

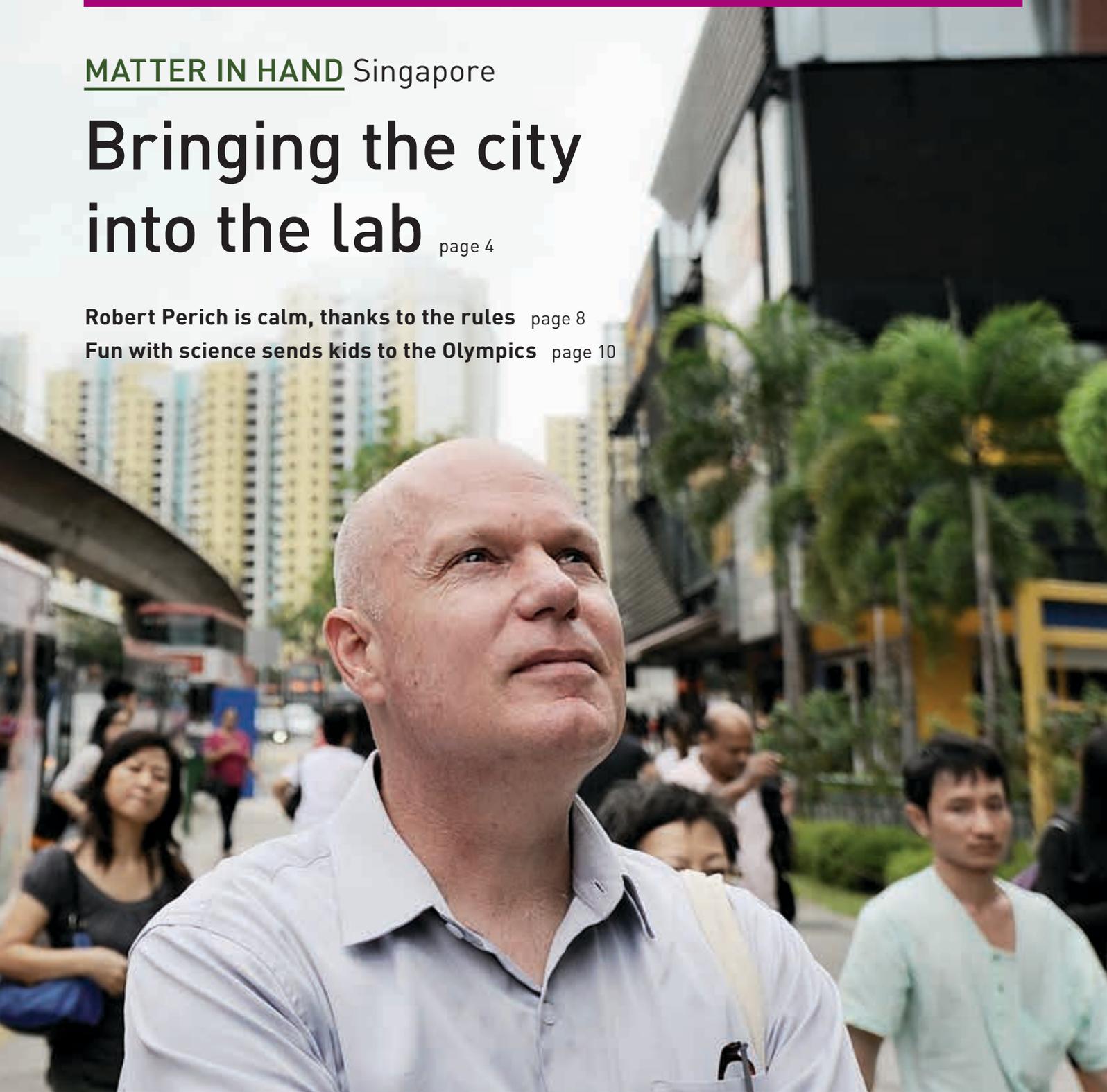
MATTER IN HAND Singapore

Bringing the city into the lab

page 4

Robert Perich is calm, thanks to the rules page 8

Fun with science sends kids to the Olympics page 10



LEE: a topping-out ceremony

2 September 2013. After more than 20 years, another new building is under construction on the Zentrum campus near the top of Leonhardstrasse. The KOF Swiss Economic Institute and parts of the Department of Mechanical and Process Engineering (D-MAVT) will move into the new LEE building in summer 2014. The completion of the shell was celebrated by ETH Zurich at a topping-out ceremony with Roman Boutellier, Vice President for Human Resources and Infrastructure. The final roof slab made from concrete elements was only inserted at 3:55 p.m., one hour before the celebration began.



Upon completion of its shell the LEE building is adorned with a wreath. (Photo: Christian Straub)

End-of-year celebration with the Executive Board

12/17 December 2013. Staff and the Executive Board will gather to celebrate the year's end at the Christmas party. The festivities will take place on 12 December on the Zentrum campus and on 17 December on the Hönggerberg campus. The "Golden Tricycle" prize for family-friendly supervisors will be awarded on this occasion.



www.family.ethz.ch →

A successful semester start

16 September 2013. For the first time in its history, ETH Zurich has an attendance of more than 18,000 students. This milestone was achieved at the start of the semester. 2,706 men and women have begun studying for a Bachelor's degree at ETH Zurich this autumn alone. They were welcomed in person by VSETH student association President Petros Papadopoulos, who gave them some tips on starting their studies.



VSETH President Petros Papadopoulos give newcomers a welcoming gift to start their first semester. (Photo: Josef Kuster)

The new ETH website is here

29 October 2013. On this day the new ETH Zurich website will go live. Apart from a redesigned main site, members of ETH can look forward to their own intranet where internal contents are now bundled and easy to access. Main site and intranet will run to a great extent in English and German.

blogs.ethz.ch/webrelaunch →



Imprint
"life – ETH community magazine" is an internal communication medium for ETH Zurich published by Corporate Communications.
Publication
Four times a year in German and English.

Editorial Staff
Norbert Staub (Editor-in-chief)
Florian Meyer, Angela Harp, Thomas Langholz
Images, layout
Edisa Balje
Proofreading
Beate Marder (German), Lilian Dutoit (English)
Translation
Syntax Translations Ltd
Concept and design
Agentur Paroli AG

Printing
Neidhart + Schön AG
Circulation
16,350 copies
Contact
Magazin life, ETH Zürich,
HG Fo 37.6, 8092 Zürich
Email to editors: life@hk.ethz.ch
Further information: www.ethz.ch/life

Cover
Stephen Cairns in Clementi estate, Singapore
photographed by Carlina Teteris.



Happy and honoured: Lino Guzzella with Federal Councillor Johann Schneider-Ammann in Bern after the election. (Photo: Keystone / Peter Schneider)

Lino Guzzella appointed ETH President

20 September 2013. The Federal Council appointed Lino Guzzella, Rector of ETH Zurich and Professor of Thermotronics (D-MAVT), the next President of ETH Zurich, effective January 2015. With this decision, the Federal Council fulfilled the unanimous request of the ETH Board. When Lino Guzzella learned of his fortune in the middle of a lecture, his students reacted with a warm applause. "I am honoured and very happy," the newly elected President said at the press conference in Bern.



Federal Councillor Johann Schneider-Ammann announces the election of the ETH President.

The key to increased security

1 Januar 2014. ETH Zurich manages around 96,000 keys. Hundreds of keys go missing each year. In order to reduce costs and improve the security of buildings and laboratories, the Facility Management Infrastructure Division will standardise the key management system.

www.ethz.ch/keys →



Online Publishing

22/23 October 2013. "E-publishing and receiving data in a digital format", the new brochure from the ETH-Bibliothek, lists its electronic publishing services.

www.library.ethz.ch/publizieren →

E-PUBLISHING AND DIGITAL CURATION

The ETH-Bibliothek services for ETH Zurich www.library.ethz.ch/en

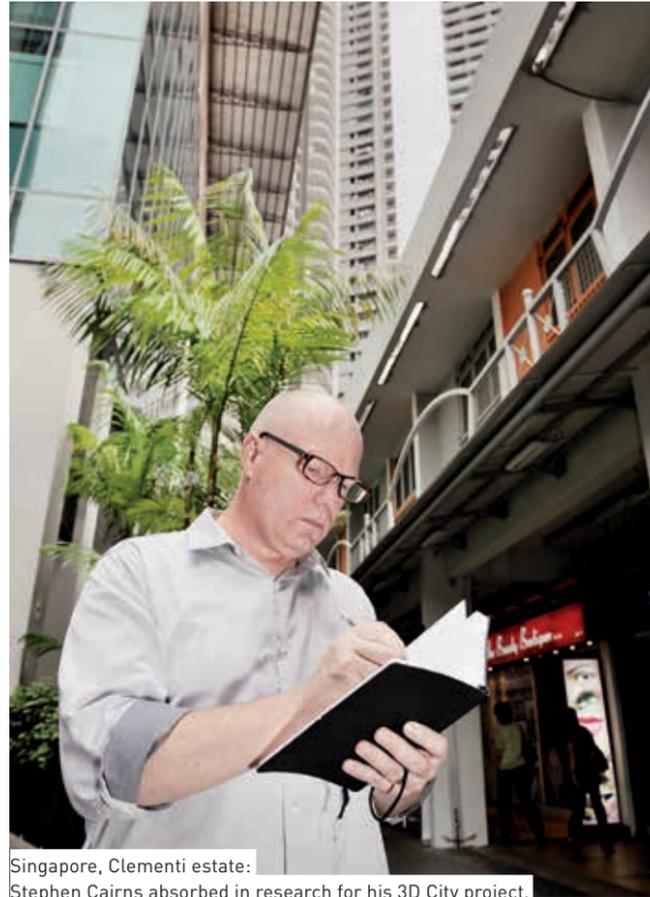
Scientifica has its finger on the pulse

1 September 2013. Risks can also be exciting. This was demonstrated by the fact that well over 2,000 guests attended ETH Zurich and the University of Zurich's Scientifica 2013. The robot and chemistry shows turned out to be real crowd-pullers. The children were particularly enthusiastic about them.

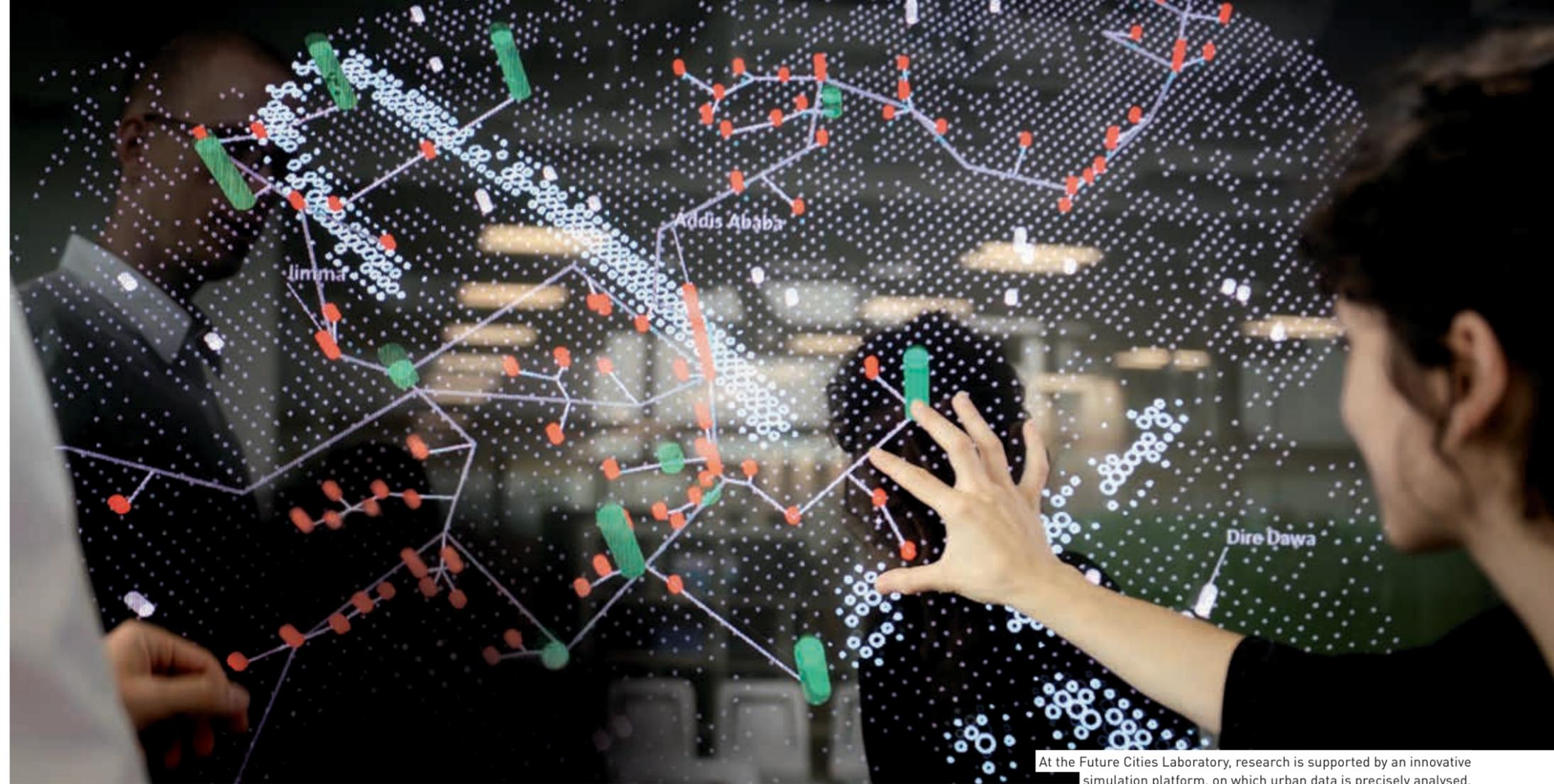
www.ethlife.ethz.ch →



(Photo: Frank Brüderli)



Singapore, Clementi estate: Stephen Cairns absorbed in research for his 3D City project.



At the Future Cities Laboratory, research is supported by an innovative simulation platform, on which urban data is precisely analysed.

Urbanisation: A call for creative interveners

Text Angela Harp Photos Carlina Teteris

Researchers at the Future Cities Laboratory (FCL) in Singapore are well aware of the unparalleled upsurge of urbanisation. Stephen Cairns, Scientific Director of FCL, and his teams are investigating ways to contribute to the sustainability of urban futures.

In the midst of the hustle and bustle and humid haze Stephen Cairns slows his pace to look up at a 10-story high-rise. Not a tall building, compared with some of the other

skyscrapers dispersed throughout Singapore that go up some fifty-odd floors. He smiles as he notices the building's close proximity to public transportation and the pharmacy, grocery store and noodle takeaway on the ground floor. Efficient, he thinks.

Efficiency and sustainable urban development are ever more essential for managing city growth in a world that is currently experiencing an unprecedented spurt of urbanisation. Up until the end of the 20th century, the bulk of the world's population was located in rural areas, but the balance has dramatically shifted to

urban centres in the last decade. Today over 50 per cent of the world's population resides in cities and the number is anticipated to increase to 70 per cent by 2050. What is grabbing the attention of urban planners, researchers, environmentalists and politicians alike is the cities: although they only occupy two per cent of the earth's surface, they contribute up to 70 per cent of the total greenhouse gas emissions.

Prime location

Most of the world's largest urban populations and fastest growing areas – India,

China and the ASEAN region, including Indonesia – are located within a three to four hour flight from Singapore. This is where the Future Cities Laboratory, a project initiated by the Singapore-ETH Centre, comes into the picture. "The lab investigates sustainable urban futures, and Singapore as a location is fundamental to our research," explains Stephen Cairns, Scientific Director of FCL. "Part of our work is to creatively think about intervening in the positive and negative externalities of cities. This entails examining ways in which to enhance infrastructure and to develop new urban fabrics that sustainably

shape resource consumption patterns as well as supporting good human health and resilient economic conditions for coming generations."

3D City

One of Cairns' research projects entitled "Three-dimensional city," specifically focuses on sustainable approaches to high-density and highly urbanised cities such as Singapore. This city-state itself has been going through rapid urbanisation since the 60s. "In its progression, Singapore has developed sophisticated urban systems for public transport, governance,

housing, water recycling and desalination and land reclamation. All of these developments can serve as models for other rapidly urbanising regions in Asia," Cairns clarifies.

Cairns' work examines new forms of vertical cities where different functions such as housing, transport, shopping, entertainment and even horticulture are embedded vertically in the same cluster of buildings. "This kind of urban development, commonly found in East Asian cities, can contribute to more sustainable future cities by co-locating dwellings and workplaces, which would then allow ▶

Sustaining the future

Text Angela Harp Photo Carlina Teteris

For the last three years Gerhard Schmitt has been directing the Singapore-ETH Centre, turning it into a prime research institution for global environmental sustainability.

“I will never forget the spirit of elegant design and data driven collective breakthroughs before and after we received the positive assessment at our Midterm Review this September from a prestigious panel of academic and government representatives,” reflects Gerhard Schmitt, founding Director of Singapore-ETH Centre for Global Environmental Sustainability (SEC). “We’ve come a long way.”

Although the idea of SEC was introduced as early as 2006, it was not until 2010 that it was officially established in a partnership between the National Research Foundation of Singapore and ETH Zurich. “Back then we were only a few colleagues fighting to create an urban sustainability research institution in a time when sustainability was on the bottom of the priority list for most Asian countries,” relates Schmitt. “But we remained persistent on making future cities a topic of focus.”

Putting heads together

The hard work finally paid off and the first research programme, Future Cities Laboratory (FCL), was launched. “We’re now a community of over 200 researchers and design research master students working on the understanding, the design, the transformation and the management of future cities,” Schmitt explains. FCL examines

cities and their hinterland, urban neighbourhoods, the architectural fabric and the buildings. Research is also supported by an innovative simulation platform, where urban data is analysed and used for design through visualisations of future scenarios.

FCL uniquely thrives on a transdisciplinary approach, explains Schmitt: “Everyone is working together in one building, on one floor. No barriers exist, so there’s constant interaction.” In such an environment, researchers of different disciplines have formed collaborations and synergy projects have taken shape.

What’s next?

“SEC is nowhere near its maximum potential, there’s much more in the pipeline,” Schmitt assures. A programme on Future Resilient Systems is planned, which will bring in an additional 60-80 people to the centre. The Future Food Security programme should follow, adding another 80 people. In 2015 a new range of urban sustainability projects will be introduced

in a second Future Cities Laboratory. “It has been an exciting three years,” concludes Schmitt. “I believe my successor, Peter Edwards, has a solid foundation on which to build.”

Peter Edwards will spend the next three years directing the Singapore-ETH Centre, effective 1 October 2013. ■

Gerhard Schmitt and Peter Edwards

Gerhard Schmitt is Professor of Information Architecture at ETH Zurich and Senior Vice-President of ETH Global. His work focuses on information architecture and design. Peter Edwards is Professor of Plant Ecology at ETH Zurich and Director of the Geobotanical Institute. His research concentrates on ecosystems and large-scale ecological processes.

Read the interview with Gerhard Schmitt at: www.ethz.ch/schmitt_EN →



“It’s been an exciting three years,” says Gerhard Schmitt, looking back on the developing years of the Singapore-ETH Centre.

► residents to convert motorised commutes to more local walking and cycling trips.” Cairns’ research also relies on advanced forms of representation such as modelling in three dimensions to gain new insights into the work of design.

Reflecting multiculturalism

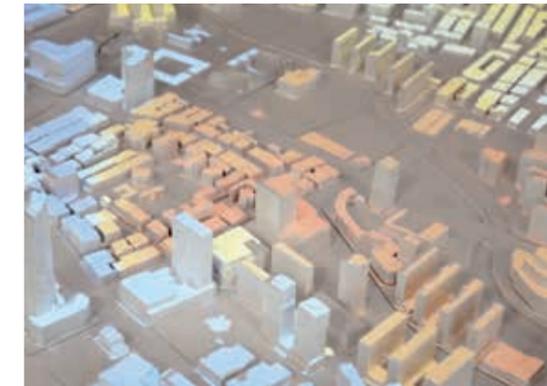
The scale and complexity of urbanisation today requires that intervention be based on transdisciplinary work. FCL brings together an array of disciplines from architects and city planners to computer scientists, ecologists and sociologists. Multi-disciplinary teams talk to each other through regular seminars, workshops and working groups and are encouraged to find points of contact between their individual projects.

“Our transdisciplinary approach reflects the multicultural aspects and the

entrepôt attitude Singapore is famous for,” says Cairns. “We try to learn from this at FCL by supporting and acknowledging disciplinary work. The lab thrives on cultivating the art of mixing disciplines, shifting in and out of our comfort zones, respecting different knowledge paradigms and ways of working, whilst being open to alternatives.” Besides the spectacular monsoon rains and Asian cuisine, Stephen Cairns enjoys the mix of people at FCL and the variety of research themes. ■

Take a peek at some of the other exciting projects going on at the Future Cities Laboratory:

www.futurecities.ethz.ch →



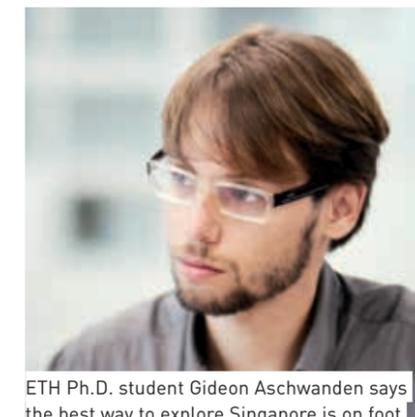
Through 3D modelling, researchers and urban planners gain insight into design.

Walk of life

Text Angela Harp Photo Carlina Teteris

Anyone taking a stroll around the block with doctoral student Gideon Aschwanden would quickly realise that the walk itself is part of the urban scenery. Say again? That’s right – as an architect and urban planner Gideon studies the correlation between the constructed environment and pedestrian flow. Creating accessible and aesthetically pleasing pathways in urban spaces, he believes, will prompt people to walk more, which will in the end lead to less car pollution and healthier lives. And what better way is there to examine different cities around the world than on foot?

Gideon’s global perspective and fascination for cities and their walking spaces is what set him on the path to Future Cities Laboratory (FCL) in Singapore. From public housing in the form of high rises to convenient transportation systems, urbanisation in Singapore is constantly developing and redeveloping under cultural and political influence, making it an interesting place for a city-lover and researcher to observe. In comparison with



ETH Ph.D. student Gideon Aschwanden says the best way to explore Singapore is on foot.

Switzerland, for example, geography and the idea of being connected to a building or owning land is of less importance. Living spaces are torn down to build newer ones, and people are willing to move as long as the apartment is newer, bigger and better.

Like in Switzerland, public transportation is highly valued. In fact, when it comes to city planning transportation systems are often constructed and expanded to non-populated areas before housing is built. Walking, however, is less preferred even in the shade. Gideon wonders if it

is even healthy to walk in certain parts of Singapore. According to his aerosol measurements, air pollution is high, in particular near Rochor a.k.a. ‘Little India’. Although most people take public buses instead of driving private cars, some of the buses are not equipped with particle filters, and thus contribute to high air pollution levels at the stations.

But it’s not just the aspects of urbanisation that make Singapore and FCL an exciting place for research. Gideon enjoys working in a centre that exposes him to other universities as well as professors and researchers from all over the world. Despite the highly international environment, ethnicity fades into the background, as research is the main focus. But outside the centre, there’s a little something from every culture. The Singaporeans even make a good rösti! Gideon’s experience has certainly made him more open to all walks of life. ■



Why is walking so important? Gideon Aschwanden give us an explanation in this video.



Robert Perich

“We want to work sensibly.”

Whether you are working with clothing, software, material or maintenance equipment, all staff at ETH Zurich must adhere to many rules. In an interview with 'life' Robert Perich, Vice President of Finance and Controlling, explains why he remains calm despite the amount of rules and how the new Compliance Guide facilitates our daily work.

“Good rules make sense intuitively. They provide security.” Robert Perich

Text Florian Meyer Photo Alexander Sauer

Mr Perich, how many rules do you think you could break in a workday?

I like that question! I couldn't say exactly how many rules really affect my own work. There are so many laws, ordinances and regulations today that no one individual can really have an overview of them all. ETH's Legal Collection alone consists of over 400 documents.

You seem fairly calm about it.

Of course, sometimes one is amazed at the morass of regulations. But what's important is not the number of rules but that you really take to heart the main principles for correct behaviour, and act prudently and responsibly.

What makes a good rule?

Good rules encourage correct and sensible behaviour because they make sense intuitively. They provide security and enable people to work together efficiently and reliably. What is bad is if every single detail is regulated. That creates mistrust.

The Executive Board has been looking at rules this autumn and has published a Compliance Guide. What is meant by compliance at ETH Zurich?

The term “compliance” means behaviour that is in line with the rules, and it encompasses two aspects: the law and personal responsibility. The laws and ordinances represent the “hard core”. They have to be observed. However, compliant behaviour as we understand it at ETH goes further: it also includes self-perception, culture and integrity.

ETH encourages a culture of personal responsibility and autonomy. How can that be reconciled with compliance with rules?

One of the features of the ETH culture is that we set ourselves very high behavioural



Vice President Robert Perich: in favour of acting prudently. (Photo: Gerry Amstutz, Franz Rindlisbacher)

standards in terms of personal responsibility and ethics. Essentially, the researchers and employees want to do their work well and sensibly in compliance with the rules.

Why is there only a guide, and no central Compliance Office?

ETH Zurich consists of about 500 independent professorships which are all a bit like a small or medium-sized company. That's why our compliance system is based on a network of professorships, specialist offices and the Risk Management Committee. For their part, the President and the Executive Board review the risk situation at ETH regularly and thoroughly. They introduce measures if they are needed.

And since no one individual can have an overview of all the ever-increasing regulations, the Compliance Guide provides initial guidance that points him or her in the right direction.

Exactly. Compliance covers those things that carry a risk to our reputation: this includes research on people and animals and data protection, as well as IT security and safety at work. The guide introduces twelve key aspects of compliance and makes people aware of the rules of conduct that are involved and which experts can help.

Does compliance really only affect managers?

Acting according to the rules affects all employees. Think about safety in a laboratory or about administrative assistants. They take on a lot of administrative management tasks and support

the researchers. But of course, it is the managers who have special responsibility for the staff and the infrastructure. That cannot be delegated to others. ■

Compliance Guide for ETH Zurich

The Executive Board approved the “Compliance Guide for ETH Zurich” on 3 September 2013. The guide will be available in October, in German and English. 1200 professors, senior scientists, managers and administrative assistants will receive a copy of the handbook. To order a copy send an email to compliance@ethz.ch

Hoping for Olympic gold

Meike Akveld, Thomas Uehlinger and Daniel Graf are among the many who coach the talent of the next generation. As they train and prepare young bright kids for Olympiads, Swiss knowledge tournaments, their message is clear – science and maths are challenging, but also really fun.



Text: Alice Werner Photos: Gerry Amstutz

Meike Akveld has a beaming smile. Her enthusiasm for what she calls a “voluntary activity that I believe in passionately” is infectious. In her office high up in the ETH Main Building, she talks about her work as a maths coach for primary and middle school pupils. This research associate, trained teacher and mentor in the Department of Mathematics who has spent eleven years teaching in local schools knows how important not only the ability to think analytically, but also imagination and creativity, are in studying natural sciences - and how little most children enjoy maths at school.

Solving puzzles should be fun

That is why she has been involved for years in organising the Swiss version of the world’s largest mathematics competition, which is called “Kangaroo”. The contest, which combines problem-solving with fun, was invented by some university mathematicians from Australia. What Akveld really raves about when we talk to her is the offshoot of Kangaroo called “DATCH”, a German-language tri-nation mathematics competition in which the most promising pupils in years 7 and 8 in Germany, Austria and Switzerland test their mental skills.

As one of the organisers of the event, which lasts several days, she always finds it motivating to see the children working so eagerly and enthusiastically on tricky maths tasks. “Doing challenging mathematics can really be a lot of fun,” she says. And she means for both sides, the children and the coach.

Finding tomorrow’s talent today

Whether it is DATCH, SOI (Swiss Olympiad in Informatics), SwissPhO (Swiss Physics Olympiad) or some other natural sciences competition for schools, anyone who takes part in them is clever - and perhaps already dreaming of a future career as a thinker and researcher. To put it crudely, one could say that these talented young people are easy pickings for a university of science and technology like ETH Zurich. Andreas Vaterlaus, professor in Physics and Education and the prorector responsible for curriculum development and



Maths lecturer Meike Akveld is enthusiastic about training school children to compete in “DATCH”.

innovations in teaching, expresses it more elegantly: “Of course we are keen to support interested schoolchildren, with their thirst for knowledge and their boundless energy - it is from this pool that we will ultimately be recruiting our future students.” That is why, for Andreas Vaterlaus, it goes without saying that ETH Zurich works closely with Swiss middle schools.

The knowledge contests referred to above are good examples of this bridgebuilding between school and university. While it is the job of busy teachers to motivate and prepare their pupils to take part, ETH Zurich, for its part, mainly offers willing hands to help with planning and running the contests. Two of those belong to Thomas Uehlinger, who is a doctoral student carrying out research at the Institute for Quantum Electronics. He is one of ten members of ETH who work with the group that organises the SwissPhO. He took part in the physics contest successfully himself several times as a teenager.

The finishing touches

“Because I really enjoyed the competitions, partly due to having the opportunity to be with like-minded people, I want to give back something of what I experienced,” he says, explaining his initiative. One of the regional qualifying events for the first round of the SwissPhO takes place alternately at ETH Zurich and the University of Zurich. Each year, Uehlinger organises a social fringe programme for the approximately 70 participants, including a tour of a physics laboratory.

“In this way, the schoolchildren get a very good first insight into ETH - and of course they can bombard us with questions.” The prize for the best five young Swiss physicists is a coveted ticket to the international Physics Olympiad. Then, on two training weekends, they receive further specific instruction in theory and experiments from Uehlinger and his co-workers: how to take a structured approach to a task, how to present interim results in a meaningful way. This intensive teaching concentrates above all ▶

► on two things: honing and developing their analytical skills, and keeping a cool head under stress. “It’s good to see how the children gain in self-confidence during this time,” says Thomas Uehlinger.

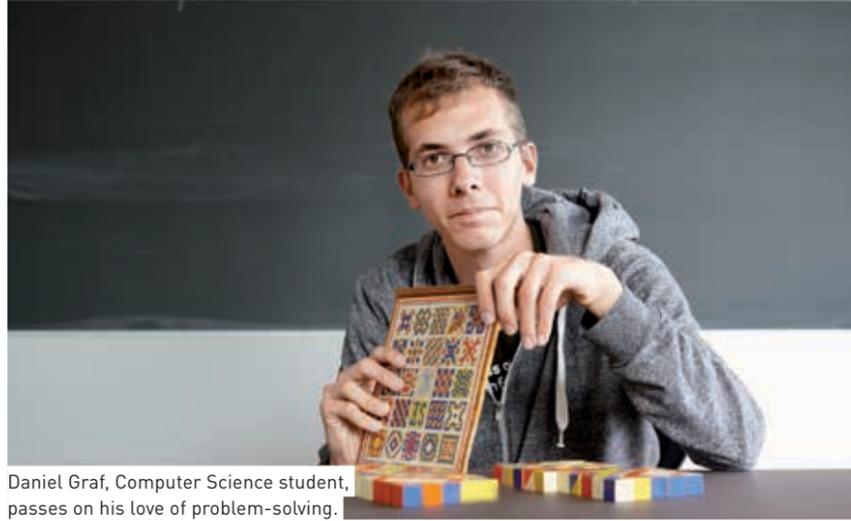
Emulating Eastern Europe’s model

Daniel Graf, Computer Science student, former participant and now president of the SOI, is another who could never get enough of puzzles and experiments. Now the 23-year-old helps school children who enjoy it as much as he did. Together with other ETH and EPFL students, he organises the various training and testing events for this national programming competition.

“As well as acting as coordinators, we also get involved on the technical side, preparing test data, developing tasks and training programmes and teaching the participants during our workshops and the annual training camp in Davos.”

With this regular, year-round and very challenging training in algorithms and programming, computer science professor Juraj Hromkovic has introduced the “Eastern European model”. In 2006, he took over as head of the SOI from his predecessor, ETH Professor Peter Widmayer. For him, it goes without saying that ETH takes the lead in encouraging children who are interested in computer science.

Hromkovic has been fighting for professional computer science teaching in schools for years. At the training camp in Davos, he says, not without a little pride, the children are taught from morning till



Daniel Graf, Computer Science student, passes on his love of problem-solving.



ETH doctoral student Thomas Uehlinger shows the kids the nature of coherent light from a laser.

night. Lectures, exercises and tasks, and then three or four more tournaments before they go to bed. To help the team of student coaches, Hromkovic invites trainers from Russia, Romania, the Czech Republic and Slovakia, countries where there is a strong tradition of scientific and elite competitions. Hromkovic has now stepped down from active work on the SOI because the organisation now runs itself.

His next aim is to set up a programming contest for primary school children. He already has his eye on 30 schools where computer science has at least been integrated into regular maths lessons. Knowing how stubborn he is, he is sure to see his plan through. ■

Competitions as exams

The “Mathematical Kangaroo” is an international multiple-choice competition in which about 6 million schoolchildren in their seventh and eighth years of school in European and non-European countries take part every year. It is organised like an examination with a time limit of 75 minutes and takes place under supervision. Science Olympiads are competitions for children in middle school. In Switzerland, they are held in the six disciplines: biology, chemistry, informatics, mathematics, philosophy and physics. Participants are also expected to solve school-type problems in the context of an examination.

Overview of the Kangaroo and DATCH mathematics competitions: www.mathe-kaenguru.ch →
 Insight into the Swiss Olympiad for Informatics (SOI): www.soi.ch →
 Swiss Physics Olympiad (SwissPhO): www.swisspho.ch/en →

When careers run up against stereotypes

Text Rebecca Wyss, Florian Meyer Table Josef Kuster

The fact is: 40 per cent of the school students who specialise in mathematics and natural sciences for their higher education qualifying examination are girls. Surprisingly, many of them do not find their way to ETH Zurich. An ETH exhibition attempts to figure out why.

In theory, people should be able to access mathematics, computer science, natural sciences and technology (MINT) regardless of whether they are men or women. However, the statistics on gender ratios tell a different story, including at ETH Zurich. It starts off well at grammar schools where girls account for at least 40 per cent of the students specialising in mathematics and natural sciences for their higher education qualifying examination.

A leak in talent inflow

In the equivalent subjects at ETH Zurich, however, women account for only about 30 per cent. The numbers fall the further up the academic career ladder: only 12.6 per cent of ETH professorships are occupied by women. Even in the subjects like biology where more than 50 per cent of new students are women, ETH does not have a high proportion of female professors.

This phenomenon is called the “leaky pipeline” and there are many reasons for it. For example, many women leave the university after their doctorate if they assume that they will not

be able to reconcile family life and research. Stubborn clichés also play a role.

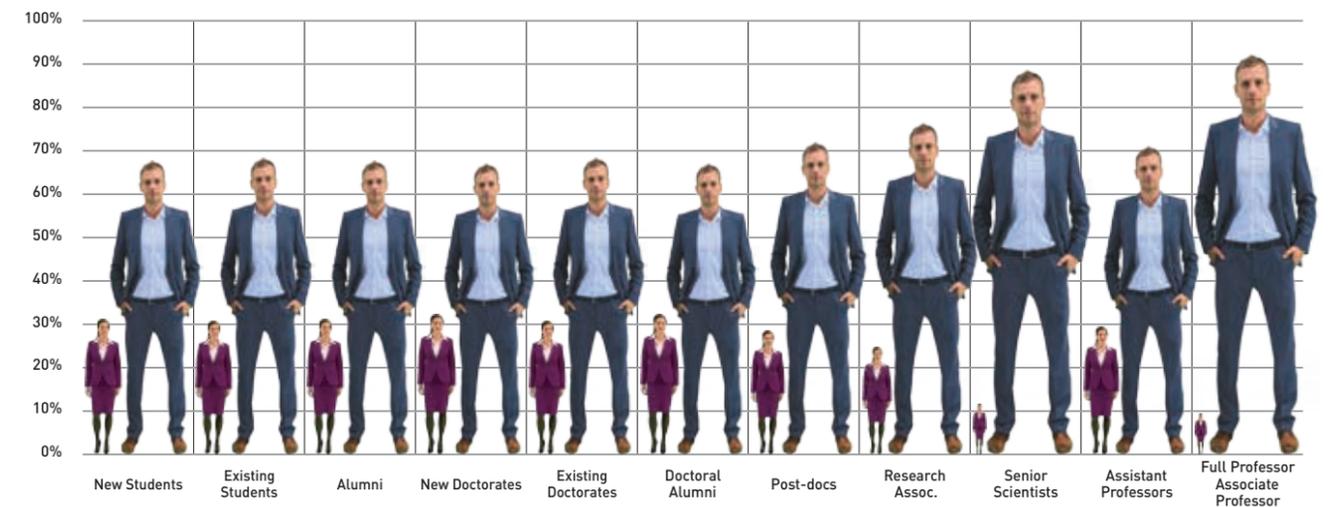
The influence of stereotypes

“Gender-related stereotypes are one of the reasons why the proportion of women at ETH Zurich is so low,” says Renate Schubert, Professor for Economics and Head of the Equal! Office for Equal Opportunities at ETH. Equal! has been working for 20 years to make study, work and family more compatible and to ensure an academic career path. One familiar stereotype that can affect the choice of course and research career, for example, is: “Women are not interested in technology.” In its anniversary year, Equal! aims to counter these stereotypes with its exhibition “Check your Stereotypes” – and hopes to open equal doors. ■

“Check your Stereotypes”

An exhibition by Equal! in the Main Hall of the ETH Main Building from 28 October to 11 November 2013. A panel debate with drinks on the subject of “Gender Stereotypes in Globalising Universities” takes place on **Monday, 28 October 2013, in the Main Building, Audimax at 17:50.**

2012 Leaky Pipeline at ETH Zurich



Well-versed in many fields

Text: Alice Werner Photo: Peter Rüegg

Behind an inconspicuous white door lies enough explosive material to blow up a house several storeys high: 50 kilogrammes of gelatinous Riodin in 250-gramme cartridges, 273 metres of detonating fuse and a few hundred detonators. The guardian of this explosive treasure trove can only smirk at his visitor's fantasies about catastrophes fit for the big screen. He taps on the huge safe: "Without my special key, no one can get at the stuff". The Zurich Cantonal Police department for weapons and explosives, which regularly inspects the store, is happy about this. And when it gets dark, Securitas patrols the area.

The keeper of the explosives magazine is André Blanchard and he has a federal explosives permit. How does it feel to be responsible for a concrete bunker full of energy-rich chemical compounds? "You are always sailing a bit close to the wind," he says, but he is not being completely serious. As one of the few members of staff at ETH Zurich authorised to use explosives, he accompanies scientists into the field to conduct geophysical experiments. Then he sets off explosions in bore holes,

generating seismic waves, like artificial earthquakes. The data collected are then analysed from a geological and rock physics perspective. He recently set off explosions in Neuhausen because geophysicists wanted to investigate the composition of the bedrock. He also spent nights shivering in a bivouac at over 2,500 metres above sea level to measure the thickness of the rock glaciers using explosion seismology. How dangerous is his work really? "It is no more risky than driving a car, provided that blowing things up does not become a routine activity."

This is not likely to happen to André Blanchard, however, as he does 100 other jobs at the same time. "Well, almost", he laughs and explains: "This is what happens when you have the same excellent employer for 36 years". He came to ETH Zurich at the age of 17 as an apprentice in precision engineering. Today, after a lot of additional professional training, he is a

technician, toxic substances officer, facility and logistics manager at the Institute of Geophysics and the Swiss Seismological Service, user representative for the Department of Earth Sciences and President of the Personnel Committee. He has licences for sailing boats, motorboats and HGVs, is an amateur farmer, brews his own grappa and goes horse-riding after work. Before we can ask him how he manages to fit all of this into one life, he has his answer ready: "You have to stay active, right?" Then he locks his safe. The impressive bunch of keys certainly suits this man of many talents. ■

www.erdw.ethz.ch →
www.peko.ethz.ch →

André Blanchard can do it all he's even a keeper of explosives.



Petros Papadopoulos
VSETH President

Foreigners is what we all are.

In June, an initiative was launched in Parliament by the National Council's Committee for Science, Education and Culture (WBK) proposing that the tuition fees for foreign students should be higher than those for Swiss students. We could hardly believe our ears. Switzerland's political, business and social leaders proclaim incessantly that education and research are our country's most important resources - and all the more so after the catastrophes suffered by the financial sector. This means that we rely on the enriching global exchange of knowledge and talent. Now some of the top educational policy makers want to go and impose a narrow-minded nationality clause which would rob Switzerland of the chance to set itself apart as a scientific centre from the rapidly growing competition. After all, especially in the booming region of Asia, people are realising that having universities that are a magnet for leading scientists from all over the world is a priceless asset for a country.

For the VSETH (Students' Union), it was clear: we had to mobilise all our forces to dispatch this idea to where it belongs - oblivion. Armed with an online petition, hundreds of flyers and fortune cookies, we positioned ourselves on the Piazza on the Hönggerberg campus during the exam period and called for support and a mandate for our work from all members of ETH Zurich. Within a month we had

attracted the support of over 2300 people. With this backing, we contacted the representatives of the next level up in the hierarchy, the WBK of the Council of States, and on 2 September 2013 we were pleasantly surprised. The initiative was rejected with a small majority, a partial victory for us and the best possible reward for all the hours we had put in. But the task is not yet over - we are still on the case.

So you see, getting involved in important issues pays off, if you are well organised and channel your energy intelligently. That even applies to students, who are disadvantaged by usually only being able to act on their political concerns in their limited free time.

Papadopoulos

Petros Papadopoulos

VSETH

This student association represents the interests of students before the Executive Board and ETH Board. It has been in existence for 150 years.

www.vseth.ch →



(Illustration:Kornel Stadler)

Encouraging a culture of empowerment – among the staff too

"ETH Zurich encourages a culture of empowerment" – this phrase can be found in the brochure on its strategic orientation in the "Values" section. This culture of empowerment has allowed ETH Zurich to climb higher up the international rankings each year. Even though it is not explicitly formulated in this way anymore, this guiding principle does seem to apply primarily to education and research. I sometimes think that ETH Zurich could become even more successful if we also allowed the technical and administrative staff to participate more fully in the culture of empowerment for example by introducing career planning for technical and administrative employees too. Strategies to expand and enrich job roles, together with attentive personnel management, would keep employees motivated and prepared for the job market. Duplication could also be reduced if the data capture systems at ETH Zurich were networked and working methods were organised in a more up-to-date way. Increased satisfaction and more efficient tools would boost the technical and administrative staff's productivity and quality of work even further, which in the end would benefit research and education. The entire ETH Zurich community would gain from a comprehensive culture of empowerment.

Stefan Karlen
www.peko.ethz.ch →



(Photo: Balz Murer)



Pump it up

Text Florian Meyer **Photo** Flavio Koch

What are those stylish green round boxes around campus for? Air. To be exact, they are bike pumps, equipped with an integrated tool and foot pedal to conveniently fill tired tyres with the air they need.

These smart pumps are located in the bicycle parking areas for the CAB and HCI buildings and in the "Töffligarage" (Main Building - HG) and HPG parking garages. They not only look flashy, they can also pump up flat car tyres. These nifty devices were installed by the Division for Events and Location Development (VS).

www.ethz.ch/velopumpen →