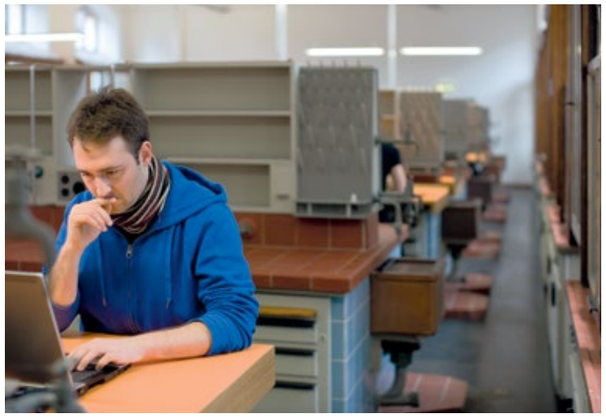
MASTER

Master of Science ETH UZH
in Computational Biology and Bioinformatics CBB

Departement Informatik
Department of Computer Science

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

University of Zurich[UZH]



Bioinformatics: The future is interdisciplinary

Bioinformatics is a young, rapidly evolving, and interdisciplinary research field.
It develops and applies computational techniques and processes to analyze genetic and other biological information and to tackle challenging problems in biology.
The scientific discipline and its applications are becoming increasingly important and involved in nearly all areas of life sciences, where most of the progress is based on bioinformatics.

A new field of research
Computational biology and bioinformatics complement the experimental biosciences with quantitative modeling and data analysis at a complexity level adapted to living systems. These new fields play a role comparable to that of mathematics in the physical sciences. The unprecedented recent development of experimental methods with the generation of large-scale datasets, as well as the increasing need to analyze and design highly complex biological systems has opened a new frontier of research with fundamental scientific challenges. For instance, scaling proven methods to the novel complexity level of biology is required to ensure validated scientific results and insights. New algorithmic techniques have to be explored to be able to extract information from large datasets.

Research priority
At ETH Zurich, research in bioinformatics is mainly carried out by two divisions: the Department of Computer Science (D-INFK) and the Department of Biosystems Science and Engineering (D-BSSE). At the University of Zurich, this research focus lies primarily with the Faculty of Science.

« I think the biggest innovations of the 21st century will be at the intersection of biology and technology. »
Steve Jobs, biography

Bioinformatics is not limited to classical research topics, e.g. analysis of gene sequence data or prediction of protein folding rates. A majority of the scientists at the two institutions work primarily on the computational modeling and analysis of diverse biological systems.

Interdisciplinarity at its best
Bioinformatics means the integrated development and use of tools from mathematics, computer science, biology, chemistry and physics. Academic and cultural characteristics of each discipline lead to critical, in-depth and comprehensive discussion.
Interdisciplinary research requires an interdisciplinary curriculum. Therefore, in 2007 ETH Zurich and the University of Zurich jointly established the specialized Master's program in Computational Biology and Bioinformatics (CBB).

Well prepared for the future
Thanks to the wide range of courses and the flexible structure of the curriculum, students enjoy a large degree of freedom to customize their study plan, supported by a dedicated mentoring scheme.
Another key feature of this program is its colorful mix of student personalities with diverse nationalities and cultures. It creates a unique learning experience and a very special working environment.
The overall objective of the program is to help students become experienced, creative and efficient problem solvers in computational biology and bioinformatics, equipped with advanced methodological and conceptual knowledge to deal with the problems of tomorrow.

Be one of the next generation bioinformaticians and help solve exciting and demanding scientific and application problems!

ETH Zurich and University of Zurich – A perfect bond

The CBB program is a joint Master's between the Computer Science Department at ETH Zurich and the Faculty of Science at the University of Zurich (UZH).

ETH Zurich

ETH Zurich maintains the highest standards for education, fundamental research and applied results, creating value for society at large. The institution has asserted itself as one of the world's most reputable universities for science and engineering.

Pioneering research

21 Nobel laureates, including Wilhelm Konrad Roentgen, Albert Einstein and Kurt Wuethrich, have studied, taught or pursued their research at ETH. Currently, over 450 professors seed and extend its superb reputation and scientific scores. Since its foundation in 1855, ETH has believed and invested in long-term and interdisciplinary research. It continually strives to bring some of the world's brightest thinkers to Zurich, fostering a vibrant intellectual community for the students. ETH promotes access to excellence and inspires through education.

D-INFK and D-BSSE

Both departments embrace diversity and value courtesy, consideration for others, and individual responsibility. They offer a supportive and caring community. The faculty members are high-caliber experts in their domains, dedicated to improving public health. While computer science professors cover the many facets of modern computing, from the underlying theory to the design of practical systems, those at D-BSSE focus on applications of computing to understand and engineer biological systems.

Potential to contribute something unique

Computer science pervades many areas of research and industry, and plays a vital role in all aspects of society. At its heart, it is a discipline of problem solving. The department thus strives to achieve the highest possible quality by going broad and deep in its research and teaching. Three major factors ensure the value of ETH's CBB degree: selectivity, rigor in the curriculum and close interaction with the department's faculty.

University of Zurich

The University of Zurich with 26,000 enrolled students is Switzerland's largest university. Founded in 1833, it was Europe's first academic institution established by a democratic political system. Today, UZH is one of the foremost universities in the German-speaking countries. Made up of seven faculties covering some 100 different subject areas, the university offers a wide variety of Bachelor's, Master's and PhD programs.

Interconnected and recognized

As a member of the «League of European Research Universities» (LERU), UZH belongs to Europe's most prestigious research institutions. Numerous distinctions highlight the university's international renown in the fields of clinical medicine, immunology, neuroscience and structural biology as well as in economics. To date, the Nobel Prize has been conferred on twelve UZH scholars.

Faculty of Science

The Faculty of Science at the University of Zurich is one of Europe's principal centers for research and teaching in the natural sciences. Several disciplines at the faculty are at the forefront of global competition, and scholars and scientists are affiliated with high-profile research projects. Members of the faculty hold leadership positions in various National Centers of Competence in Research – for instance, the NCCR Structural Biology – and have received a number of grants from the European Research Council in the area of life sciences.

Diverse and comprehensive

The faculty is the largest and most diverse school of science in Switzerland, with 13 institutes, 8 Bachelor's and 28 Master's degree programs as well as 14 fast-track Master's programs.

Switzerland – Part of the world's leading «BioValley»

The Swiss chemical and pharmaceutical industry play a pivotal role in the global market. Their economic growth is based on the country's exceptional strength in research and development, as well as in its knowledge and technology transfer to the private sector. The highest academic quality and standards, as well as excellent research infrastructure safeguard and expand this success.

Unique location

During their studies, Master's or PhD students in Computational Biology and Bioinformatics will learn about topic-related institutions in Switzerland, for instance the SystemsX.ch Center (Swiss Initiative in Systems Biology) in Zurich or the Swiss Institute of Bioinformatics (SIB) with locations in Geneva, Lausanne, Basel, Berne and Zurich. Various academia-industry partnerships are being developed which offer students and young researchers access to expert knowledge, new ideas and opportunities, cutting-edge technologies, and specialized equipment and facilities. Based on individual initiative, students get connected with the private sector at an early stage and interact with potential employers.

A stone's throw from the «BioValley»

Basel, located in the northwest of Switzerland and one hour away from Zurich, together with Strasbourg (France) and the Upper Rhine (Germany) form the economically dynamic trinational area «Bio Valley». Irrespective of pharmaceutical giants like Novartis and F. Hoffmann-La Roche, the city has one of the highest densities of successful life science companies worldwide.

In the specialty chemicals business, innovative small and medium-sized enterprises, start-ups and spin-offs are at home in this vibrant and rapidly growing area.

Little big city

Switzerland is known for its political and economic stability, safety and extraordinary beauty. Swiss cities have a deep and rich history and combine traditions with the highest standards of modern living.
Zurich is Switzerland's largest city and its economic and cultural center.
For many years it has been ranked as one of the top two cities in the world for quality of life. Within walking distance of ETH and UZH, the city's core is a beautiful old town with excellent restaurants, quaint cafes, world-class museums and galleries, and a long promenade next to the lake, which stretches more than 30 km into the mountains. Zurich is also international, ethnically diverse, ultramodern in architecture and life style, and offers a vibrant night life. These are just a few reasons why some are calling Zurich «the smallest metropolis in the world.»

Bioinformatics in practice: Gene databases

Today, a tiny amount of DNA is all that is needed to determine the ancestry of an Egyptian mummy or to discover a new biological species. This is only possible due to the relentless efforts of bioinformaticians, who have created huge sequence databases as references.

New understanding and new technology

For many years now, DNA has been a powerful tool used in investigations – think, for example, of a police team taking samples at a crime scene or of plant breeders tracking genetic variety in order to improve an agricultural crop.
However, until recently the use of DNA sequences was severely limited by a lack of reference information. Only well-developed 'model' organisms, including laboratory animals and plants, or certain well-characterized bacteria had their genomes sequenced and could be used for comparisons.

Trace the evolution of life and biology

Some of the most exciting applications of DNA sequencing technology arise when it is not clear from the outset what researchers can expect to find. Archaeologists, for example, had long been eager to use the power of DNA sequencing to their advantage. What kind of foodstuffs did people consume in ancient times? What was the cause of ancient disease epidemics? Could DNA be used to track human migration routes, or establish when and where farm animals had been domesticated?
Similarly, even many of today's mysteries can only be solved by DNA analysis: What is the root cause of the new epidemic in honey bees? What is the energy source for bacteria found thriving many kilometers deep down in the Earth's crust? How can we find novel antibiotics genes?

The next era in personalized medicine

Enter bioinformatics. The variety of life and its molecular toolkit are so daunting that it is absolutely essential to have carefully designed reference information and classification systems.
Bioinformaticians make it their task to bring order into the chaos: to establish which gene sequences are diagnostic for certain species or certain functions, to develop algorithms to assemble raw sequences into proper genomes, or to predict the function of newly discovered genes.
Over time, bioinformaticians have created huge online repositories dedicated to all aspects of genetic sequence data – repositories for whole genomes, databases on genetic variations in cancer or inherited diseases, or automated pipelines to establish the position of coding sections in DNA.
Bioinformatics even helps to predict functional capabilities for entire organisms, for example regarding their metabolism.

Unlock the mysteries of human history and present

Another big challenge for bioinformaticians is to resolve questions of ancestry, both recent and ancient. How did the history of the human species play out? Am I related to Napoleon? What was the first living organism on Earth? What happened during the Cambrian 'explosion' of body forms?
Again, bioinformatics analysis of DNA sequence data has surpassed all other methods for addressing these questions. It is bioinformaticians, with their well-stocked databases, who have given us the best resolution in the big 'Tree of Life' and have confirmed Darwin's theory of evolution in beautiful detail, mutation by mutation.

Prof. Christian von Mering
University of Zurich

Bioinformatics in practice: Synthetic Biology

Much of bioinformatics is devoted to studying different aspects of existing, natural systems. Recently, however, it has acquired an additional role in the rational engineering of biological systems, in the new discipline of synthetic biology.

Putting modern engineering into biology

Since the first breeding of plants and microbes for nutrition (for example, in beer brewing), improvements in biotechnological production processes have mainly been achieved by trial and error – random mutations and subsequent selection of 'better' variants. Likewise, the development of new drugs in the pharmaceutical industry has a major emphasis on screening for small molecules that bind tightly to targets of interest. Bioinformatics contributes to this endeavor, for instance, by predicting small molecule structures that could be effective drugs. But we are still far from predicting 'a drug'.

Beyond the lab – where bioinformatics serves human needs

Synthetic biology aims at making such development processes more rational by combining new experimental capabilities – such as DNA synthesis – with new theoretical tools. Bioinformatics, in this case, is applied to design new biological functions.
One prominent example for this idea is the production of the antimalarial drug artemisinin in engineered yeasts. The drug has been known in traditional Chinese medicine for more than 2'000 years, but still today it needs to be extracted from a specific herb, at too high costs for distribution especially in underdeveloped countries. Approximately 10 years ago, researchers at University of California, Berkeley, started to engineer yeasts to produce a precursor for artemisinin. This involved bioinformatics in searching for appropriate metabolic pathways and in engineering DNA constructs to modify the microbes. Now, low-cost production of this drug is within reach.

The intrinsic value of life and synthetic biology

Synthetic biology is a new field, and admittedly artemisinin is one of the few 'working' examples so far – but there is much more to come. Imagine that – similar to modern aircraft or car engineering – one could use computer-aided design of new functions in living cells to a large extent before building and testing prototypes. These capabilities would enable substantial improvements in areas such as the development of new drugs for important diseases, or the development of next-generation biofuels.
This involves many challenges. For example, we need to better understand how interacting networks in living cells operate, and we have to develop methods to predictably design biological circuits despite the 'sloppy' character of biology. Progress will depend heavily on bioinformatics – for analysis and design in biology.

Open doors for scientific and personal development

For students at ETH/UZH, the field has still another attraction, namely participation in the international competition on Genetically Engineered Machines (iGEM).
It involves interdisciplinary student teams from around the world conducting their own summer projects in synthetic biology and competing to come up with the best ideas and implementations on 'new' biology.

Prof. Jörg Stelling
ETH Zurich

Master's program: Qualification, structure and objectives

The CBB Master's is a specialized joint degree program at the interface between biology and computer science. A young, interdisciplinary program for tomorrow's leaders in life science research. The goal of the program is to provide students with a broad education in computational biology and bioinformatics based on strong foundations in computer science, biology and mathematics.

The program leads to a Master of Science ETH UZH in Computational Biology and Bioinformatics.

The curriculum includes practical experience with experimental biology and computer science as cooperation and communication are key to success in this highly interdisciplinary field.

Curriculum structure

The Master's program is designed as a full-time study program.

Duration: 3 semesters
ECT credits: 90 credit points
Language: English

The Master's degree must be obtained within three years, otherwise credits will expire and students may be disqualified from graduation.

The structure of the CBB Master's aims at an optimal trade-off between the breadth of education and flexibility in specialization according to the student's own choices. The program is divided into four large blocks. For each block there exist specific credit requirements and some restrictions as to the combinations of courses that are allowed.

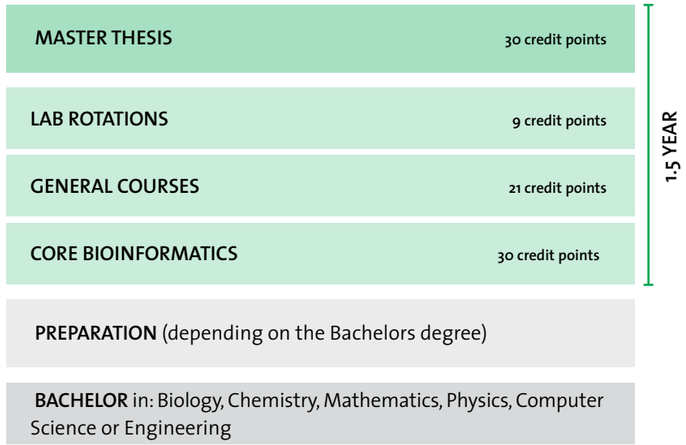
Core bioinformatics (30 cp ECTS)
The courses are grouped into the three focus areas:
- Structures: molecular modeling, structural bioinformatics
- Sequences: sequence analysis, alignment, phylogenetic trees
- Systems: modeling and analysis of biological networks

At least one course from each of the three focus areas has to be attended.

General courses (21 cp ECTS)
This area encompasses courses on foundational, general methods and techniques. It is subdivided into:
- Methods in Computer Science: computer science and applied mathematics areas such as modeling, optimization and data analysis
- Advanced Courses: choices for in-depth studies
- Humanities, Social Sciences and Political Science: enrichment of the student's general education

Lab rotations (9 cp ECTS)
Flexible, short research projects providing a practical overview of different research areas and applying concepts taught in the general and core courses. Three lab rotations are performed in different research groups, at least one of which with an emphasis on experimental biology.

Master thesis (30 cp ECTS)
A research project of 6 months' duration and including a written report and an oral presentation.



Mentor system

The CBB Master's program is mentor-driven. Each student must select a mentor before starting the program or during the first semester. The individual curriculum and the face-to-face support are designed to provide an excellent, specialized education and at the same time to realize the capabilities and expectations of the student.

Prerequisites

The program is open for students holding a Bachelor's degree in biology, chemistry, mathematics, physics, computer science or engineering. Depending on the discipline in which students hold a Bachelor's degree, additional basic knowledge in some or all of those fields will be necessary for entering the program. The entry requirements are defined by the curricula of a set of courses, the composition of which depends on the discipline of the applicant's Bachelor degree.

Admission

Details of the application and admission process can be found on the webpage at www.admissions.ethz.ch. In particular, an application is to include a personal letter of purpose, a recommendation letter from an academic referee and proof of sufficient English knowledge. Furthermore, candidates are recommended to submit additional information that might be relevant for the evaluation of their application (scientific or technical publications or awards, previous graduate studies, professional experience, etc.).

Financial matters

In comparison with other countries, tuition fees in Switzerland are rather low. Detailed information regarding financial matters, including tuition fees at ETH, the cost of living, travel allowances and scholarships for national and international students, is provided on the website of the ETH Rectorate at www.rektorat.ethz.ch.

Typical prerequisites for admission, tabulated according to Bachelor's degree

BACHELOR IN:	BIOLOGY	COMPUTER SCIENCE	MATHEMATICS/STATISTICS	BIOINFORMATICS
Biology		Introduction to Programming, Data Structures and Algorithms	Calculus and Linear Algebra Probability and Statistics I	Introduction to Bioinformatics
Chemistry	General Biology, Molecular Biology and Biochemistry	Introduction to Programming, Data Structures and Algorithms	Calculus and Linear Algebra Probability and Statistics I	Introduction to Bioinformatics
Computer Science	General Biology, Molecular Biology and Biochemistry			Introduction to Bioinformatics
Mathematics / Physics / Engineering	General Biology, Molecular Biology and Biochemistry	Data Structures and Algorithms		Introduction to Bioinformatics

First-hand reports: Study experience and career prospects

The CBB Master's program attracts talent from diverse backgrounds. Two current and four former students share their personal inside experiences, career aspirations and up-close view on how ETH and UZH are preparing for the future.

Veronika Bosková, 27, Slovakia

2005 – 2008: **Bachelor in Biology, Utrecht University**
2008 – 2011: **Master in Cancer Genomics and Developmental Biology, Utrecht University**
2011 – present: **CBB Master's program, ETH/UZH**

«Studying biology and genomics, I became aware of the demand for bioinformaticians. I started to be progressively interested in scripting and took an introductory course in Perl. After my stay in Boston, where I worked for a project based on data analysis, I decided to become a fully educated bioinformatician, including mathematical and statistical skills.
The CBB Master is a very flexible program and I am free to choose almost any course. I am part of a highly motivated and heterogeneous group. Everybody tries hard to learn new and often really difficult material. Students spend entire days at the institute or in libraries. I have not seen such a level of motivation at other universities before and it really inspires me.
ETH has a great reputation and is one of the best engineering schools outside the US. Everything is very well organized, from the registration through to the lab rotations and Master thesis. Our professors have a responsible attitude and we get ready access to resources such as libraries and computers.

« The CBB Master is a very flexible program and I am free to choose almost any course. »

Soon I will be finishing the program and starting my position as a doctoral student here in beautiful Zurich. I think in the future I will stay in research and possibly pursue my current fields of interest, which are HIV and copy-number polymorphisms.»

Lorenzo Gatti, 24, Italy

2008 – 2011: **Bachelor in Industrial and Environmental Biotechnology with Major in Bioinformatics, University of Milan**
2012 – present: **CBB Master's program, ETH/UZH**

«At high-school time I participated in a competition and received the chance to work with a group of bioinformaticians. Our project was about investigating the origin of intron gain and loss in homologous gene structures. We developed a model and published an article which appeared in EMBO Reports. This world captured my attention and I decided to study bioinformatics.
With a Bachelor's degree in my pocket, I was looking around for the right Master's course to complete my education. Thanks to the advice of a friend, a senior researcher who used to work in the ETH biology department, I was introduced to the CBB Master's program.
The educational system at ETH is quite different from what I knew. All the lectures I have attended so far have required a lot of individual work on top of normal study. Without a high degree of dedication and self-motivation you can't get through it.
At ETH/UZH, I interact with leading researchers within the field and have access to the best resources. The professors and assistants here are the best I have ever met.
After my Master studies I would love to continue with a doctoral program. Being fascinated by the possibility of applying artificial intelligence to solving complex biological problems, I hope to be able to contribute to simplifying biologists'/biotechnologists' life through the smart application of informatic methods.»

« At ETH/UZH I am connected with the most relevant researchers within the field and I have access to the best resources. »

From left to right: Stefan, Hoda, Veronika, Lukas, Lorenzo, Parit

Lukas Widmer, 26, Switzerland

2006 – 2010 **Bachelor in Computer Science, ETH Zurich**
2010 – 2013 **CBB Master's program, ETH/UZH**

«I have always been fascinated by computing and this ultimately led to my decision to study computer science at ETH. The elective courses in the third year of the Bachelor's allowed me to explore new, intriguing fields. In the end, computational biology, an exciting, young discipline won over my interest. I therefore decided to continue with the CBB Master's program.

« I strongly believe the greatest advancements in the history of computational biology are yet to come. »

One of the highlights during my Master's studies was the international Genetically Engineered Machine competition (iGEM) in 2011. Participation was offered as an extended course in synthetic biology. Meeting up with other teams from all over the world in Amsterdam and presenting the results of four months' work at the Massachusetts Institute of Technology (MIT) in Boston were awesome experiences.
I am currently in Santa Barbara writing my Master's thesis in collaboration with a group at the University of California. It is an intensive time, but I feel very much at home in this international and interdisciplinary field. And I have made new friends for life.
When I get back to Switzerland, I definitely want to continue doing research and join a doctoral program. On a longer timescale, I would be interested in exploring collaboration with industry in order to make recent developments in research available to a wider group of researchers.
Combining experimental questions, approaches and data from the broad area of biology with the methods from computer science to uncover the underlying mechanisms of life is fascinating. The problems posed often go to the limit of what can be done with computers these days, driving both the development of new computational methods and theory. I strongly believe the greatest advancements in the history of computational biology are yet to come.»

Hoda Sharifian, 28, Iran

2002 - 2006: **Bachelor in Electrical Engineering, Amirkabir University of Technology, Tehran**
2006 - 2008: **Master in Electrical Engineering, Amirkabir University of Technology, Tehran**
2008 - 2010: **CBB Master's program, ETH/UZH**
2010 - present: **Doctoral Studies in Systems Biology of Complex Diseases, ETH Zurich**

«During my studies in electrical engineering, I learned about the concept of a 'system'. I automatically started to look at every phenomenon from a systematic point of view. Could we analyze biological phenomena as we do engineering systems? Is it possible to describe cellular reactions with differential equations? Searching the web to find answers to my questions, I discovered that an academic field of study searching for adequate answers did in fact exist.
At that time, my sister had already started her doctoral studies at ETH, and she introduced me to the CBB program. The program offers a biology course for engineers as a prerequisite, which, in my case, eliminated my concern about not being qualified enough in this field. Compared with other universities the conditions overall at ETH/UZH are very attractive, although the cost of living is considerable. I really liked the friendly atmosphere and teamwork within our study group and was positively surprised by the international mix of people and their different backgrounds. The professors were great and the diversity of their lectures made it easy for me to find subjects that were close to my area of interest. Today, I am working for the Institute of Biochemistry at ETH. I realize that there is still a long way

« I really liked the friendly atmosphere and teamwork within our study group and was positively surprised by the international mix of people. »

to go to merge engineering principles into biology. Being part of this progress in reaching the goal of 'systems biology' is very exciting. And it's truly interdisciplinary: If you get bored with the one side (biology or programming), you can always switch over to the other. It is hard to be professional in both, but there are a few of us who are.»

Parit Bansal, 27, India

2003 – 2007: **Bachelor in Technology, Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar**
2008 – 2011: **CBB Master's program, ETH/UZH**
2011 – present: **Software developer, Swiss Institute of Bioinformatics, Geneva**

«As a software engineer, I was fascinated by the amount of data crunching required from the software tools that are used by life scientists. But writing and implementing complex algorithms in a way that they can be scaled for large data sizes and be maintainable is only possible by gaining the right domain knowledge. The CBB Master's program is cut out to provide exactly that.

« ETH has a proven track record and attracts some of the best professors and students in the field. »

The CBB is a great program. After consulting with my mentor, I was free to choose courses from different departments. This allowed me to create my own individual curriculum. My study colleagues came from diverse backgrounds and countries, and it was a great experience to be part of such an interdisciplinary and friendly crowd.
ETH has a proven track record and attracts some of the best professors and students in the field. To me, it is on a par with the top-tier technical universities in the US. Having experts from all the disciplines required to excel in life science, ETH/UZH is the perfect place to train for an interdisciplinary field like bioinformatics.
For most students, a safe stay and a tolerant society are crucial factors. Compared to other hot destinations for studies, Switzerland offers a much more stable environment, economically as well as socially.
From the perspective of an engineer, in life sciences we are trying to understand one of the most complex machineries ever made, which is life itself. What else could be more challenging and exciting?»

Stefan Zoller, 37, Switzerland

1991 – 1997 : **Primary School Teacher, Lehrerseminar Heerbrugg**
2003 – 2007: **Dipl. Ing. FH with focus on technical computer science, FHSG St. Gallen**
2008 – 2010: **CBB Master's program, ETH/UZH**
2010 – present: **Doctoral studies, Computational Biochemistry Research Group, ETH Zurich**

«Before joining the CBB Master's program, I knew next to nothing about biology. But I was challenged by the idea of studying at the border of computer science, in combination with a totally new discipline. Furthermore, I like dealing with large amounts of data, the way you do in statistics and high-performance computing. Computational biology would allow me do both of these.
Plumping for ETH/UZH was easy – it is simply the best place in Switzerland and continental Europe to do a Master's in Computational Science. And the diversity of the topics as well as the diversity of the students is amazing.
The classical researcher's career is no option to me. But I like teaching combined with research. In the future, a permanent position at some technical college (FH) could therefore be a nice alternative. Most of these schools are not yet aware of the importance of bioinformatics and it might be possible to build something new.

« Similar to computer science, bioinformatics offers the opportunity to solve interesting problems, but coupled to biology, which is basically everything that is alive. Fascinating! »

Similar to computer science, bioinformatics offers the opportunity to solve interesting problems, but coupled to biology, which is basically everything that is alive. Fascinating!»

Information and contacts

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Student life

Course catalogue
(search via Department of Computer Science)
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Computer Science Library
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NEBIS library network
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ETH student associations
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Doctoral studies at ETH/UZH
www.phd.ethz.ch
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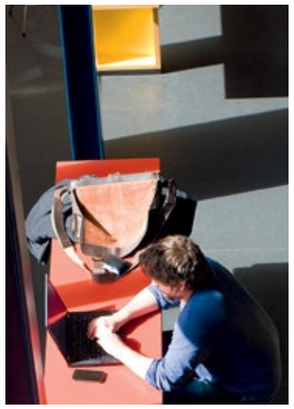

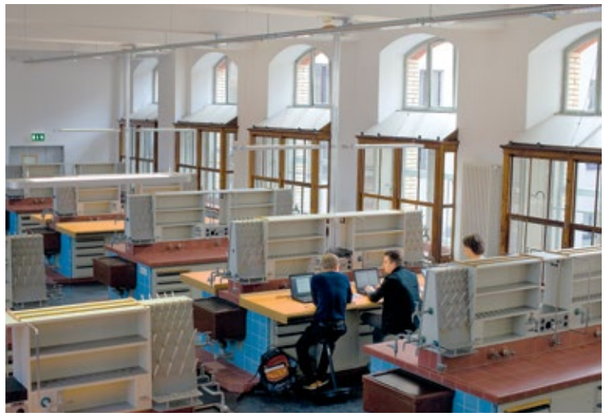



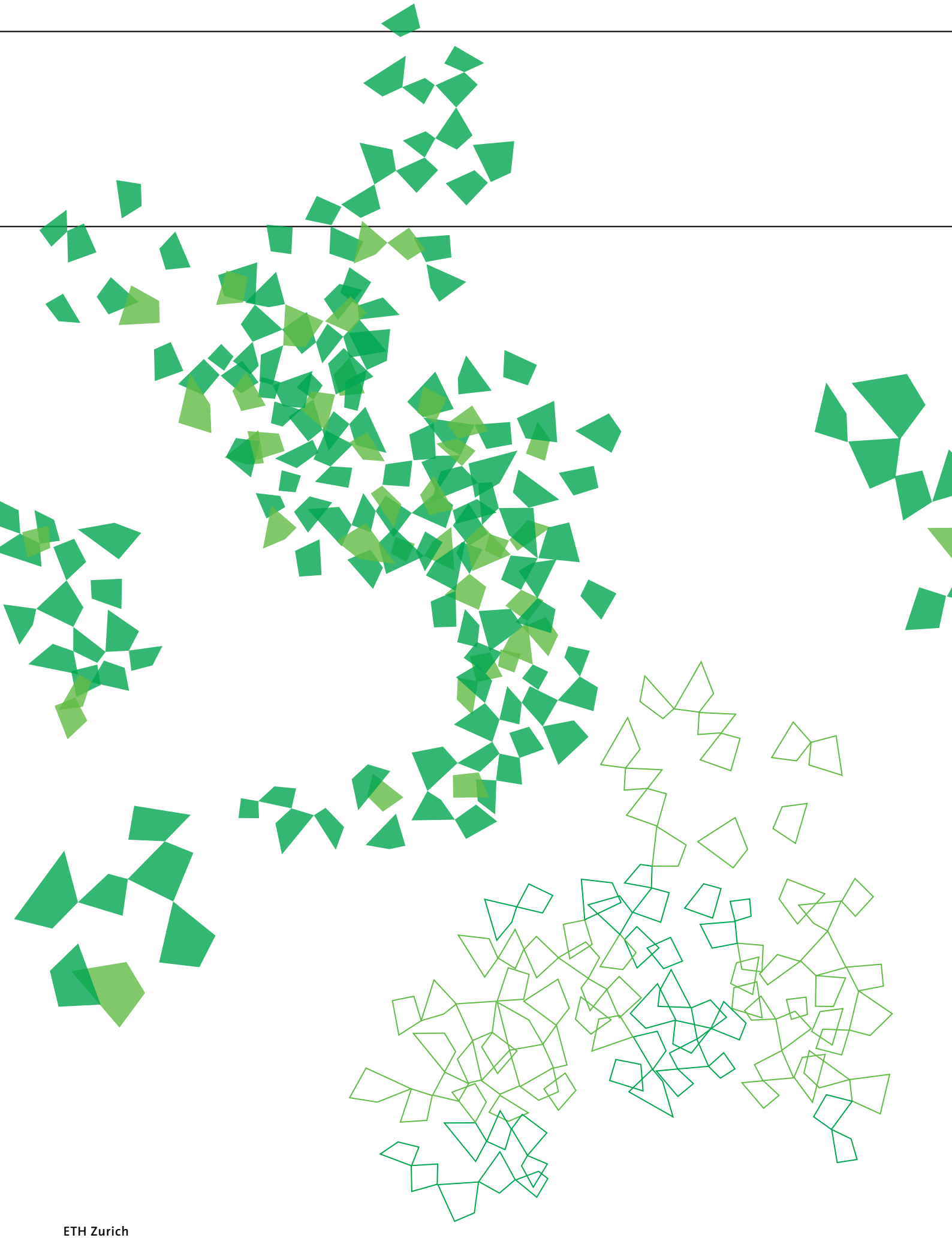

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