



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

瑞士联邦理工大学，洛桑

EPFL	Tel	+4121 693 5564
Dean of International Relations	Fax	+4121 693 58 65
Stephane Morgenthaler	Email	relint@epfl.ch
CH-1015 Lausanne	Web	http://www.epfl.ch



EPFL News

EPFL in leading position for 1 billion Euro grant

In December 2010, EPFL submitted two research project proposals to the European Union (EU), both of which qualified as pilots for the Future Emerging Technologies (FET) Flagship program. The program, an initiative launched by the EU, aims to support technical innovation in Europe, and attracted in 2010 twenty-six submissions from the best universities in Europe. The winning projects will receive up to a billion Euros funding over ten year, a research grant with no equivalent in the world. With two finalists in the final six (“Guardian Angels” and “Human Brain Project”), the Federal Institute of Technology Lausanne (EPFL) is already in a strong position in this closely disputed European competition. The EU will make the final FET Flagships selection in Summer 2012.

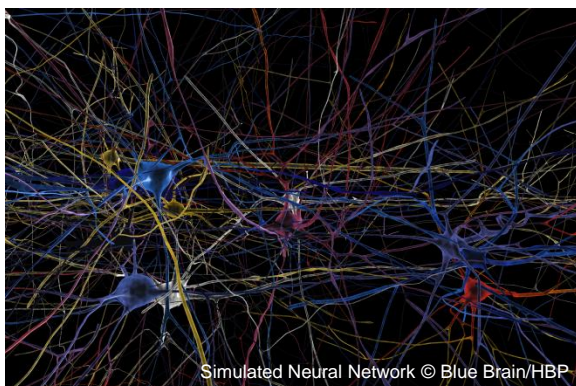
Guardian Angels for a Smarter Life

The Guardian Angels project, led by the teams of Adrian Ionescu (EPFL) and Christopher Hierold (Swiss Federal Institute of Technology Zurich) seeks to design and produce completely new electronic components that are energy-autonomous, integrated into our daily lives, and low-cost. Sensors, compact enough to be discreetly inserted into the fibers of clothing, will measure various internal and external parameters chosen by the wearer, such as temperature, stress, pollution, pollen or gases in the air. They will work using very little energy, fueling themselves with solar energy, piezoelectrical energy sources or thermal gradients. They will enable people to better manage their daily lives. Major companies such as Siemens, IBM, Intel and Infineon are backing this project, working side-by-side with the researchers.



Human Brain Project – simulating the human brain

An outgrowth of the Blue Brain Project, the Human Brain Project led by Henry Markram aims to create a simulation of the human brain – a revolutionary research tool in neuroscience. By creating a model of the human brain, researchers will provide an exceptional tool with which to better understand this extremely complex organ. In medicine, for example, a research and testing platform will be used to develop new medicines and appropriate treatments. In informatics and robotics, the researchers will draw their inspiration from the human being’s astounding brain capacities. The scientists are preparing a true technological revolution that will improve our quality of life and will ultimately aim to generate a computer simulation of a complete human brain. Some of the best universities in Europe are taking part in the project.



Simulated Neural Network © Blue Brain/HBP

These projects, headed by EPFL, bring together several European teams. “This critical mass of experts from different European countries is needed to solve our society’s challenges,” explains Henry Markram.

It is also a unique opportunity for Europe to stay at the forefront of global technology. As Adrian Ionescu states: “By bringing together European universities and high-tech industries, long-term research in energy and nano-technologies will become a reality.”

EPFL tops rankings yet again in 2011

This year again, EPFL ranks among the top universities in Europe in the fields of science and technology, ranking number 1 in the Leiden University Ranking measuring scientific performance, and number 2 in the Academic Ranking of World Universities 2011 produced by Shanghai Jiaotong University, in the ranking for Engineering/Technology and Computer Sciences. In both cases, the Swiss Federal Institute for Technology Zurich follows not far behind, highlighting Switzerland as a first-class nation for higher education in technology and science.

Leiden University Ranking 2011

Euro Rank	University	Country
1	Federal Institute of Technology, Lausanne	CH
2	Federal Institute of Technology, Zurich	CH
3	Cambridge University	UK
4	London School of Hygiene and Tropical Medicine	UK
5	Oxford University	UK
6	Durham University	UK

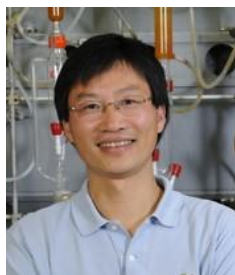
Leiden University Ranking <http://www.leidenranking.com/ranking.aspx>

Academic Ranking of World Universities 2011
Eng. & Computer Sc.

Euro Rank	University	Country	Score
1	Cambridge University	UK	73.8
2	Federal Institute of Technology, Lausanne	CH	71.8
3	Imperial College, London	UK	70.3
4	The University of Manchester	UK	66.9
5	Federal Institute of Technology, Zurich	CH	64.4
6	Oxford University	UK	63.4

European Ranking for Engineering/Technology and Computer Sciences <http://www.shanghairanking.cn/>

China's Zhu Jieping appointed full professor



In June, Zhu Jieping was appointed as a full professor of organic chemistry at the School of Basic Sciences. At the EPFL, Jieping Zhu will start a research program to develop new tools for synthesis and will research innovative strategies for creating medications.

Zhu Jieping studied at Hangzhou Normal University and Lanzhou University, earning a master's degree in 1987. After completing his doctorate at Université de Paris-Sud, he joined the French National Center for Scientific Research. He was hired as a research fellow by the Institute for the Chemistry of Natural Substances in Gif-sur-Yvette (France), where he developed a high-quality research program for organic synthesis of complex molecules. Since 2000 he has been the CNRS research director at the ICSN and heads a laboratory of 25 doctoral students, postdoctoral fellows and researchers.

China's Jinko provides solar panels for EPFL roof project

JinkoSolar, one of China's largest producers of crystalline silicon photovoltaic modules, has supplied EPFL with a total of 0.7 Megawatt solar modules to install the first phase of the solar energy park over the roofs of the campus, paving the way for further Sino-Swiss cooperation in the field of renewable energies.

This three-phase project, covering an area of approximately 20,000 square meters and constructed with an estimated budget of \$35 million, is going to create Switzerland's biggest solar park and will ultimately supply over two million kilowatt-hours (kWh) per year. More uniquely, the park is also destined to function as a foremost research and development center by the year 2011, accompanied by a strategic partnership in the field of energy innovation.

EPFL students back from Beijing with an international prize in hand

A group of EPFL students returned from Beijing with the third place prize from the international iCAN micro- and nanotechnology contest. Switzerland participated for the first time this year.

The participants had to design an original application using sensors that would "wow" a jury of experts. Mission accomplished for the EPFL team who, with their project entitled "Sensing the world through iPhone/Smartphone", won the third place in the contest and \$1,000. The idea: to gather atmospheric data using an iPhone, then send it over social networks, in order to build a sort of "environmental data map" that is continuously being updated, and is accessible to everyone.

For more information <http://actu.epfl.ch/news/back-from-beijing-prize-in-hand/>



Switzerland is still the most innovative country in the world

This year again, Switzerland tops various rankings positioning it as the world's most innovative nation, including the Global Innovation Index (INSEAD) and the Innovation Index (Deutsche Telecom and German Industrial Association).

Country	Rank (INSEAD)	Rank (Deutsche Telecom & German Industrial Assoc.)
Switzerland	1	1
Sweden	2	3
Singapore	3	2
Hong Kong	4	-
Finland	5	5

Innovation is central to economic growth and to the creation of new and better jobs. It is the key to competitiveness for economies, for industries and for individual firms. As such, Switzerland's strong and diversified economy is unanimously identified as the most important factor to its success in the innovation index.

Switzerland's strong commitment to education also plays a major role. With only 8 million inhabitants, it placed this year four universities in the top 100 global rankings of both the Academic Ranking of World Universities (Shanghai Jiaotong University) and the Times Higher Education World University Rankings.

Switzerland's stable politics and international environment further nurtures a sound environment for innovation and input from around the world. As an example, EPFL has 112 nationalities on campus, 50% of its faculty and 70% of its PhD students from abroad, ranking it as one of the most international campuses by the Times of Higher Education Supplement.

For more information <http://www.globalinnovationindex.org/gii/>

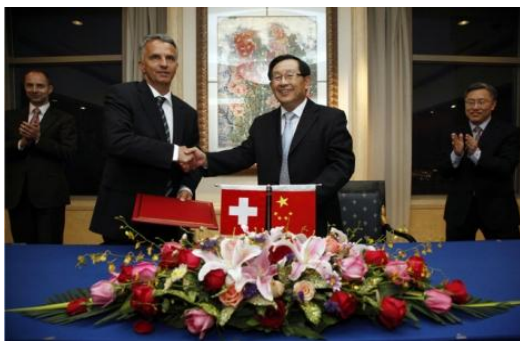
Tsinghua University opens new library designed by Swiss architect Mario Botta

In the presence of Swiss Federal Councillor Didier Burkhalter, Vice president of Tsinghua Xie Weihe and the designer himself, Swiss architect Mario Botta, Tsinghua University in Beijing officially opened its new Library of Humanities and Social Sciences. Spanning over 4 floors, its opening coincided with the University's Centennial Anniversary, and is conceived as "a gift from our generation to future generations", said the architect Mario Botta.



FC Didier Burkhalter at the opening ceremony.

Federal Councillor Didier Burkhalter in China to strengthen scientific ties



FC Didier Burkhalter with Minister Wan Gang

Federal Councillor Didier Burkhalter travelled to China in April 2011 on a working visit with the main aim to strengthen scientific ties between the two countries. He was accompanied on the trip by the Presidents of the two Federal Institutes of Technology, Patrick Aebischer (EPF Lausanne) and Ralph Eichler (ETH Zurich).

The Federal Councillor held meetings with three of his counterparts: the ministers of science and technology, education and health, and in particular signed a declaration of intent with Minister Wan Gang (Science and Technology) underlining the mutual desire to deepen the partnership, particularly in the context of the SSSTC programme (Sino-Swiss Science and Technology Cooperation) launched in 2004.

Sino-Swiss Science and Technology Cooperation: New call for Stepping Stone Symposia

The Sino-Swiss Science and Technology Cooperation (SSSTC) program is a governmental framework between China and Switzerland, aiming to encourage and strengthen individual contacts by building a multi-level research cooperation between institutions, research groups as well as individuals.

With the closing of the most recent call for proposals, the SSSTC has concluded its "Call for Proposals" for the 2008-2011 phase. Future new calls for the next four year program (2013 – 2016) will be announced once the federal resolution on education, research, and innovation has been formalized and the budget allocated, expectedly in fall 2012. Meanwhile, in order to pave way for the next SSSTC phase, several "Stepping Stone Symposia" are being organized to encourage

- 1) the participation of Swiss industries
- 2) contacts to top-level Chinese scientists

For more information <http://www.global.ethz.ch/stc/china>

EPFL programming language Scala in direct competition with Java



Professor Martin Odersky

Thanks to the infusion of 3 million dollars in capital, EPFL professor Martin Odersky has just created the company Typesafe. This investment will enable the Scala programming language designed for today's multicore hardware architectures and cloud computing workloads - a promising alternative to Java - to increase its use on the Internet. Already used by Twitter, LinkedIn, Foursquare, Sony, Xerox and the Guardian Online, Scala is simple to use, perfectly compatible with Java and requires only about half the number of lines of code as Java.

The principal investor in this round of financing, Greylock, based in Boston and Silicon Valley, notably backed Facebook when the social network site was first introduced to the public, and has been investing in LinkedIn since 2004.

For more information <http://actu.epfl.ch/news/new-start-up-leverages-scala-a-product-of-epfl/>

EPFL deep down in Antarctica with the IceCube observatory

Ten years will have been required to set up the world's largest neutrino observatory. IceCube is now ready and can begin its mission: to decipher the universe. 40 million neutrinos pass through the human body every second. They are so small that they almost never interact with the matter around us. And yet, being able to detect them would give us extremely valuable information about the universe and the objects it is made of. Consequently, the international scientific community decided to build IceCube, the Antarctica observatory with the goal of improving the observation of neutrinos.

EPFL's Laboratory for High Energy Physics (LPHE), and in particular astroparticle physicists, took part in this fascinating adventure. Located at the pole of the earth, this innovative detector is dedicated to the study of the fundamental properties of particles, whose origin describes the most spectacular phenomena of the universe, such as supernovae or gamma-ray bursts.



For more information <http://actu.epfl.ch/news/epfl-deep-down-in-antarctica-2/>

New Certificate of Advanced Studies (CAS) in "Doing Business in Asia"

Every summer the EMBA Management of Technology class goes on a Study Trip abroad, the last 3 years the destination was China, with company visits and classes at Universities in Beijing and Shanghai. In 2012 the study trip will be extended to include optionally a third week in India, with seminars at the Indian Institute of Management (IIM) in Bangalore and company visits in Bangalore and Mumbai.

A certificate of advanced studies (CAS) "Doing Business in Asia" will be delivered to participants going through the China & India study trip and completing successfully the evaluations.

For more information <http://mot.epfl.ch/Asia>

Important Contacts

EPFL

In China

Nicolas MUSY : +86 21 6266 0844 – 805
email: nicolas.musy@epfl.ch
c/o www.ch-ina.com

In Switzerland

Marius BURGAT
VP of Academic Affairs, International Relations
www.epfl.ch
General Info : +41 21 693 11 11

Alumni

www2.epfl.ch/a3/page78086.html
email: china.a3@a3.epfl.ch

Twitter: twitter.com/EPFLNews

Facebook: www.facebook.com/EPFL.ch

Science & Technology in China

Swiss Embassy

Markus REUBI
Head of Section Science, Education, Health
Tel.: +86 10 8532 8888
markus.reubi@eda.admin.ch

swissnex China

Flavia SCHLEGEL
22F, Building A, Far East International Plaza
319 XianXia Road, Shanghai 200051, China
www.swissnexchina.org
email: flavia.schlegel@swissnexchina.org
Tel: +86 21 6235 1889