

LiU magazine

LINKÖPING UNIVERSITY

NR 2 2011



Antarctic adventure

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Masters' students recommend LiU

Rated number 2 in global student survey | page 8

Solar energy gives hope

LiU hosted World Renewable Energy Congress | page 22

Seeing is
believing
page 4



An extraordinary student experience



FOR THE FIRST TIME, Linköping University took part in the 2010 International Student Barometer conducted by British *I-Graduate*. The massive student survey involved more than 130,000 international students from 203 universities in Europe and the US.

Regarding their overall satisfaction with their student experience LiU students rated LiU number two! This question did not relate to any single issue.

WE ARE EXTREMELY HAPPY and proud of these results. We know that we provide world-class facilities. Our labs received the highest possible rating – number one – and our on-line library is second to none, but this question relating to overall experience is exactly that – the total experience.

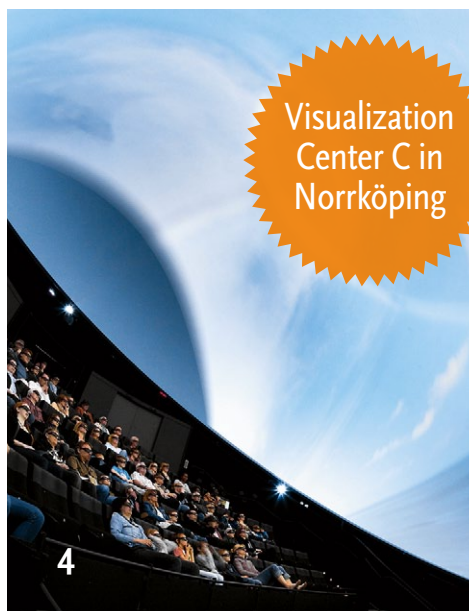
Teachers and administrative staff are important, however, to a large extent, the students create the students' experience. A good example is the International Student Association who, during May, organised a week of sporting and cultural activities aimed at promoting intercultural friendship and raising money for the earthquake stricken people of Japan.

IN TERMS OF "ECO-FRIENDLY ATTITUDE" students also gave LiU highest marks – number one. I suppose that category was even more reinforced when researchers from all over the world gathered in Linköping just a couple of weeks ago for the World Renewable Energy Congress 2011. It was a week of critical assessment of issues relating to renewable energy sources and even reports were tabled illustrating progress in this field that raised optimism and hope.

"Many small drops can form a river, which is the foundation for future energy systems. The solution cannot be found in one technology rather via collective measures. We need to engage on many fronts simultaneously," said LiU Professor Bahram Moshfegh who was host of the congress.

Karin Fälth-Magnusson

Karin Fälth-Magnusson, Rector •
karin.falth-magnusson@liu.se



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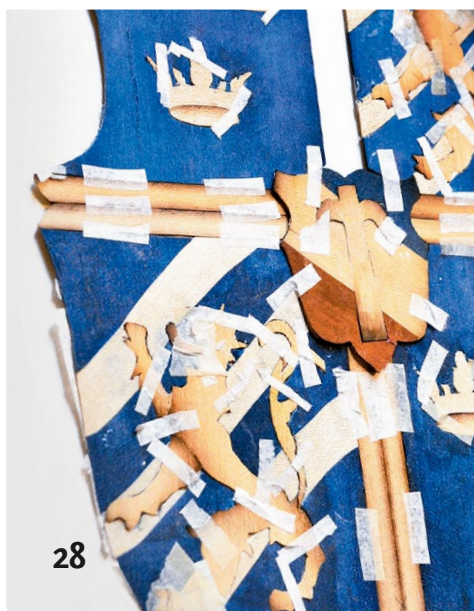
He fell in love with Sweden

Berthold Panzner from Germany stayed for two years.

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She builds jigsaw puzzles with cultural history

Stina Ekelund is a furniture conservator at a castle in Denmark.



GLIMPSES OF HOPE

IN EARLY MAY, Linköping University had a little extra to offer. The sun and warmth provided a taste of the summer that was to come and the students and employees took advantage of the weather by relaxing on the lawns and park benches.

The sun was also the centre of attention at the World Renewable Energy Congress 2011 (WREC). The WREC is a significant international congress hosted this year by Linköping University. Researchers were present from the UN panel on climate change (IPCC), as well as some of the research heavyweights within the field of renewable energy. During the weeklong congress, close to 650 papers were presented on various topics. These ranged from the latest findings on everything from solar, wind, wave and bioenergy to increasing industry's energy effectiveness, the development of sustainable transport systems and how to achieve innovative climate change agreements.

The congress caused both anxiety and gave hope for the future. It is certain that there are many threats yet many speakers illustrated that all the requirements exist to be able to develop a global energy system based on renewable energy sources. One of the reasons for this optimism is the fast development within the field of solar energy.

RUNNING PARALLEL to the energy congress, a student orchestra festival held sway with thousands of musicians taking part from different parts of Sweden and even other European countries. The procession through Linköping's main street was

swinging and also at various concerts.

During the same week LiU's International Student Association arranged a two-day international festival. On one of the evenings, I participated in an international cultural party, where both traditional and modern music and dance were on show and the entertainment, with origins in different countries, received rousing ovations.

My family is host family for an Indian student who is the chairperson for the International Student Association and one of the organisers of the event. As a host family we have been party to exciting glimpses of a somewhat different world and, at the same time, learnt to appreciate how similar we humans actually are.

IN THIS MAGAZINE you will meet some former LiU students such as Ikea's CEO, a furniture conservator at a Danish castle and a physicist who ventured to Antarctica.

For those of you lucky enough to pass through the province of Östergötland this summer, then a good tip is to visit the Visualization Center C in Norrköping. At the dome theatre you can take part in a thrilling journey to outer space or through a humans innards. Check it out in *LiU magazine*.

Enjoy!

Lennart Falklöf, editor-in-chief • lennart.falklof@liu.se



LiU magasin

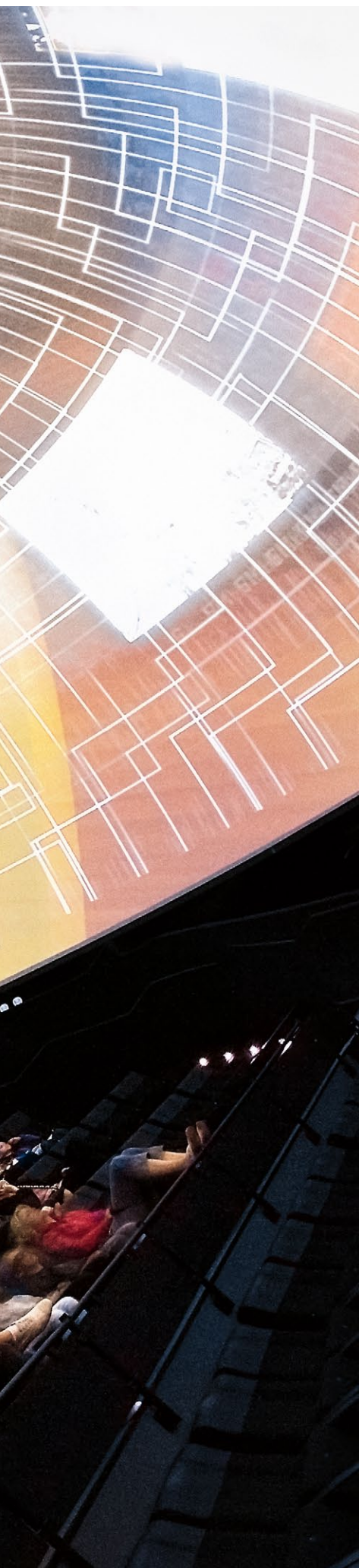
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Editor-in-chief	Lennart Falklöf lennart.falklof@liu.se
Editorial staff	Anika Agebjörn, Eva Bergstedt, Maria Karlberg, Gunilla Pravitz, Birgitta Weibull
Translation	Space360
Revision	Darren Hughes
Layout	Lennart Falklöf
Graphic Form	Peter Karlsson, Svarteld form & foto, peter@svarteld.com
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Ett internationellt magasin



Välkommen till det årliga internationella numret av *LiU magasin*, med texter på engelska. Här berättar vi bl.a. om spännande forskning, internationella studenter och om alumner som har världen som sin arbetsplats.





SEEING IS BELIEVING

Northern Europe's most modern dome theatre.
A virtual autopsy table that has impressed the entire world.
At Visualization Center C in Norrköping, research and public activities run parallel and in turn benefit from each other.

text **MARIA KARLBERG**
photo **PETER HOLGERSSON**

The Visualization Center C is situated at the heart of Norrköping's old industrial landscape. Launched in May 2010, it received 50,000 visitors up until the end of December, which was twice as many as expected. The prediction for 2011 is in the range of 90,000 visitors.

The idea had been brewing for some

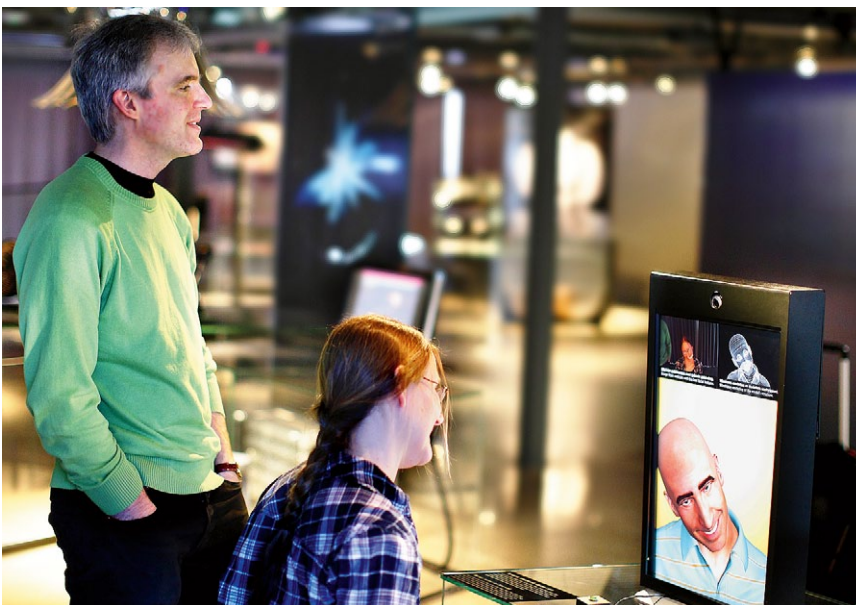
time before the centre opened and in 2000 the first step was taken when Norrköping's Visualization and Interactive Studio was built. The initiative was Anders Ynnerman's brainchild. He is LiU's first professor of scientific visualisation and the director of Visualization Center C. The centre came to fruition via close collaboration between ►

Photo to the left: Each day, several shows are given in the dome theatre. One of them, "All We Are", is a journey through macro- and microcosmos. The show, produced by the centre itself, recently won a prize at The Immersive Film Festival in Portugal.

"At Visualization Center C, visitors are asked to touch the exhibits. To feel, squeeze and experience them hands-on."



The virtual autopsy table was originally built just for the centre, without commercial motive. But the market interest was larger than expected.



Since 70 per cent of the body's receptors are found in the eyes, visualisation is an extremely powerful tool. To the left, Stefan Gustavson, one of the researchers at the centre.

the Municipality of Norrköping, Linköping University, Norrköping Science Park and the Interactive Institute.

The ground floor restaurant and shop offer visitors food and souvenirs. Some school children pass by and are greeted by their guide. Is it a problem conducting research and education in such a public environment? Not according to Stefan Gustavson, senior lecturer in computer graphics and image processing.

"It has been a very positive and inspiring experience. We get all sorts of synergies from being able to see how people react to our research."

A PERMANENT EXHIBITION is situated on the first floor. The idea is to show things that normally cannot be seen, or to make very complex matters easier to comprehend. Since 70 per cent of the body's receptors are found in the eyes, visualisation is an extremely powerful tool.

At Visualization Center C, visitors are asked to touch the exhibits. To feel, squeeze and experience them hands-on. One incident illustrates the benefits of this method. A twelve-year-old girl was reprimanded by her mother for touching the screen of the virtual autopsy table. Stefan Gustavson intervened and informed the parents that touching was allowed and indeed highly recommended. The girl continued to explore and quickly grasped the concept: "Mum, it's just like an iPhone, only bigger!"

The virtual autopsy table displays the innards of the human body in great detail and has become a real success story. It was originally built for the centre, without commercial motive. But a YouTube film of the table received about 60,000 hits during the first week and many people were interested in buying the table. So the company Sectra and the Interactive Institute developed a commercial product that recently reached the market. The original table is still here where it all started.

There is also a temporary exhibition area at the centre. Coming up next is *Animalistic*, where wildlife will be presented employing visual experiences.

One of the centre's main attractions is the dome theatre, where an audience of 100 people can watch an interactive panoramic stereo display. The technology is so advanced that it is now the most modern in



The Visualization Center C is situated right at the heart of Norrköping. You will find it in the building to the right with a colourful "C" on the front.

northern Europe. There are several shows each day, from the National Geographic production 'Sea Monsters 3D' to 'All We Are', which is a journey through macro- and microcosmos produced by the centre.

WE LEAVE THE PUBLIC AREA and enter the research and development floor home to some of the visualisation researchers' workrooms. All in all there are about 50 people at LiU conducting research within this field.

In one of the laboratories, an HDR video camera is being tested. Recently supplied by a manufacturer in Germany, the prototype is the third of its kind in the world (the very first one was built here at the centre a few years ago). HDR stands for high dynamic range and uses a set of techniques

that improve contrast in an image. This means that both very dark and very light areas can be accurately represented.

"Contrast is still a weak area for today's digital cameras", says Stefan Gustavson. "Consistently achieving the right exposure would make filming much easier. We have a pretty good idea of what this prototype can do. What we want now is to find the areas where it can best be used."

The technology of tomorrow may be born today, at Visualization Center C. ■



A camera good at contrasts.

Att visa det man inte kan se



Visualiseringscenter C har på kort tid blivit en av de stora turistattraktionerna i Norrköping. Här kan människor slå sig ner i domteatern och bl.a. följa med på spännande resor ut i yttersta rymden och in i kroppens innersta vrår. I utställningarna har man tagit avancerad visualisering till hjälp för att förklara komplexa samband och för att visa sådant som man normalt inte kan se med blotta ögat.

Men centret är inte bara en turistmagnet – här bedrivs även forskning i världsklass. Ett 50-tal forskare arbetar med visualisering vid LiU.

LiU is second best of 203 universities in the world when international students are asked about overall satisfaction.

Masters' students

Linköping University came second out of 203 universities in a global survey when international students were asked how satisfied they are with their university experience.

For the first time LiU participated in the world's largest student survey, *International Student Barometer*, conducted by the British organisation

The International Graduate Insight Group, i-graduate. 138,000 students from about 200 educational institutions participated, including in-

What are the best things about studying at Linköping University? How can LiU improve? We asked three international students.

interviews & photos **EVA BERGSTEDT**



HOOMAN SEDGHAMIZ, FROM IRAN
MASTERS'S PROGRAMME IN BIOMEDICAL ENGINEERING

"There is an open atmosphere"

"The library provides a very good service. Much of the course literature is available online – you can sit anywhere you like to read, so you don't have to buy a lot of books. There are also a lot of places where you can sit alone and study. There is an open atmosphere at LiU. Teachers and other staff are very friendly and it is easy to get hold of them when you need help. And student life is really good.

"As a newly-arrived student, it is difficult to arrange accommodation. Otherwise, I think that everything is okay, apart from the cold weather in the winter! Ha-ha. But there isn't much we can do about that.

Nöjda internationella studenter – LiU tvåa i stor studie



Linköpings universitet får en hedrande andra plats av 203 universitet i världen när internationella studenter som pluggar utomlands be-

dömer hur pass nöjda de är med det lärosäte de gästar.

138 000 studenter har deltagit i International Student Barometer, som

världens största studentundersökning. Linköpings universitet får bland annat mycket höga betyg för bibliotek, laboratorieresurser och miljövänlighet.

recommend LiU

stitutions in USA, Great Britain, Germany, Canada, Hongkong, Italy, Ireland, Finland, Luxemburg, Netherlands and Sweden.

LiU received highest praise for its excellent laboratories, technological equipment, environmental policy and an outstanding library with online service. In many of these areas LiU scored highest both in Sweden and globally.

But there is still some work to be done at LiU to support the students' social contacts

and possibilities to earn extra money during their stay in Sweden.

Linköping University's 67% response rate was the highest of all participating educational institutions (1,073 of LiU's Masters students).

Read more about International Student Barometer at www.liu.se/en/education/international-student-barometer ■

High ranks for LiU

Overall satisfaction 92%

LEARNING

Laboratories 98%

Learning Technology 96%

Online Library 96%

Learning Spaces 96%

Academics' English 96%

LIVING

Safety 98%

Eco-friendly attitude 97%

Good place to be 95%

Home Friends 93%

Internet Access 92%



JULIANA OGOLLA, FROM KENYA

MASTER'S PROGRAMME IN COMPUTER SCIENCE

"The study environment is really good"

"The study environment is really good. It is easy to get in contact with the teachers and you can always ask them questions. The laboratories are well equipped and accessible and there are also plenty of study rooms. I also appreciate working in groups. I learn a lot from that because we discuss issues with one another and see things from different perspectives. LiU also has an international campus; you meet people from many different countries.

"But the university needs to have better contacts with the business world and we need help in planning our careers after our studies."

ELIAS YILO, FROM VENEZUELA

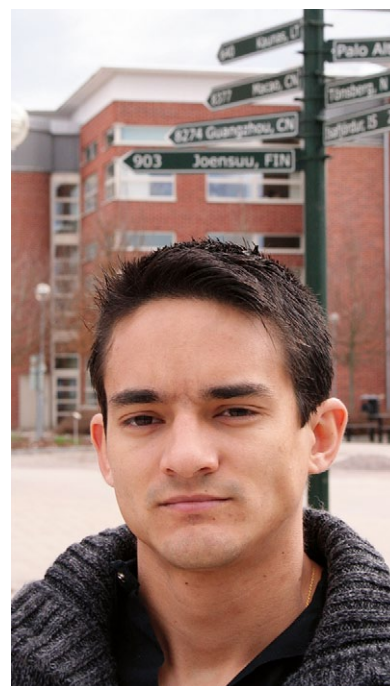
ENERGY AND ENVIRONMENTAL ENGINEERING

"I like the diversity at LiU"

"The best things are all the resources and the infrastructure, like being so close to student accommodation, and it is easy to get around by bicycle. The classrooms are well fitted with modern technical equipment.

The education and library are good, too. I also like the diversity at LiU; there are students here from all over the world. And I like the halls of residence; it makes it easy to meet people in the communal kitchen."

"But I miss sports activities. It would also be better if it were obligatory for us to learn Swedish. That would probably increase the likelihood of finding work after our exams."



LiU news

Proposed as new Rector

Helen Dannetun, Professor of Physics and Dean of the Institute of Technology at Linköping University, has been proposed as Rector of Linköping University.

“Endorsed as an good leader, Dannetun has displayed strong engagement for the university’s development. Employees and students alike hold her in high esteem and I’m convinced that she will be a great Rector for Linköping University”, states

Bengt Westerberg, Chairman of the University Board.

Helen Dannetun is 54 years old and has been the Dean of the Institute of Technology since 2004. She retains several external positions on different committees, among them, as a member of the Swedish Foundation for Strategic Research. Previously she was a member of the Technological Delegation (Teknikdelegationen) on behalf of the Ministry of Education and Research.

Dannetun has also been revered as a proficient teacher.

She says, “Linköping University is a successful university and being proposed as the new Rector is, of course, an honor. Great changes are ongoing within the realm of universities and tertiary institutes.”

“Two important issues relate to elevating our position as a successful educational-based university and at the same time investing in our profile as a research institution. We will develop our high levels of quality and be an active participant in an ever changing world both on national and international arenas.”

It is the government who will appoint the new Rector.



Student orchestras parade through Linköping city.

Blown away by student

For some days in May, Linköping was taken over by thousands of musicians and dancers. The Student orchestra festival, one of Sweden’s largest student events, was held for the 22nd time and lasted for several days. Orchestras arrived from different parts

Europeans on dignity

A comprehensive European study interviewed more than 1300 people and has identified that cultural differences do not influence the approach to dignity within health and welfare.

Lennart Nordenfelt, Professor of Philosophy of Medicine and Health Care at LiU explains, “Regardless of where a person lives, problems and needs must be attended to so that a person’s dignity is respected.”

Nordenfelt recently published a book based on the European project, *Dignity and Older Europeans*, which he also contributed to.

The respondents were asked to describe how they perceived dignity within health and welfare. They repeatedly re-counted two issues.

“...that people continually talked as if they weren’t there and about them in the third person, which they felt was most demeaning. The respondents from all 6 countries also felt that the actual loneliness and that it wasn’t taken seriously was undignified,” claims Nordenfelt.

DAVID EINAR NYGREN



Helen Dannetun



DAVID EINAR NYGREN

musicians

of Sweden and even from other European countries.

The parade passed through Linköping's main streets and there were many concerts on campus and in and around Linköping. As always, the atmosphere was festive.

Both benefits and risks

A common medicine used to combat osteoporosis can cause fractures. Bisphosphonates are a medication, which reduces the overall risk of bone fragility, although, there have been suggestions that bisphosphonates can also be the cause of other forms of fractures such as fatigue fractures.

This connection was confirmed during a study led by Per Aspenberg, professor of Orthopaedics and researcher at Linköping University.

However he emphasises the fact that the benefits from bisphosphonate medication greatly exceed the negatives.

"The principal effects of bisphosphonates remain: They significantly reduce the risk of fractures in patients with osteoporosis. So even if a negative connection has been established, this relates to a very small group and minimal overall risk."

Research on these findings was published in the *New England Journal of Medicine*.

Hello there, Tore Vikström

PROFESSOR AND HEAD OF THE CENTRE FOR TEACHING & RESEARCH IN DISASTER MEDICINE AND TRAUMATOLOGY IN LINKÖPING.

For nine years, you have been working closely with Japan on disaster medicine. Have you been on location for relief efforts following the events in Japan?

"No, but I was there as late as one week before the disaster and spoke at a conference on disaster medicine. People in Japan have also been in Linköping a number of times for training.

"We developed a method of education based on linking disaster medicine with regular health care. Previously, disaster medicine was something separate and special, which made it easy to forget important knowledge between events. This type of education, just like the simulation systems that we developed, is used not only all over Japan but in many countries across Europe and even the USA, China, Australia and New Zealand."

What role does the Centre have to play?

"We carry out research, development and we also teach. This is a nationwide centre, which means that we carry out many training sessions and exercises in Sweden, but we work to almost the same extent for other countries. We are probably better known for our work internationally than locally."

But don't you occasionally participate on location when disasters occur?

"Yes, such as after the tsunami in Thailand and during the evacuation of Beirut following the bombing in 2006. We have also worked with the Balkans for the last 15 years. As well as providing relief, we also learn a lot. Needs differ and it is important that aid is provided according to the conditions in each country."

What lessons can you draw from what has happened in Japan?

"That it is extremely important to be ready to handle serious events and that medical treatment and cooperating agencies need to be educated and trained. Once it happens, it is too late."



EVA BERGSTEDT

International festival on campus

On 12 and 13 May there was a spectacle of food, culture and presentations from all corners of the world at Linköping University. It was time for iDay11 – the International Colours Festival.

Behind the event was the International Students Association (ISA) at Linköping University.

On the first day, there was a colourful exhibition on campus, where students from 20 countries provided glimpses of the cultures and patterns of life in different parts of the world. Visitors also had an opportunity to taste dishes from the

international kitchen!

The following day, the ISA arranged an international cultural evening with dance performances, singing and music, as well as a fashion show featuring traditional clothing.



PETER MODIN

ANTARCTIC ADVENTURE

There's never a dull moment in the life of Carl Wernhoff. In February, he was at the South Pole chasing photons in the icy cold weather. Now, he is aiming for the theatre.

text GUNILLA PRAVITZ

Carl Wernhoff speeds forward on a snowmobile with camera in hand. It is February 2011 and he is on his way to work on the international neutrino telescope IceCube near the South Pole.

He publishes the film on YouTube. It boggles the mind. The obvious com-

munication choice of today set against the weak photon traces from outer space, the things that can give researchers clues about the structure of the universe and its properties, dark matter, string theory and other remarkable things.

IceCube has just been completed after six years of construction. 2.5 kilometres down in the crystal clear ice hang detectors on a kind of string, 86 of them. A total of 5,300 light sensors send information about 2.5 million photon hits every second, 24 hours a day, up to the computers in IceCube Laboratory on top on the ice.

Carl is there to install an electronic circuit (FPGA). This circuit implements

an algorithm directly in the hardware that sorts the signals received from the weakest photon traces from space and the traces of electron neutrinos from the sun that happen to collide with a molecule down in the ice.

"The collisions cause a weak trace of small impulses of light, namely photons. If you can find the traces of light and see the direction they are travelling then you can understand where in space the neutrino came from", explains Carl after returning home to Stockholm.

"Right now it feels unreal that I have actually been there."



Carl Wernhoff is a LiU alumnus.

50 DEGREES BELOW ZERO in tunnels underneath the Amundsen Scott South Pole Station, taking a sauna with a dash to the South Pole a few hundred metres away is not exactly something you experience every day. The station is situated at a height of 3000 metres, with the air pressure at the Pole the equivalent of 4000 metres. As Carl puts it, it can cause certain intelligence problems:

“Just before we landed I pulled my boots on, but despite frenetic attempts, I was suddenly unable to tie the laces.”

Apart from that, we cannot identify any other problems with him. It was when Carl was considering a subject for his thesis as part of the MSc Programme in Applied Physics and Electrical Engineering (Y programme) at Linköping University that he contacted the IceCube project.

“I emailed the American researchers and discovered that researchers at Stockholm University were also part of the project”, he says. ►



Photo above: Carl Wernhoff in a Hercules airplane on his way to the South Pole. On his left, David Nygren, one of the leading figures in instrument physics in the world.



Photo on the right: Carl Wernhoff testing Track Engine in the computer hall inside IceCube Laboratory.

"Now he sees instrument physics as a kind of advanced side job and will focus on theatre training."

► At the time, guest professor David Nygren was in Stockholm. Nygren has Swedish ancestry and comes from Berkeley, San Francisco.

"He is one of the leading figures in instrument physics. He had an idea about an algorithm that could be implemented in hardware, which could provide a much greater computing capacity than software in the computers."

CARL WERNHOFF WROTE HIS THESIS amongst particle physicists at Stockholm University. It concerned the algorithm and electronics in physics applications. Following his graduation, Carl worked at implementing it and building the actual Track Engine circuitry that is now on site at IceCube.

"The preparatory work was enormous because the design is so complex and everything needs to be tested – every single subcomponent. I have written about 10,000 lines of code for the software in a test environment that I also had to develop myself."

Two small red boxes containing Track Engine, one as a reserve was included with the baggage to the South Pole. The first card worked fine.

"However we also wanted to get the re-

serve card working in the event of potential problems during polar nights when the station is completely shut off from the outside world. Then there was a hitch with the power supply."

Up until the last minute prior to the return journey, Carl Wernhoff was sitting at the South Pole thinking, re-soldering and testing new solutions until everything was working properly. Yet, before leaving the lab, he made time to put up a picture of King Carl Gustaf in full dress uniform.

NOW HE SEES INSTRUMENT PHYSICS as a kind of advanced side job and will instead focus on theatre training.

Not entirely surprising. He was on stage even as a student, such as when he was master of ceremonies at the great welcoming party for new students. Together with fellow student Jonas Månsson, he was given countless assignments as toastmaster at parties and events. He was also a student comedian.

At the same time, Carl was engaged in the student union, was class representative and served on the student committee. He was also busy welcoming new students and helped to start the Swedish section of a European organisation for electronics students (EESTEC).

"Before starting my studies I had made up my mind that during the years I studied that I would do everything I possibly could."

He also found time to actually study; that being the Y programme with an international focus on German. He spent an exchange term in Regensburg and took half a year study break to work at Cybaero, which

developed unmanned helicopters.

"I even went to the United Arab Emirates to deliver helicopters."

LIFE HAS SWUNG between electronics/automatic control technology and theatre/music. For the past three years, he has studied music either full or part time. Studying classical composition in Härnösand left its mark on an entire web site and it also encouraged him to focus on theatre and his own songs.


This autumn he will continue his theatre training. He has been admitted to the Stockholm Fundamental Theatre School (*Stockholms Elementära Teaterskola*) and hopes to be able to continue propping up his finances with part time work at the the Physics Department of Stockholm University.

Perhaps we shall see him one day soon as a thespian on stage. The country boy from Östra Skrukeby outside of Linköping. Maybe we will think: isn't that the guy that went to the South Pole? ■

SOME USEFUL LINKS

- Carl's blog from the South Pole: <http://sydpolen2011.wordpress.com/>
- Animations about neutrinos: <http://www.youtube.com/watch?v=aMnGWqoDaAA>

Fysiker tar plats på scenen

 Det svänger rejält i Carl Wernhoffs liv. I februari var han vid sydpolen och jagade fotoner i isande kyla. Nu siktar han mot teaterscenerna.

Name	Carl Wernhoff
Place of residence	Stockholm
Education	Applied Physics and Electrical Engineering – International
Current activities	Focusing on song and theatre and working a little on the side with the particle physics group at Stockholm University.
Recently completed	An electronic circuit and installed it in a lab at the South Pole.
Best teacher at LiU	If I have to choose, it would be Peter Mürger, who was a phenomenal lecturer on electromagnetism for one of the most difficult courses in the programme.
Favorite memory	The premiere and the performances the first time I performed in <i>Holgerspexet</i> , a student music theatre group.



Carl Wernhoff is not just working with advanced instrument physics. He is also an experienced entertainer. This autumn he will continue his theatre training.



In the 70's Mikael Ohlsson was a student at Linköping University. Now he is CEO of the Swedish furniture retailer Ikea with 123.000 employees worldwide.

Ikea furnishes the world

LiU alumnus Mikael Ohlsson is in charge of the Swedish furniture retailer Ikea that serves hundreds of millions of customers across the world. He began as a carpet salesman at one of the stores. Contact with employees on the floor is still important to him.

text **EVA BERGSTEDT**
photo **GUNNAR MENANDER**

Anyone expecting to see a strict man wearing a suit and tie who exudes power and position using body language and various status symbols will be surprised to meet Ikea's CEO. If there is such a thing as a completely ordinary person, then Mikael Ohlsson is one of them.

In spite of his elevated position, he prefers to take the bus, ride second-class on the train and meet employees face to face on the Ikea shop floor.

"It is a conscious decision to work this way and it is based on our philosophy to remain close to reality", he says.

He is described in the media as a goal-oriented, strong-willed person, but also as "a nice guy", so he fits in well with Ikea's intended branding image. With his simple image, he stands out as a trustworthy frontman for a company that is conquering the world with its furniture and furnishings ►

85 roomsettings that are inspirational, relevant and reflect the needs of life at home.

Be inspired...



Worldwide, nearly 600 million customers visit Ikea's stores each year. Not just the rich should be able to afford their furniture.

under the motto: "Affordable solutions for better living". Everyone should be able to afford Ikea furniture, not just the rich.

Ikea has, to put it mildly, made a success of its brand. It stands firm, even when the wind blows. And in the media, it sometimes does.

In Sweden, the company has become a part of the collective Swedish soul and many homes are furnished with items from Ikea. More and more stores are being built around the world. The Ikea group has stores in 26 countries. Annual surveys show that Ikea tops the lists as one of the companies that Swedish students would like to work for after their exams.

HOWEVER ACADEMIC CREDENTIALS have never been important for the company. Not for Mikael Ohlsson, neither, although he was one of the first to study Industrial Economics at Linköping University in the 1970s. It was in Linköping where he started out as a carpet salesman to supplement his economy during his studies.

And that is how it happened. He enjoyed the work and liked the spirit within the company. However, the carpets soon had to do without him. Instead, he was given increasingly advanced management assignments that after several years led him out into the world and then to Ikea's top leadership.

In 2009, he was appointed CEO and now has the post that the company's legendary founder Ingvar Kamprad served for many decades.

Yet even if academic scores do not count for much within the company, learning is central and this means the willingness to learn new things and to share one's knowledge with others. In this context, Mikael Ohlsson sits down on one of the company's sofas and spontaneously talks about his time at LiU.

"I learned how to learn there. It was cutting-edge education based on identifying problems, putting them into context and finding solutions. There was a link between the students, teachers and businesses – something that I would like to see more of

at universities. At the same time, we learned the various subjects thoroughly, such as mathematics, and I have definitely benefited from that."

MIKAEL OHLSSON RETURNS several times to that phrase, "learning to learn" – because, even though he also links it with LiU, it is mainly within Ikea that the awareness of its importance has been raised.

"Universities and management programmes throughout the world are interested in our philosophy and imitate what we do", explains Mikael Ohlsson.

Ikea puts a lot of energy into internal training. Many of the company's employees who show a willingness to learn are given an opportunity to advance within the company, regardless of whether they are warehouse workers, salesmen or managers. They need to understand the meaning of "learning to learn", be able to see problems or needs and then find constructive solutions. They also need to learn from one another and instead of building walls and forming ter-



"I learned how to learn at Linköping University. It was cutting-edge education based on identifying problems, putting them into context and finding solutions. There was a link between the students, teachers and businesses – something that I would like to see more of at universities", says Ikea's CEO Mikael Ohlsson.

ritories, should be generous and share their knowledge with others. This is a pillar of the internal culture at Ikea. Another is to not act superior to anyone else.

To the extent that time permits, Mikael Ohlsson tries to practice what he preaches. He wants to see the real world for the company's 123,000 employees, on the factory floor as well as in the stores.

"I want to see the same thing that customers and employees see. It isn't easy to find the time, but the visits also give me a lot of energy. From experience, if I take time to meet people where they are, then we will all grow from the meeting, personally as well as professionally."

IN MANY WAYS, Ikea's corporate culture goes hand-in-hand with a Swedish leadership model based on a democratic approach and 'employee-ship', where the voices of employees are important. These values are to characterise every Ikea store in the world, whether it is situated in Älmhult in Småland or China, India and Germany.

"Our leadership is based on naturalness. Be yourself. The more you learn about yourself, the greater the likelihood that you can work with others and achieve good results. The whole setup is based on mutual commitment and participation."

This style of leadership differs significantly from many other countries and cultures that retain authoritarian and elevated directors. Does Ikea's leadership model really work at its stores around the world? Where, in that case, do you find those leaders who, through their school systems and culture, are imprinted with a more authoritarian mind set?

Without hesitating Mikael Ohlsson says, "Yes, it works". He adds that it is not difficult to find the right people who can lead others according to the Swedish Ikea culture.

"On the contrary, our leadership model is very much appreciated, particularly outside of Sweden. 20 or 30 years ago, most of our managers came from Sweden. That is not the case today. We differ from the traditional view of management in many countries and that makes people want to stay with us. But, of course, just like any other company we sometimes have problems and recruit the wrong people."

Then, of course, there are the barriers that need to be overcome, regardless of the country a person comes from.

"But, behind those barriers, we human beings are equal. Throughout the world, there are people who share our values. No matter which country we are active in, they are not difficult to find. I'm thinking about China, for example. We have fantastic 25-30 year-old Chinese managers. They are smart, open and cost-conscious."

WHEN THE DAY COMES that Mikael Ohlsson stops working, he will not be without things to do. The family is important to him, music has always played an important role in his life and photography is one of his major hobbies.

"I had considered retiring in a few years, but that will have to wait. Now I shall stay at the post as long as people are confident in me and as long as I find it fun." ■

FACTS ABOUT IKEA

Ikea was founded in 1943 by Ingvar Kamprad. Today, the company operates in 26 countries. Worldwide, nearly 600 million customers visit Ikea's stores each year. The company employs 123,000 people.

<i>Name</i>	Mikael Ohlsson
<i>Place of residence</i>	Leiden, Holland. Has previously lived in Spain and Canada, amongst other places.
<i>Family</i>	Wife and three children
<i>Education</i>	Industrial Economics
<i>Favourite teacher</i>	There were many. One of them was Ove Brandes.

LiU-alumn leder Ikea



LiU-alumnen Mikael Ohlsson leder möbelföretaget Ikea, som har hundratals miljoner kunder över världen. Han började en gång som matförsäljare på varuhuset i Linköping. Och trots sin nuvarande toposposition tar han gärna bussen, åker andra klass på tågen och möter medarbetare öga mot öga på Ikeagolven.

LiU alumni around the globe

Wherever you find yourself, you can always bump into a former Linköping University student. Meet four people who live and work in Australia, Egypt, China and the Netherlands.

Lena Olofsson, Egypt

PLACE OF RESIDENCE: Cairo

FAMILY: Husband Sameh and a bunch of cats

WORK: Tourism, mostly in Egypt. Since 1999; I have been the Director of Scandinavia & The World (great name or what!), which means that I am the production and sales manager for Scandinavia and the northern hemisphere.

BEST THING ABOUT THE JOB: Variety, travel and freedom.

CURRENT ACTIVITIES: Struggling to arrange travel to Egypt following the revolution. Take the opportunity to visit Egypt now! Fantastic prices and get to see the attractions almost by yourself.

HOBBIES: Exercising, reading.

PROS AND CONS OF LIVING IN CAIRO: On the plus side, there is the weather, the country's fantastic sights and the people. On the down side are the traffic and the difficulties that arise when 20 million people live in a fairly small area.

EDUCATION: International Economy, with a focus on German.

GOOD MEMORIES FROM THE STUDIES: Song and music (I was chairman of the song group LiHtösen for several years). Life in the halls of residence, our Sunday dinners and, last but not least, how awesome it was to study full time.



Jenny Ann Sundbro, China

PLACE OF RESIDENCE: Shanghai

FAMILY: Partner

WORK: Product Director for one of EF's global online services since the beginning of 2010.

BEST THING ABOUT THE JOB: Working with a global product in an international environment. EF is a very entrepreneurial company where you are immediately given your own responsibility. That I am also involved in teaching young people English makes it even more motivating.

CURRENT ACTIVITIES: The Summer product launches and travelling to the Philippines.

HOBBIES: Exploring Shanghai, being together with friends and family at one of Shanghai's many nice restaurants, travelling – right now mostly in Asia.

PROS AND CONS ABOUT WHERE YOU LIVE:

Shanghai is never boring – people here have such energy and drive, and new things are always happening. But the air could be cleaner ...

EDUCATION: Industrial Economics

GOOD MEMORIES FROM YOUR STUDIES: Hysterical attacks of the giggles and pizza from Pizzeria Valla during late nights before submission of various group projects.

Daniel Jaredson, Netherlands

PLACE OF RESIDENCE: Wassenaar

FAMILY: Married, three children aged between 7 and 13 years

WORK: I have been working for the European Space Agency (ESA) since 2006. My workplace is the technical research centre ESTEC in Noordwijk.

BEST THING ABOUT THE JOB: Being at the hub of development for European space technology is very stimulating. I can influence the entire chain from the planning stage for future studies to quotations and contracts with the European space industry, following up results and then planning again for the next step. I really enjoy working with a variety of people and businesses in different countries.

CURRENT ACTIVITIES: I am in charge of technical development for "Materials & Structures" for the ESA Future Launcher Preparatory Programme. The development is in preparation for the rocket that will replace Ariane 5 after 2025. A lot of different activities need to be coordinated, from system studies down to specific technical development activities and management of my staff.

HOBBIES: Food and drink, photography, motor sports and golf.

PROS AND CONS ABOUT

WHERE YOU LIVE: A positive thing is the much better schooling that children receive here compared to Sweden. It is also close to most things. You can, for example, easily take the car to France for a weekend. Moreover, it is a useful experience living as an immigrant. On the negative side, Holland is crowded, so it is very expensive to buy a decent house with a garden.

EDUCATION: MSc in Mechanical Engineering, with focus on solid mechanics and advanced material technologies, 1994-98.

GOOD MEMORIES FROM THE STUDIES: The good spirit we had with fellow students and



at IKP, the institution I studied most at. Since we had children during the time I was studying, it is probably the infant stage I remember the most, along with taking on the situation of supporting a family on a study allowance.

Jennie Cederholm, Australia

PLACE OF RESIDENCE: Sydney

FAMILY: Fiancé Magnus

WORK: Postdoctoral fellow at the University of New South Wales since February 2011. Before that I was Postdoctoral fellow at Neuroscience Research Australia.

BEST THING ABOUT THE JOB: Variation and stimulation. No day is like another. The work involves lab experiments, planning experiments, writing articles, national and international presentations, meetings with other researchers, teaching university students and visiting colleges to promote neuroscience and research.

CURRENT ACTIVITIES: Just got back to work after two weeks of convalescence following an operation on a herniated disc. Working hard on new experiments that will hopefully lead to a better understanding of how damage

occurs to hearing. I am also looking forward to travelling to Athens in August to accept a prize I won for an article I wrote for the *Journal of Neurochemistry* last year.

HOBBIES: Exercise of any kind (e.g. running, boxing, weight training, cycling), being together with friends and reading books.

PROS AND CONS OF LIVING IN SYDNEY: It is great to have at least 20-degree temperatures for nine months of the year. Other advantages are the relaxed atmosphere and being so close to fantastic beaches. And BYO (bring your own) is brilliant! Bring your own favou-



rite wine to the restaurant – you get exactly what you want and it's a lot cheaper. On the downside, there is the distance to Sweden. I can't meet my family and friends so often. The country is also lagging behind in terms of the Internet (slow and expensive). The lack of cycle paths are not so great either.

EDUCATION: Master's degree in Medical Biology at LiU (2002); PhD in Biomedical Science from University of

South Australia, Adelaide, Australia (2007).
GOOD MEMORIES FROM YOUR STUDIES: All the wonderful sessions and refreshments at Örat. All the Saturday nights I worked at Nationernas Hus and learned how to mix drinks. We had so much fun!

“An incredible experience”

OCCUPATIONAL THERAPIST IN NEW ZEALAND

An exchange year in New Zealand gave Ulrika Hagenfalk a taste for more. She chose to stay on a further five years as an occupational therapist in one of the poorer residential areas outside the city of Wellington. Her encounters with people and nature have made a deep impression on her.

text **LENNART FALKLÖF**

It all started during Ulrika Hagenfalk's studies at Linköping University. She was studying to become an occupational therapist and wanted to broaden her horizons and spend a year in another country; so she contacted a university in Auckland, New Zealand.

“It was an incredible experience that I wish more people would try”, says Ulrika.

The exchange year provided her with the opportunity to see how occupational therapy is conducted in another country. It was also an opportunity to gain close contact with people, nature and culture.

“New Zealand offers a totally amazing variety of stunning landscapes with deserts, beaches, volcanoes, wine regions, rain forests and glaciers.”

Following her return, she worked for a short time in Sweden before she followed her heart back to New Zealand. For five years, she worked as an occupational therapist just outside of the city of Wellington.

BUT IT WAS NOT just a matter of walking into a hospital or district health care centre and getting going. She first had to prove that she not only knew her profession but also had a sufficiently good command of the English language and understood the country's culture.

“The culture is often very important, especially for the indigenous people of New Zealand, the Maori, but also for other ethnic groups that have immigrated to the country.”

Ulrika gives us an example.

“Amongst the Maori, there is a custom where various objects to do with the body



Ulrika Hagenfalk

and death are viewed as ‘tapu’ meaning holy. These objects must be held strictly separate from things that are not holy. Understanding how this applies to everyday work is important in order to offer care that is perceived as respectful and of a high quality.”

Unlike Sweden, New Zealand has, for some years, also required that all occupational therapists and physiotherapists continuously update their skills.

“It felt a bit tedious at first, having to prove that I lived up to that, but after a while it felt more like a great opportunity and something that I have actually missed since returning to Sweden.”

DURING HER TIME in New Zealand, Ulrika first worked in an emergency ward and then

in home rehabilitation. Much of the theory, methods and practical tools were the same as they are in Sweden.

“The fact that my day-to-day work was a little different was probably more because of differences in the population, the lifestyle and the culture. I worked in one of the poorer residential areas outside Wellington. Many of my patients lived in cramped conditions with several generations under the same roof, sometimes without good insulation or heating.”

In general, it can be difficult to find good housing in New Zealand. There is a shortage of small flats and poor quality housing can cause it to be very cold indoors during the winter.

Another drawback is the constant risk of earthquakes and large volcanic eruptions.

EVEN SO, IT IS THE POSITIVE ASPECTS that weighs heavier when Ulrika talks about life in New Zealand. The most positive things are meeting people and the beautiful countryside. You are never too far from the sea and there is always plenty to do outdoors.

“The colours, the blue sea and the green vegetation felt more vivid than I'd experienced in Sweden. People are happy, friendly and generous. The tempo is more calm and relaxed.”

But for the time being, the adventure in New Zealand is over.

“My partner and I moved to Sweden and found work in Västerås. I am currently working at the general hospital in Västerås”, Ulrika Hagenfalk says. ■

New hope for Africa

The key to development in Africa rests on a focus on small farmers. It also appears that more and more African governments are recognising this. There is reason for cautious optimism, says a Swedish research group.

text **ANIKA AGEBJÖRN**

A group of Swedish researchers, in conjunction with colleagues in Africa, studied developments for small farmers in nine African countries between the years 2001 and 2010. One of the researchers is Hans Holmén from the Department of Water and Environmental Studies at Linköping University.

"The focus on small farmers in Africa is currently greater than it has been for many decades", he says.

African states are gradually abandoning the neoliberal policies that the World Bank and International Monetary Fund imposed on them in structural adjustment programmes during the 1980s.

Furthermore, when negotiations broke down during talks at the Doha Development Agenda at the World Trade Organization, a renewed opportunity arose for governments to protect their own farmers with tariffs and other import barriers.



Hans Holmén

"The EU's large agricultural subsidies and cheap food exports were set to wipe out farming in Africa", says Hans Holmén.

THE TURNAROUND CAME just after the turn of the century and was reinforced by the sharp increases in food prices in 2008 and the food riots that followed in their wake. Several countries have reintroduced subsidies for seed and fertilisers. Malawi is an example that is often highlighted as a success story, since the country has, once again, become an agricultural exporter.

Now investments are being made in road construction. To a great extent, Africa still lacks roads. Many small farmers need to travel long distances to get to a main road and it is difficult for them to transport their goods. Other government initiatives aiming to support small farmers are systems of contract farming and better market information.

Harvests, however, are still small and yields are low, say the researchers. The average small farmer collects 1.3 tonnes of maize per hectare. This is just a fifth of what a high-productivity farm delivers. In the USA, farmers easily harvest 7 tonnes per hectare. Even a well-managed field in Africa can provide more than twice the present yield in Africa.

Poor farmers are also dependent on having a lot of strong family members. The ground is worked with hoe and machete; there are no other tools.

THE MOST EFFECTIVE STRATEGY to fight poverty in Africa is to concentrate on small farmers, the researchers say. In many countries, they still make up a large majority of the population.

"Africa is an old continent", says Hans Holmén, "with soil that is leached and decayed and therefore in need of fertilizer to produce a good yield. However small farmers often lack larger livestock and they are dependant on artificial fertilizers, which are expensive. It is however more complicated when it comes to droppings from hens and goats."



A Kenyan small farmer.

Also there is often a dearth of warehouses, which means that the farmers are forced to sell their crops when the prices are at their lowest.

"Often, they are encumbered with debt because, for example, from the need for hospital care and medicines. In order to pay off their debts, they are forced to sell their crops immediately. However later in the year, they themselves are forced to buy food and seed at a time when prices have increased."

Several countries are now investing in so-called "warehouse receipt" systems, where farmers can deposit their crops and in return receive a receipt. Receipts can be used as a means of payment to reduce the farmers' debts so they can also wait for prices to rise before selling their crops.

The study was financed by the Swedish International Development Agency, Sida, and is reported in the a book published in the spring of 2011, *African Smallholders: Food crops, markets and policy*. ■

World leaders on renewable energy research met in Linköping

Researchers from the UN climate panel, the world's foremost name in solar energy, and researchers engaged by the G8 world superpowers. These heavyweights met in Linköping in May for an energy congress – World Renewable Energy Congress 2011 (WREC).

text **ANIKA AGEBJÖRN**

photo **PETER MODIN, MICHAELA REHLE, SARI GUSTAFSON**



Hundreds of papers were presented.



Crown Princess Victoria participated on the opening day.

Amongst the keynote speakers at WREC, were Kornelis Blok and André Faaij who are leading researchers on the UN Climate Panel and also recipients of the Nobel Peace Prize. Also in attendance was Ernst Worrell who is in charge of several studies for the UN Climate Panel, as well as the United Nations Environment Programme (UNEP).

650 researchers presented scientific contributions, or papers, on a range of different themes. These included solar electricity, solar heating, wind energy, hydroelectricity, wave power, bioenergy and fuel cells. They also discussed the possibility of increasing energy efficiency within industry, sustainable transport and cities, low-energy architecture, policy issues and climate change.

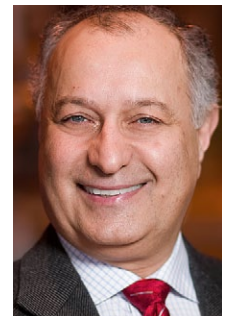
The idea that 'many drops make a river' is the basis for future energy systems', according to Bahram Moshfegh, head of the De-

partment of Energy Systems, and WREC host.

"The solution does not lie within one technology, but via a package of measures. We need to work on many fronts simultaneously, and we need to be much better at saving energy."

But if he were to identify one area where progress is moving quickly, it would be solar energy.

"Whether we are talking about supply, demand, policy or commercialisation, things are moving very quickly in that area – especially thanks to countries like Germany and China."



Bahram Moshfegh

A sustainable energy system by 2050 is fully possible

It is fully possible to achieve a global energy system that is almost entirely based on renewable energy sources by the year 2050, whilst still maintaining present levels of comfort and taking into consideration an increase in populations.

This is what climate researcher Kornelis Blok and his colleagues demonstrate in a study presented at WREC.

Kornelis Blok is Professor of Sustainable

Energy at Utrecht University and one of the main authors of the UN climate report. He was one of the keynote speakers at the WREC.

The researchers' scenario is based on a comprehensive study of current global energy consumption. They considered our actual physical activities that require energy, industrial processes, transportation and construction. 95 per cent of global energy needs for 2050 could be met by renewable energy sources. Energy efficiency is the key,

they claim. The potential for saving energy is enormous.

They also established that electricity is the energy carrier that can most easily be obtained from renewable energy sources. Moreover, they state that a global emphasis on renewable energy sources will significantly reduce our energy costs. Initially, large investments are needed – approximately two per cent of global GNP – however the researchers claim it will pay for itself many times over.



Things are been moving rapidly in the area of solar energy. During the conference there were also discussions about the development of a sustainable transport system.

Electric cars are the solution

Massive investments on electric cars is the only way to drastically reduce transport sector carbon emissions.

That was the message from Julia King, member of the Committee on Climate Change, which serves as an advisory council to the parliament in the United Kingdom.

During her speech at WREC, King claimed that road transport produces 20 % of all UK carbon emissions and that this figure is standard for a developed country. Private people make up more than half of all road transport in the UK.

One way to reduce emissions is to influence these drivers and their choices.

"We could choose smaller vehicles, share cars, drive slower and car pool."

Technological improvements that reduce carbon emissions will also contribute.

"However it is not enough. The challenge is much bigger than just that."

Julia King says that the goal of radically reducing road transport emissions can only be achieved via a massive investment in electric cars. The drawback with electric cars is that they are unable to be driven long distances before they need recharging. King states that the typical motorist drives less than 80 km per day, which means they would only require one charge per day.

Electric cars could work well with the introduction of a smart electric network where it would be cheaper to use electricity during those times of the day when the grid is in less demand. Electric cars could also be charged overnight.

New approaches are needed on climate policy

The Kyoto Protocol looks set to fail; alternative approaches are now needed in order to reduce greenhouse gas emissions.

That was the message from Björn-Ola Linnér in his speech at WREC. Björn-Ola Linnér is Professor of the Department of Water and Environmental Studies at Linköping University and previously directed the Centre for Climate Science and Policy Research (CSPR).

Emission trading is a cornerstone of the Kyoto Protocol, which was developed within the United Nations Framework Convention on Climate Change. But it appears to be a dismal failure. The results, in terms of reducing emissions, are poor. The Kyoto Protocol is not even going to live up to the very small expectations that were placed upon it, said Björn-Ola Linnér.

Alternative strategies are now needed in order to achieve the climate goals, such as

stimulating measures to reduce emissions as by-products of other political goals. One such goal that is growing in importance is energy security. He also pointed out that major changes are needed in terms of patterns of production and consumption as well as people's lifestyles.



Björn-Ola Linnér



When Steve Woolgar came to LiU he began by putting a list on his door for those people who wanted to meet him for what he jokingly refers to as a “doctor’s consultation”. Within a few hours, the list was full and he had to put up a new one.

Being seen through fresh eyes

Twenty-one internationally well renowned professors are taking part in a guest researcher programme at Linköping University. One of them is the British professor Steve Woolgar.

text **BIRGITTA WEIBULL**
photo **GÖRAN BILLESÖN**

When Steve Woolgar was asked to become a visiting professor at Linköping University, he didn't need to think twice. He was impressed during his first visit to Linköping in the 1980s.

"There was an extraordinary contrast between the new brave way at LiU and the traditional ways at older universities", explains Steve Woolgar, professor at Saïd Business School at Oxford University.

Now that he has returned as a visiting professor 25 years later, LiU has of course grown and changed, but he feels that the positive driving spirit is still here. He is particularly fond of the interdisciplinary research at Tema – The Department of Thematic Studies, which is hosting the visiting professorship.

"Interdisciplinary science has received a boost now that the university is more topic-centred", Steve Woolgar says.

He mentions climate change and the effects of technological development, such as the scientific challenges that need to be addressed at an interdisciplinary level.

Steve Woolgar's visiting professorship is part of a guest researcher programme included in LiU's strategy aimed at improving research. Twenty-one internationally, well renowned professors are taking part in the programme, which covers all of LiU and continues until 2012.

Rector Karin Fälth-Magnusson explains, "Our hope is that the programme will improve the quality of publications and lead to the exchange of researchers and promote active networks. Collaboration and international contacts are becoming ever more important for both citations and to promote research funding".

FOR STEVE WOOLGAR, it is a positive thing that his three years at LiU are part of something larger. It is also a longer period than any of his previous assignments as guest professor at universities in Canada, the USA and France.

"There is some good thinking behind this and there is clearly a job for me to do. The potential to help with the internationalisation of the research effort is extraordinary."

He began by putting a list on his door where anyone who wanted to meet him



Steve Woolgar is professor at Oxford University.

could put themselves down for what he jokingly refers to as a "doctor's consultation". Within a few hours, the list was full and he had to put up a new one. Based on his many years of experience on how scientific publication works, he can assist with anything from tips on journals for publication to advice on what can be highlighted in an article to increase its chances of being published.

Researchers and postgraduate students can also participate in one of his seminars or courses, such as the postgraduate course on qualitative research methods that has attracted participants from all over the country; including Umeå, in the far north of Sweden, to Gothenburg and Lund in the South. Another prospective course is "Professional Skills for Social Scientists" which is all about how to form contacts, build networks or cope with the rejection of a paper – knowledge that is important to have in a research career but it is often taken for granted.

STEVE WOOLGAR'S time in Linköping will also be used to form closer links between Linköping and Oxford University, where he is head of the Science and Technology Studies research group at Saïd Business School.

"An entire team at Tema will visit Oxford University this year to meet with my students and research group, and later on, I hope to bring back a group to visit Linköping."

He is primarily a professional in Science and Technology Studies – STS, a social sci-

ence research area that first emerged in the 1980s, focusing on a critical understanding of the growth of science and the impact of new technology. But his professorship in Oxford is in marketing.

"The chair opens many interesting doors and unexpected opportunities. Marketing is an interesting area undergoing large-scale changes and there is a new understanding of markets and new consumer practices coming."

IN RECENT TIMES, STS researchers have also become increasingly interested in how science is affected by the economy, markets and values. At the beginning of April, Steve Woolgar participated in the international workshop *The Moral Economy of the Life Sciences*, which was arranged by ValueS, a new research programme at Tema T (Technology and Social Change). He tells about one of the studies that had to do with a new practice at zoos where people are involved in cloning rare animals.

"The question is if the cloned tiger is a real rare tiger or a domestic version, and what counts as a rare species that needs protection. We want to understand this debate and see who wins."

A distinctive feature of this style of research is that the researchers keep their distance and act as anthropologists, often using ethnographic methods.

Steve Woolgar himself has personally used ethnographic methods in many areas. As early as thirty years ago, he wrote his ground-breaking book about the social construction of scientific facts in laboratory work. Since then, he has carried out several ethnographic studies on researchers' at work and this has always been well received.

"They understand the value of being seen through fresh eyes", Steve Woolgar concludes. ■

Gästforskare sätter spets



21 internationellt välrenommerade professorer deltar i ett gästforskarprogram på Linköpings universitet. En av dem är den brittiske professorn Steve Woolgar.

LiU alumni

SHE'S A SUPER TALENT

Head of Information Jenny Fridh is another prodigy that has studied at Linköping University. This spring, the Swedish magazine *Veckans Affärer* (The Week's Business) nominated her as a super talent on their talent list.

For the last three years, Jenny Fridh has worked as the Head of Information for 'Lantmännen Kronfågel', which is one of the largest groups in the food, energy, machinery and agriculture industries in the Nordic region. Earlier she had worked as Head of Information for another Lantmännen subsidiary, 'Lantmännen Cerelia'.

Her role as the Head of Information includes responsibility for overall strategic communication, internal communication, PR, crisis communication and communication for the leadership.

Between 1992 & 1995, she enjoyed her student years in Linköping where she studied Cultural Studies with a major in Media and Communication. Currently she lives in a suburb of Stockholm with her partner and two children.

She was ranked 62 on *Veckans Affärer* talent list. We mentioned the list in the last issue of *LiU Magazine* and seven other super talents from LiU have now made the grade. The highest ranked LiU alumna is Biomedical researcher Fredrik Bäckhed in twelfth place.



Jenny Fridh

NEW ON THE ALUMNI TEAM

Karin Gibson is new on the Alumni Team. She will be responsible for contact with international alumni.

LiU is working to strengthen the ties between the university and international alumni. Last year Karin Gibson headed a pilot project aimed at both exchange students and master's students. It established a concept where the students primary contacts is with their programmes and

teachers. In her new role, Karin Gibson will help coordinating this work.

There are LiU alumni across the globe, see the map at <http://bit.ly/1KAgAG>



Karin Gibson

PETER MODIN



Want to know more about LiU Alumni?

Camilla Smedberg
013-28 24 20
alumni@liu.se
LiU Alumni, Linköping University, 581 83 Linköping, SWEDEN.

Alumni world

ANDERS EK BACKMAN is Chief Technical Officer at Swedish Biogas International Korea Ltd in Seoul, South Korea. He earned an MSc degree in Technical Biology and Engineering in 2009.

GUSTAF ENGSTRAND works as Global Procurement Process Manager at the Basel headquarters of the Swiss pharmaceutical giant Roche. He gained his MSc degree in Industrial Engineering and Management in 2001.

ELIN FALK is a PhD student at École Polytechnique Fédérale in Lausanne, Switzerland. She holds an MSc degree in Medical Biology from 2009.

JOHAN FREDHOLM is an Associate Banker at the European Bank for Reconstruction and Development in Tbilisi, Georgia. He received a MSc in Information Technology and Engineering in 2000.

MIKAEL HASSLUND is Programmer at Outso Ltd in Nottingham, England. He received a MSc in Media Technology and Engineering in 2008.

ROGER JANSSON is President of As-sab Pacific in Singapore. He received an MSc in Industrial Engineering and Management in 1988.

MALIN KARLSSON is security expert at Jernbaneverket in Fyllingsdalen, Norway. She studied Cognitive Science at LiU and graduated in 2010.

ARSHAD MUTEER is a Software Engineer at Elixir Technologies in Rawalpindi, Pakistan. He studied a Master's Programme in Software Engineering and Management and graduated 2010.

JACOB LERENIUS works as a Systems Engineer at Huawei Technologies Sweden AB in Shenzhen, China. He holds a BSc degree in Electronics Design from 2006.

MARKUS SEPPÄLÄ works as a Senior Consultant at Ernst & Young in Drumoyne, Australia. He received a BSc in Commercial and Business Law in 2003.

He fell in love with Sweden

Berthold Panzner was supposed to study at Linköping University for six months, yet he enjoyed it so much that he stayed for two years.

It all started in 2004, when he visited a friend in Stockholm. It was his first time in Sweden and he was hooked.

"It was love at first sight", he says. "I knew I wanted to return. My university in Magdeburg had a partnership agreement with Linköping University and so I came to Linköping as an Erasmus student in 2005."

At the University of Magdeburg he had studied applied physics and electrical engineering and he continued in this area, combining it with a beginner's course in Swedish. But it was certainly not all work and no play. He had lots of fun with other students while living in the student dorms, including monthly theme parties.

"Once we had a dorm beach party and we dressed up in swim wear for the occasion. It was freezing outside so we turned on the oven to warm up the room", says Berthold, who is still in touch with his dorm buddies.

HE ALSO TOOK THE OPPORTUNITY to really get to know Sweden and travelled a lot. Lacking previous experience of cross-country skiing, he and two fellow exchange students signed up for the Vasaloppet. For three months they practised on the golf course by the university before successfully entering the race in March 2006.

Alumni Annual Fund

There is a steady increase in contributions from alumni to LiU Fund of U, a fund supporting small but important LiU projects within research and student life. Since 2009 over SEK 400,000 have been raised through telephone campaigns and halfway through the latest spring campaign there are pledges for another SEK 250,000.

Childhood diabetes research and more microwave ovens for students are two examples of projects that have received funding through LiU Fund of U.

By then, Berthold had already decided to stick around. He continued his studies at LiU and ended up doing his degree project with the research company Acreo in Norrköping. What was it that made him stay?

"Life in Sweden is more peaceful than in Germany. I also find it more personal, relationships are highly valued. And of course I enjoyed life as a student at Linköping University."

Berthold Panzner is now back at the University of Magdeburg, where he is a doctoral student working with ground-penetrating radar. He is still fluent in Swedish, although that's unsurprising, since he is a frequent visitor to Sweden.

"I must have gone back at least eight times since I left in 2007 and I certainly will again", he says in conclusion.

MARIA KARLBERG



Berthold Panzner

First alumni meeting in Berlin

On 4 May, LiU arranged an alumni meeting in Berlin for the first time. At recently opened Café Bajka, former students took a chance to network and share memories of Linköping University.

Ten LiU alumni attended the meeting from different educational backgrounds. Some were Germans who had been exchange students at Linköping University, others former LiU students pursuing their careers in Berlin or, in the case of teacher and marathon runner Frida Södermark, living there for a while "to work less and run more". Over a buffet of soup and quiche, they all soon found common ground, remembering good old times in Ryd and sharing experiences of different Berlin phenomena such as the four-letter word "stau" (traffic jam).

At the end of the evening, the guests stated that they were looking forward to the next alumni meeting in Berlin. After Sweden, Germany has the largest number of LiU alumni network members, so a follow-up event is not unlikely.

See you in London!

*Alumni meeting at Corney & Barrow, Broadgate Circle
Friday 16 September 18.30*



www.liu.se/alumni



Linköpings universitet

She build



s jigsaw puzzles with cultural history

Stina Ekelund works as a furniture conservator in a castle in Denmark. With gentle hands, she guards a piece of cultural history.

text **GUNILLA PRAVITZ**
photo **GÖRAN BILLESÖN**

It is quite late in the evening when furniture conservator Stina Ekelund's neighbour calls at the door. The entire house smells! Are you baking?

No, it is sand from a Libyan desert.

Heated in a pan, the sand is burning thin pieces of maple veneer. They are receiving the exact millimetre-wide edge shading that provides a depth effect for the marquetry work that Stina Ekelund is doing. It is a replica of a sixteenth century coat of arms, commissioned by Kalmar Castle.

She specialises in marquetry – the technique of creating patterns and pictures using thin pieces of veneer that are glued to a surface. It is a kind of jigsaw puzzle using different kinds of wood, stone, bone, ivory,

mother of pearl and tortoise shell; sometimes all at once.

It is almost three in the morning before the coat of arms is ready, secured between two sheets of Plexiglas.

The following morning, Stina is in a workshop at the Frederiksborg Castle, Hillerød, pouring a cup of coffee. The train from Copenhagen, where she lives, takes an hour. When the weather is warmer she cycles the 80 km return trip.

Stina's regular job is as one of the museum's three furniture conservators at the largest renaissance palace in Scandinavia, which is also Denmark's national history museum.

Two of the furniture conservators were

educated at Linköping University, at Carl Malmsten Furniture Studies; traditionally operating from Stockholm. Stina Ekelund started studying there in 2001 while her colleague, Gitte Jørgensen, began in 1999. By that time they were already trained cabinetmakers.

THE CASTLE WAS BUILT in the 1500s and the workshop is located in the oldest parts complete with thick, whitewashed walls and exposed wooden beams. However it is not particularly large considering the number of objects that the furniture conservators are expected to keep track of:

"Between four and six thousand, depending on how you count them", says Stina Ekelund. ►

Photo to the left: Stina Ekelund has been working as furniture conservator at Frederiksborg Castle since 2008. Her speciality is marquetry, which is the technique of creating patterns and pictures using thin pieces of veneer that are glued to a surface.

Photo to the right: The workshop is located in the oldest parts of the castle, with thick, whitewashed walls and exposed wooden beams.



Name	Stina Ekelund
Place of residence	Copenhagen, Denmark
Education	Furniture conservationist, graduated 2004. Masters training in Copenhagen.
Work	Conservationist at the renaissance castle Frederiksborg, approximately 80 km north of Copenhagen.
Hobbies	A great deal of exercising, lots of reading, distance courses in art history.
Future plans	There will probably be a doctoral thesis eventually and I would love to return to the new Malmstens' building on Lidingö!
Good memory	The walk down Katarinavägen after the admissions interview. I was accepted. Yes! Now it begins!

Photo to the right, practical problem solving: getting a giant cabinet into a freezer container. The common furniture beetle will only die when rapidly frozen to 30 degrees below zero. "If they are chilled too slowly, they develop a protective fluid."

- Large sheets of paper are scattered on the staff room's simple wooden table where Stina Ekelund keeps jobs listed. Furniture in need of immediate care needs to be moved to exhibitions or to be lent out.

Prioritising requires knowledge and consideration. Restoration is balanced against accessibility for visitors, in that efforts to keep items in good condition are weighed against pressing urgent actions.

FREDERIKSBORG SETS out the framework for their work, with seasonal changes that reach into every corner of the castle – raw weather, single glazing and being difficult to heat.

"We take as many precautions as we can to maintain a constant temperature and level of humidity. We are constantly emphasising how important it is for the windows to have UV filters."

That is under way but is expensive.

The castle was built as a pompous manifestation of power for Christian IV (1588-1648) and the Danish autocrats that followed. The symbolic value of the castle for the nation-state became particularly evident following the great castle fire in 1859, when practically the only things that remained intact were the outer walls and parts of the church. Nineteen years later, the castle had



been rebuilt and reopened as a national history museum.

"The money came from J.C. Jacobsen, the founder of Carlsberg Breweries. The museum still operates from a fund that he set up."

STINA EKELUND ESTABLISHED her Danish museum contacts when she was doing work experience during her third term at the Conservation Department of the National Museum of Denmark. Her instructor told her about Frederiksborg, which led to a paper about the Danish master Hans Barchmann, who was responsible for the advanced marquetry in the castle's church.

Stina complemented her degree with a Masters course at the conservation school at the Royal Danish Academy in Copenhagen; this time with comparative studies of marquetry in Kalmar castle in Sweden. She kept up her contacts at Malmsten's and analysed wood samples from marquetry in the modern laboratories in Stockholm.

"Using infrared spectroscopy, I wanted to see if the wood was stained or dyed using various fungi. I like the natural science approach; it provides new and objective knowledge."

Following her studies, Stina took over a workshop amongst the antique dealers at Bredgade in Copenhagen. Two old cabinet makers worked at the workshop and there was a constant fog of tobacco smoke and an unconcealed surprise that she never wanted to start the day with a drink of Gammel Dansk.



Stina Ekelund shows her castle domains. Perusing the exhibitions is like taking a walk through five centuries of European cultural history.



Photo above: Knowledge needs to be kept alive. The reason hare skin glue is amongst the best is because of the structure of the amino acids. Injected with a needle.

Stina soon received a number of really exciting assignments. For example, the Design Museum gave her a writing desk from the 1700s made by the master carpenter Röntgen.

"It was an assignment that really required that I got my act together. I was quite happy until I realised that in the evenings I was locking up a piece of furniture worth something like 2 million Euro. Just the thought that something could happen..."

Without even flinching, Stina closed the workshop, worked in Venice for six months and was then signed up for a project at Rosenborg Castle in Denmark. There, she had to work extremely hard, restoring the narwhal tusk veneer on the 1671 Danish royal throne.

"About 2,000 hours' work. The twisted pieces of veneer had to be softened up in humidity cabinets to be straightened and then be allowed to slowly dry again before they could be put back in to place."

STINA EKELUND STARTED WORKING at Frederiksborg in 2008.

Now, she is used to her castle domains. Where ordinary people mostly see the surface, Stina sees layer upon layer of stories, new questions to be asked and challenging problems to be solved.

Perusing the exhibitions is like taking a walk through five centuries of European cultural history. There are traces of technical development and the exchange of knowledge; changes in fashion and the flow of ideas. There are also traces of the travelling

cabinetmakers journeys through Europe with new pattern books in his pack.

Stina stops by a renaissance cabinet, a masterpiece made in a time of conquest in Europe, displaying clear signs that the owner had access to the entire world.

"With exotic types of wood from Africa and South America. Jet black ebony, snake wood in patterns like snakeskin or semi-transparent tortoise shell backed by coloured paper."

In drawers and secret drawers hide treasures brought home that few could afford.

FURNITURE CONSERVATION is a sophisticated blend of detective work, normal natural science, skill and a kind of practical furniture archaeology. There is still much that is unexplored.

"It is impossible to get by just with theory. You have to feel your way forward. It is when I work on the piece that I see how the original piece must have been made."

The discovery of details that do not match, the chain reaction of thoughts that follow, the new conclusions that need to be drawn are all a fantastic part of the job, according to Stina:

"Then I'm completely exhilarated! I love the geekiness about techniques."

Stina Ekelund manages not only a cultural heritage but also the knowledge of its coming into being, the history itself.

"And everything we fix must always be able to be returned to its original condition. Everything we do has to be documented. And if nobody notices our work, then we have done it really well. ■



Händig historiebevarare



LiU-alumnen Stina Ekelund är möbelkonservator på Frederiksborgs slott i Danmark. Hennes jobb är en avancerad blandning av detektivarbete, vanlig naturvetenskap, handskicklighet och en slags praktisk möbelarkeologi.



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