

NEWSLETTER – June 2009

Ten Nano-Tera.ch projects funded

Nano-Tera.ch, the Swiss scientific initiative in health, security and environment systems, supports ten large Research, Technology and Development (RTD) projects. These projects will be carried out by 62 research groups from 17 Swiss universities and research institutions. The consolidated budget for these ten projects amounts to CHF 60 million.

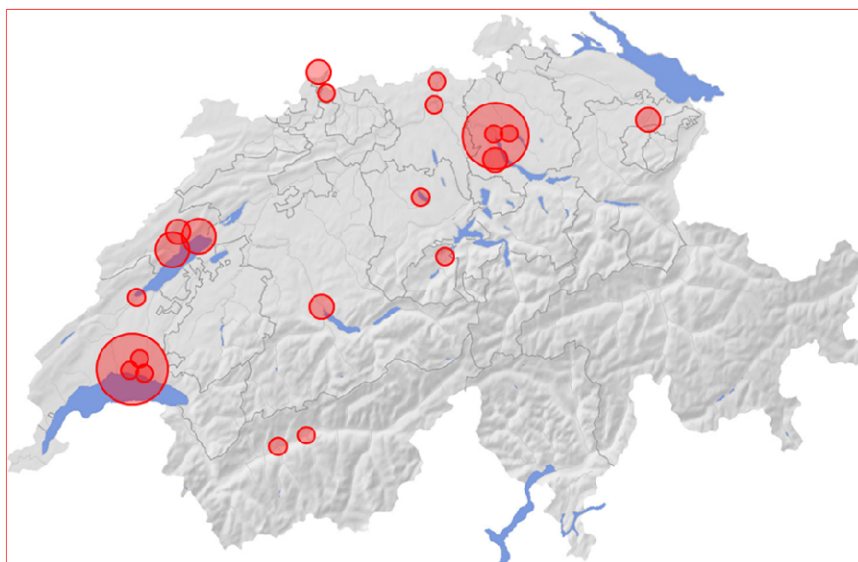
The Nano-Tera initiative aims to bring Switzerland to the forefront of a new technological revolution, using engineering and information technology to improve health, security and the environment for the well-being of humans. Examples such as real-time detection of risks through wearable and body-integrated probing, biotope and environmental sensing platforms and many more have been approved by the Swiss National Science Foundation (SNSF) in a first wave of RTD projects.

They will engage a total of 62 research groups from several institutions of the Swiss Federal Institute of Technology domain (ETH Zurich, EPF Lausanne, Paul Scherrer Institute and Empa), as well as from the universities of Basel, Lausanne and Neuchâtel and the universities of applied sciences Northwestern Switzerland (FHNW) and Western Switzerland (HES-SO). Other research institutions are the Swiss Center for Electronics and Microtechnology (CSEM), the Icare institute, the institute for Work and Health (IST), the university hospitals of Vaud (CHUV) and Zurich as well as the Swiss Paraplegic Center. Private research centers include the IBM Zurich Research Laboratory, the Swiss prosthesis manufacturer Symbios as well as other industrial partners.

Each of the ten approved RTD projects is coordinated by a researcher from a Nano-Tera.ch

partner institution. Scientists from the EPFL and the ETHZ lead 4 projects each, and the University of Basel and the CSEM each lead one of these RTD.

The international review panel of the SNSF was responsible for the selection process of the submitted projects. The decision was made based on the scientific quality of the applications, and their alignment towards health, security and environment systems. The budget for the ten RTD projects is CHF 60 million in total: they will be financed for four years, and the research activities are currently starting or are about to start in the coming months.



Distribution of the 62 research groups by institution and by location.

New set of applications received

The selection process for a second set of RTD projects is currently starting. The second call for proposals included more stringent selection criteria, and a new group of applications has now been received, involving 23 Swiss universities and research institutions.

The consolidated budget of the whole program is CHF 120 million, of which 50% is funded by Nano-Tera.ch with financing from the Swiss Confederation and 50% by the participants' own contributions.

Current members of the research initiative include the two Swiss Federal Institutes of Technology ETHZ and EPFL, the universities of Basel, Neuchâtel and Lugano, as well as the CSEM.

Details on the 10 projects approved

Project name	Principal Investigator	Participating institutions	Budget (mio CHF)
<i>SELSYS</i> – Fluidic-mediated self-assembly for hybrid functional micro/nanosystems	Jürgen Brugger (EPFL) 021 693 65 73 juergen.brugger@epfl.ch	EPFL, ETHZ, CSEM, IBM ZRL, Icare Institute	4.2
<i>CABTURES</i> – Enabling Autonomous Sensor Nodes: Low-Power Nano-Sensor/Electronics Building Blocks based on Tunable Carbon Nanotube Electro-Mechanical Resonators	Christofer Hierold (ETHZ) 044 632 31 43 christofer.hierold@micro.mavt.ethz.ch	ETHZ, EPFL, EMPA	6.5
<i>MIXSEL</i> – Vertical integration of ultrafast semiconductor lasers for wafer-scale mass production	Ursula Keller (ETHZ) 044 633 21 46 keller@phys.ethz.ch	ETHZ, EPFL, UniNE	6.5
<i>LiveSense</i> – Cell-based sensing microsystem	Philippe Renaud (EPFL) 021 693 25 96 philippe.renaud@epfl.ch	EPFL, ETHZ, UNIL, HESSO, CSEM, IST	6.3
<i>NanowireSensor</i> – Integrateable Silicon NANOWIRE SENSOR Platform	Christian Schönenberger (UniBas) 061 267 36 90 christian.schoenenberger@unibas.ch	UniBas, EPFL, ETHZ, FHNW, PSI	6.3
<i>CMOSAIC</i> – 3D Stacked Architectures with Interlayer Cooling	John Thome (EPFL) 021 693 59 81 john.thome@epfl.ch	EPFL, ETHZ, IBM ZRL	5.3
<i>TecInTex</i> – Technology Integration into Textiles: Empowering Health and Security	Gerhard Tröster (ETHZ) 044 632 39 64 troester@ife.ee.ethz.ch	ETHZ, EMPA, UniSpital ZH, CSEM, Swiss Paraplegic Center	6.6
<i>IRSENS</i> – Integrated sensing platform for gases and liquids in the near and mid-infrared range	Jérôme Faist (ETHZ) 044 633 72 80 jerome.faist@phys.ethz.ch	ETHZ, EPFL, EMPA, UniNE, FHNW	7.6
<i>SImOS</i> – Smart Implants for Orthopaedics Surgery	Peter Ryser (EPFL) 021 693 38 58 peter.ryser@epfl.ch	EPFL, CHUV, Symbios	4.9
<i>NEXRAY</i> – Network of integrated miniaturized X-ray systems operating in complex environments	Alex Dommann (CSEM) 032 720 50 35 alex.dommann@csem.ch	CSEM, ETHZ, EMPA	6.2

60.4

For more information, please visit <http://www.nano-tera.ch/projects/rtd.php>

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