



NEWSLETTER – May 2011

Nano-Tera holds its second annual plenary meeting

The 2nd Annual Plenary Meeting of Nano-Tera.ch was held in Bern, on May 12-13 showcasing the ambitious research projects supported and leveraging the unique expertise that now percolates around it.

The meeting featured a keynote presentation by Dr. Bruno Murari of ST Microelectronics entitled “Lateral thinking: the impact of breakthrough innovation”, as well as oral presentations by all principal investigators to the 19 RTD projects. Reflecting the fact that the second 2010 wave of RTD projects is now also well under way, these were also featured prominently through oral presentation and poster contributions. This year, over 250 participants were present over the 2-day meeting.

In addition to all oral presentations, as many as [107 posters](#) have been presented by researchers involved in all fields. A poster contest was organized at the meeting: not only were the posters outstanding in terms of quantity, the experts evaluating the posters also praised the high quality of the contributions.

The best posters will be awarded an overall prize of CHF 3000 to support conference subscriptions and related travelling costs (winners: see box). ✂

Poster contest: And the winners are...

1st place:

- [Gastrointestinal Tract on a chip](#) – **NutriChip**
(H. Jafarpoorchekab, Q. Ramadan, P. Silacci, S. Carrara, G. Vergères, J. Ramsden, M. Gijs)

2nd place:

- [Modeling Self-Assembly at All Scales](#) – **SelfSys**
(G. Mermoud, M. Mastrangeli, A. Martinoli)

3rd place (shared):

- [Thermal Analysis and Active Cooling Management for 3D MPSoCs](#) – **CMOSAIC**
(M. Sabry, A. Coskun, D. Atienza)
- [Electrochemical Sensors for Living Cell Toxicity Detection](#) – **LiveSense**
(F. Cortes Salazar, S. Beggah, H. Bi, V. Devaud, J. van der Meer, P. Renaud, H. Girault)
- [Robust Microelectrodes Developed for Improved Stability in Electrochemical Characterization of Biomolecular Layers](#) – **ISyPeM**
(Y. Temiz, A. Ferretti, E. Accastelli, Y. Leblebici, C. Guiducci)

Joint Nano-Tera – SSSTC call for Sino-Swiss pilot grants

Combining the strengths of Nano-Tera.ch and the Sino Swiss Science and Technology Cooperation (SSSTC) a new joint call for proposals is now open. This call aims at creating synergies to encourage Swiss-Chinese research collaborations within Nano-Tera.ch thematic areas.

The present call for this joint pilot grant by Nano-Tera.ch and SSSTC is released following the recent visit to China of Federal Councilor Didier Burkhalter with the ministers of science and technology, education and health in order to reinforce common programs in sectors such as health, environment, and energy to cite those directly correlated to the strategic objectives of Nano-Tera.

For more: <http://www.nano-tera.ch/proposals.html> ✂

Transducers 2011 conference

Nano-Tera.ch will be present at the large [Transducers 2011](#) conference which will take place on June 5-9, 2011 in Beijing.

The conference will also feature the Second International Contest of Applications in Nano-Micro Technology (iCAN-2011). This is a global contest for young university students interested in micro-nano technology, by using micro-nano devices from sponsoring companies to create new applications. The Swiss-based pre-selection contest, organized as a Nano-Tera Education & Dissemination activity, resulted in the selection of two teams who will join 28 other teams from 14 other countries in Beijing.

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

Nicolas Gisin named one of the 100 personalities of Romandy

Prof. Nicolas Gisin, principal investigator of the Nano-Tera RTD project QCrypt was cited as one of the 100 most prominent people in French-speaking Switzerland in the yearly selection made by the magazine L'Hebdo.

In this 2011 edition, Nicolas Gisin was selected for his contributions to the physics of entanglement. The article stresses the importance of this work for quantum cryptography. ✂

FSRM activities in full swing

The Swiss Foundation for Research in Microtechnology is organizing 2 important events in the context of their Education & Dissemination activity.

➤ First up is a 2-day workshop **Innovative Sensors in the Nano-Tera program** which will take place on June 21-22. Confirmed speakers include Cosmin Roman (ETHZ), David Aتيenza (EPFL), Harry Heinzelmann (CSEM), Martial Geiser (HES-SO VS), Martin Wolf (University Hospital of Zurich), Michel Calame (UniBasel), Tobias Kippenberg (EPFL), Stéphanie Pasche (CSEM) and Yves De Coulon (Neroxis-Veolia).

Please register by the end of May by dropping an email to Céline Auberson at auberson@fsrm.ch

Details: <http://www.fsrn.ch/nano-tera/workshop.pdf>

➤ Next is a Nano-Tera summer school **Micro-Nano for Large Distributed Systems** (Neuchâtel, August 22-26). It aims to provide participants with the latest progresses made in micro and nanotechnologies and their applications to large distributed monitoring systems in environment, health and security. In particular, attendants will learn about newest sensor technologies, leading edge power management techniques in autonomous devices and advanced communication systems. The presentations will show the newest results based on research work made in several universities and Research centers in the framework of the Nano-Tera program. At the end of the week, the participants will have an extended overview on the state of the art in micro and nanotechnologies and their applications to large monitoring systems.

Details: <http://www.fsrn.ch/doc/c465.php?lang=e>.

Wireless MEMS school

Wireless MEMS (WIMEMS) focused on health, security and environment is the main topic of this Nano-Tera workshop that will take place this year in Neuchâtel September 12-13.

Progress in WIMEMS and their implementation in emerging domains such as health, security and environment are nowadays technology, economy and society issues. In a multi-disciplinary area such as the one addressed in the Nano-Tera program, it is crucial to make young and senior researchers aware of advanced investigations in the field of systems engineering in the health-security-environment domains.

The school will address and make links between a set of key enabling technologies such as sensors, MEMS, NEMS, ultra-low power electronics, wireless communication, system integration, and applications, which are of high importance. Not only the academic but also the industrial views and perspectives will be disseminated to the participants.

The WIMEMS workshop in Neuchâtel is a part of the International NAMIS Autumn School 2011 that

will be held on September 12-16 at three locations: IMT - Neuchâtel in Switzerland (Sept. 12-13), Arcet-Senans in France (Sept. 14) and FEMTO-ST - Besançon in France (Sept. 15-16).

Since the number of attendees is limited, the Nano-Tera PhD students and postdocs willing to participate are required to register by June 30th, 2011.

Details: <http://www.nano-tera.ch/projects/211.php>



Body area wireless sensor networks summer school

Wireless Body Sensor Networks (WBSN) have tremendous potential to transform how people interact with and benefit from information technology, but their practical adoption must overcome formidable technical challenges.

The objective of B-AWaRE is to organize an important educational event at EPFL in the areas related to ultra-low-power electronic circuits, WBSN system-level architectures and advanced signal processing. B-AWaRE is a 5-day summer school introducing the advances, challenges, and opportunities for WBSNs to young researchers and PhD students world-wide interested in this fascinating and highly promising field.

The summer school will gather scientists working on WBSN in different and cross-disciplinary fields – sensors and actuators, signal processing, software, system architecture, application fields. In addition to daily lectures and discussions around various research themes, the school will provide a mix of hands-on and theoretical classes. Time will also be allocated to give students the opportunity to present their work. PhD students will be awarded 2 ECTS credits as a regular summer course.

Registration deadline is already close: June 5th.

Details and registration: <http://b-aware.epfl.ch>



Agenda summary...

- 05-10/06 [Microscale Cooling of 3D integrated systems](#)
- 21-22/06 [Innovative Sensors in the Nano-Tera program](#) (FSRM/Nano-Tera workshop)
- 20-24/06 [B-AWaRE: Body area wireless sensor network summer school](#)
- 18-22/07 [Plasmonics School](#)
- 22-26/08 [Micro-Nano for Large Distributed Systems](#) (FSRM/Nano-Tera summer school)
- 12-13/09 [WIMEMS School](#)
- 12-16/09 [QCrypt conference](#)
- 01-02/12 [Swiss E-print workshop](#)