



NEWSLETTER – January 2011

Nano-Tera.ch exploring the potential for collaborations with China

Recognizing the importance of bilateral relations, Nano-Tera.ch – on the initiative of Executive Committee member Prof. Boi Faltings – has taken part to a tour of Chinese institutions in order to initiate a dialog on possible future collaborations.

In addition to Prof. Faltings, the Swiss delegation was composed Dr. Patrick Mayor, scientific coordinator of Nano-Tera.ch, and Dr. Guillermo Barrenetxea, representing the MICS program. Support was provided by Dr. Lan Zuo Gillet and Dr. Claudio Boër of Swissnex China as well as Prof. Denis Gillet of EPFL and Nano-Tera.ch executive director Dr. Peter Bradley.

Visits started in Shenzhen with the tour of the Shenzhen Institute of Advanced Technologies – where the team was welcomed by Prof. Joshua Huang and his colleagues.

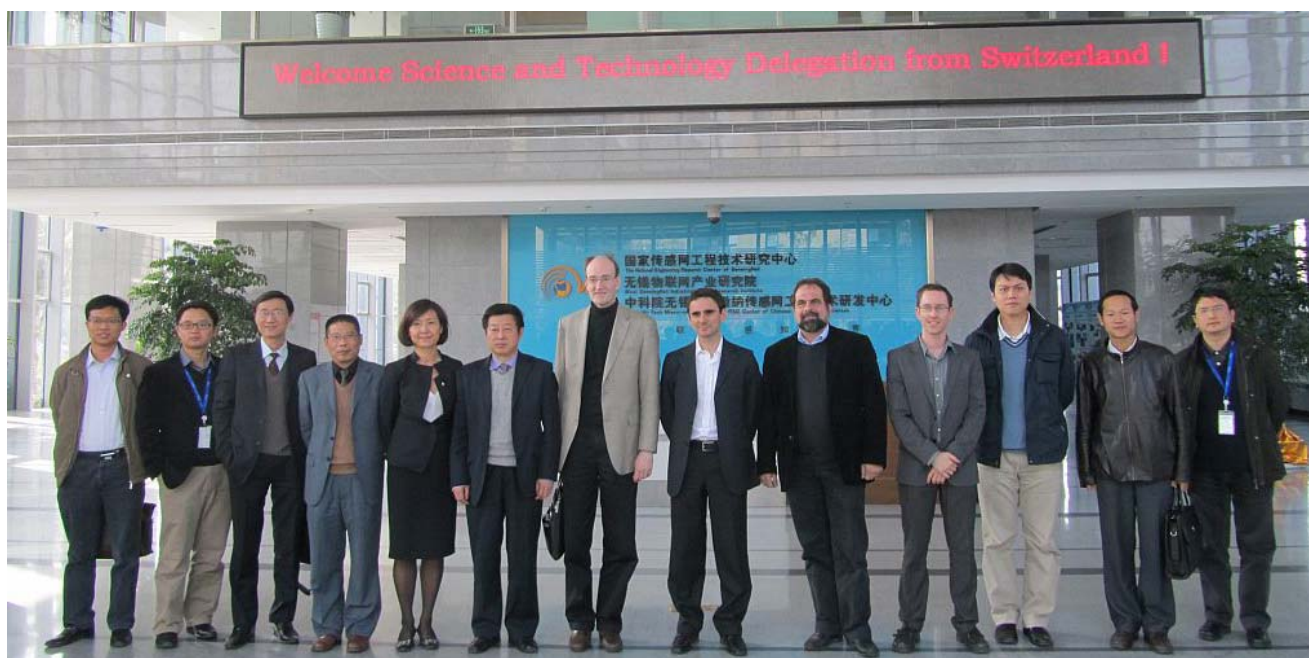
In Shanghai, the delegation had promising exchanges with Wang Xi, director general of the Shanghai Institute of Microsystem and Information Technology (SIMIT), and his collaborators. SIMIT is part of the Chinese Academy of Sciences (CAS).

The Nano-Tera concept was strongly praised and generated a great interest since the institute combines research in nanotechnology with research in computing and communication sciences.

The potential collaboration of Nano-Tera in China with the Chinese Academy of Science could benefit from the existing agreement between CAS and the Sino-Swiss Science and Technology Cooperation (SSSTC) program, which encourages long term partnership and aims to provide opportunities for collaboration between Swiss and Chinese research institutions.

Further visits included the Shanghai Jiao Tong University, which held a workshop chaired by Prof. Ping Li, associate dean of the School of Electronic, Information and Electrical Engineering. At Fudan University, the team took part to interesting discussions led by Prof. Li-Rong Zheng, who is part of the “Thousand Talents”, a program initiated in 2008 to attract Chinese expatriates with impeccable credentials from overseas.

Finally, a visit of the impressive Wuxi Center of Internet of Things was organized. The center was visited by Premier Wen Jiabao recently, where he declared the Internet of Things a national priority. It covers a large area, includes a demonstration museum, and clearly shows the determination in making it the main center for the Internet of Things in China. ✕



The Swiss delegation and their Chinese hosts at the Wuxi Center of Internet of Things

iCAN'11 contest to be held in Beijing

In other China-related news, the large international Transducers conference will be held on June 5-9, 2011 in Beijing.

It will feature the International Contest of Application in Nano-micro Technology (iCAN'11), which is an international youth innovation contest in micro/nano fields. The mission of iCAN'11 is to promote the innovative spirits of youth, to construct a collaboration platform between academy and industry, to accelerate the applications of nano-micro technology and to educate the young generation in high-tech research and development.

All student teams must first participate to a country or region's local contest to win the chance to go to the final Beijing contest.

The Swiss iCAN competition is organized as a Nano-Tera.ch ED project. The participating teams have been selected and the Swiss contest will take place in Neuchâtel on March 15th, 2011.

<http://www.ican-contest.org> (International contest)
<http://www.ican-contest.ch> (Swiss contest) 

Three new Education and Dissemination activities

The on-going call for Education & Dissemination activities – with deadlines at the end of every even month – keeps attracting interesting applications. As a result, three new projects have been selected last month:

➤ **Swiss Education and Entrepreneurship in Nanoelectronics** ▶ PI: Prof. V. Wood, ETHZ

This activity consists of an outreach program that provides educational opportunities for current and future leaders in the area of nanoelectronic devices. It will focus on providing hands-on training in material development, device preparation and system characterization, in nanoelectronic device fabrication for students and industry professionals in the field of nanotechnology.

The program will consist of several activities: a hands-on ETH-based class “Introduction to nanoelectronics” for MSc students, a 1-week course for mid-career researchers in industry, a 1-day seminar for business professionals evaluating possible entry points or investment opportunities, as well as various activities for young students.

➤ **5th International Symposium on Medical Information and Communication Technology (ISMICT 2011)** ▶ PI: Prof. Ch. Enz, CSEM

The purpose of ISMICT 2011, to be held on **March 27th** in Montreux, is to bring together leading researchers and experts from the medical

and hospital community with those from the information and communication technology domains in order to exchange experiences, share new ideas and promote innovation.

ISMICT will continue and extend the tradition established in Japan, Finland, Canada and Taiwan. The focus this year will be on Medical Body Area Networks, Technology and Services for Personalized Medicine.

Prof. Giovanni De Micheli and Prof. Christian Enz are honorary chairs, while Dr. Sandro Carrara is a Technical Program Committee co-Chair for this event.

➤ **Educational Workshops on Energy Efficient Autonomous Systems: a collaborative framework between Nano-Tera and Guardian Angels for a Smarter Planet** ▶ PI: Prof. A. Ionescu, EPFL

Future Emerging Technologies (FET) Flagships are proposed to be visionary, large-scale European ICT research initiatives nucleated from FET but cascading into various scientific and technological areas of different maturity, from long term to more technology driven research.

One of Swiss led ongoing flagship proposal is **Guardian Angels for a Smarter Planet**. A pilot proposal is being prepared for a phase of 12 months during which the main proposal will be issued: the leaders of this proposal are professor Ionescu (EPFL) and professor Hierold (ETHZ), both members of the Nano-Tera community. They define a joint EPFL-ETHZ lead of this flagship as an example of high level collaboration between the two federal schools, as well as other Nano-Tera partner institutions such as IBM Zurich and CSEM.

Guardian Angels are future zero-power intelligent autonomous systems featuring some well defined human-like functions but having many other capabilities beyond human aptitudes.

With Nano-Tera.ch covering energy challenges in its continuation starting in 2012, two major educational events dedicated to the advancements, challenges and opportunities of energy aware technologies and system will be organized to enable complementarity between Nano-Tera.ch and Guardian Angels.

Annual Meeting videos available online

All videos of presentations made at the latest Nano-Tera.ch annual meeting have been made available online on our website.

These are highlights of the presentations of the 10 RTD projects made by their respective PI, as well as a general video presenting the meeting.

<http://www.nano-tera.ch/news/webvideo.html> 

Nano-Tera.ch internal notes

➤ SNF mid-term review panel

The SNF panel meeting for the midterm evaluation of RTD projects took place on November 3-5, 2010. All teams involved in the projects presented their work to the SNF review panel.

At the same time, every interested project leader had the opportunity to submit “add-on” proposals for additional funding on a specific extension of their existing project. Proposals selected are currently under active consideration and will be announced shortly.

➤ Scientific report 2010

The Nano-Tera scientific report 2010 is now completed and was submitted last month to the SNF for further review. All project leaders have provided useful insight on their research progress and the scientific outreach such as publications or conference participations.

So far – as of October 2010 – already 183 contributions on Nano-Tera RTD projects have been made at international conferences in 26 different countries.

In addition, more than 100 publications have been reported by PIs, a promising start given that the scientific report covers just 6 months of research for half of the RTD projects and about 1.5 year for the other half. ✂

Prof. De Micheli and Prof. Thiele elected to the Academia Europaea

In September 2010, Prof. Giovanni De Micheli (EPFL) and Prof. Lothar Thiele (ETHZ) were invited to join the 2'300 members of the Academy of Europe (Academia Europaea).

It is a non-governmental association based in London aiming at promoting human science such as social, physics and life, mathematics, engineering and medicine in Europe. Its members come from

these domains and are spread across Europe and other continents, as part of a pan-european network.

Founded in 1988, the Academy of Europe's mission, among others, is to make recommendations to national governments and international agencies concerning matters affecting science, scholarship and academic life in Europe. It also proposes to encourage interdisciplinary and international research in all areas of learning, particularly in relation to European issues.

Members of the Academy of Europe are selected for their expertise in their domain, linked to those of the association. Prof. De Micheli and Prof. Thiele join a group that counts a number of Nobel prize laureates amongst them, several of whom were elected before they received the prize. Prof. De Micheli is the Director of the Institute of Electrical Engineering of EPFL and Nano-Tera.ch program leader. He is involved in the RTD projects i-IronIC and ISyPeM. Prof. Thiele heads a research group in the Computer Engineering and Networks Laboratory of ETHZ, is a member of the Nano-Tera.ch Executive Committee and is involved in the RTD projects X-Sense and OpenSense.

Other ongoing/upcoming events of interest

➤ January 24-25, 2011

As was previously announced, in the context of the **LASE Photonics West** conference, held in San Francisco, showcasing the latest research on new laser sources and applications, Prof. Ursula Keller (ETHZ), PI of the RTD project MIXSEL, is the chair of a conference dedicated to VECSELs.

For more on this conference, [follow this link](#)

➤ May 12-13, 2011

The **Nano-Tera.ch Annual Meeting** will be held over 2 days in Bern and will feature oral presentations of RTD projects started in 2009 as well as the more recent 2010 series. Posters will complement the picture. ✂