommunication	40 263	36 927		
Other services and fees	34 767	42 914		
Depreciation	54 708	58 371		
Provisions <sup>1</sup>	200 358	34 525		
Other general expenditure	35 929	42 078		
<b>Total expenditure</b>	<b>1 230 808</b>	<b>1 288 374</b>	<b>57 566</b>	<b>4.7</b>
<b>Total result</b>	<b>9 109</b>	<b>13 950</b>	<b>4 841</b>	<b>53.1</b>

<sup>1</sup> New guidelines on accounting for building expenditure since 2007: the investment credit is transferred directly to the Federal Office for Buildings and Logistics FBL (Bundesamt für Bauten und Logistik BBL). In turn, the provisions entry for buildings on behalf of the federal government is omitted (2006: CHF 126.6 million). The proportion for tenant expansions is now accounted for in the Materials expenditure of ETH Zurich (2006: part of the entry for Provisions), causing Maintenance and Fees to increase.

<sup>2</sup> For the first time in 2007 an estimated rent was calculated for the buildings owned by the federal government and used by ETH Zurich. The estimated rental expenses are offset by a corresponding entry under Miscellaneous revenue.

<sup>3</sup> 2007 includes reimbursement of costs.

## Carry-over total expenditure in accordance with income statement to total

	2006	2007
<b>Total expenditure (in acc. with income statement)</b>	<b>1 230 808</b>	<b>1 288 374</b>
<b>Expenditure not incurring expenses</b>	<b>-241 624</b>	<b>-240 512</b>
Estimated rental expenses for buildings owned by the federal government		-158 119
- Depreciation (incl. buildings)	-54 708	-58 371
+/- Formation of provisions, not incurring expenses	-183 344	-23 056
- other expenditure not incurring expenses	-3 572	-966
<b>Expense-reducing income</b>	<b>-10 682</b>	<b>-12 867</b>
<b>Expenses not included in expenditure</b>	<b>194 159</b>	<b>182 091</b>
+ Investments (buildings, movables, IT)	192 568	181 068
+/- Changes in accumulated liabilities	1 591	1 023
<b>Total expenses ETH Zurich</b>	<b>1 172 661</b>	<b>1 217 086</b>

# Personnel

## Labour Force by Source of Funding

Full-time equivalents (cut-off date 31 December 2007<sup>1</sup>)

Year-on-year comparison based on the current ETH Zurich organizational structure

	Financed by own budget funding	Financed by third-party funding	2006 Total	Financed by own budget funding	Financed by third-party funding	2007 Total
<b>Architecture and Building Sciences</b>						
Architecture	293	19	312	316	22	337
Civil, Environmental and Geomatic Engineering	353	87	440	353	86	439
<b>Total number of positions</b>	<b>647</b>	<b>105</b>	<b>752</b>	<b>669</b>	<b>108</b>	<b>776</b>
<b>Engineering Sciences</b>						
Mechanical Engineering	356	123	479	380	110	489
Information Technology and Electrical Engineering	308	137	445	315	114	429
Computer Science	253	62	315	268	72	339
Materials Science	166	31	197	162	41	203
Biosystems Science and Engineering <sup>2</sup>	16	0	16	27	1	27
<b>Total number of positions</b>	<b>1099</b>	<b>353</b>	<b>1452</b>	<b>1151</b>	<b>337</b>	<b>1488</b>
<b>Natural Sciences and Mathematics</b>						
Mathematics	205	29	234	162	32	194
Physics	327	88	416	351	84	436
Chemistry and Applied Biosciences	477	129	607	490	92	582
Biology	387	139	526	398	151	549
<b>Total number of positions</b>	<b>1396</b>	<b>386</b>	<b>1782</b>	<b>1401</b>	<b>359</b>	<b>1760</b>
<b>System-Oriented Natural Sciences</b>						
Earth Sciences	172	69	242	174	79	253
Environmental Sciences	281	60	341	306	46	352
Agricultural and Food Sciences	209	73	282	208	80	289
<b>Total number of positions</b>	<b>662</b>	<b>203</b>	<b>865</b>	<b>688</b>	<b>205</b>	<b>894</b>
<b>Management and Social Sciences</b>						
Management, Technology and Economics	128	35	163	144	33	177
Humanities, Social and Political Sciences	104	79	183	126	69	195
<b>Total number of positions</b>	<b>233</b>	<b>114</b>	<b>346</b>	<b>270</b>	<b>102</b>	<b>372</b>
<b>Total departments</b>	<b>4037</b>	<b>1161</b>	<b>5197</b>	<b>4179</b>	<b>1111</b>	<b>5290</b>
<b>Extra departmental teaching and research units, projects and centers</b>						
CSCS Manno	38	1	39	31	3	34
Collegium Helveticum	8	4	12	7	6	13
FIRST Lab	6	1	7	9	0	9
KOF Swiss Economic Institute	10	18	27	16	15	31
Other extra-departmental teaching and research units	15	3	17	36	5	41
Projects and centers	23	5	28	20	6	26
<b>Total number of positions</b>	<b>100</b>	<b>31</b>	<b>131</b>	<b>119</b>	<b>36</b>	<b>155</b>
<b>Total number of positions teaching and research</b>	<b>4136</b>	<b>1192</b>	<b>5328</b>	<b>4298</b>	<b>1147</b>	<b>5445</b>
<b>Total number of positions Executive Board staff and Infrastructure Divisions</b>						
of which infrastructure management	948	21	969	945	18	963
of which exec. board staff and other personnel	895	7	902	886	3	889
	53	14	67	58	15	74
<b>Total number of positions (full-time equiv.)</b>	<b>5084</b>	<b>1213</b>	<b>6297</b>	<b>5243</b>	<b>1165</b>	<b>6408</b>

<sup>1</sup> Due to the rounding up of full-time equivalents to the nearest integer, the line and column totals may contain rounding differences. Changes to the organizational structure in 2007 have produced shifts in the departments' or teaching and research units' figures for the previous year in comparison with the 2006 annual report (changes already included above).

<sup>2</sup> The Department of Biosystems Science and Engineering was set up with effect from January 1, 2007.

## Breakdown of Establishment

Full-time equivalents (cut-off date 31 December 2007<sup>1</sup>)

Year-on-year comparison based on the current ETH Zurich organizational structure

	2006			2007		
	Women	Men	Total	Women	Men	Total
<b>Professorial posts</b>						
Full professorships	18	260	278	20	262	283
Associate professorships	5	26	31	5	26	31
Assistant professorships	6	44	50	9	45	54
<b>Total professorial posts</b>	<b>28</b>	<b>330</b>	<b>359</b>	<b>34</b>	<b>334</b>	<b>368</b>
of which temporary positions	6	44	50	9	45	54
of which part-time positions	1	16	18	0	16	16
<b>Other teaching and research</b>						
Assistants/scientific staff	867	2676	3543	930	2743	3673
Technical and administrative staff	495	654	1150	499	667	1166
Teaching/research assistants	79	197	276	84	154	238
<b>Total other teaching and research</b>	<b>1442</b>	<b>3527</b>	<b>4969</b>	<b>1513</b>	<b>3564</b>	<b>5077</b>
of which temporary positions	1104	2817	3921	1183	2862	4045
of which part-time positions	910	1337	2246	955	1292	2247
<b>Total teaching and research<sup>2</sup></b>	<b>1470</b>	<b>3858</b>	<b>5328</b>	<b>1547</b>	<b>3898</b>	<b>5445</b>
<b>Infrastructure management</b>						
Finance and controlling	23	37	60	26	35	61
Corporate communications	16	12	28	13	10	23
Rector's office	32	19	51	36	22	59
Teaching center	11	17	28	11	15	26
ETH library	104	76	181	98	71	170
IT	24	146	170	26	148	173
Personnel department	19	16	34	16	15	31
Real estate	84	266	350	81	266	347
<b>Total infrastructure management</b>	<b>313</b>	<b>589</b>	<b>902</b>	<b>307</b>	<b>582</b>	<b>889</b>
of which temporary positions	51	78	129	44	64	109
of which part-time positions	180	110	290	177	106	283
<b>Executive Board staff and other personnel</b>	<b>41</b>	<b>26</b>	<b>67</b>	<b>48</b>	<b>26</b>	<b>74</b>
of which temporary positions	12	9	21	18	9	26
of which part-time positions	19	9	28	22	8	30
<b>Total no. of positions (full-time equivalents)</b>	<b>1825</b>	<b>4472</b>	<b>6297</b>	<b>1902</b>	<b>4506</b>	<b>6408</b>
of which temporary positions	1173	2948	4121	1254	2980	4234
of which part-time positions	1110	1473	2583	1154	1422	2577
Trainees and interns	56	110	166	46	112	158

<sup>1</sup> Due to the rounding up of full-time equivalents to the nearest integer, the line and column totals may contain rounding differences.

<sup>2</sup> The personnel in the extra-departmental teaching and research units will now be consolidated in the teaching and research total.

# Education

## New Students, Entrants by Category

Programs	Bachelor students		Master students <sup>1</sup>		Under-graduates <sup>2</sup>		Doctoral candidates <sup>3</sup>		MAS/MBA-students <sup>4,5</sup>		Total	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>Architecture and Building Sciences</b>												
Architecture	291	282	–	64	65	41	14	22	45	73	415	482
Civil Engineering	109	115	36	51	5	1	32	22	–	–	182	189
Environmental Engineering	42	50	12	38	–	1	9	5	–	–	63	94
Geomatics and Planning	22	16	15	23	4	3	4	6	–	20	45	68
<b>Total</b>	<b>464</b>	<b>463</b>	<b>63</b>	<b>176</b>	<b>74</b>	<b>46</b>	<b>59</b>	<b>55</b>	<b>45</b>	<b>93</b>	<b>705</b>	<b>833</b>
<b>Engineering Sciences</b>												
Mechanical Engineering	272	286	132	130	6	5	69	89	–	–	479	510
Electrical Eng. and Information Technology	178	156	9	77	4	4	66	61	–	–	257	298
Biosciences and Engineering	–	–	21	22	–	–	–	–	–	–	21	22
Interdisciplinary Engineering Sciences	–	–	5	20	–	–	–	–	–	–	5	20
Computer Science	116	104	57	113	4	6	52	60	–	–	229	283
Materials Science	51	57	19	25	2	1	32	35	–	–	104	118
<b>Total</b>	<b>617</b>	<b>603</b>	<b>243</b>	<b>387</b>	<b>16</b>	<b>16</b>	<b>219</b>	<b>245</b>	<b>–</b>	<b>–</b>	<b>1095</b>	<b>1251</b>
<b>Natural Sciences and Mathematics</b>												
Mathematics	102	101	30	64	5	7	19	18	15	8	171	198
Computational Science and Engineering	3	1	3	16	–	–	13	2	–	–	19	19
Physics	138	133	–	59	15	1	68	56	30	5	251	254
Chemistry	54	65	44	49	5	4	67	51	7	2	177	171
Chemical Engineering	10	21	12	14	–	–	14	16	–	–	36	51
Biotechnology	9	25	6	8	–	–	–	–	–	–	15	33
Interdisciplinary Sciences	31	44	–	3	–	–	4	3	–	–	35	50
Pharmaceutical Sciences	88	81	25	43	1	1	23	14	–	–	137	139
Biology	105	98	59	80	7	4	104	82	9	3	284	267
Physical Education and Sports	110	99	49	97	–	–	3	1	21	2	183	199
<b>Total</b>	<b>650</b>	<b>668</b>	<b>228</b>	<b>433</b>	<b>33</b>	<b>17</b>	<b>315</b>	<b>243</b>	<b>82</b>	<b>20</b>	<b>1308</b>	<b>1381</b>
<b>System-Oriented Natural Sciences</b>												
Earth Sciences	45	45	43	61	5	7	24	32	2	–	119	145
Environmental Sciences	101	127	59	88	5	5	58	70	–	–	223	290
Forest Sciences	–	–	–	–	–	–	–	–	–	–	–	–
Agricultural Science	48	23	9	13	3	2	31	30	2	–	93	68
Food Science	64	48	13	29	–	3	3	14	9	8	89	102
<b>Total</b>	<b>258</b>	<b>243</b>	<b>124</b>	<b>191</b>	<b>13</b>	<b>17</b>	<b>116</b>	<b>146</b>	<b>13</b>	<b>8</b>	<b>524</b>	<b>605</b>
<b>Management, Social Sciences and other</b>												
Management, Technology, and Economics	–	–	58	82	9	18	40	32	73	101	180	233
Humanities, Social and Political Sciences	–	–	13	9	–	–	21	24	58	42	92	75
Professional Officer	13	17	–	–	–	–	–	–	–	–	13	17
Physical Education and Sports Teacher	–	–	–	–	–	–	–	–	–	–	–	–
<b>Total</b>	<b>13</b>	<b>17</b>	<b>71</b>	<b>91</b>	<b>9</b>	<b>18</b>	<b>61</b>	<b>56</b>	<b>131</b>	<b>143</b>	<b>285</b>	<b>325</b>
<b>ETH Zurich total</b>	<b>2002</b>	<b>1994</b>	<b>729</b>	<b>1278</b>	<b>145</b>	<b>114</b>	<b>770</b>	<b>745</b>	<b>271</b>	<b>264</b>	<b>3917</b>	<b>4395</b>
Percentage women	30.4	30.0	32.9	29.8	32.4	35.1	32.3	28.2	39.9	38.3	32.0	30.3
Percentage foreigners	16.4	15.5	23.6	28.7	85.5	93.0	59.4	59.7	33.6	42.0	29.9	30.5

<sup>1</sup> Of which 187 (2006) and 324 (2007) new ETH-external entrants.

<sup>2</sup> Of which 127 (2006) and 112 (2007) new ETH-external entrants.

<sup>3</sup> Of which 491 (2006) and 466 (2007) new ETH-external entrants.

<sup>4</sup> Including MAS in Secondary and Higher Education (2006: 71; 2007: 122). The MAS SHE certifies the completion of a program in didactics and was introduced at the beginning of the 2006/07 winter semester.

<sup>5</sup> Of which 219 (2006) and 216 (2007) new ETH-external entrants.

## Students by Categories

Programs	Bachelor students		Master students		Under-graduates <sup>1</sup>		Doctoral candidates		MAS/MBA-students <sup>2</sup>		Total	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>Architecture and Building Sciences</b>												
Architecture	657	856	-	64	568	410	94	100	66	90	1385	1520
Civil Engineering	347	383	36	88	94	16	103	105	-	-	580	592
Environmental Engineering	158	174	12	55	50	15	32	28	-	-	252	272
Geomatics and Planning	82	75	15	41	33	15	47	39	26	20	203	190
<b>Total</b>	<b>1244</b>	<b>1488</b>	<b>63</b>	<b>248</b>	<b>745</b>	<b>456</b>	<b>276</b>	<b>272</b>	<b>92</b>	<b>110</b>	<b>2420</b>	<b>2574</b>
<b>Engineering Sciences</b>												
Mechanical Engineering	909	955	219	306	58	24	276	317	-	-	1462	1602
Electrical Eng. and Information Technology	577	560	303	284	37	36	306	300	-	-	1223	1180
Biosciences and Engineering	-	-	39	47	-	-	-	-	-	-	39	47
Interdisciplinary Engineering Sciences	-	-	5	25	-	-	-	-	-	-	5	25
Computer Science	474	497	57	172	318	188	168	188	-	2	1017	1047
Materials Science	137	162	28	53	16	5	115	126	-	-	296	346
<b>Total</b>	<b>2097</b>	<b>2174</b>	<b>651</b>	<b>887</b>	<b>429</b>	<b>253</b>	<b>865</b>	<b>931</b>	<b>-</b>	<b>2</b>	<b>4042</b>	<b>4247</b>
<b>Natural Sciences and Mathematics</b>												
Mathematics	286	305	30	93	132	84	79	92	15	27	542	601
Computational Science and Engineering	34	40	15	21	5	1	20	1	-	-	74	63
Physics	333	387	-	59	289	198	197	203	30	35	849	882
Chemistry	172	179	59	81	52	41	261	244	7	9	551	554
Chemical Engineering	44	46	17	22	-	-	54	54	-	-	115	122
Biotechnology	13	36	6	13	-	-	-	-	-	-	19	49
Interdisciplinary Sciences	49	96	-	3	32	26	13	14	-	-	94	139
Pharmaceutical Sciences	257	267	56	81	34	17	82	74	-	-	429	439
Biology	404	404	59	139	218	129	334	346	9	20	1024	1038
Physical Education and Sports	444	400	79	143	18	19	8	9	21	33	570	604
<b>Total</b>	<b>2036</b>	<b>2160</b>	<b>321</b>	<b>655</b>	<b>780</b>	<b>515</b>	<b>1048</b>	<b>1037</b>	<b>82</b>	<b>124</b>	<b>4267</b>	<b>4491</b>
<b>System-Oriented Natural Sciences</b>												
Earth Sciences	164	158	43	104	67	28	103	107	2	2	379	399
Environmental Sciences	412	456	59	149	256	160	222	251	-	-	949	1016
Forest Sciences	-	-	-	-	51	13	16	-	-	-	67	13
Agricultural Science	122	126	9	21	58	35	112	120	2	3	303	305
Food Science	185	197	13	41	75	35	46	47	14	20	333	340
<b>Total</b>	<b>883</b>	<b>937</b>	<b>124</b>	<b>315</b>	<b>507</b>	<b>271</b>	<b>499</b>	<b>525</b>	<b>18</b>	<b>25</b>	<b>2031</b>	<b>2073</b>
<b>Management, Social Sciences and other</b>												
Management, Technology, and Economics	-	-	76	156	56	25	74	95	153	164	359	440
Humanities, Social and Political Sciences	-	-	13	23	-	-	32	47	50	40	95	110
Professional Officer	60	62	-	-	-	-	-	-	-	-	60	62
Physical Education and Sports Teacher	-	-	-	-	138	2	-	-	-	-	138	2
<b>Total</b>	<b>60</b>	<b>62</b>	<b>89</b>	<b>179</b>	<b>194</b>	<b>27</b>	<b>106</b>	<b>142</b>	<b>203</b>	<b>204</b>	<b>652</b>	<b>614</b>
<b>ETH Zurich total</b>	<b>6320</b>	<b>6821</b>	<b>1248</b>	<b>2284</b>	<b>2655</b>	<b>1522</b>	<b>2794</b>	<b>2907</b>	<b>395</b>	<b>465</b>	<b>13412</b>	<b>13999</b>
Headcount <sup>3</sup>	5902	6239	1247	2284	2549	1429	2792	2900	336	383	12826	13235
Percentage women	29.2	29.4	27.2	28.5	32.7	34.5	28.1	28.4	35.2	36.8	29.7	29.8
Percentage foreigners	13.4	14.2	19.6	24.9	14.3	18.8	55.9	56.8	29.1	32.0	23.5	25.9

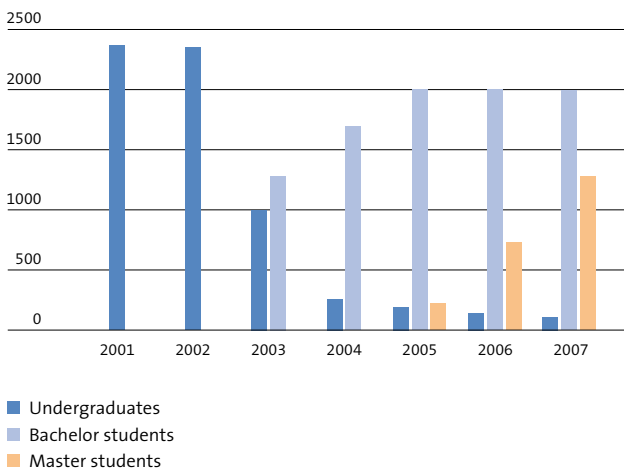
<sup>1</sup> Including teaching certificate following degree (2006: 617; 2007: 597). The teaching certificate certifies the completion of a program in didactics and was superseded by two new courses of study at the beginning of the 2006/07 winter semester: the MAS in Secondary and Higher Education and the Teaching Certificate.

<sup>2</sup> Including MAS in Secondary and Higher Education (2006: 71; 2007: 122). The MAS SHE certifies the completion of a program in didactics and was introduced at the beginning of the 2006/07 winter semester.

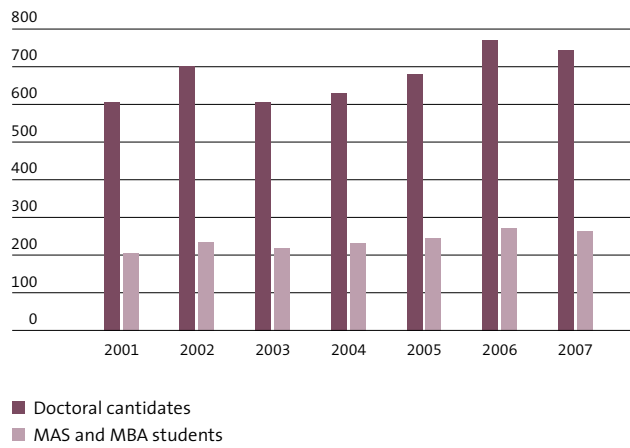
<sup>3</sup> The student numbers are based on registrations for courses; a student may be registered for more than one course simultaneously. Under Headcount, a student is only counted on his/her main course (e.g. as a doctoral student, if simultaneously registered for an MAS/MBA program and a doctorate).

## New Students, Entrants by Categories 2001–2007

New undergraduates, Bachelor students and Master students 2001–2007

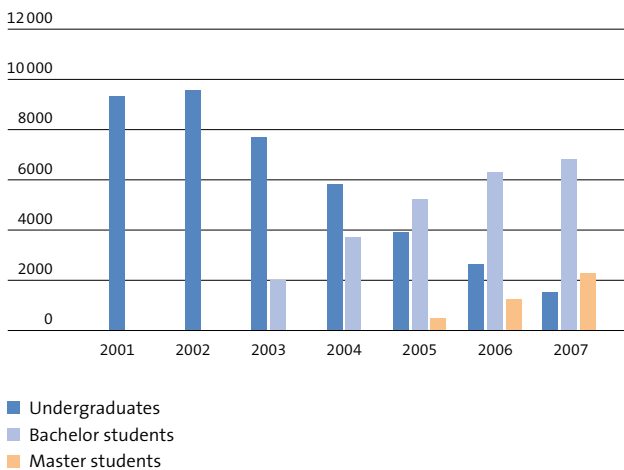


New doctoral candidates, MAS and MBA students 2001–2007

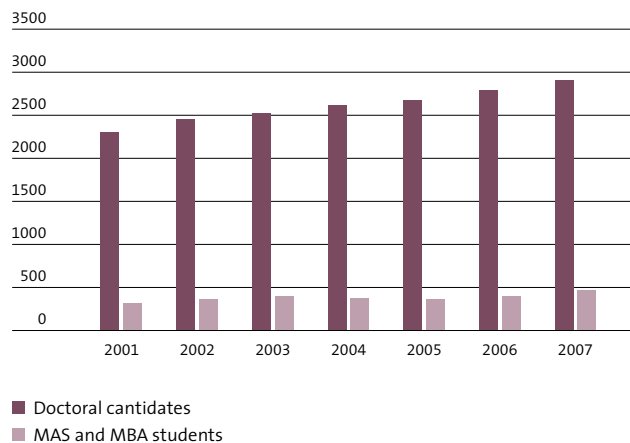


## Students by Categories 2001–2007

Undergraduates, Bachelor students and Master students 2001–2007



Doctoral candidates, MAS and MBA students 2001–2007



## Foreign Students by Nationality in Fall 2007

(Without Residence Permit C)

	Bachelor students		Master students		Under-graduates		Doctoral candidates		MAS/MBA students		Total	
		%		%		%		%		%		%
<b>EU</b>												
Germany	421	58.4	160	31.1	122	52.6	750	47.2	54	42.9	1507	47.4
Austria	64	8.9	17	3.3	26	11.2	93	5.9	6	4.8	206	6.5
Italy	11	1.5	7	1.4	4	1.7	125	7.9	3	2.4	150	4.7
Luxembourg	48	6.7	17	3.3	4	1.7	19	1.2	3	2.4	91	2.9
France	12	1.7	19	3.7	3	1.3	38	2.4	4	3.2	76	2.4
Greece	5	0.7	19	3.7	-	0.0	34	2.1	7	5.6	65	2.0
Sweden	4	0.6	5	1.0	7	3.0	18	1.1	1	0.8	35	1.1
Netherlands	2	0.3	2	0.4	2	0.9	23	1.4	1	0.8	30	0.9
Romania	2	0.3	6	1.2	1	0.4	16	1.0	3	2.4	28	0.9
Great Britain	1	0.1	6	1.2	1	0.4	18	1.1	1	0.8	27	0.8
Poland	4	0.6	1	0.2	3	1.3	13	0.8	1	0.8	22	0.7
Spain	4	0.6	3	0.6	1	0.4	11	0.7	2	1.6	21	0.7
Slovakia	-	0.0	2	0.4	2	0.9	10	0.6	-	0.0	14	0.4
Portugal	1	0.1	2	0.4	1	0.4	9	0.6	-	0.0	13	0.4
Denmark	1	0.1	3	0.6	2	0.9	6	0.4	-	0.0	12	0.4
Belgium	1	0.1	2	0.4	-	0.0	6	0.4	2	1.6	11	0.3
Hungary	3	0.4	-	0.0	-	0.0	8	0.5	-	0.0	11	0.3
Bulgaria	2	0.3	2	0.4	1	0.4	5	0.3	-	0.0	10	0.3
Czech Republic	1	0.1	1	0.2	-	0.0	7	0.4	1	0.8	10	0.3
Others	6	0.8	5	1.0	1	0.4	13	0.8	3	2.4	28	0.9
<b>Total</b>	<b>589</b>	<b>81.7</b>	<b>271</b>	<b>52.6</b>	<b>179</b>	<b>77.2</b>	<b>1201</b>	<b>75.6</b>	<b>89</b>	<b>70.6</b>	<b>2329</b>	<b>73.2</b>
<b>Rest of Europe</b>												
Russia	18	2.5	8	1.6	-	0.0	32	2.0	5	4.0	63	2.0
Turkey	9	1.2	31	6.0	1	0.4	21	1.3	1	0.8	63	2.0
Liechtenstein	29	4.0	5	1.0	3	1.3	6	0.4	1	0.8	44	1.4
Croatia	4	0.6	2	0.4	-	0.0	13	0.8	-	0.0	19	0.6
Ukraine	3	0.4	2	0.4	2	0.9	10	0.6	-	0.0	17	0.5
Norway	2	0.3	3	0.6	3	1.3	2	0.1	-	0.0	10	0.3
Others	8	1.1	13	2.5	2	0.9	10	0.6	-	0.0	33	1.0
<b>Total</b>	<b>77</b>	<b>10.7</b>	<b>72</b>	<b>14.0</b>	<b>13</b>	<b>5.6</b>	<b>115</b>	<b>7.2</b>	<b>10</b>	<b>7.9</b>	<b>287</b>	<b>9.0</b>
<b>Asien</b>												
China	26	3.6	50	9.7	14	6.0	62	3.9	5	4.0	157	4.9
India	5	0.7	27	5.2	4	1.7	49	3.1	3	2.4	88	2.8
Iran	2	0.3	11	2.1	1	0.4	26	1.6	-	0.0	40	1.3
Korea	2	0.3	4	0.8	4	1.7	5	0.3	1	0.8	16	0.5
Japan	1	0.1	3	0.6	2	0.9	4	0.3	1	0.8	11	0.3
Others	7	1.0	24	4.7	3	1.3	35	2.2	4	3.2	73	2.3
<b>Total</b>	<b>43</b>	<b>6.0</b>	<b>119</b>	<b>23.1</b>	<b>28</b>	<b>12.1</b>	<b>181</b>	<b>11.4</b>	<b>14</b>	<b>11.1</b>	<b>385</b>	<b>12.1</b>
<b>Amerika</b>												
United States of America	2	0.3	16	3.1	4	1.7	37	2.3	2	1.6	61	1.9
Brazil	-	0.0	4	0.8	1	0.4	14	0.9	1	0.8	20	0.6
Canada	-	0.0	5	1.0	-	0.0	13	0.8	-	0.0	18	0.6
Mexico	-	0.0	9	1.7	2	0.9	1	0.1	3	2.4	15	0.5
Others	5	0.7	10	1.9	1	0.4	6	0.4	3	2.4	25	0.8
<b>Total</b>	<b>7</b>	<b>1.0</b>	<b>44</b>	<b>8.5</b>	<b>8</b>	<b>3.4</b>	<b>71</b>	<b>4.5</b>	<b>9</b>	<b>7.1</b>	<b>139</b>	<b>4.4</b>
<b>Afrika</b>												
Egypt	1	0.1	2	0.4	1	0.4	1	0.1	-	0.0	5	0.2
Algeria	2	0.3	-	0.0	-	0.0	3	0.2	-	0.0	5	0.2
Tunisia	-	0.0	4	0.8	-	0.0	1	0.1	-	0.0	5	0.2
Others	2	0.3	2	0.4	3	1.3	7	0.4	3	2.4	17	0.5
<b>Total</b>	<b>5</b>	<b>0.7</b>	<b>8</b>	<b>1.6</b>	<b>4</b>	<b>1.7</b>	<b>12</b>	<b>0.8</b>	<b>3</b>	<b>2.4</b>	<b>32</b>	<b>1.0</b>
<b>Australia and New Zealand</b>												
<b>Total</b>	<b>-</b>	<b>0.0</b>	<b>1</b>	<b>0.2</b>	<b>-</b>	<b>0.0</b>	<b>8</b>	<b>0.5</b>	<b>1</b>	<b>0.8</b>	<b>10</b>	<b>0.3</b>
<b>Total</b>	<b>721</b>	<b>100.0</b>	<b>515</b>	<b>100.0</b>	<b>232</b>	<b>100.0</b>	<b>1588</b>	<b>100.0</b>	<b>126</b>	<b>100.0</b>	<b>3182</b>	<b>100.0</b>

## Bachelor Degrees

Program	2000	2005	2006			2007
	Total	Total	Total	Women	Men	Total
<b>Architecture and Building Sciences</b>						
Architecture	-	-	-	-	-	-
Civil Engineering	-	-	20	11	34	45
Environmental Engineering	-	-	14	11	15	26
Geomatics and Planning	-	-	13	5	13	18
Rural Engineering and Surveying	-	-	-	-	-	-
<b>Total</b>	-	-	<b>47</b>	<b>27</b>	<b>62</b>	<b>89</b>
<b>Engineering Sciences</b>						
Mechanical Engineering	-	55	121	17	162	179
Electrical Engineering and Information Technology	-	2	6	2	37	39
Biosciences and Engineering	-	-	-	-	-	-
Interdisciplinary Engineering Sciences	-	-	-	-	-	-
Computer Science	-	-	4	7	33	40
Materials Science	-	-	13	5	14	19
<b>Total</b>	-	<b>57</b>	<b>144</b>	<b>31</b>	<b>246</b>	<b>277</b>
<b>Natural Sciences and Mathematics</b>						
Mathematics	-	-	7	8	27	35
Computational Science and Engineering	-	6	6	1	4	5
Physics	-	-	-	-	29	29
Chemistry	-	14	35	6	32	38
Chemical Engineering	-	8	9	2	9	11
Biotechnology	-	-	-	-	1	1
Interdisciplinary Sciences	-	-	-	-	-	-
Pharmaceutical Sciences	-	-	18	35	10	45
Biology	-	-	35	35	42	77
Physical Education and Sports	-	13	46	46	44	90
<b>Total</b>	-	<b>41</b>	<b>156</b>	<b>133</b>	<b>198</b>	<b>331</b>
<b>System-Oriented Natural Sciences</b>						
Earth Sciences	-	-	-	9	25	34
Environmental Sciences	-	-	-	31	30	61
Forest Sciences	-	-	-	-	-	-
Agricultural Science	-	-	2	3	3	6
Food Science	-	-	3	20	5	25
<b>Total</b>	-	-	<b>5</b>	<b>63</b>	<b>63</b>	<b>126</b>
<b>Management and Social Sciences</b>						
Management, Technology and Economics	-	-	-	-	-	-
Humanities, Social and Political Sciences	-	-	-	-	-	-
Professional Officer	-	20	29	2	13	15
Physical Education and Sports Teacher	-	-	-	-	-	-
<b>Total</b>	-	<b>20</b>	<b>29</b>	<b>2</b>	<b>13</b>	<b>15</b>
<b>ETH Zurich total</b>	-	<b>118</b>	<b>381</b>	<b>256</b>	<b>582</b>	<b>838</b>

## Diplomas and Master Degrees

Program	2000	2005	2006			2007
	Total	Total	Total	Women	Men	Total
<b>Architecture and Building Sciences</b>						
Architecture	207	153	143	69	89	158
Civil Engineering	58	37	51	11	62	73
Environmental Engineering	21	24	16	12	24	36
Geomatics and Planning	-	17	14	6	16	22
Rural Engineering and Surveying	36	-	-	-	-	-
<b>Total</b>	<b>322</b>	<b>231</b>	<b>224</b>	<b>98</b>	<b>191</b>	<b>289</b>
<b>Engineering Sciences</b>						
Mechanical Engineering	92	95	132	3	79	82
Electrical Engineering and Information Technology	93	100	93	9	115	124
Biosciences and Engineering	-	-	-	2	12	14
Interdisciplinary Engineering Sciences	-	-	-	-	-	-
Computer Science	52	93	138	13	111	124
Materials Science	21	36	18	2	9	11
<b>Total</b>	<b>258</b>	<b>324</b>	<b>381</b>	<b>29</b>	<b>326</b>	<b>355</b>
<b>Natural Sciences and Mathematics</b>						
Mathematics	44	37	51	15	35	50
Computational Science and Engineering	6	8	11	3	11	14
Physics	72	72	70	8	67	75
Chemistry	37	15	28	16	15	31
Chemical Engineering	8	5	6	6	3	9
Biotechnology	-	-	-	-	-	-
Interdisciplinary Sciences	8	5	5	2	3	5
Pharmaceutical Sciences <sup>1</sup>	52	38	41	30	4	34
Biology	90	83	92	39	52	91
Physical Education and Sports	-	32	21	26	17	43
<b>Total</b>	<b>317</b>	<b>295</b>	<b>325</b>	<b>145</b>	<b>207</b>	<b>352</b>
<b>System-Oriented Natural Sciences</b>						
Earth Sciences	36	27	28	12	32	44
Environmental Sciences	66	96	107	49	56	105
Forest Sciences	43	39	24	10	24	34
Agricultural Science	52	25	37	11	17	28
Food Science	34	39	23	32	23	55
<b>Total</b>	<b>231</b>	<b>226</b>	<b>219</b>	<b>114</b>	<b>152</b>	<b>266</b>
<b>Management and Social Sciences</b>						
Management, Technology and Economics	63	68	54	4	43	47
Humanities, Social and Political Sciences	-	-	-	-	-	-
Professional Officer	-	-	-	-	-	-
Physical Education and Sports Teacher	-	-	-	-	-	-
<b>Total</b>	<b>63</b>	<b>68</b>	<b>54</b>	<b>4</b>	<b>43</b>	<b>47</b>
<b>ETH Zurich total</b>	<b>1191</b>	<b>1144</b>	<b>1203</b>	<b>390</b>	<b>919</b>	<b>1309</b>
<sup>1</sup> Of which Staatsexamen (state examination)	51	36	40	28	3	31

## Doctorates

Department	2000	2005	2006			2007
	Total	Total	Total	Woman	Men	Total
<b>Architecture and Building Sciences</b>						
Architecture	2	8	11	3	4	7
Civil, Environmental and Geomatic Engineering	26	26	27	4	27	31
<b>Total</b>	<b>28</b>	<b>34</b>	<b>38</b>	<b>7</b>	<b>31</b>	<b>38</b>
<b>Engineering Sciences</b>						
Mechanical and Process Engineering	29	42	41	8	44	52
Information Technology and Electrical Engineering	69	54	80	8	48	56
Computer Science	20	31	27	4	30	34
Materials Science	23	18	22	4	18	22
<b>Total</b>	<b>141</b>	<b>145</b>	<b>170</b>	<b>24</b>	<b>140</b>	<b>164</b>
<b>Natural Sciences and Mathematics</b>						
Mathematics	9	12	13	4	13	17
Physics	48	49	55	6	34	40
Chemistry and Applied Biosciences <sup>1</sup>	93	78	100	32	80	112
Biology	68	69	70	22	40	62
<b>Total</b>	<b>218</b>	<b>208</b>	<b>238</b>	<b>64</b>	<b>167</b>	<b>231</b>
<b>System-Oriented Natural Sciences</b>						
Earth Sciences	20	19	23	13	17	30
Environmental Sciences <sup>2</sup>	63	56	53	25	35	60
Agricultural and Food Sciences	40	28	34	15	20	35
<b>Total</b>	<b>123</b>	<b>103</b>	<b>110</b>	<b>53</b>	<b>72</b>	<b>125</b>
<b>Management and Social Sciences</b>						
Management, Technology and Economics	13	16	13	1	9	10
Humanities, Social and Political Sciences	-	-	-	2	2	4
<b>Total</b>	<b>13</b>	<b>16</b>	<b>13</b>	<b>3</b>	<b>11</b>	<b>14</b>
<b>ETH Zurich total</b>	<b>523</b>	<b>506</b>	<b>569</b>	<b>151</b>	<b>421</b>	<b>572</b>

<sup>1</sup> Of which doctorates in Pharmaceutical Sciences: 23 (2000), 24 (2005), 25 (2006) and 21 (2007; women: 10).

<sup>2</sup> Of which doctorates in Forest Sciences: 6 (2000), 9 (2005), 7 (2006) and 2 (2007; women: 0).

## Federal Diplomas

	2000	2005	2006			2007
	Total	Total	Total	Woman	Men	Total
Physical Education and Sports Teacher/diploma I and II <sup>1</sup>	123	141	19	-	6	6
Professional Officer <sup>2</sup>	27	-	-	-	-	-
<b>Certificates in complementary studies<sup>1,3</sup></b>						
Physical Education and Sports Teacher	21	43	41	68	63	131

<sup>1</sup> The Physical Education and Sports Teacher training diplomas and complementary studies are to be discontinued.

<sup>2</sup> Since 2005 Professional Officers have graduated with a Bachelor degree.

<sup>3</sup> Complementary studies are an additional program completed on top of Physical Education and Sports Teacher training.

Teaching Certificates <sup>1</sup>

	2000	2005	2006			2007
	Total	Total	Total	Women	Men	Total
<b>Architecture and Building Sciences</b>						
Architecture	2	1	-	1	-	1
Civil Engineering	1	-	2	1	-	1
Environmental Engineering	-	-	1	1	1	2
Geomatics and Planning	-	-	-	-	-	-
Rural Engineering and Surveying	-	-	-	-	-	-
<b>Total</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>4</b>
<b>Engineering Sciences</b>						
Mechanical Engineering	2	3	2	-	6	6
Electrical Engineering and Information Technology	5	4	3	1	3	4
Biosciences and Engineering	-	-	-	-	-	-
Interdisciplinary Engineering Sciences	-	-	-	-	-	-
Computer Science	2	14	10	4	3	7
Materials Science	-	-	1	-	-	-
<b>Total</b>	<b>9</b>	<b>21</b>	<b>16</b>	<b>5</b>	<b>12</b>	<b>17</b>
<b>Natural Sciences and Mathematics</b>						
Mathematics	3	8	3	4	2	6
Computational Science and Engineering	-	-	1	-	-	-
Physics	6	20	11	1	14	15
Chemistry	6	4	7	2	2	4
Chemical Engineering	-	-	-	-	-	-
Biotechnology	-	-	-	-	-	-
Interdisciplinary Sciences	-	-	-	-	-	-
Pharmaceutical Sciences	-	2	-	-	-	-
Biology	11	12	14	7	4	11
Physical Education and Sports	-	2	3	8	3	11
<b>Total</b>	<b>26</b>	<b>48</b>	<b>39</b>	<b>22</b>	<b>25</b>	<b>47</b>
<b>System-Oriented Natural Sciences</b>						
Earth Sciences	3	5	5	-	1	1
Environmental Sciences	14	7	7	4	8	12
Forest Sciences	1	-	-	1	4	5
Agricultural Science	10	3	6	3	5	8
Food Science	6	-	4	3	1	4
<b>Total</b>	<b>34</b>	<b>15</b>	<b>22</b>	<b>11</b>	<b>19</b>	<b>30</b>
<b>Management and Social Sciences</b>						
Management, Technology and Economics	1	-	-	-	-	-
Humanities, Social and Political Sciences	-	-	-	-	-	-
Professional Officer	-	-	-	-	-	-
Physical Education and Sports Teacher	-	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>ETH Zurich total</b>	<b>73</b>	<b>85</b>	<b>80</b>	<b>41</b>	<b>57</b>	<b>98</b>

<sup>1</sup> Teacher training which leads to the acquisition of the teaching certificate can be completed during or after study. The award of the teaching certificate presupposes a Master degree or diploma qualification.

## Certificates of Completed Postgraduate Studies (MAS, MBA, NDS)

Program	Postgraduate studies <sup>1</sup>	2000	2005	2006			2007
		Total	Total	Total	Women	Men	Total
<b>Architecture and Building Sciences</b>							
Architecture	MAS Architecture	36	55	33	17	25	42
	MAS Landscape Architecture	-	12	10	-	-	-
Bauingenieurwissenschaften	NDS Hydraulic Schemes	-	1	-	-	-	-
	NDS Hydrology	3	-	-	-	-	-
	MAS Water Resources Management and Engineering <sup>2</sup>	-	-	-	12	17	29
Geomatics and Plannin	MAS Spatial Planning	-	22	1	8	15	23
<b>Total</b>		<b>39</b>	<b>90</b>	<b>44</b>	<b>37</b>	<b>57</b>	<b>94</b>
<b>Engineering Sciences</b>							
Electrical Engineering and Information Technology	NDS Information Technology	8	7	3	-	1	1
<b>Total</b>		<b>8</b>	<b>7</b>	<b>3</b>	<b>-</b>	<b>1</b>	<b>1</b>
<b>Natural Sciences and Mathematics</b>							
Mathematics	MAS Finance <sup>3</sup>	-	-	19	5	11	16
Physics	MAS Medical Physics	20	1	18	-	3	3
<b>Total</b>		<b>20</b>	<b>1</b>	<b>37</b>	<b>5</b>	<b>14</b>	<b>19</b>
<b>System-Oriented Natural Sciences</b>							
Food Science	NDS Human Nutrition	16	16	14	1	-	1
<b>Total</b>		<b>16</b>	<b>16</b>	<b>14</b>	<b>1</b>	<b>-</b>	<b>1</b>
<b>Management and Social Sciences</b>							
Management, Technology and Economics	MAS Occupational Health	10	3	5	1	6	7
	MAS Management, Technology and Economics	53	66	65	8	41	49
	MBA Supply Chain Management	-	17	22	3	14	17
Humanities, Social and Political Sciences	MAS Developm. and Cooperation (NADEL)	18	5	21	1	1	2
	MAS Intellectual Property	12	28	15	5	6	11
	MAS Security Policy and Crisis Management	-	-	-	-	12	12
<b>Total</b>		<b>93</b>	<b>119</b>	<b>128</b>	<b>18</b>	<b>80</b>	<b>98</b>
<b>ETH Zurich total</b>		<b>176</b>	<b>233</b>	<b>226</b>	<b>61</b>	<b>152</b>	<b>213</b>

<sup>1</sup> Postgraduate study programs offer an opportunity to develop specialized skills in greater depth or to extend them in an interdisciplinary manner, and can even lead to a new career. The programs entail at least 60 ECTS credit points and 600 contact hours, require a Master thesis or project work and generally take between one year (full-time study) and two years (part-time study while working). Admission to the program requires a Masters degree from ETH Zurich, an equivalent degree from another university or an equivalent standard of education. Due to the limited availability of work, laboratory and practical training positions, admission to most postgraduate study programs is restricted. The number of participants cannot be increased indefinitely, even though the demand would be there.

<sup>2</sup> MAS Water Resources Management and Engineering is offered in collaboration with EPF Lausanne. Participants are registered at EPF Lausanne.

<sup>3</sup> MAS Finance is offered in collaboration with Zurich University. Participants are registered at Zurich University.

## Certificates of Advanced Studies

Program	Postgraduate certificate course <sup>1</sup>	2000	2005	2006			2007
		Total	Total	Total	Women	Men	Total
<b>Architecture and Building Sciences</b>							
Geomatics and Planning	Space as a Factor of Decision Making	9	–	–	2	3	5
	Spatial Information System	15	20	16	7	14	21
<b>Total</b>		<b>24</b>	<b>20</b>	<b>16</b>	<b>9</b>	<b>17</b>	<b>26</b>
<b>Engineering Sciences</b>							
Mechanical Engineering	Risk and Safety	23	33	–	3	20	23
Computer Science	Computer Science	12	14	12	–	10	10
<b>Total</b>		<b>35</b>	<b>47</b>	<b>12</b>	<b>3</b>	<b>30</b>	<b>33</b>
<b>Natural Sciences and Mathematics</b>							
Mathematics	Applied Statistics	4	33	–	1	–	1
Pharmaceutical Sciences Radiopharmacy	Radiopharmaceutical Chemistry	18	–	10	–	–	–
<b>Total</b>		<b>22</b>	<b>33</b>	<b>10</b>	<b>1</b>	<b>–</b>	<b>1</b>
<b>System-Oriented Natural Sciences</b>							
Earth Sciences	Applied Earth Science	5	–	2	–	1	1
<b>Total</b>		<b>5</b>	<b>–</b>	<b>2</b>	<b>–</b>	<b>1</b>	<b>1</b>
<b>Management and Social Sciences</b>							
Humanities, Social and Political Sciences	Development and Cooperation (NADEL)	15	22	19	17	13	30
Interdisciplinary	E-Learning	–	6	7	–	5	5
<b>Total</b>		<b>15</b>	<b>28</b>	<b>26</b>	<b>17</b>	<b>18</b>	<b>35</b>
<b>ETH Zurich total</b>		<b>101</b>	<b>128</b>	<b>66</b>	<b>30</b>	<b>66</b>	<b>96</b>

<sup>1</sup> Postgraduate certificate courses offer an opportunity to develop specialized skills in greater depth or to extend them in an interdisciplinary manner. The certificate courses are designed for university graduates who are employed in the workforce (and generally have a Master degree or equivalent qualification) and who are looking for further professional development or specialization. The courses entail at least 10 ECTS credit points and 150 contact hours and may require written project work or a dissertation. They are organized into block courses or weekly day-release courses and last between one and two years. Due to the limited availability of work, laboratory and practical training positions, admission to most postgraduate certificate courses is restricted. The number of participants cannot be increased indefinitely, even though the demand would be there.

## Diplomas of Advanced Studies

Program	Diploma course <sup>1</sup>	2000	2005	2006			2007
		Total	Total	Total	Women	Men	Total
<b>Natural Sciences and Mathematics</b>							
Mathematics	Applied Statistics	–	–	–	12	33	45
<b>ETH Zurich total</b>		<b>–</b>	<b>–</b>	<b>–</b>	<b>12</b>	<b>33</b>	<b>45</b>

<sup>1</sup> Diploma courses offer an opportunity to develop specialized skills in greater depth or to extend them in an interdisciplinary manner. They are designed for university graduates who are employed in the workforce (and generally have a Masters degree or equivalent qualification) and who are looking for further professional development or specialization. They entail at least 30 ECTS credit points and 300 contact hours and usually require written project work or a dissertation. They are organized into block courses or weekly day-release courses and last between one and two years.

# Research

## International Research Collaboration

Six<sup>th</sup> Framework Program of the European Union

	No. of current and completed projects	Committed contributions from the SER <sup>1</sup> in CHF 1000	Committed contributions directly from the EU in EUR 1000
<b>Participation in the six<sup>th</sup> Framework Program of EU 2002–2006</b>			
Life sciences, genomics and biotechnology for health (LIFE)	22	2 724	6 735
Information society technologies (IST)	67	6 731	18 170
Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices (NanoMatPro)	12	1 199	2 888
Aeronautics & Space	6	–	1 714
Food quality and safety (Food)	6	166	973
Sustainable development, global change and ecosystems (EESD)	36	3 401	5 580
Citizens and governance in a knowledge-based society (Governance)	–	–	–
Policy-oriented research (Policy support)	2	463	–
New and Emerging Science & Technologies (NEST)	11	–	3 717
SME-related measures	1	–	426
Specific measures in support of international cooperation (INCO)	6	–	664
Research and innovation (Innovation)	–	–	–
Human resources and mobility (Mobility)	53	977	11 500
Research infrastructures (Infrastructures)	2	–	353
Science & Society	1	–	51
Coordination of Research Activities (ERA-NET)	2	–	132
EURATOM	1	117	–
<b>Total six<sup>th</sup> Framework Program</b>	<b>228</b>	<b>15 778</b>	<b>52 903</b>

<sup>1</sup> State Secretariat for Education and Research, SER.

## Projects Evaluated by the ETH Zurich Research Commission in 2007

	2007 No. of applications submitted	Of which (partly) approved	
ETH research projects	84	57	
Swiss National Science Foundation research projects	237	202	
Swiss National Science Foundation Scholarships:			
of which new researchers	58	48	Assessment transferred to SNSF*
of which advanced researchers	8	6	Assessment transferred to SNSF*

\*Swiss National Science Foundation.

## Projects Evaluated by the ETH Zurich Ethics Commission in 2007

Submitted	57
of which approved	18
of which approved after revision	9
of which forwarded to the cantonal Ethics Commission	30

## Knowledge and Technology Transfer

	2001	2002	2003	2004	2005	2006	2007
Spin-off	10	10	11	12	9	16	21
Patents registered	86	84	80	85	77	84	79
Cooperation agreements (> CHF 50,000)	n/a	n/a	n/a	164	213	225	259

# Statistics

ETH-Bibliothek	2004	2005	2006	2007
Overall holdings	6 460 000	6 712 000	6 790 000	6 850 000
of which individual works and journal volumes	2 510 000	2 600 000	2 622 000	2 648 000
of which in micro form	2 142 000	2 183 000	2 198 000	2 205 000
of which picture documents	1 200 000	1 286 000	1 295 000	1 315 000
of which maps and plans	335 000	365 000	392 000	396 000
of which individual hand-written documents	257 000	257 000	259 000	260 000
of which electronic documents <sup>1</sup>	5 200	5 330	5 188	5 143
Electronic documents (E-books and E-Collection) <sup>1</sup>	15 300	20 900	27 143	41 000
Licensed electronic journals <sup>1</sup>	7 050	7 660	7 916	8 513
Databases on ETH network <sup>1</sup>	200	153	149	142
New acquisitions	60 000	137 000	81 000	69 000
No. of active users of the ETH Library	28 575	28 400	29 230	29 900
Borrowed	333 700	293 000	291 000	291 000
Articles from journals (copies sent)	223 662	236 000	216 000	185 100
Website hits	476 591	373 000	334 000	307 501
E-Collection hits	341 000	725 000	958 000	954 000
Electronic journals hits <sup>2</sup>	1 345 420	1 573 000	1 851 000	2 125 000
Database hits <sup>2</sup>	807 820	402 000	425 000	510 000
E-Books hits <sup>2</sup>		59 700	78 000	171 000

<sup>1</sup> The figures for 2006 have been corrected due to a typesetting error in last year's annual report.

<sup>2</sup> Figures are extrapolated, definite data corrected if necessary will be available in 2008.

IT Services	2004	2005	2006	2007
Active IP addresses	79 588	99 212	107 010	110 000
Wireless access points	250	396	710	890
Data transferred between ETH Zurich and the Internet <sup>1</sup> (in TB)	801	729	827	1 250
Data stored in Netbackup in the data silos (in terabyte)	630	950	1 100	1 900
Data stored by Netbackup per day (in terabyte)	4	13	13	20
Web links to the ETH Zurich schedule of lectures	n/a	1 980 000	2 770 000	3 800 000
Data transferred (in GB)	n/a	113	180	193
Staff's software orders	20 792	22 354	22 674	26 504
Registered software licences	45 821	53 026	52 791	58 092
Students' software orders	n/a	11 379	19 023	26 525
Number of training courses		174	196	152
Number of course days		250	283	208
Number of participants		1 250	1 443	1 276
Number of student courses		50	48	49
Number of participating students		1 075	1 343	1 290

<sup>1</sup> From 2005 students' data traffic from home was no longer included in the figures as the technical connectivity was achieved differently.

Real Estate	2004	2005	2006	2007
ETH Zurich property (owned)	206	205	204	204
Rented property	60	53	47	44
Managed main used area MUA (in m <sup>2</sup> ) <sup>1,2</sup>	403 100	424 574	421 152	421 649
Managed net floor area NFA (in m <sup>2</sup> ) <sup>1</sup>	787 800	828 471	829 090	830 390

<sup>1</sup> Main used area managed by the Infrastructure Division Immovables, of which occupied by ETH Zurich: 380,400 m<sup>2</sup> (2004), 397,259 m<sup>2</sup> (2005), 389,760 m<sup>2</sup> (2006) and 390,472 m<sup>2</sup> (2007).

<sup>2</sup> Of which undergoing rebuilding or refurbishment and not occupied:  
MUA: 37,167 m<sup>2</sup> (2004), 13,405 m<sup>2</sup> (2005), 16,623 m<sup>2</sup> (2006) and 14,735 m<sup>2</sup> (2007).  
NFA: 54,500 m<sup>2</sup> (2004), 15,256 m<sup>2</sup> (2005), 19,492 m<sup>2</sup> (2006) and 17,163 m<sup>2</sup> (2007).

More statistics about ETH Zurich in German at: [www.ethz.ch/about/bginfos](http://www.ethz.ch/about/bginfos).

# Honors at the ETH Day 2007

## Honorary Doctors of ETH Zurich

Prof. Dr Hector Garcia-Molina  
Prof. Dr Gene H. Golub  
Prof. Dr Ortwin Renn

## Honorary Board Members of ETH Zurich

Dr Jakob Kellenberger  
Marina de Senarclens

## Industry and Endowed Prizes

### ABB Research Prize

Dr Sebastian Alexander Mödersheim, D-INFK

### Construction Management Promotion Prize

Dr Thorsten Alexander Busch, D-BAUG  
Dr Tobias Garmisch, D-BAUG

### Georg A. Fischer Prize

Dr Enrico Conte, D-MAVT

### Hilti Prize

Dr Urs Thomas Gonzenbach, D-MATL

### Heinrich Hatt Bucher Prizes

Elisabeth B. Rutz, D-ARCH  
Martin K. Dubach, D-ARCH  
Dominique B. Meier, D-ARCH

### Latsis Prize

Dr Benjamin J. Marsland, D-UWIS

### Otto Jaag Water Conservation Prize

David J. Dürrenmatt, D-BAUG  
Dr David Christian Finger, D-UWIS

## Medals Awarded by ETH Zurich for Outstanding Diploma and Master Theses

Mathias J. Gunz, D-ARCH  
Luzi A. Meyer, D-ARCH  
Kaspar A. Löffel, D-BAUG  
Esther Müller, D-BAUG  
Stefan W. Münch, D-BAUG  
Leonardo Snozzi, D-BAUG  
Stefan G. Kerkemeier, D-MAVT  
Fabian Meier, D-MAVT  
Matthias Muoth, D-MAVT  
Martin Kusserow, D-ITET  
Marco Tomamichel, D-ITET  
Ghislain G. Fourny, D-INFK  
Heidi Gebauer, D-INFK  
Sebastian Martin, D-INFK  
Florian Milde, D-IFK  
Pascal Wolfer, D-MATL  
Marco Eberhard, D-MTEC  
Matteo Casserini, D-MATH  
Mario Häfeli, D-MATH  
Marcel F. Nutz, D-MATH  
Rosmarie Joss, D-PHYS  
Françoise A. J. Molitor, D-PHYS  
Reto Huggenberger, D-CHAB  
Ronald Heusser, D-BIOL  
Gabriela Kiefer, D-BIOL  
Deta Gasser, D-GEOL  
Tom Bodenmann, D-UWIS  
Karin S. Allenspach, D-UWIS  
Philippe R. Kindler, D-UWIS  
Philippe Peter, D-UWIS  
Samuel Schmid, D-AGRL  
Annina Zihler, D-AGRL

**Willi Studer Prizes for the Best  
Graduates of the Year  
(Diploma or Master)**

Stefan Hubatka, D-ARCH  
 Kaspar A. Löffel, D-BAUG  
 Esther Müller, D-BAUG  
 Matthias Muoth, D-MAVT  
 Martin Kusserow, D-ITET  
 Remo A. Meier, D-INFK  
 Yoshimi F. Takano, D-INFK  
 Valérie Geiser, D-MATL  
 René U. Peyer, D-MTEC  
 Tobias. J. Peter, D-MATH  
 Gian-Marco Baschera, D-MATH  
 Vladimir V. Mitev, D-PHYS  
 Gisela Helen Fontaine, D-CHAB  
 Manuel Th. Favre, D-CHAB  
 Anna-Pitschna E. Kunz, D-CHAB  
 Tamara S. Koch, D-CHAB  
 Gabriela Kiefer, D-BIOL  
 Christian R. Hoerner, D-BIOL  
 Felix Bussmann, D-GEOL  
 Deta Gasser, D-GEOL  
 Michael J. Hilbe, D-GEOL  
 Dominik Schäuble, D-GEOL  
 Urban J. Hettich, D-UWIS  
 Michael Madliger, D-UWIS  
 Regula A. Schneider, D-AGRL  
 Salome Egger, D-AGRL

**Golden Owl of the VSETH  
(Award for the Best Lecturer  
in a Department)**

Prof. Dr Otto Künzle, D-ARCH  
 Adrian Ryf, D-BAUG  
 PD Dr Remco Ingmar Leine, D-MAVT  
 Prof. Dr Gerhard Tröster, D-ITET  
 Prof. Dr Marc Langheinrich, D-INFK  
 Prof. Dr Walter Caseri, D-MATL  
 Prof. Dr Georg von Krogh, D-MTEC  
 Prof. Dr Michael Struwe, D-MATH  
 Dr Roland Horisberger, D-PHYS  
 Prof. Dr Massimo Morbidelli, D-CHAB  
 Cécile Kramer, D-BIOL  
 Dr Flavio Anselmetti, D-GEOL  
 Dr Marc Alexander Wüest, D-UWIS  
 Dr Markus Stauffacher, D-AGRL  
 Dr Victor Mauer, D-GESS

**Credit Suisse Award for Best Teaching**

Prof. Dr Otto Künzle, D-ARCH

# Honors and prizes for members of ETH Zurich

## In alphabetical order

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### A

**Prof. Andersson, Göran**, D-ITET, Outstanding Power Engineering Educator Award, IEEE Power Engineering Society, USA.

**Ackerknecht, Felix**, D-ARCH, 2<sup>nd</sup> prize, Marty Häuser AG, Wil SG, Switzerland.

**Aeberli, Isabelle**, D-AGRL, Nestlé Switzerland Nutrition Prize 2007, Nestlé, Switzerland.

**agps. architecture Prof. Angéllil, Marc/Graham, S./Scholl, M./ Pfenninger, R./Oester, H. P.**, D-ARCH, The Presidential Award of Excellence, American Institute for Steel Construction (AISC), USA.

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### B

**Baltsavias, Emmanuel/Zhang, Li/Eisenbeiss, Henri**, D-BAUG, Hansa Luftbild Award, German Society for Photogrammetry and Remote Sensing, Germany.

**Bambi, Mauro**, D-MTEC, PhD thesis prize, Italian Association for Applied Mathematics in Economics and Social Sciences, Italy.

**Prof. Batlogg, Bertram**, D-PHYS, Leibniz Medal, IFW (Institute for Solid State and Materials Research), Dresden, Germany.

**Baumgartner, Daniel**, D-MAVT, ISB student dissertation award, International Society of Biomechanics.

**Bäumli, Martin F.**, D-BAUG, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert Rüt Foundation and Ernst&Young, Switzerland.

**Bay, Herbert**, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert Rüt Foundation and Ernst&Young, Switzerland.

**Bayer-Wilfert, Lena**, D-UWIS, Chorafas Prize, Dimitris N. Chorafas Foundation.

**Bearth & Deplazes Architekten AG**, D-ARCH, 1<sup>st</sup> prize, Tamedia, Zurich, Switzerland.

**Bergeles, Christos (and all iGEM Team)**, D-MAVT, Gold Medal & Best Presentation Award iGEM – International Genetically Engineered Machine Competition, Boston, USA.

**Berger, Imre/Fitzgerald, Daniel/John, Corinne/Schaub, Christian**, D-BIOL, Swiss Technology Award 2007, KTI/CTI and others, Bern, Switzerland. De Vigier Award 2007, W. A. de Vigier Foundation, Support for Young Swiss Entrepreneurs, Solothurn, Switzerland.

**Bleuler, Stefan**, D-ITET, Best Paper Award, GECCO 2007 Conference Committee.

**Blum, Salem**, D-BAUG, VSS Prize, Swiss Association of Road and Transportation Experts, Switzerland.

**Bodenmiller, Bernd**, D-BIOL, DSM Innovation Science & Technology Awards 2007, DSM Nutritional Products.

**Bonderer, Lorenz J.**, D-MATL, special Rehau Prize for Engineering 2007, Rehau AG+Co., Rehau, Germany.

**Boschek, Erik**, D-MAVT, ASME Turbo Expo 2006 Prize, Combustion & Fuels Committee, ASME.

**Botsch, Mario**, D-INFK, Eurographics Young Researcher Award, Eurographics Association, Switzerland. Best Course Notes Award, ACM Siggraph, USA.

**Prof. Boulouchos, K./Karagiannidis, S./Mantzaras, I./Jackson G.**, D-MAVT, Distinguished Paper Award in Colloquium New Technology Concepts, The Combustion Institute, Pittsburgh, USA.

**Prof. Boulouchos, K./Obrecht, P./Kistler Instrumente AG/Sensoptic SA/Volkswagen AG**, D-MAVT, SENSOR Innovation Prize 2007, AMA Association for Sensor Technology, Göttingen, Germany.

**Brändli, André**, D-CHAB, Pfizer Research Prize 2008, Pfizer Foundation Research Prize, Zurich, Switzerland.

**Brevern, Jan von**, D-GESS, Award for the Advancement of the Scientific Study of Art 2007, Alfred Richterich Foundation and the Swiss Association of Art Historians.

**Prof. Buchmann, Nina**, D-AGRL, Member of the Academy, German Academy of Natural Sciences Leopoldina, Halle, Germany.

**Prof. Bühlmann, Peter L.**, D-MATH, Elected Member, International Institute of Statistics.

**Busetto, Alberto**, D-INFK, Toni Mian Award, University of Padua, Italy.

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### C

**Chandrasekharan, Rico (Arktis Radiation Detectors AG)**, D-PHYS, ZKB Pioneer Prize Technopark 2007, ZKB, Technopark Foundation Zurich, Switzerland. De Vigier Award 2007, W. A. de Vigier Foundation, Support for Young Swiss Entrepreneurs, Solothurn, Switzerland. Young Entrepreneur's Prize, 2<sup>nd</sup> prize, Swiss chapter of the French Foreign Trade Advisors (C.C.E.F.).

**Chikatamarla, Ravikiran**, D-BAUG, PLANAT Research Prize 2006, National Platform for Natural Hazards PLANAT, Federal Office for the Environment FOEN, Bern, Switzerland.

**Prof. Christodoulou, Demetrios**, D-MATH, Tomalla Prize, Tomalla Foundation.

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### D

**Davatz, Giovanna (Arktis Radiation Detectors AG)**, D-PHYS, ZKB Pioneer Prize Technopark 2007, ZKB, Technopark Foundation Zurich, Switzerland. De Vigier Award 2007, W. A. de Vigier Foundation, Support for Young Swiss Entrepreneurs, Solothurn, Switzerland. "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert Rüt Foundation and Ernst&Young, Switzerland. Young Entrepreneur's Prize, 2<sup>nd</sup> prize, Swiss chapter of the French Foreign Trade Advisors (C.C.E.F.).

**Prof. Davies, Huw C.**, D-UWIS, IAMAS Honorary Award, IAMAS.

**Prof. Diederich, François**, D-CHAB, ACS Ronald Breslow Award for Achievement in Biomimetic Chemistry 2007, American Chemical Society, USA. Hans Herloff Inhoffen Medal 2007, Society for Biotechnological Research (GBF) and the Technical University of Braunschweig, Germany.

**Dong, Lixin/Prof. Nelson, Bradley**, D-MAVT, IEEE T-ASE Googol Best New Application Paper Award, IEEE Transactions on Automation Science and Engineering.

**Prof. Douglas, Rodney**, D-PHYS, Fritz Kutter Prize, ETH Zurich, Switzerland.

**Duff, Armin**, D-PHYS, Best Student Presentation, euCognition, Munich, Germany.

**Duschau-Wicke, Alexander**, D-MAVT, Automed Prize 2007, Automed Conference 2007 at the Technical University of Munich, Germany.

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## E

**Eichinger, Gregor**, D-ARCH, Prize awarded by the City of Vienna, Cultural Department of the City of Vienna, Austria.

**Prof. Embrechts, Paul**, D-MATH, Doctor honoris causa, University of Waterloo, Canada.

**Prof. Escher, Felix**, D-AGRL, honorary member of the Swiss Society of Food Science and Technology, Wädenswil, Switzerland. Albert Mehrlitz Medal, Society of German Food Technologists, Germany.

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## F

**Prof. Fichtner, Wolfgang**, D-ITET, Top Inventors Award, Synopsys Inc., USA.

**Fieseler, Lars**, D-AGRL, Feodor Lynen Fellowship, Alexander von Humboldt Foundation, Bonn, Germany.

**Fiolka, Reto**, D-MAVT, Analytical and Quantitative Light Microscopy Award, AQLM Faculty, Marine Biological Laboratory, Woods Hole, USA.

**Fischlin, Andreas (Coordinating Lead Author in the IPCC Report 2007) and other ETH researchers**, D-UWIS i.a., co-recipients of the Nobel Peace Prize 2007, Nobel Prize Committee, Oslo, Norway.

**Frank, Mario**, D-INFK, Otto Haxel Prize 2007, Faculty of Physics and Astronomy, Ruprecht Karls University, Heidelberg, Germany.

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## G

**Ganz, Michael**, D-BAUG, Geosuisse Prize, GeoSwiss, Laufenburg, Switzerland.

**Prof. Geering**, Hans P., D-MAVT, IEEE Life Fellow, IEEE, Piscataway, NJ, USA.

**Geiser, Reto**, D-ARCH, The Most Beautiful Swiss Books, The Most Beautiful Swiss Books Award, Switzerland. 50 Books of the Year 2007, American Institute of Graphic Arts (AIGA), USA. Golden Letter Award, The Most Beautiful Book in the World, Stiftung Buchkunst (Book Art Foundation), Frankfurt/Leipzig, Germany.

**Grabner, Roland H.**, D-GESS, research prize from the Initiative on Brain Research in Styria, Austria. Scientific Award from the Karpov Chess Academy, Hockenheim, Germany.

**Gramazio, Fabio/Prof. Kohler, Matthias**, D-ARCH, Daylight Award, special mention, Velux Foundation, Switzerland.

**Grass, Robert**, D-CHAB, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert Rüt Foundation and Ernst&Young, Switzerland.

**Prof. Gruetzmacher, Hansjoerg**, D-CHAB, Sandmeyer Prize 2007, Swiss Chemical Society, Bern, Switzerland.

**Prof. Grün, Armin**, D-BAUG, member of the first Academic Committee, Key Laboratory of Mapping from Space, Chinese Academy of Surveying and Mapping (CASM), Beijing, China. D-BAUG, Honorary Professor at the University of Wuhan, China.

**Grundy, A. Nicholas/Chen, Ming/Hallstedt, Bengt/Prof. Gauckler, Ludwig J.**, D-MATL, Honor of the Spriggs Phase Equilibria Award, The American Ceramic Society Board of Directors at their April 30, 2007, meeting, USA.

**Prof. Gujer, Willi**, D-BAUG, Doctor technices honoris causa at the Technical University of Lyngby, DTU Lyngby, Denmark.

**Prof. Günther, Detlef**, D-CHAB, Fresenius Award, GDCh (Society of German Chemists), Germany. Lester W. Strock Award, ACS, New England Section Applied Spectroscopy, USA.

**Prof. Guzzella, Lino**, D-MAVT, Watt d'Or 2007, Federal Office of Energy, Switzerland.

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## H

**Häckermann, Johanna**, D-AGRL, Hans Vontobel Award, Hans Vontobel Foundation, ETH Zurich, Switzerland.

**Prof. Hager, Willi H.**, D-BAUG, Hydraulic Structures Medal, ASCE, Reston, VA. IAHR Council Member, co-opted, IAHR, Madrid, Spain.

**Prof. Hampel, Frank**, D-MATH, Doctor honoris causa, Department of Statistics at the University of Dortmund, Germany.

**Prof. Haug, Gerald**, D-GEOL, Gottfried Wilhelm Leibniz Prize 2007, DFG (German Research Foundation), Bonn, Germany.

**Hebel, Dirk/Stollmann, Jörg**, D-ARCH, Red Dot Design Award 2007, Red Dot Design, Singapore. Van Alen New York Fellowship, 2007/2008, Van Alen Institute, New York, USA. Lanxess, Lanxess Leverkusen, Germany. Competition, 2<sup>nd</sup> place, municipality of Herxheim, Germany.

**Prof. Heinrich, Christoph A.**, D-GEOL, SEG Silver Medal, Society of Economic Geologists.

**Prof. Helbing, Dirk**, D-GESS, award from the Central Department for Project Development, Ministry of Municipal and Rural Affairs, Riyadh, Saudi Arabia.

**Prof. Helenius, Ari**, D-BIOL, Marcel Benoist Prize, Marcel Benoist Foundation, Switzerland.  
The White Rose of Finland (1<sup>st</sup> class), Medal given by the government of Finland, Finland.

**Herbig, Michael E.**, D-CHAB, GSIA PhD Thesis Award 2006/2007, GSIA (Swiss Society of Industrial Pharmacists), Switzerland.

**Herrmann, Carmen**, D-CHAB, Chorafas Prize 2007, ETH Zurich, Switzerland.

**Prof. Herrmann, Hans Jürgen**, D-BAUG, Fellow of American Physical Society, The American Physical Society, USA.

**Herrmann, Kai/Wärtsilä Switzerland**, D-MAVT, 2007 BP Award on Health, Safety & Environment, International CIMAC World Congress Jury, Frankfurt, Germany.

**Hohenegger, Stefan**, D-PHYS, Prize of Recognition from the Federal Minister for Science and Research, Austrian Federal Ministry of Science and Research, Austria.

**Hohm, T./Egli, M./Gaehwiler, S./Bleuler, S./Feller, J./Frick, D./Huber, R./Karlsson, M./Lingenhag, R./Ruetimann, T./Sasse, T./Steiner, T./Stocker, J.**, D-ITET, Best Student Paper Award, Evolution Artificielle Conference Committee.

**Hohm, Tim**, D-ITET, Best Paper Award, PRIB Workshop Committee.

**Holzner, Markus**, D-BAUG, Leonardo da Vinci Prize, ERCOFTAC, Brussels, Belgium.

**Hribernik, Wolfgang**, D-ITET, OGE Prize 2007, OVE Austrian Electro-technical Association, Austria.

**Prof. Hungerbühler, Konrad**, D-CHAB, Fellow of the School of Engineering at the University of Tokyo, University of Tokyo, Japan.

**Hüttenhain, Ruth**, D-BIOL, First Prize, Swiss Proteomics Society, Lausanne, Switzerland.

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## J

**Prof. Jackson, Andrew**, D-GEOL, Petrus Peregrinus Medal, European Geosciences Union.  
Fellowship of AGU, American Geophysical Union, USA.  
Price Medal, Royal Astronomical Society, Great Britain.

**Jaeggli, T./Koller-Meier, E./Prof. Van Gool, L.**, D-ITET, Saburo Tsuji Outstanding Paper Award at 8th Asian Conference on Computer Vision, ACCV/Microsoft Research.

**Janner, Gabriele**, D-MATH, SVOR/ASRO Prize for an outstanding thesis, Swiss Operations Research Society, Bern, Switzerland.

**Jeger, Simone**, D-CHAB, Young Investigator Award, Working Group on Radiochemistry/Radiopharmacy of the German Society of Nuclear Medicine (DGN).

**Jenny, B./Prof. Hurni, L.**, D-BAUG, Henry Johns Award 2007, British Cartographic Society, Great Britain.

**Prof. Jochem, Eberhard**, D-MTEC, Award from the Fondazione Energia and the Gestore Servizi Elettrici, Fondazione Energia and Gestore Servizi Elettrici, Rome, Italy.

**Johansson, Anders**, D-GESS, award from the Central Department for Project Development, Ministry of Municipal and Rural Affairs, Riyadh, Saudi Arabia.

**John, Corinne**, D-BIOL, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert RUF Foundation and Ernst&Young, Switzerland.

**Jurisc, Giorgia**, D-CHAB, Carl Storm International Diversity Fellowship, Gordon Research Conference, USA.

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## K

**Kaegi, Manuel**, D-MAVT, venture kick award (level 1), venture kick, St. Gallen, Switzerland.

**Kahlmann, T.**, D-BAUG, Best Paper Award, VIIIth Conference on Optical 3-D Measurement Techniques.

**Kahmen, Ansgar**, D-AGRL, Strasbourg Prize, German Botanical Society, Germany.

**Prof. Keller, Ursula**, D-PHYS, Honor Medal from the Leibniz University Hanover, Leibniz University Hanover, Germany.  
Journal of Selected Topics in Quantum Electronics, Most Cited Article, IEEE Lasers and Electro-Optics Society (LEOS), New York, USA.

**Kessler, Ulrich**, D-CHAB, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert RUF Foundation and Ernst&Young, Switzerland.

**Koepfel, Gaudenz**, D-ITET, ETG (Power Engineering Society) Innovation Prize 2007, electrosuisse, Zurich, Switzerland.

**Köhl, Michael**, D-PHYS, Röntgen Prize 2007, Justus Liebig University, Giessen, Germany.

**Kos, Andrew**, D-GEOL, Media-Didactic University Prize from the Society for Media in Science (GMW), University of Hamburg, Germany.

**Prof. Koumoutsakos, Petros**, D-INFK, Otto Moensted Fellowship, Danish Technical University, Denmark.  
Honorary Fellow, University of Tokyo, Japan.

**Kuhn, Fabian**, D-INFK, Best Paper Award, 19<sup>th</sup> ACM Symposium on Parallelism in Algorithms and Architectures.

**Kut, E./Schaffner, N./Wittwer, A.**, D-CHAB, Prize for the Advancement of Pain Research 2007, German Society for the Study of Pain (DGSS), Germany.

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## L

**Lamon, Pierre**, D-MAVT, EURON 2007 Best PhD Award, EURON, European Robotics Research Network.

**Lange, Adam**, D-CHAB, Otto Hahn Medal, Max Planck Society, Germany.

**Leibe B./Prof. Van Gool, L.**, D-ITET, IEEE CVPR 2007 Best Paper Award, IEEE Computer Society.

Optical 3D Measurement Techniques 2008 Best Paper Award, isprs, International Society for Optical Photogrammetry and Remote Sensing.

**Prof. Leibundgut, Hansjürg**, D-ARCH, honorary member of SIA (Swiss Association of Engineers and Architects), SIA, Switzerland.

**Leuffen, Dirk**, D-GESS, Lorenz von Stein Prize, Lorenz von Stein Society, Mannheim, Germany.

**List, Renate**, D-MAVT, ISB student dissertation award, International Society of Biomechanics.

**Liu, Chunlei**, D-MATL, EMPA Research Prize, EMPA Dübendorf, Switzerland.

**Liu, Xinyu**, D-CHAB, Roche Symposium Special Award, F. Hoffmann-La Roche Ltd., Basel, Switzerland.  
Chinese Government Award for Outstanding Self-Financed Student Abroad, Chinese Ministry of Education, China.

**Locher, Thomas**, D-ITET, Best Paper Award SPAA 2007, ACM.

**Prof. Lohmann, Ulrike**, D-UWIS, Henry G. Houghton Award, AMS, USA.

**Lorenz, Stefanie**, D-UWIS, Award, Annual Conference of the Ecological Society of Germany, Switzerland and Austria (GfÖ), Marburg, Germany.

**Luber, Sandra**, D-CHAB, IBM Research Prize 2007, IBM Rüschlikon, Switzerland.

**Prof. Lüthi, Hans-Jakob/Hinz, Juri/Fehr, Max/Wilhelm, Martina/Doege, Jörg**, D-MATH, EURO Excellence in Practice Award, EURO Association of the European Operational Research Societies within IFORS.

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## M

**Maciejewski, Marek**, D-CHAB, Title of Honorary Membership, Polish Society of Thermal Analysis and Calorimetry, Warsaw, Poland.

**Malfait, Wim Jan**, D-GEOL, Young Scientist Award, International Congress on Glasses, Strasbourg, France.

**Manca, Carine**, D-CHAB, SCS Mettler Toledo Prize, Swiss Chemical Society, Switzerland.

**Prof. Marti, Peter**, D-BAUG, Honorary President of the Society for Structural Engineering, Society for Structural Engineering, Zurich, Switzerland.

**Mastalerz, Remigius**, D-CHAB, Examination Prize from the University of Jena, Germany, University of Jena, Germany.

**Mattmann, Corinne**, D-ITET, Best Paper Award ISWC 2007, Georgia Tech, Atlanta, USA.

**Prof. Maurer, Ueli**, D-INFK, elected to the German Academy of Natural Sciences Leopoldina, German Academy of Natural Sciences Leopoldina, Halle, Germany.

**Mayor, Pierre et al.**, D-BAUG, Umsicht – Regards – Sguardi – Award from SIA (Swiss Association of Engineers and Architects) for forward-looking work 2006/2007, SIA, Switzerland.

**Prof. Mazzotti, Marco**, D-MAVT, elected Vice President of the International Adsorption Society from July 1, 2007–June 30, 2010.

**McCusker, Lynne B./Bärlocher, Christian (together with Osamu Terasaki, Stockholm University, Sweden)**, D-MATL, Donald W. Breck Award, International Zeolite Association.

**Prof. McKenzie, Judith A.**, D-GEOL, Geochemistry Fellow, Geochemical Society & European Association of Geochemists.

**Mindt, Thomas L.**, D-CHAB, Young Investigator Award, Society of Radiopharmaceutical Sciences.

**Mittag, Sandra**, D-GESS, DeGEval New Generation Prize, DeGEval German Evaluation Society.

**Prof. Morari, Manfred**, D-ITET, 2007 John Ragazzini Award, the AACC (American Automatic Control Council) Board of Directors and the AACC Awards Committee, USA.

**Müller, Cristina**, D-CHAB, Young Investigator Award, Society of Nuclear Medicine, USA.

**Prof. Müller, Ralph**, D-MAVT, Most Outstanding Clinical Abstract Award, Australian and New Zealand Bone and Mineral Society, Australia.

**Prof. Müller, Ralph and group**, D-MAVT, annual prize of publications, German Academy of Osteological and Rheumatological Sciences, Germany.

**Mumprecht, Viviane**, D-CHAB, Dr Albert Wander Prize, Wander AG, Bern, Switzerland.

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## N

**Prof. Nelson, Bradley et al.**, D-MAVT, Winner of the RoboCup Nanogram Soccer, Atlanta, USA.

**Prof. Neri, Dario**, D-CHAB, Robert Wenner Prize, Swiss Cancer League, Bern, Switzerland.

**Niederer, Hans-Martin**, D-CHAB, Amat Mills Award, 20<sup>th</sup> Colloquium on High Resolution Molecular Spectroscopy.

**Novak, David**, D-BAUG, 2<sup>nd</sup> prize, Young Talent Prize for Photogrammetry, Remote Sensing and Geoinformation – in memory of Prof. Karl Kraus, Three Countries Conference 2007 of SSPAIT, DGPF, OVG.

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## O

**Oberti, Stefano/Prof. Dual, Jürg**, D-MAVT, RSJ/SICE Award, IROS.

**Prof. Oechslin, Werner**, D-ARCH, Central Switzerland Cultural Prize, Board of Trustees of the Central Switzerland Cultural Foundation, Switzerland.

**Prof. Ohmura, Atsumu**, D-UWIS, Norbert Gerbier-Mumm International Award, World Meteorological Organization (WMO), Geneva, Switzerland.

**Ortmanns, Christoph**, D-BAUG, Alpine Hydropower Prize, Alpine Wasserkraft working group.

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## P/Q

**Prof. Parrinello, Michele**, D-CHAB, Honorary Doctorate in Industrial Chemistry, University of Como, Italy.  
Honorary Fellow St. Catherine's College Oxford, St. Catherine's College Oxford, Great Britain.

**Pellegrini, Marco**, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert RUF Foundation and Ernst&Young, Switzerland.

**Pooley, Emma**, D-BAUG, Amy Gillett Award 2007, Amy Gillett Foundation, Australia.

**Prof. Pratsinis, Sotiris E.**, D-MAVT, 2007 NSTI Fellow Award, Nanotech 2007, Santa Clara, CA, USA.

**Queloz, Valentin**, D-UWIS, Student Prize, Emulation Society of the Jura, Switzerland.

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## R

**Raveglia, Elio**, D-BAUG, Outstanding Contribution Award, IABSE Yes, Zurich, Switzerland.

Mirko Ros Medal for the best PhD student paper, University of British Columbia, Department of Civil Engineering, Vancouver, Canada.

**Prof. Richmond, Timothy J.**, D-BIOL, Member, National Academy of Sciences, Washington DC, USA.

**Prof. Rudolf von Rohr, Philipp**, D-MAVT, Doctor honoris causa (Dr h. c.), Science Council of the Slovakian Technical University of Bratislava, Slovakia.

**Roth, Antoine**, D-GEOL, F. A. Paneth prize set up to encourage and further research with meteorites, F. A. Paneth Meteorite Trust, Royal Astronomical Society, London, Great Britain.

**Roth, Volker/Fischer, Bernd**, D-INFK, DAGM Prize, DAGM (German Association for Pattern Recognition), Germany.

**Ruckstuhl, Christian**, D-UWIS, Norbert Gerbier-Mumm International Award 2007, WMO, Geneva, Switzerland.

**Rutz, Andrea**, D-ITET, Gorter Award 3<sup>rd</sup> prize, German Section of the ISMRM, Würzburg, Germany.

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## S

**Salo, T./Kirstein, K.-U./Sedivy, J./Vancura, T./Brand, O./Prof. Hierlemann, A./Prof. Baltes, H.**, D-PHYS, prize winners of the 2007 SWISS TECHNOLOGY AWARD, SECO, ETH Board, SATW, SWTR, etc., Switzerland.

**Sankaran, Krishnaswamy**, D-ITET, Best Student Paper Award – Honorable Mention, IEEE International Microwave Symposium.

**Santini, Silvia**, "venture leaders" award, venturelab, KTI/CTI initiative, with the Gebert RUF Foundation and Ernst&Young, Switzerland.

**Schellenberg, Kristian/Volkwein, Axel/Roth, Andrea/ Prof. Vogel, Thomas**, D-BAUG, Simon Perry Award, organizers of the Conference on Shock & Impact Loads on Structures, Beijing, China.

**Schild, Stefan**, D-ITET, Best Paper Award, iWat 2007.

**Prof. Schimmelfennig, Frank**, D-GESS, JEPP Special Issue Award, Journal of European Public Policy.

**Prof. Schmid-Hempel, Paul**, D-UWIS, Fellow of the Institute for Advanced Study Berlin, Institute for Advanced Study Berlin, Germany.  
Bernhard Rensch Lecture, University of Münster, Germany.

**Schmidt, Erik**, D-CHAB, DECHEMA Student Prize 2007, Technical Chemistry, DECHEMA, Frankfurt am Main, Germany.

**Schönbächler, Maria**, D-GEOL, Paul Niggli Medal, Swiss Geoscience Meeting, Geneva, November 2007, Switzerland.

**Schönberg, Hartmut**, D-CHAB, Sandmeyer Prize 2007, Swiss Chemical Society, Switzerland.

**Schunk, L./Haberling, P./Wepf, S./Wuillemin, D./Meier, A./ Prof. Steinfeld, A.**, D-MAVT, Best Paper Award, ASME Solar Energy Division.

**Prof. Schwab, Martin E.**, D-BIOL, Betty and David Koetser Prize, Betty and David Koetser Foundation for Brain Research.

**Prof. Seebach, Dieter**, D-CHAB, Criegee Lecture, University (TH), Karlsruhe, Germany.  
Foreign Associate of the National Academy of Sciences USA, National Academy of Sciences USA, Washington DC, USA.

**Prof. Seeberger, Peter H.**, D-CHAB, Yoshimasa Hirata Gold Medal, Nagoya University, Nagoya, Japan.  
Körber European Science Award, Körber Foundation, Hamburg, Germany.  
Havinga Medal, Leiden University, Netherlands.

**Sieber, Marco**, D-ITET, Scholarship Award 2006, SEW-EURODRIVE Foundation, Bruchsal, Germany.

**Siegrist, Marco/Prof. Uggowitzer, Peter J./Prof. Löffler, Jörg F.**, D-MATL, Heuberger Winterthur Young Entrepreneurs Prize 2007, Siska Heuberger Holding AG/Economic Development Region Winterthur, Switzerland.

**Prof. Siegwart, Roland Y.**, D-MAVT, Appointment as IFRR Officer, International Foundation of Robotics Research (IFRR).

**Spence, E.**, D-GEOL, 2007 Marshall N. Rosenbluth Outstanding Doctoral Thesis Award, American Physical Society, USA.

**Prof. Spencer, Nicholas**, D-MATL, Fellow of the Royal Society of Chemistry, Royal Society of Chemistry, London, Great Britain.

**Prof. Spiro, Annette**, D-ARCH, prizewinner, "Im Gut" cooperative, Zurich, Switzerland.

**Prof. Springman, Sarah M./Mayor, Pierre/Banjac, Robert (et al.)**, D-BAUG, Best Paper published in Geotextiles & Geomembranes in 2006, Geotextiles & Geomembranes, International Geosynthetics Society, Easley, SC, USA.

**Stafforst, Thorsten**, D-CHAB, Leopoldina grant, German Academy of Natural Sciences Leopoldina, Germany.

**Prof. Stark, Wendelin**, D-CHAB, Ruzicka Award, Ruzicka Committee, Switzerland.

**Stauber Martin**, D-MAVT, dissertation awarded the Research Prize from the Swiss Society for Biomedical Engineering, Switzerland.

**Prof. Steger, Angelika**, D-INFK, accepted into the German Academy of Natural Sciences Leopoldina, German Academy of Natural Sciences Leopoldina, Germany.

**Prof. Steinfeld, Aldo**, D-MAVT, ASME Calvin W. Rice Award, USA. ME Founders Lecture Award, University of Minnesota, USA.

**Steinova, Monika**, D-INFK, Google Europe Anita Borg Memorial Scholarship 2007, Google Inc.

**Stendel, Claudia**, D-BIOL, Friedrich Wilhelm Prize, Friedrich Wilhelm Foundation, Aachen, Germany.

**Prof. Stoffel, Markus**, D-BIOL, Minkowski Prize, European Association for the Study of Diabetes. Scholar Award, Juvenile Diabetes Research Foundation International.

**Storti, Giuseppe**, D-CHAB, European University Support Programme 2007 – Unrestricted University Grant, Du Pont de Nemours International S.A., Geneva, Switzerland.

**Strasser, Michael**, D-GEOL, CHGeol Award, CHGeol, Professional Association of Swiss Geologists, Solothurn, Switzerland.

**Studio Monte Rosa**, D-ARCH, New Horizons – Ideas Pool holz 21, “holz 21” program, Switzerland.

**Sturzenegger, Philip N.**, D-MATL, Frank T. Filser Award: “Award for best student work”, Non-Metallic Inorganic Materials, ETH Zurich, Zurich, Switzerland, 12.18.2007.

**Sznitman, Josué**, D-MAVT, Young Scientist, National Center for Scientific Research (CNRS), France. John Bardeen Studentship, American Physical Society, USA. Visiting Student Research Collaborator, Princeton University, USA.

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## T

**Takala, Timo**, D-AGRL, Research Fellowship, Finland Academy of Science, Helsinki, Finland.

**Thönnissen, Udo/Congiu, Marcello/Vilhena, Gomes da Silva/João, Manuel**, D-ARCH, 3<sup>rd</sup> prize in the architecture competition for the Pückler Gymnasium Cottbus, International Building Exhibition (IBA), Fürst-Pückler-Land, Germany.

**Tobler, Nadia**, D-CHAB, Dr Albert Wander Prize, Wander AG, Bern, Switzerland.

**Touboul, David**, D-CHAB, Best thesis in mass spectrometry, French Mass Spectrometry Society, France.

**Trachsel, Eveline**, D-CHAB, DSM Award (2<sup>nd</sup> Prize), DSM, Netherlands. GSIA Award for best dissertation, GSIA (Swiss Society of Industrial Pharmacists), Bern, Switzerland.

**Trüssel, Sabrina**, D-CHAB, Amedis Award, Amedis AG, Unterentfelden, Switzerland.

**Tuchschnid, Stefan**, D-ITET, MICCAI Young Scientist Award 2007, MICCAI Society.

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## V

**van der Kruk, Jan/Streich, Rita/Prof. Green, Alan**, D-GEOL, Honorable Mention, Society of Exploration Geophysics, Tulsa, USA.

**van Dorland, Anette**, D-AGRL, Schaumann Prize, Schaumann Foundation, Hamburg, Germany.

**Van Melckebeke, Hélène**, D-CHAB, SFB Young Researcher’s Prize, SFB. Poster Prize, SFB.

**van Mier, Jan G. M.**, D-BAUG, President Elect 2007–2010, International Association for Fracture Mechanics of Concrete and Concrete Structures.

**Prof. Vasella, Andrea**, D-CHAB, Honorary Doctor, INSA de Rouen (National Institute of Applied Sciences), Mont-Saint-Aignan, France. Haworth Memorial Medal and Lectureship, Royal Society of Chemistry, Great Britain.

**Vogel, Peter**, D-MAVT, Excellence Scholarship and Opportunity Award, ETH Zurich, Switzerland.

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## W

**Waffler, Stefan/Prof. Kolar, Johann Walter**, D-ITET, Best Paper Award, ICPE’07, Daegu, South Korea.

**Walz, Steffen P.**, D-ARCH, Nokia Forum Champion 2007, Forum Nokia Champion Nokia Corp., Finland.

**Wegmüller, Marc**, D-ITET, Best Graduate Student Paper Award, IEEE Instrumentation & Measurement Society, USA.

**Prof. Welzl, Emo**, D-INFK, Member of the Berlin-Brandenburg Academy of Sciences and Humanities, Academy of Sciences and Humanities, Berlin-Brandenburg, Germany.

**Wild, Martin**, D-UWIS, Award 2007, American Geophysical Union Editor’s Citation for Excellence in Reviewing, American Geophysical Union (AGU), Washington DC, USA.

**Prof. Wüthrich, Kurt**, D-BIOL, Doctor honoris causa, University of Pécs, Hungary. Doctor honoris causa, Universidad del Norte, Asunción, Paraguay. Doctor honoris causa, University of Verona, Italy. Doctor honoris causa, Université René Descartes, Paris, France.

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## Z

**Zakaznova-Herzog, Valentina**, D-GEOL, Young Scientist Award, International Congress on Glasses, Strasbourg, France.

**Prof. Zeeman, Samuel C.**, D-BIOL, Charles Albert Shull Award, American Society of Plant Biologists, USA.  
Golden DNA, VeBiS, ETH Zurich, Switzerland.

**Zeilinger, Melanie**, D-ITET, Peter Sagirow Prize, University of Stuttgart, Germany.

**Prof. Zenobi, Renato**, D-CHAB, Honorary Professorship, East China Institute of Technology, China.

**Ziegler, Remo**, D-INFK, Günter Enderle Award for Best Paper and Best Student Paper Award, European Association for Computer Graphics, Europe.

**Zikas, Vassilis**, D-INFK, Award for the students with the highest diploma degree in NTUA graduating in year 2004, Technical Chamber of Greece, Athens, Greece.

**Zürn, Anke**, D-CHAB, Hans Herloff Inhoffen Prize, Schering Foundation, Germany.

D-AGRL: Department of Agricultural and Food Sciences; D-ARCH: Department of Architecture; D-BAUG: Department of Civil, Environmental and Geomatic Engineering; D-BIOL: Department of Biology; D-BSSE: Department of Biosystems Science and Engineering; D-CHAB: Department of Chemistry and Applied Biosciences; D-ERDW: Department of Earth Sciences; D-GESS: Department of Humanities, Social and Political Sciences; D-INFK: Department of Computer Science; D-ITET: Department of Information Technology and Electrical Engineering; D-MATH: Department of Mathematics; D-MATL: Department of Materials Science; D-MAVT: Department of Mechanical and Process Engineering; D-MTEC: Department of Management, Technology and Economics; D-PHYS: Department of Physics; D-UWIS: Department of Environmental Sciences

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**VSETH**

**Personnel Committee**

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**Architecture and  
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**Engineering  
Sciences**

**Natural Sciences and  
Mathematics**

**System-oriented  
Natural Sciences**

**Management and  
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Management, Technology  
and Economics

Civil, Environmental  
and Geomatic  
Engineering

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and Electrical Engineering

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Chemistry and Applied  
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