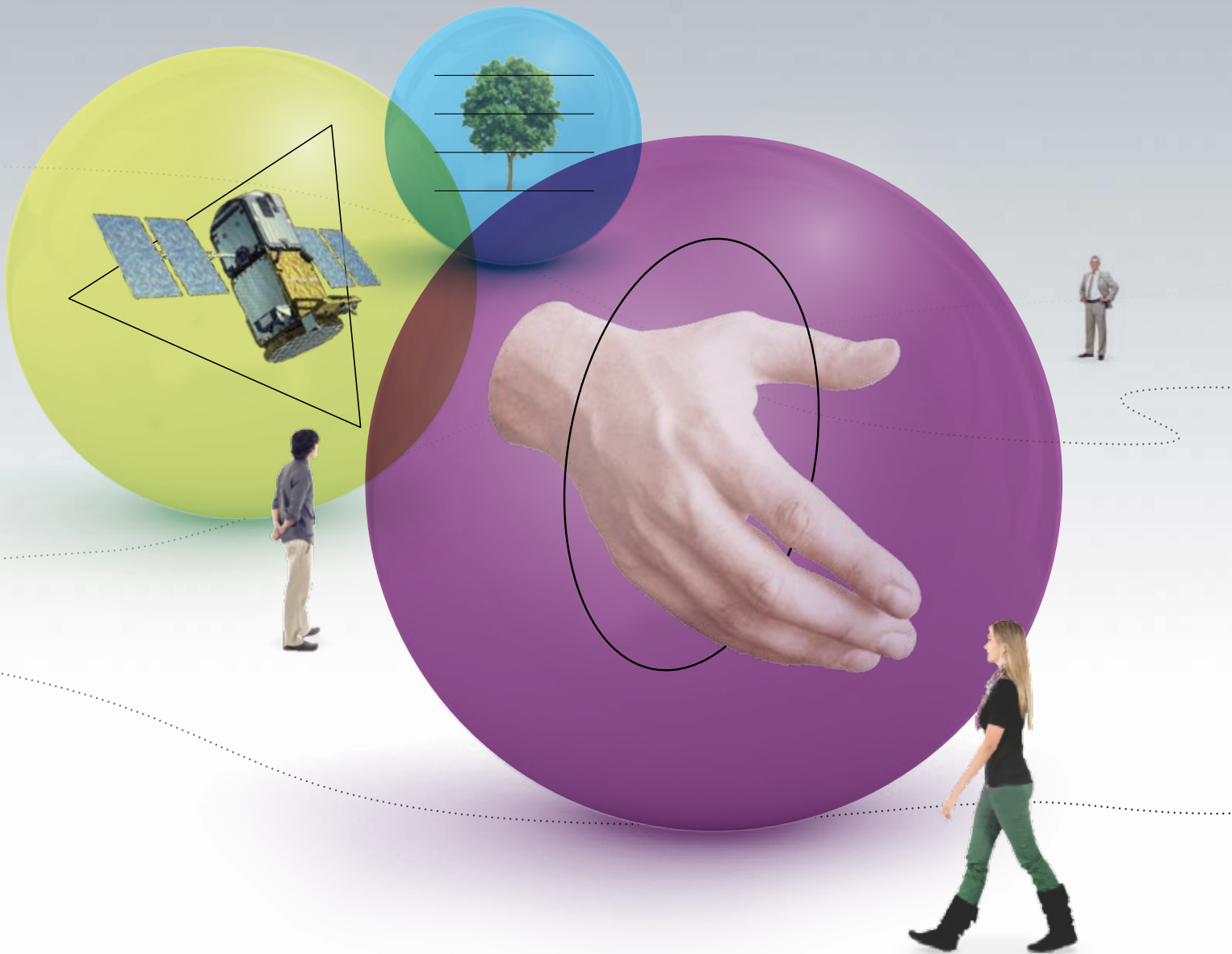


# D-GESS

Department of Humanities,  
Social and Political Sciences

Understanding People  
Steering Developments  
Grasping Information





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# Preface

The Department of Humanities, Social and Political Sciences (D-GESS) at ETH Zurich has undergone a fundamental restructuring and reorientation in recent years. As part of this development, the individual professorships, which had previously operated largely autonomously, were arranged into three topical areas that cooperate closely in research, teaching, and graduate education: Behavior (behavioral science), Governance (political science), and Knowledge (humanities). Cooperation within D-GESS has recently been supported spatially by bringing together the professorships in the CLU, IFW, and RZ buildings at the ETH Zentrum campus.

Today, D-GESS offers courses in the humanities and social sciences in the framework of the compulsory elective subject for students of natural sciences and engineering, Bachelor's and Master's degrees, a specialized doctorate, and qualification programs. In addition, it continues to offer service-oriented teaching, which is a permanent element of the curricula in the various study courses. All of these offers also constitute the foundations of successful training of young scientists in the humanities and social science.

In the area of research, the department is committed to excellent fundamental research, both disciplinary and interdisciplinary. With its work, it aims to contribute in a relevant way to resolving important societal issues. Furthermore, D-GESS is engaged in a number of national tasks such as teacher training; archiving and making available cultural assets of historical importance; and security policy consultancy.

Today, D-GESS rests firmly on two pillars: On the one hand, it seeks cooperation with the natural sciences and engineering departments. Within this cooperation, D-GESS benefits from the expertise of those disciplines, while it reciprocates with reflective and contextual knowledge in the humanities and social science, which is in increasingly high demand in numerous areas. On the other hand, the department delivers excellent research and teaching performance in its own disciplines. In this way, D-GESS ensures that in these areas, too, ETH Zurich enjoys a high international reputation. Both pillars are required for ETH Zurich to live up to its claim of delivering integrated investigation of problems and research topics.

The following brochure will provide you with an overview of ongoing activities at D-GESS. Enjoy your reading!



**Prof. Dr. Frank Schimmelfennig**  
Head of Department, D-GESS



# A unique profile

With the D-GESS department, ETH Zurich can offer an extraordinary range of research and teaching, which strengthens the university's position.

One key goal of ETH Zurich is to share the innovation potential of academic research with the general public and the corporate sector in the long run. In this way, it aims to make a practical and sustainable contribution to a positive development of society at large. ETH Zurich therefore considers its key mission to be the compilation of knowledge that goes beyond fundamental research and can serve as a basis for the development of new products and services in the natural sciences, in engineering, and in architecture. At the same time, ETH Zurich regards itself as a leading institute of training that brings forth qualified graduates with an extensive profile.

In this environment, the humanities and the social and political sciences reflect the philosophical, historical, cultural, and social foundations and prerequisites for the natural sciences and technical disciplines, and they analyze the intellectual and social consequences arising from their research results. They thus contribute decisively to making academic insights fruitful and to the successful implementation of innovations. They also ensure that ETH Zurich brings forth responsible individuals whose broad competence profile allows them to employ their skills for the benefit of society. It is due to this holistic education that ETH Zurich graduates are sought-after experts in the job market.

## **Approaches to societal challenges**

The academics at the Department of Humanities, Social and Political Sciences (D-GESS) work at the intersection of the humanities and the natural sciences. With their work, they aim to conduct high-value fundamental research in their own area of expertise as a contribution to overcoming the great societal and technological challenges of the 21<sup>st</sup> century. To this end, they participate in the strategic initiatives of ETH Zurich in the areas of security and risk, energy and climate change, cities and development, and life and health. With its departmental research focus on «Coping with Complexity», D-GESS aims for a deeper understanding of challenges arising from the growing complexity of contemporary social and cultural systems.

Both in its research and its teaching, D-GESS focuses on the three core areas of Behavior (behavioral science), Governance (political science), and Knowledge (humanities). In close cooperation with other universities and ETH departments, the professorships cover a broad range of topics in their research work. In this way, they add a further perspective to the predominantly scientific-technical orientation of the university's activities, thus contributing to the unique competence profile of ETH Zurich.

# The foundations of integrated science

The status of the humanities and social sciences at ETH Zurich has undergone a significant change. The emphasis is no longer on complementarity, but on integration.

The humanities at ETH Zurich can look back on a long tradition. When the Swiss Federal Polytechnic was founded in 1855, the new university already had a department of elective subjects that complemented the students' education. Subjects such as language and literature studies, history, philosophy, and law and economics have largely been part of ETH Zurich since its beginnings. Until well into the 1980s, they constituted the core of Department XII (Humanities and Social Sciences). With its first appointments, the board of the Polytechnic already signaled its determination to meet the highest standards in these disciplines. Leading European scholars such as Friedrich Theodor Vischer, Francesco de Sanctis, Jacob Burckhardt, and Gottfried Kinkel were assembled at the newly founded university. This tradition was continued with high-profile personalities such as Jean-Rodolphe von Salis, Karl Schmid, or Paul Feyerabend.

In the 1980s and 1990s, Department XII was expanded and diversified: New professorships of Science Studies, Development Cooperation, Sociology, Conflict Research, History of Technology, and Social Psychology and Research on Higher Education were added. At the same time, the changing economic, social, and academic environment transformed the fundamental role of the humanities and the social and political sciences at ETH Zurich: While the humanities were intended as a supplement to the other disciplines until well into the 1970s, today the emphasis lies on integration with other disciplines. The aim is to link up complementary views in order to develop common problem statements.

## **Fundamental reorientation**

The Executive Board of ETH Zurich identified this fundamental change and the resulting need for reform at an early stage. In the years 1998–2003, as a large part of the professors in the humanities and the social and political sciences was approaching retirement, the university seized the opportunity to restructure the faculty. In September 1999, the university administration presented an action plan laying the groundwork for the reorientation: The two departments of Social Sciences and of Law and Economics as well as Department XI (Military Science) were amalgamated into a new unit – D-GESS – and expanded by adding the Faculty of Political Science.

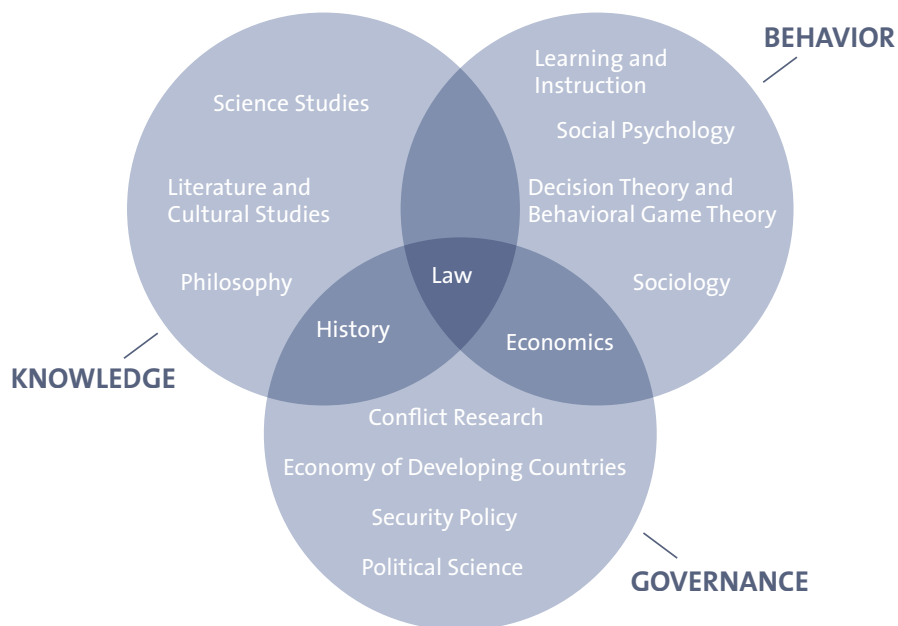
Today, D-GESS is one of 17 departments at ETH Zurich and conducts fundamental research and teaching in around ten different disciplines. Overall, 23 professors, around 80 doctoral students, and about 150 other academic staff ensure that research and teaching meets the highest standards. With its activities, D-GESS completes the range of courses offered by the other ETH departments, which are predominantly oriented towards the natural sciences and engineering, thus contributing to the development of ETH Zurich's unique competence profile. In terms of substance, the D-GESS professorships focus on the three core areas of Behavior (behavioral science), Governance (political science), and Knowledge (humanities). All professorships are independent teaching and research units that have a clear methodological and topical relevance for ETH Zurich's focus on the natural sciences and technology.



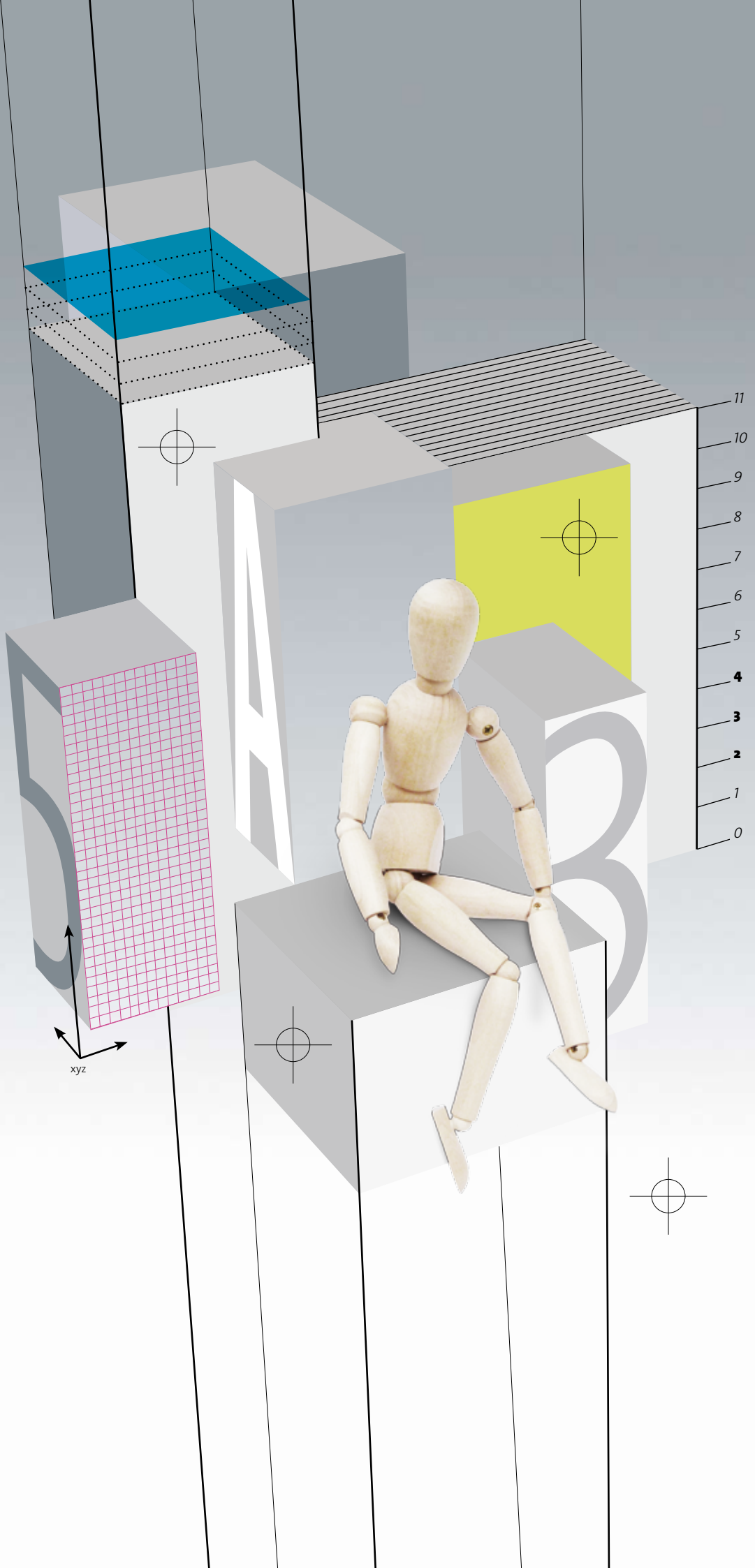
### Acknowledged record of achievement

The realignment of the department in 2000 saw the introduction of the compulsory elective GESS course, which must be taken by all students at ETH Zurich. The GESS courses aim to deepen critical reflective knowledge by enabling graduates to take social and economic contexts into account when contemplating their expertise and their actions. In addition, D-GESS also offers independent degree programs: the Bachelor in Public Policy for officers of the Swiss armed forces as well as Master's degrees in Comparative and International Studies and in History and the Philosophy of Knowledge, respectively. Furthermore, D-GESS conducts two specialized Masters of Advanced Studies (MAS) programs and is in charge of training high school teachers in the framework of the Teacher's Diploma for secondary schools.

D-GESS has a successful academic track record. This can be seen in the approximately 500 publications it generates every year as well as in the roughly 40 percent share of third-party funding in its overall expenditures. For many years, D-GESS has thus procured the highest share of third-party funding among all ETH departments. The numerous publications in respected academic journals, the high proportion of third-party funding, and the growing demand for the courses offered show that the professorships of D-GESS combine research and teaching to meet the highest standards.



Its orientation towards the three core areas of Behavior (behavioral science), Governance (political science), and Knowledge (humanities) helps D-GESS maintain a clear profile in teaching and research.



# Understanding People

Research in the area of Behavior supplies the foundations for integrating scientific insights successfully into society.

Over the past years, the natural sciences and engineering disciplines have already developed a range of solutions for the great challenges of the 21st century. Among these challenges are, for example, global climate change, the transformation of energy supply systems, combating poverty, or sustainable stewardship of resources.

In order to resolve these problems, it is not sufficient to understand scientific correlations and to present technical solutions. What is also required is a deeper understanding of the social nature of humankind and of the ways in which scientific insights are communicated to the general public and can be practically applied in society.

## **Broad range of methodologies**

It is precisely these aspects that the Behavior (behavioral science) research area at D-GESS investigates. Researchers in this area enquire as to how humans – both as individuals and as parts of society – behave in certain social environments and study the practical effects of this behavior on the application of scientific-technical insights in society as well as on other social and economic developments. To this end, experts in the areas of psychology, sociology, and economics work on a broad range of research problems: They investigate why we behave irrationally, how social norms come about, how humans make decisions in uncertain situations, and what measures could be introduced, for instance, to promote energy-saving behavior.

In their investigations, the researchers in the area of Behavior make use of a comprehensive methodological toolbox. In addition to their theoretical work, they also model sequences using computer models and collect empirical data as part of field research and survey experiments. Not least, they also conduct experiments in the test laboratory. The close interaction of various disciplines creates remarkable opportunities for a lasting research impact that can generate insights of academic and societal relevance.

## **Success in communicating knowledge**

In order for society to be able to actually adopt new scientific-technical insights, however, the general public must have a fundamental understanding of the interrelations involved. Therefore, the research in the field of Behavior also investigates how these foundations can best be communicated to the coming generations in school and university classrooms. This also includes studies that take a closer look at the quality of research and teaching at university level.



## Sociology

### Why we behave irrationally

Why do people frequently refuse to accept innovative technologies? What barriers prevent the spread of «green» technologies and lifestyles? Why are energy-saving investments avoided even if they promise to pay off in the long run? How are social norms, trust, and institutions formed, and how do conflicts, discrimination, and the collapse of social systems come about? The Professorship of Sociology investigates research questions such as these using empirical-experimental methods. The search for insights is guided by decision theory and theories of bounded rationality. Models based on game theory and other mathematical concepts are used to describe social interactions with a high degree of precision. These models allow us to formulate hypotheses that can be empirically corroborated. Empirical tests are based on systematic surveys and multivariate statistics as well as controlled experiments and field trials. In order to enhance the reliability of the data, the professorship is also working on further developing the scientific methods. Finally, it also conducts fundamental research into the ways in which cooperation systems develop and the conditions under which social cooperation breaks down. The insights thus gained are of importance for environmental sociology (e.g., sustainable management of resources), economic sociology (e.g., the way electronic markets operate), and for the further development of social theory at large.

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## Sociology (Modeling and Simulation)

### What keeps the social world together

The Professorship of Sociology, in particular Modeling and Simulation deals with the question of how society functions and how it can be modeled on a computer. Why do individuals cooperate? How do social norms come about? When do conflicts arise? How are individuals influenced by others in their decisions? When does collective action lead to revolutions? And how can instabilities in the financial markets be avoided? In order to answer questions such as these, the professorship takes into account not only the insights of sociology, but also the methods of complexity theory, statistical physics, psychology, and biology, as well as political and computer science. Its scope ranges from experimental work to data mining approaches and issues of integrative systems design (e.g., how financial markets can be stabilized, traffic jams can be reduced, and crowd disasters can be avoided). Within the European flagship initiative, the professorship aims to promote the exploration of techno-socio-economic systems. The aim is to enable science to keep pace with the rapid changes in our world as well as to understand systemic risks better and to improve integrated risk management. To this end, feedback and domino effects as well as unwanted side-effects in linked complex systems must be appropriately taken into account.

**Prof. Dr. Dirk Helbing**

Professorship of Sociology, in particular Modeling and Simulation

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## Decision and Behavioral Game Theory

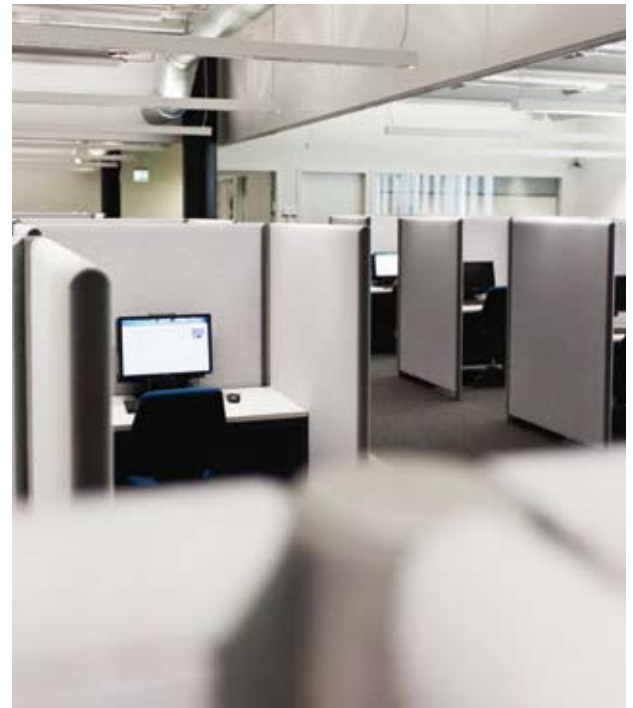
How people make decisions in critical situations

The research of the assistant professorship of Decision Theory and Behavioral Game Theory focuses on human decisionmaking in both individual and strategic contexts. It contrasts normative models of choice that conceptualize humans as rational agents who optimize expectations with descriptive models of decisionmaking (i.e., psychologically realistic models of humans as boundedly rational and heterogeneous). We use an interdisciplinary approach combining methods from experimental economics, cognitive psychology, and mathematical modeling in an effort to gain insights into how humans make decisions, reason, and learn in stochastic and strategic environments.

In one line of research, we study the structure of social preferences (or social value orientation) and develop ways to measure this important individual difference. In another line of work, we study how decisionmakers adapt and make trade-offs when making sequential choices among alternatives in a risky and dynamic environment. Two recent projects focus on real options and studies of sequential investments given noisy environments. Neoclassical economics assumes that humans are primarily motivated by their own profit. There is also evidence, however, that humans do take into account the interests of others. The group aims to achieve a better understanding of this latter aspect.

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## Decision Science Laboratory

A multifaceted test bed for behavioral science

The Decision Science Laboratory (DeSciL) was founded in 2010 as a collection center for socio-scientific behavioral data. The lab was carefully designed to ensure a broad field of application and the highest possible degree of flexibility. Its primary remit is the organization and realization of experiments on decisionmaking behavior and social interaction. Besides behavioral experiments, which can be conducted in three self-contained rooms, it is also possible to conduct experiments outside the laboratory and online via the internet. The portfolio is completed by instruments for recruiting participants, solutions for socio-scientific surveys (call center, questionnaire scanning, online survey tools) and IT resources for data analysis and simulations (cluster computing).

At the DeSciL, up to 36 study participants can take part simultaneously in a session by interactively using computers to make decisions with others or against others. So far, studies have been conducted on issues such as opinion dynamics, donation behavior, reputation and trust formation, signaling, political participation, formation of social networks and social norms, dynamic investment decisions, and temporal and spatial social dilemmas.

### **ETH Decision Science Laboratory**

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## Research on Learning and Instruction

### The foundations of motivational and successful instruction in schools

The focus of the Professorship for Research on Learning and Instruction lies on the question of how school instruction in the MINT subjects (Mathematics, Informatics, Natural Sciences, and Technics) can be designed in a way that is conducive to efficient learning in order to allow students better to understand complex and abstract relations. The professorship also has responsibility for didactic courses and training for teachers in the MINT subjects. The associated MINT Learning Center explores ways of applying the insights gained through research in learning and instruction in the classroom. Teachers in the subjects of physics, chemistry, and mathematics join up with learning researchers to develop course units for the classroom that promote the development of a flexible knowledge base. In a longitudinal study, we examine whether children who have already accumulated knowledge about physics in primary school later enjoy an advantage in science classes. In addition to such studies in schools, we also carry out laboratory studies that aim to show how educational material should be structured in order to allow students to arrive at their own conclusions. The studies also investigate how differences in intelligence and aptitude affect the use of such course offerings. In the neurolab, we measure the brain activity of test persons in order to arrive at conclusions that are as comprehensive as possible.

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Professorship for Research on Learning and Instruction  
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## Neurolab

### How aptitude and learning are reflected in the brain

The neuroscientific laboratory of the Professorship for Research on Learning and Instruction uses electroencephalography (EEG) to investigate brain activation patterns that form the basis of various degrees of aptitude and of learning processes. Two key areas constitute the focus of this research: The first is the question of differences in brain activation between more and less gifted individuals, and whether more efficient use of the brain can be acquired (e.g., through training programs). Our research concentrates on cognitive aptitude (intelligence), which is not only important for school, but also a decisive factor in how efficiently the brain is activated for problem-solving. Furthermore, we carry out studies in creative thinking that aim to identify the states of the brain coinciding with particularly original ideas.

The second research focus studies the activation of the brain in solving problems in the MINT subjects (Mathematics, Informatics, Natural Sciences, and Technics). We investigate how various presentation formats affect the use of the brain, how the difficulty of the problem correlates with brain activity, and whether different problem-solving strategies can be identified by looking at neurophysiological data. The neurolab data complements the results of behavioral studies and may supply further insights into thought processes.

#### **Neurolabor**

[www.ifvll.ethz.ch](http://www.ifvll.ethz.ch)



## Research on Higher Education

### Assessing and improving the quality of research and teaching

Research on higher education is currently developing into a highly dynamic research area. Its empirical investigations allow universities better to understand processes in research, teaching, and administration and continuously optimize them in terms of quality management. The Professorship of Social Psychology and Research on Higher Education at ETH Zurich and its professor, who is also the director of the Evaluation Office at the University of Zurich, deals with issues related to academic policy and practice using social science research methods and the theories of social psychology. One focal area is the further development of techniques for evaluating teaching and research (alumni surveys, evaluation of curricula, teaching evaluation, bibliometrics, peer review). Thus, for instance, application procedures of research funding institutes or the peer review procedures of academic journals are checked empirically for quality (fairness, reliability, validity). As part of a project funded by the Rectors' Conference of the Swiss Universities (CRUS), furthermore, quality criteria are being developed for research in the humanities. At the same time, the professorship also analyzes the transition from school to university and from university to career, and develops the methodological-statistical instruments that facilitate analysis of complex structured data.

#### **Prof. Dr. Hans-Dieter Daniel**

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## Economics

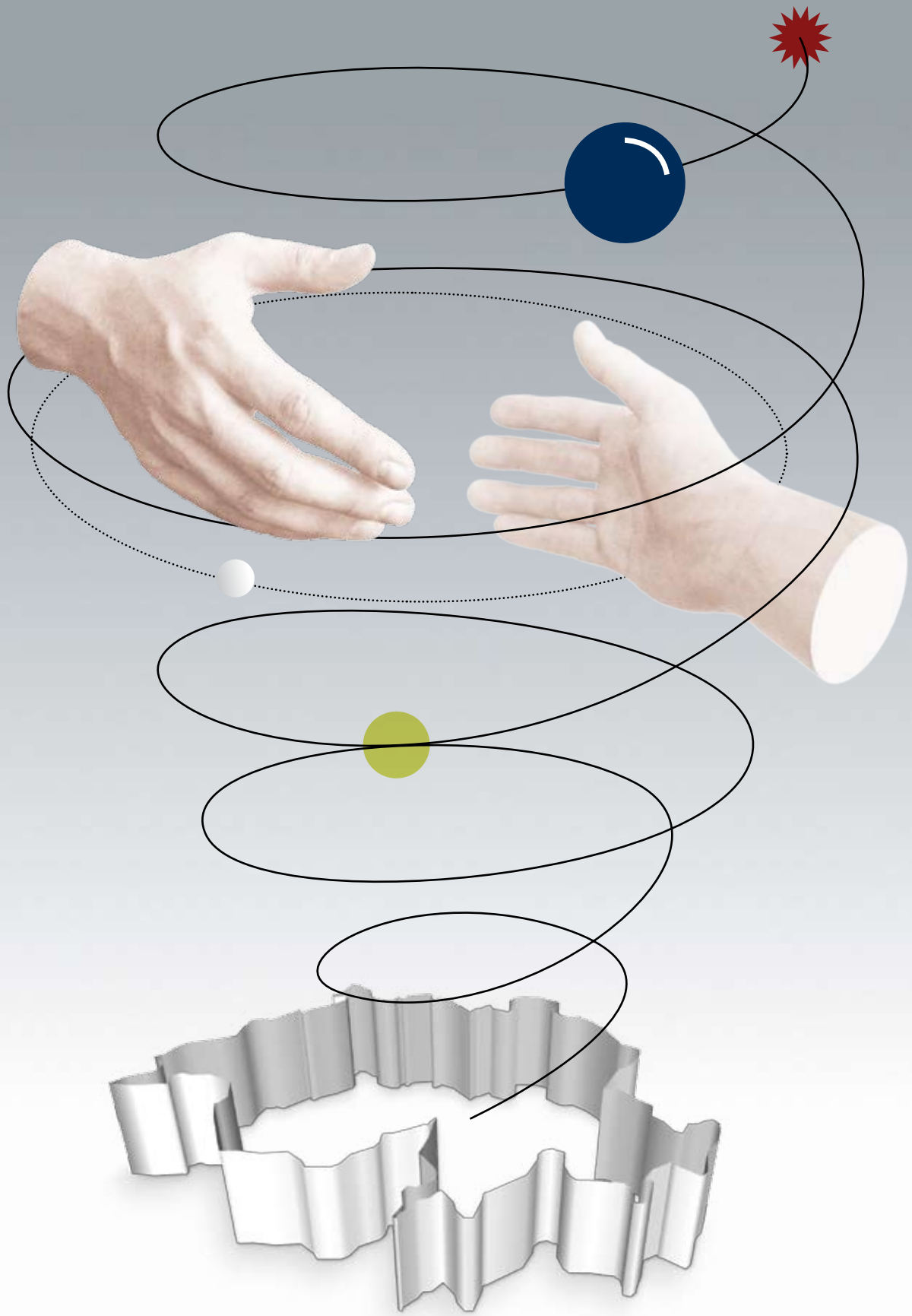
### How to promote energy-saving behavior

The Professorship of Economics is part of the cross-departmental Institute for Environmental Decisions. Environmental economics and climate policy therefore play key roles. For instance, the professorship investigates why individuals and groups of actors still only rarely pay heed to energy-saving and low-emission behavior. In doing so, it shows how such behavior can be encouraged. For instance, by offering the appropriate (economic) incentives, companies can ensure that their employees behave in an energy-conscious manner even outside of office hours. The economics group was able to demonstrate that this constitutes a particularly effective means of reducing energy consumption. Furthermore, the professorship advises national and international decisionmakers who advocate on behalf of sustainable energy and climate policies.

Risk issues constitute another focal area of the professorship's research. The economics group deals with risk management of nuclear power plants as well as with the variations in risk behavior between men and women when it comes to financial investments. Gender-specific behavioral differences are studied, as are the implications of such differences for the national economy. The portfolio of the professorship and its professor, who is also the ETH president's Delegate for Equal Opportunity Issues, is complemented by research on why women continue to be under-represented in management or leading positions in institutes of higher learning.

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# Steering Developments

Research in the area of Governance shows which institutional approaches can meet the challenges of the 21<sup>st</sup> century.

Many of the great challenges that humankind will have to overcome in the coming decades can only be met if the appropriate political, legal, and institutional solutions are developed. This requires an understanding of how economic and political processes function at the national and international levels, and of the instruments that can guide these processes. However, a better understanding is also required regarding the origins of intra- and inter-societal conflicts and how they can be resolved when it comes to practical application. In the area of Governance, political scientists, economists and legal scholars adopt a range of perspectives to determine how security, welfare, and development as well as liberty and participation can be ensured. They analyze which steering instruments – ranging from the deployment of appropriate military and economic means to political processes as well as legal means and institutions – can be used to achieve these goals. The research in this field aims at developing adequate academic responses to the challenges that globalization poses for security, democratic policy, and efficient and sustainable economic activity.

## **International politics**

The study of these issues has opened up a new and increasingly important research field for ETH Zurich in recent years that is of great importance for numerous other disciplines, such as energy science and environmental studies. Its nucleus was the Professorship of Security Policy and Conflict Research, which was founded in 1986. From the mid-1990s onwards, it was successively complemented by further professorships in International Relations, Swiss and International Security Policy, European Policy, and Global Governance. Today, these professorships show, for instance, how international environmental problems – for instance, regarding the use of water resources – can be tackled; how politicians behave in global climate negotiations; how the institutional development of the European Union is progressing; how

conflicts and wars arise between states and ethnic groups; and which challenges will shape Swiss and international security policy in the coming years.

## **Development and law**

In this context, particular attention is devoted to the situation in developing countries and their specific problems, which are investigated by two professorships. Their research and teaching investigates the approaches that can be adopted to combat poverty in developing countries and the role that economic factors play in the process. The research area of Governance is completed by two professorships that look specifically at legal questions. Among other things, these professorships are engaged in empirical studies to examine aspects of corporate governance as well as the question of how legal frameworks can promote technical innovation.



## International Relations

### Challenges and opportunities in international environmental policy

The Professorship of International Relations predominantly seeks to determine the requirements for resolving transnational environmental problems. As part of the Institute for Environmental Decisions (IED) and the Center for Comparative and International Studies (CIS), the professorship works closely with other research groups. It investigates, for instance, why states are engaged in environmental policy to varying degrees, how global environmental policy can be legitimated, and what practical preconditions must be met in order for collaboration between NGOs and governments to produce better results in environmental policy. It analyzes which socio-economic consequences and political conflicts can be expected to result from global climate change and how these might be resolved. Special attention is devoted to resource conflicts over water. For instance, one of the professorship's projects looks at water usage in 35 countries in the Mediterranean region and the Sahel. In another project, they examine the question of how water usage in major international riverine catchment areas is regulated between the littoral states, with concrete case studies being researched in Africa and Central Asia.

**Prof. Dr. Thomas Bernauer**  
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## European Politics

### The differentiated integration of the EU and its neighbors

The Professorship of European Politics deals with fundamental problems in regional political integration. It devotes special attention to the European Union and its neighborhood. Its work rests on the assumption that the EU does not follow patterns of state-building, but is developing into a system of differentiated internal and external integration. The professorship looks at three main questions: First of all, it aims to clarify which democracy model is suitable for a multinational entity with weak identity and under-developed political structures and how democratic institutions can assert themselves under these conditions. Secondly, it looks at case studies to understand how the EU can promote democracy in its Eastern European neighborhood and the Mediterranean region and how it can contribute to transparent and participative governance. Thirdly, it strives to understand why European integration is developing along increasingly differentiated lines. A database on differentiated integration is used to establish why some of the EU members are embarking on independent paths while non-members such as Switzerland participate selectively in EU politics and adopt EU regulations. The professorship is part of the Center for Comparative and International Studies (CIS) and the National Center of Competence in Research (NCCR) «Challenges to Democracy in the 21<sup>st</sup> Century».

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## Global Governance

### How politicians behave in international negotiations

The Professorship of Global Governance examines decisionmaking and negotiation processes at the international and national levels. The goal is to understand the actions of politicians and governments better. The research project «Negotiating Climate Change» studies the strategies and power resources that governments employ to reach their aims in international climate negotiations. Also, we analyze which factors influence negotiation positions and strategies and the extent to which they are shaped by the political alignment of a government, the interests of its electorate, economic interests, or the socio-economic structure of the country in question.

In addition, the professorship investigates decisionmaking processes at the national level in the project «Party Group Discipline in Comparison». The main question here is which factors affect the decisions of parliamentarians and how disciplinary measures can be measured and explained. Based on a survey of parliamentarians in Switzerland, Germany, the Netherlands, the United Kingdom, and the European Parliament, we examine attitudes of parliamentarians vis-à-vis their voters and their party faction. Additionally, 80 expert interviews with chief whips and experts on parliaments serve to establish which sanctions are applied in which factions.

#### **Prof. Dr. Stefanie Bailier**

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## Conflict Research

### Enhancing understanding of conflicts between states and groups

The Professorship of International Conflict Research applies socio-scientific theories and methods to investigate political violence, such as ethno-nationalist conflicts or civil wars. The main focus is on macro-historical processes such as nationalism, democratization, and state formation, as well as associated micro-theoretical mechanisms. For instance, macro research involves studies on the statistical distribution of war casualties or on the importance of state size. At the domestic level, the group studies how political and economic inequality affects the course of conflicts. Transnational mechanisms such as irredentism and conflict diffusion are also part of the research agenda.

In order to understand such processes, the group collects and analyzes data on ethnic groups and their access to state power. This data is supplemented by digital geographical data. All of the data will be integrated into the GROWup portal (Geographic Research On War: Unified Platform) from November 2011. This portal combines and visualizes data from different sources. This research is aimed at generating conclusions that make it easier for researchers and decisionmakers to understand conflicts – and in some cases, can even be used to arrive at risk assessments concerning future conflicts.

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## Security Policy

### Military challenges and strategies for peace promotion

The Center for Security Studies (CSS) at ETH Zurich was founded in 1986 as the Professorship of Swiss and International Security Policy. Today, it is a national center of competence with an international reputation. The services provided by the CSS encompass research, teaching, think-tank activities, and the ISN information service.

In its research, the CSS focuses on six topics: It analyzes new risks and current threats to states and societies; it examines how security institutions change over time; it analyzes core aspects of the Revolution in Military Affairs and the influence of military transformation processes on policy, strategy, and doctrine; it studies the foreign-policy behavior of regional actors from a security policy point of view; it deals with the causes and consequences of state failure and analyzes new strategies for conflict prevention as well as peace- and statebuilding processes; and it studies Swiss foreign, security, and defense policy, both historically and from a contemporary point of view. Each of these research areas focuses on questions from the field of security and strategic studies: What are the causes and consequences of organized violence between groups, states, or societies? And how can institutions, political processes, and policy approaches contribute to preventing, stabilizing, or overcoming political violence?

#### **Prof. Dr. Andreas Wenger**

Professorship of Swiss and International Security Policy  
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## Think-Tank and ISN

### Rendering services to politics and the public

Based on its academic expertise, the CSS in its capacity as a think-tank elaborates practical recommendations for policy-makers and the public administration, research institutions with a political affinity, and the general public. As such, the Center has an important function as a bridge between fundamental and applied research. As part of its academic consultancy work, the CSS puts out a number of publications, including the annual «Strategic Trends» and the «Bulletin zur schweizerischen Sicherheitspolitik» («Bulletin on Swiss Security Policy») as well as the monthly «CSS Analyses in Security Policy». Furthermore, it authors commissioned studies, organizes conferences and workshops, and makes use of a range of media platforms to promote debate on security policy and provide information to the general public.

The CSS also runs the International Relations and Security Network (ISN), a leading global information platform in the field of international relations and security policy. The ISN generates and gathers open-source information and thus promotes security policy dialog and cooperation in this area. The ISN also provides access to a global network of organizations and experts in the field of international relations and security policy.

#### **International Relations and Security Network**

[www.isn.ethz.ch](http://www.isn.ethz.ch)



## Problems of Developing Countries

Combating poverty without destroying the environment

The Professorship for Problems of Developing Countries, which together with the Professorship for Development Economics makes up the Postgraduate Course on Developing Countries (Nachdiplomstudium für Entwicklungsländer – NADEL), deals with reforms in economic policy and institutions to promote economic growth and reduce poverty as well as topics in the field of ecologically sustainable development. For instance, we look at foreign direct investment in the agricultural sectors of developing countries. Specifically, we study how these investments can contribute to food security and poverty reduction. In addition to the effects on global wheat markets, the analysis also looks at local effects in a country study for Zambia, for instance. The focus is on small farms that receive technical and financial goods and services from large foreign companies and market their harvests through these corporations.

Two resource economics projects on water usage are based in Zambia and China: In Zambia, demand for water from the Zambezi is significantly increasing, which causes ecological problems. In China, the professorship examines means of raising the efficiency of water usage in the Yanqi Basin in Xinjiang. In both projects, hydrological-economic simulation models are developed in order to elaborate guidelines for ecologically sustainable and economically profitable use of the water resources.

**Prof. Dr. Rolf Kappel**

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## Economy of Developing Countries

Understanding urban and uncertain living conditions

The next decades will be marked by the urbanization of poverty. At the same time, the influence of economic and climatic risks on the lives of the poor continues to increase. This development poses new challenges to the international community's efforts to combat poverty. The Professorship of Development Economics aims to enhance our understanding of these problems at the intersection of development, demographic, and behavioral economics. Our research starts with specific questions arising in poor, urban, and uncertain environments: What is the role of economic factors in explaining the more than two billion people without access to sanitation? What role do social norms and economic development play in population growth? How do high urbanization rates affect public health? How do social norms shape economic decisions under uncertainty? What is the optimal design for health insurances for the poor? How can the effectiveness of drinking water projects be measured and enhanced? Based on microeconomic theories, these questions are investigated by applying empirical and experimental methods in various African countries (e.g., Ethiopia, Benin, Uganda, and South Africa).

**Prof. Dr. Isabel Günther**

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## Law

### Good corporate governance

Research at the Professorship of Law is finance oriented, taking into account current developments in economics and psychology. It aims to arrive at a comparative analysis of corporate governance in Europe and the US and to study the behavior of governmental agencies and courts, in particular by investigating aspects of banking and equity market law. The research focuses on the fundamentals of corporate governance and the development of equity markets. In terms of methodology, the Professorship of Law adopts the analytical approach of Law and Economics.

The Professorship of Intellectual Property and the Professorship of Law lead a joint interdisciplinary research group composed of PhD candidates and postdoctoral scientists with backgrounds in law, economics, and natural sciences. The group maintains close contact with leading Law and Economics research institutes in the US and Europe. Internationally renowned academics regularly present their research results in the group's various workshops and lecture series.

**Prof. Dr. Gérard Hertig**

Professorship of Law

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## Intellectual Property

### Promoting innovation through law

The Professorship for Intellectual Property deals with matters related to patent, trademark, copyright, and design law, legal issues of emerging technologies (especially the internet and biotechnology), and telecommunications and antitrust law. In terms of methodology, the Professorship (which is part of a joint interdisciplinary research group with the Professorship of Law) is oriented towards Law and Economics, a school of research that applies economic and psychological analytical approaches to legal questions. It applies theoretical, empirical, and experimental methods to explore the interdependencies between legal institutions and human behavior. One of the main topics is the optimal design of intellectual property law to promote innovation and meet the challenges of novel legal problems on the internet. The activities of the two legal professorships in this research group promote the move towards empirical legal scholarship in international legal research.

In terms of teaching, they are responsible for organizing the law courses at ETH Zurich, which are attended by around 2,500 students per year.

**Prof. Dr. Stefan Bechtold**

Professorship of Intellectual Property

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# Grasping Information

Knowledge is fascinating, dangerous, and useful. Knowledge is what drives, structures, and sustains a society. This is also the reason for its diverse manifestations.

Knowledge may take on a scientific appearance, occasionally it manifests itself in an esoteric form, and it may often appear in popular and yet specialized form. At the same time, there are manifold channels through which knowledge is spread and diverse vessels in which we try to retain it, and occasionally even lock it up. Nevertheless, knowledge can hardly be captured; it quickly gathers dust and must be supplemented, reacquired, or replaced. And yet, knowledge cannot be simply left to itself. It demands to be displayed and systematized; it must be comprehended and related.

## **Knowledge in transformation**

The focal research area on Knowledge investigates normative and narrative conditions of possibility relating to knowledge – in its institutional consolidation, in its historical changes, and in its material practice.

In particular, the focus of interest lies on three topical areas: How is data generated, retained, and distributed (from file cards to electronic databases, from biomedical research to the police dragnet)? Furthermore, how is this data converted into facts, and how are the facts ultimately used to generate knowledge? Secondly, what role does knowledge about «the good life» play for the moral self-guidance of modern humankind? What importance do new media have in spreading this knowledge? And third, how did the theory of evolution originate and develop? What is its significance for the self-image of humankind today, in the humanities and in popular culture?

## **Reference to core ETH subjects**

The research area on Knowledge includes the professorships of History of Technology, History of the Modern World, Philosophy, Science Studies, and Literature and Cultural Studies, as well as the Archives of Contemporary History and the Thomas Mann Archives. The professorships apply philosophical, historical, and literary perspectives,

dealing in particular with the conditions, problems, and developments of the natural and engineering sciences that are part of the range of subjects offered by ETH Zurich. In addition, the professorships offer the Master's course in the History of Knowledge and work together with colleagues from the University of Zurich at the Center for the History of Knowledge, which is jointly administered by the two universities.



## History of Technology

### The societal dynamics of technological change

The history of technology investigates how technological developments came about in particular situations and how groups or societies perceived, negotiated, and finally used or forgot them as means of social change. In this way, innovations are understood and explained as processes that are rich in technical and societal presuppositions. Questions studied in the history of technology are the outcomes of the respective societies' need for orientation, and its procedures correspond to current methodologies in historical research. The Professorship of the History of Technology concentrates on five topics: Environment and Space; Energy; Communication; Engineered Bodies; and Knowledge. It conducts problem-oriented research that is geared towards current issues. Its lectures can be integrated as teaching-related research into the curricula of the ETH departments and the Master's course in History and Philosophy of Knowledge. They are distinguished by their high degree of relevance to current events and broad range of topics and aim to sensitize students to the dynamic relationship between technology and society. The professorship also promotes young researchers and offers junior historians innovative opportunities for research and debate. Based on current events that give rise to societal debates, we interrogate a past that is of concern to us.

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## History of the Modern World

### The importance of global historical processes for the contemporary world

The Professorship of History of the Modern World deals with global interdependencies that have increasingly been shaping the world since the 18<sup>th</sup> century. The focus of the investigation lies on the importance of colonial, transnational, and transcultural relations for the developments of Europe and of the Global South. Particular attention is devoted to the history of South Asia and the British Empire; individual projects also deal with other regions (Latin America, West Africa) or countries (Nepal, Switzerland). One of the intentions of the professorship is to link an interest in the history of globalization with solid regional expertise. A major project on the history of the temperance movement examines one of the earliest truly global movements. The project aims to trace how various forms of regulating mind-altering drugs emerged within the competition between empires, since the temperance movement contributed to the shaping of global governance structures, which became increasingly important in the 20<sup>th</sup> century. A second major project is devoted to the emergence of assimilation discourses in South Asia during the 19<sup>th</sup> century. Here, the emphasis is on establishing how European science paradigms such as the theory of evolution were received and modified outside of Europe.

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## Archives of Contemporary History

### Developing Swiss historical sources for research

The Archives of Contemporary History promote research on Swiss contemporary history. They secure and develop sources, mostly of private provenance, from World War I to the present. Currently, the institution provides access to around 500 personal papers, institutional archives, contemporary testimonies in oral history, and image sources on foreign and domestic policy, economic and foreign trade policy, refugee policy and emigration, World War II, the Holocaust and anti-Semitism, the Cold War, and security policy. The archives are pursuing a long-term digitalization strategy: The virtual reading room at <http://onlinearchives.ethz.ch> and the archive portal at [www.archivesonline.org](http://www.archivesonline.org) provide online information on holdings as well as source documents. Furthermore, the archives publish a series of publications with a topical focus on the key areas of politics, economics, and Jewish history. The archives also offer lectures in the framework of the compulsory elective GESS course and the Master's course in History and Philosophy of Knowledge. To this end, they also maintain cooperation agreements with the history departments of various universities. They develop education and qualification courses for the Swiss archivists' professional association and regularly conduct guided tours and events for the benefit of the general public.

#### **Dr. Gregor Spuhler**

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## Science Studies

### How is academic knowledge generated?

Science has been described as being both realistic and disconnected from reality, as threatened and threatening, as undervalued and overrated, as expensive and lucrative, as elitist and democratic. As contradictory as these conceptions may be – hardly anybody in our «knowledge society» can remain unaffected by science. How is it that the sciences have such a crucial role in society? The Professorship of Science Studies looks at the following questions: How do phenomena become objects of scientific investigation? How is new knowledge generated? Under which conditions and with which methods do academics conduct their research? What roles do academics and non-academics play, and to which extent does their authority in society depend upon these roles? Focal areas of research include the importance of images and visual media in the history of knowledge, the history of brain research, cybernetics, human science and biology, as well as the culture of the humanities with particular attention to their material instruments of thought such as books, archives, and writing tools. Common aspects of our research include not only the goals of promoting deliberation on the sciences and other knowledge systems and encouraging interested researchers to reflect on their own work, but also the intention of strengthening public understanding of and for the sciences.

#### **Prof. Dr. Michael Hagner**

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## Philosophy

### The role of science and technology in human life

The Professorship of Philosophy mainly deals with issues in theoretical philosophy. Many of its projects concern questions arising from the significance of the modern sciences and technologies for human life. The goal is to produce philosophically relevant results that are of importance not only to professional philosophy, but also to other scientific and non-scientific disciplines. As part of the Center for the History of Knowledge, the Professorship of Philosophy cooperates closely with the Professorships for Science Studies and History of Technology.

In its research projects, the professorship deals with issues from the fields of epistemology, history of philosophy, and the philosophy of the natural sciences. For instance, research questions include how long scientific insights can be regarded as relevant, to which extent scientific theories provide true explanations of the world, why alchemy continues to exert such a strong fascination today, and how the notion that philosophy is at the same time also a therapy has changed over the past 400 years.

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## Practical Philosophy

### Philosophy is the illumination of existence through the medium of reasoning

How should we understand ourselves, given our knowledge about ourselves? This is a fundamental philosophical question. We are living in a scientized everyday culture. Evidence of this can be found in the list of calories on the yoghurt cup or the educational advice books in every home that popularize the findings of brain researchers. Does science, then, have the last word when it comes to the question of how we should understand ourselves? No. For there is one essential dimension of our existence on which it cannot shed any light: The fact that we act in accordance not only with the factual, but also according to what should be. We take a stance vis-à-vis the world and occasionally claim to know what is good and legitimate. This is the phenomenon of normativity, to the explication of which the professorship has devoted a large part of its work.

This includes debating attempts to portray «the ought», the rational, and the good naturalistically as mere functional regularities. This is why the philosophy of mind and epistemology play an important role. Our stance in terms of what is good and what is justified is more than simple appraisal; it is also a guideline for behavior. This is why matters of ethics and political philosophy are essential for capturing the finer points of normativity.

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## Literature and Cultural Studies

Unlocking the cultural heritage from the early modern age to today

The Professorship of Literature and Cultural Studies regards itself as a center of research on literary and cultural knowledge. It applies this research to relevant examples such as models of universal knowledge or of occult lore. Furthermore, it also studies Jewish and Jewish-German literary and cultural history and the core elements of occidental literary history. For instance, in the recent past, it has published works on authors such as Franz Kafka or Max Frisch and studies on the history of plagiarism or on the function of literary imagination for human knowledge about the future. The professorship runs a number of projects ranging from the early modern age to the present. In addition to several edition projects, these include joint research projects on the assimilation discourse in Judaism and on the Zionist concept of knowledge, and individual projects on the history of the language game or on the poetics of the warrior's return. In its lectures, the professorship combines themes in literary theory with historical problems. Together with the students, the lecturers study the critical self-reflection of knowledge in the modern age by looking at the figure of Dr. Faustus, for example, or study the notion of a «fourth dimension» as a special poetic space at the intersections of mathematics, occultism, and aesthetics.

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## Thomas Mann Archives

Preserving the great writer's legacy for posterity

The Thomas Mann Archives are both a research center and a museum. As a place of research, they constitute the world's leading research center on Thomas Mann. Researchers, students, and interested members of the general public may access the written legacy of the Nobel laureate. Manuscripts of his works, notes, diaries, material, and the author's reference library are available for study. Thousands of letters by Thomas Mann and by many famous correspondents to Thomas Mann may be accessed by researchers. The Thomas Mann Archives take an active part in research with their own editions, as a participant in the «Grosse kommentierte kritische Ausgabe» (annotated critical edition) of Thomas Mann's works, and by editing the research series «Thomas-Mann-Studien» and «Thomas Mann Jahrbücher». The archives' own museum presents the complete furnishings of Thomas Mann's last study room, including his desk, which he took with him from Munich to Switzerland, then to exile in the United States and finally back to Switzerland. The exhibition shows personal objects, valuable portraits by Franz von Lenbach, the author's Nobel Prize for Literature certificate, facsimiles, and his death mask.

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## Italian Literature and Culture

### Enrichment through exchange with the cultural space of Italy

The Professorship of Italian Language and Literature at ETH Zurich was closed in 2002. In order to continue the cultivation of contacts with Italian culture, the De Sanctis Visiting Professorship of Italian Literature and Culture was founded in 2007. It invites individuals of high standing in the fields of literature, culture, history, art history, or philosophy to visit ETH Zurich for one semester. Among the visiting professors have been Remo Ceserani, Giani Celati, Gianni Vattimo, or Dacia Maraini. The visiting professorship brings a great deal of enrichment to Italian studies in Switzerland by contributing in-depth examinations of subjects such as photography and literature, multicultural life in the Italian Renaissance, or Italian ideologies at the end of the 19th century. Due to its open nature, the De Sanctis professorship reaches out to a broad audience outside of ETH Zurich. The visiting renowned intellectuals are not only available for academic events in cooperation with other institutions (mainly the University of Zurich), but they also hold public readings at the Zurich Literaturhaus or take part in panel discussions on current topics to promote the dissemination of Italian culture.

**Visiting Professorship of Italian Literature and Culture**  
[www.lit.ethz.ch/faq/italienisch](http://www.lit.ethz.ch/faq/italienisch)



## French Literature and Culture

### A living link with the Francophone world

In 2007, ETH Zurich founded a Visiting Professorship of French Literature and Culture, which is filled each semester by an eminent personality from the Francophone world. The invited academics or artists deal with topics in the fields of literature, anthropology, sociology, the history of philosophy, and many others. For instance, among the guests at ETH Zurich have been Swiss author and essayist Etienne Barilier, anthropologist Marc Augé, poet Jacques Roubaud, and esotericist Antoine Faivre. The continuously changing character of this professorship allows students to study a range of topics in the humanities. Trans- and interdisciplinary events with the guests create opportunities for fruitful and unexpected encounters. For instance, there have been dialogs between the anthropologist and the architects or between the poet and the mathematicians. Because the selection of guests is guided by openness and the desire to discuss timely issues, the response outside of ETH Zurich is equally great. Regular joint colloquia and conferences are held with the University of Zurich, and are complemented by readings and theme nights in conjunction with the City of Zurich (Literaturhaus, Museum Rietberg).

**Visiting Professorship of French Literature and Culture**  
[www.lit.ethz.ch/faq/Franz](http://www.lit.ethz.ch/faq/Franz)







# The goal of interconnectedness

Interdisciplinary approaches are becoming more and more important for our society. D-GESS makes important contributions in research and teaching.

D-GESS regards itself as an integral part of the polytechnic's science and technology focus and as a committed partner in the Zurich university landscape. With this approach, D-GESS offers new topical research perspectives to academics at ETH Zurich who are investigating matters bordering on other disciplines – and it allows students to benefit from a broad educational underpinning.

## Two levels of integration

D-GESS lives up to this claim in two ways: In their research, the D-GESS professorships habitually join forces with groups from other faculties across disciplinary boundaries to form dynamic research teams. Due to such cooperation projects, open questions can be tackled in an efficient, performance-oriented, and successful manner. Today, the D-GESS professorships participate in a series of interdisciplinary research units that are administered together with other ETH departments, but also in cooperation with other universities or research institutions. The various cooperative efforts with the University of Zurich, such as in the fields of political science, historical research, and learning and training research, are of special importance here. These partnerships provide D-GESS researchers with access to new fields of research and thus serve as sources of exciting topics that are relevant for their own disciplines. Conversely, the knowledge accumulated by D-GESS researchers can contribute significantly to the solution of pressing problems in other areas.

In its teaching, D-GESS offers a range of courses that complement the focus on science and technology in the education provided by the other fields of study. In this way, the department allows ETH Zurich to offer a unique form of holistic and modern education.

On the one hand, the professors at D-GESS and their lecturers are part of the compulsory elective course that must be taken by all students at ETH Zurich. On the other hand, they also offer Bachelor's and Master's courses of their own as

well as certificate courses and the possibility of studying for a doctorate. This range of courses contributes to overcoming the traditional boundaries between disciplines. Students are thus confronted with the approaches used in other subjects and learn at an early stage how to scrutinize pressing problems from a holistic point of view and from various perspectives. It is precisely this ability to cooperate across disciplinary boundaries that is currently in increasingly high demand – not just in the world of academia, but also in practical application outside of the university.

# Foundations of academic practice

D-GESS studies the societal dynamics of a world shaped by the natural sciences and technology.

In order to be able to understand the broad range of societal, political, economic, legal, and philosophical presuppositions of the modern world, students require the analytical tools and the ability to reflect on their own work that only the humanities and social sciences can offer. The contexts in which technical and scientific actions take place are investigated within the broad range of disciplines at D-GESS.

In addition to project-oriented partnerships, the D-GESS professorships participate in a range of fixed interdisciplinary research groups:

## **Center for Comparative and International Studies (CIS)**

In 1997, political scientists at ETH Zurich joined forces with the political science professorships at the University of Zurich to found what is today the Center for Comparative and International Studies (CIS). This research center for comparative political science and international relations is currently home to around 150 academics, which makes the CIS one of the biggest political science research centers in Europe and facilitates strong internal synergies and a great deal of external impact. Most of the research conducted at the CIS concentrates on the four themes of political violence, democracy, political economics, and sustainable development. A broad range of methodologies is applied in the investigation of these phenomena, ranging from qualitative case studies and statistical analyses to formal (mathematical) models and computer simulations. Since 2005, the CIS has hosted the National Center of Competence in Research (NCCR) «Challenges to Democracy in the 21st Century» and the joint Master's course in Comparative and International Studies of ETH Zurich and the University of Zurich. [www.cis.ethz.ch](http://www.cis.ethz.ch)

## **Institute for Environmental Decisions (IED)**

At the Institute for Environmental Decisions (IED), academics from the ETH departments GESS, Environmental Sciences, and Agricultural and Food Sciences collaborate closely in the fields of economics, psychology, and political science. The institute with its interdisciplinary approach analyzes how individual and collective decisions influence the consumption of natural resources and how these decisions affect the emergence and resolution of environmental problems. Specifically, the IED's projects deal, for instance, with remuneration for environmental services, decisionmaking structures in agriculture, conflicts arising from environmental change, or the question of how energy efficiency affects the purchasing decisions of consumers. [www.ied.ethz.ch](http://www.ied.ethz.ch)

## **Coping with Crises in Complex Socio-Economic Systems (CCSS)**

The ETH Competence Center for Coping with Crises in Complex Socio-Economic Systems (CCSS) deals with the emergence and resolution of various kinds of crises. These include upheavals in the financial markets and political conflicts as well as the question of how traffic jams and crowd disasters arise. The work of the CCSS academics relies on a broad range of approaches from the fields of the natural sciences, social studies, and computer science. By applying an empirical approach as well as theories and methods from statistical physics, the social sciences, network theory, and the analysis of complex systems, the CCSS attempts better to understand how crises arise and to which extent social crises in particular can be anticipated. The CCSS will be transferred to the newly founded ETH Zurich Risk Center from the beginning of 2012 on. [www.ccss.ethz.ch](http://www.ccss.ethz.ch), from 2012 on: [www.riskcenter.ethz.ch](http://www.riskcenter.ethz.ch)

### **North South Centre**

The North South Centre at ETH Zurich bundles a broad interdisciplinary research expertise from the fields of technological sciences, environmental sciences, the humanities, and social studies. The competence center works closely together with institutions from developing and emerging countries and concentrates on the three areas of research collaboration, capacity development, and networks and communication. It provides theoretical and methodological expertise and takes part in interdisciplinary projects in the thematic research areas of food security, natural resource management, urban and rural transformation, and technology and infrastructure. [www.northsouth.ethz.ch](http://www.northsouth.ethz.ch)

### **Teaching and Learning (EducETH)**

The ETH Competence Center for Teaching and Learning (EducETH) works at the intersection of university and high school. It aims to make a contribution to the scientifically founded optimization of school learning and teaching and thus also to improve the transition from secondary school to university. On the one hand, EducETH is based academically on the sciences that have traditionally been part of the ETH Zurich curriculum, such as biology, chemistry, information technology, mathematics, and physics. On the other hand, the projects supported by EducETH are also informed by the results of empirical research on teaching and learning. The work is distributed across three centers of learning: The Ausbildungs- und Beratungszentrum für Informatikunterricht (training and guidance center for IT instruction); the Life Science Learning Center, operated jointly with the University of Zurich; and the MINT Learning Center for schools, which focuses on classroom instruction in the natural sciences. [www.educ.ethz.ch](http://www.educ.ethz.ch)

### **Institute of Behavioral Sciences (IFV)**

The Institute of Behavioral Sciences (IFV) is home to two professorships in the behavioral sciences: The Professorship of Learning and Training Research investigates ways to optimize school classroom instruction in the MINT subjects. It combines fundamental research on human learning with applied research projects on optimizing learning in school environments. A comparable bridging effect is expected to result from the Professorship of Cognitive Psychology and its Application in Technology, a position that has yet to be filled. [www.ifv.ethz.ch](http://www.ifv.ethz.ch)

### **Institute of History (IFG)**

The Institute of History (IFG) comprises the Professorship of History of Technology, the Professorship of History of the Modern World, and the Archives of Contemporary History. The members of the institute are engaged in analyzing and documenting societal developments, in particular technological change, the global circulation of knowledge, migration, and economic dynamics in the 19th and 20th centuries. Research, teaching, and archival documentation serve to discuss the interrelationships that have determined the evolution of technological and natural scientific knowledge. [www.ifg.ethz.ch](http://www.ifg.ethz.ch)

### **Competence Centre History of Knowledge (ZGW)**

The Competence Centre History of Knowledge (ZGW) is a joint center of competence of ETH Zurich and the University of Zurich. Here, researchers from the fields of art history, literary history, history of technology, history of philosophy, social history, and economic history as well as researchers in science studies examine the circulation, dynamics, representation, and genealogy of knowledge and values and their historical transformations. The ZGW maintains close academic links with partners in Berlin, Bielefeld, Constance, London, Princeton, Tel Aviv, and Vienna. [www.zgw.ethz.ch](http://www.zgw.ethz.ch)

# Choices for a holistic education

In addition to the mandatory basic choice of courses for all students at ETH Zurich, D-GESS also offers specialized degree courses and qualification programs.

D-GESS conducts a broad range of courses that may be part of coursework in other departments, components of the compulsory elective course, or independent degree courses and qualification programs.

## **Compulsory elective course GESS**

All students at ETH Zurich must attend courses within the GESS compulsory elective course at some point during their education. These courses contextualize the knowledge students have accumulated during their training according to social and societal criteria and analyze it critically. Students are familiarized with the mindsets and methodological approaches of other disciplines and thus enabled to adopt a holistic perspective.

The GESS compulsory elective course allows ETH Zurich, as a university with a technical-scientific focus, to provide a unique choice of educational offerings that supports a comprehensive and modern knowledge transfer. Therefore, the compulsory elective course is also a competitive advantage in comparison with other top-ranking universities at the international level.

## **BA in Public Policy**

The BA course in Public Policy offers prospective career officers of the Swiss Armed Forces an education in selected subjects from the humanities, social studies, public policy, and military science in accordance with the requirements of a modern army.

## **MA in History and Philosophy of Knowledge**

The specialized Master's course in History and Philosophy of Knowledge provides a broad proficiency in the humanities, natural sciences, and technical sciences. Students gain a well-founded understanding of the natural sciences and technical sciences. On the one hand, they are given the analytical tools to critically review the premises and effects of these scientific disciplines. On the other hand, the course enables them to comment on the conditions of academic work. Students also learn how to make scientific results and their societal impacts accessible to a broader audience.

## **MA in Comparative and International Studies**

The specialized Master's course in Comparative and International Studies teaches theories and methods for the academic analysis of interlinked national and international political processes and problems. It provides an excellent foundation for a future academic career.

## **Doctoral studies**

At the doctorate level, D-GESS offers two kinds of study courses: the interdisciplinary D-GESS doctorate and the specialized doctorate. The D-GESS doctorate is recommended for candidates with a Master of Science (MSc) in natural or technical sciences from ETH Zurich or another university. This doctorate necessitates the involvement of another ETH department, e.g., in the form of second examiners from the disciplines of natural or technical sciences within ETH Zurich. Candidates for a specialized doctorate should hold a Master's degree in one of the D-GESS professorships (e.g., law, history, philosophy, political science, sociology, economics).

### Continuing education

In addition to the compulsory elective GESS course and the Bachelor's and Master's courses, D-GESS also offers two courses for further qualification of professionals, both of which provide the foundations for working in an international environment. The Master of Advanced Studies in Development Cooperation (MAS DC) prepares university graduates for a professional career in development cooperation. The Master of Advanced Studies in Security Policy and Crisis Management (MAS ETH SPCM) provides in-depth knowledge about modern risks and threats as well as expertise in security policy and grand strategy. It teaches how complex problems, crises, and emergencies can be analyzed and resolved.

### Didactic training

In close cooperation with the individual professors, D-GESS is also responsible for didactic training at ETH Zurich. It is offered in two variants: as a Teacher's Diploma in the subjects of biology, chemistry, computer science, mathematics, physics, and sports and as a Teaching Certificate in the fields of agricultural and food science, mechanical engineering, electrical engineering, and environmental sciences. The Teacher's Diploma is a certificate of pedagogical-didactic training with a view to teaching at secondary schools, specialist secondary schools, universities of applied sciences, and other higher educational establishments, while the Teaching Certificate is more suitable for those seeking basic training as teachers in further education within businesses and institutions. This selection of courses is complemented by the Master of Arts «Fachdidaktik der Naturwissenschaften» (Science Didactics). The Joint Master of the Zurich University of Teacher Education, ETH Zurich, and the University of Zurich qualifies graduates for work at universities of teacher education and specialized didactic research at universities.



### GESS Library

The GESS library was reopened in autumn of 2010 as a joint project of the ETH library and the department on the occasion of the GESS professorships being merged in a single location. It is attached to the organizational structure of the main ETH Zurich library and offers the same services. The GESS library meets the information needs of the GESS department members and of the general public. Its holdings encompass 20.000 freely accessible documents (books, reference works, and dictionaries) as well as 170 journal subscriptions from the fields of philosophy, political science, sociology, military science, history, law, economics, and technical sciences.

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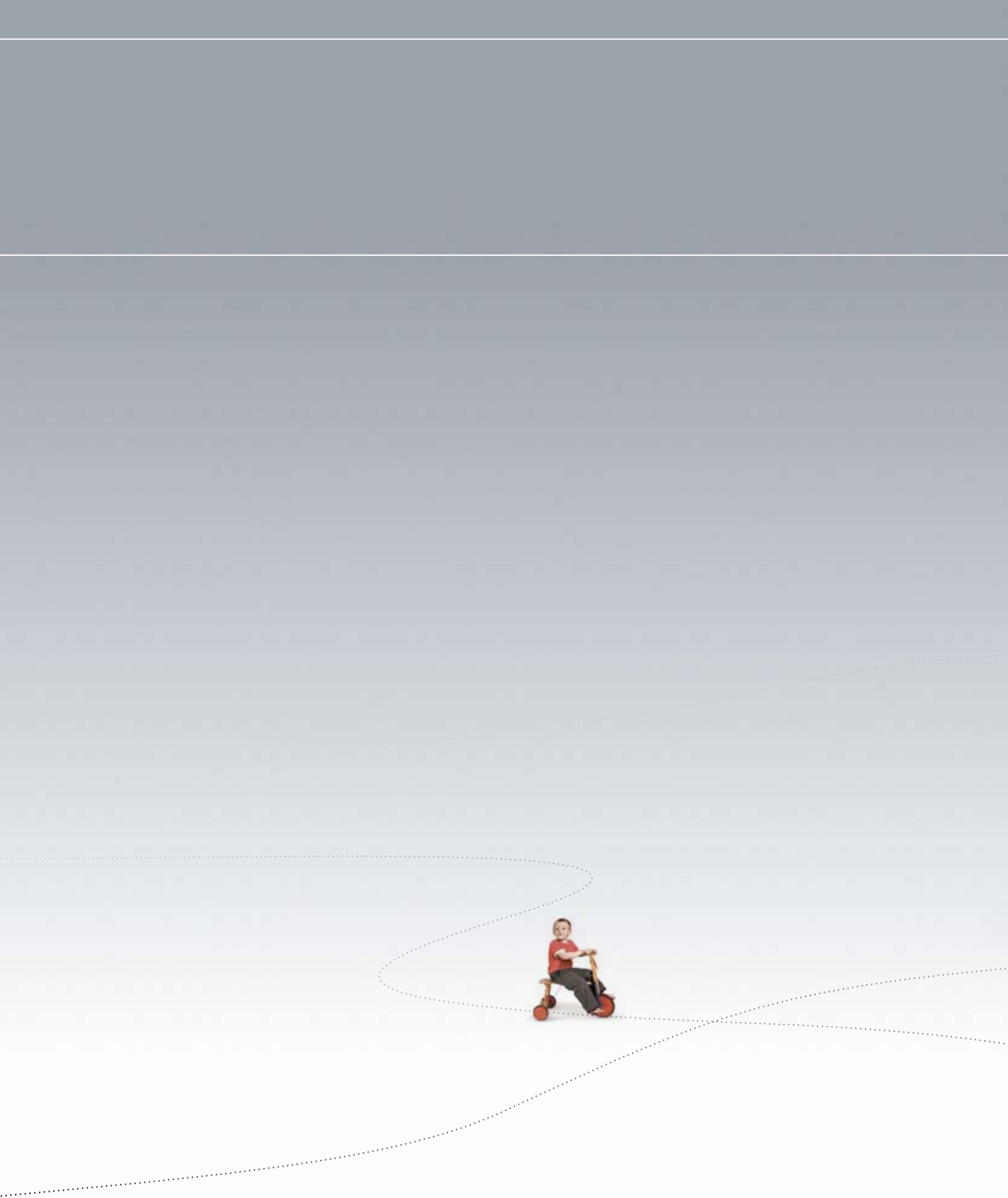
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## DGESS

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