



## Science & Technology News from Japan, July 2014

### 1. Swiss Related News

#### SLF/WSL Has Research Cooperation Agreement on Disaster Prevention

(The S&T Office Tokyo, July 02, 2014)

The Institute for Snow and Avalanche Research (SLF) of the Swiss Federal Institute for Forest, Snow and Landscape (WSL) signed a comprehensive research cooperation agreement with Japan's National Research Institute for Earth Science and Disaster Prevention (NIED) earlier this month. While the two institutions have been collaborating on individual research topics, the new agreement will enable enhanced cooperation including sharing of data and facilities and joint research projects in the field on a broader range of topics. It is also expected to enhance researcher and information exchange between the two. SLF and NIED have a good record of joint research on individual topics; one example is a project to enhance the snow accumulation (physical structure) model developed by SLF to forecast avalanches to accommodate Japan's wet snow. Another is a joint research on snowstorms at NIED's Shinjo Cryospheric Environment Laboratory.



#### Business Innovation Forum 2014

(The Science & Technology Office Tokyo, July 09, 2014)

In collaboration with the Swiss Business Hub Japan, the Science & Technology Office Tokyo organized the first Business Innovation Forum, taking place at Roppongi Academyhills, during the visit of Federal Councillor Johann N. Schneider-Ammann and an economic delegation. After the opening speeches by Federal Councillor Schneider-Ammann and State Minister Kazuyoshi Akaba from the Ministry of Economy, Trade and Industry (METI), IMD's president, Prof. Turpin, mapped out the fields of innovation, diversity, globalization and their relation to competitiveness. The first stream of talks with Dr. Harayama (Executive Member, CSTI, Cabinet Office), Mr. Steinlin (President, CTI) and Prof. Sone (Executive Vice President, NIMS) addressed the topic of fostering innovation by creating the right framework conditions. Stream two touched on the initiatives of the private sector in Switzerland and Japan. Mr. Hess (President, Swissmem), Dr. Mori (CEO, DMG Mori Seiki), Mr. Küng (CEO, Switzerland Global Enterprise) and Mr. Collardi (CEO, Bank Julius Baer Group) discussed the industry's point of view on fostering innovation. The highlight of the forum may have been the panel discussion moderated by Prof. Turpin where the previous topics were touched on again and further elaborated. The forum was closed by the two main organizers, Dr. Roger Zbinden (Head, Swiss Business Hub Japan) and Dr. Matthias Frey (Head, Science & Technology Office Tokyo) of the Embassy of Switzerland in Japan. About 350 participants from industry and academia, from Switzerland and Japan were highly satisfied with the event. The program can be viewed here: <http://forum2014.stofficetokyo.ch>



#### FC Johann N. Schneider-Ammann at Tohoku University

(The Science & Technology Office Tokyo, July 10, 2014)

During the visit of Federal Councillor Johann N. Schneider-Ammann and an official and economic delegation in Japan, the delegation also stopped at the Tohoku University where they were greeted by the president, Prof. Susumu Satomi. After the official greetings and introduction to the university, the Swiss delegation was received by Prof. Motoko Kotani, Director of the WPI-AIMR project. Prof. Kotani gave an impressive presentation on the research project that she headed and answered many questions the delegation had. The visit was concluded with a lab-tour and discussions with research professors. On the way back to Tokyo, the delegation stopped in Fukushima City to have a meeting with the Governor.



#### CTI President Visits NIMS, Gives Presentation at Industry-Academia Workshop

(The S&T Office Tokyo, July 11, 2014)

The Swiss Committee for Technology and Innovation (CTI) President Walter Steinlin extended his official stay in Japan, where he visited as a member of the delegation of FC J. Schneider-Ammann, for one full day to meet with his counterparts and potential partners. During the morning, Mr. Steinlin visited the National Institute for Materials Science (NIMS) to meet with Executive Vice President, Dr. Sone. He also received lab tours to see advancements in energy related research at NIMS, namely research on thermoelectric materials, dye-sensitized solar cells and superconducting wires. In the afternoon, Mr. Steinlin gave a presentation at the "Academia-Industry Collaboration: Current Situation



and Future Plans in a Globalized World” workshop. His co-speakers were Dr. Michiharu Nakamura, President of the Japan Science and Technology Agency (JST), Prof. Dr. Yoshinao Mishima, President of Tokyo Institute of Technology, and Dr. Anders Karlsson, Vice President responsible for Global Academic Relations at Elsevier.

### **ETH Zurich & ZHAW-Team: Runner-up at Int. Contest in Sendai**

(ETH Zurich Press Release, July 21, 2014)

The 5<sup>th</sup> International Contest of Applications in Nano-Micro Technologies (iCAN) was held at Tohoku University along with the local Science Day. The Swiss team (M. F. Lagadec from ETH Zürich; A. Lagadec, C. Roth and D. Strässler from ZHAW Zürich and Winterthur) presented "Dēta no Takkyūbin" (Data Delivery Service) – a universal post-disaster monitoring system using sensor node deployment and data collection in inaccessible areas by means of quadcopters as well as short-range communication between sensor nodes and an airborne platform. More than 7'000 visitors joined the final ceremony where from the 23 teams coming from 10 countries, the Swiss team was awarded the second prize for their project!



### **Swiss Studies in Japan, Japanese Studies in Switzerland**

(The Science & Technology Office Tokyo, July 22, 2014)

A special evening of lectures on Swiss studies in Japan and Japanese studies in Switzerland was held at the Swiss Embassy. The event attracted many Japanese academics in the field and served well as a precursor to the “Japan and Switzerland seen from the outside – historical and social scientific analysis” workshop to be held in Zurich in September to commemorate the 150th year anniversary of diplomatic relations between the two countries. Prof. Dr. David Chiavacci, Mercator Professor in Social Science of Japan at the University of Zurich, Institute of East Asian Studies, gave a concise overview of the history of Japanese studies and how Japan’s image had transformed and where it stands today.



### **AISTS to Aid Tsukuba University's Sports Academy for Tokyo 2020**

(The S & T Office Tokyo, July 26, 2014)

The Académie Internationale des Sciences et Techniques du Sport (AISTS), founded by the International Olympic Committee (IOC), Swiss universities and institutions of higher education, signed an agreement to work together with Tsukuba University's newly established Tsukuba International Academy for Sport Studies (TIAS) in delivering education for the Tokyo Olympic Games in 2020. TIAS will offer a master degree course on sports management and open courses for Japanese as well as international students. Classes, all of which are to be taught in English, will be based on AISTS' education modules. AISTS professors and sport industry professionals will be invited to give lectures, while TIAS students will have the opportunity to do internships in Japan and abroad. Prior to the launch of a full course in 2015, a short-term program of six educational modules, AISTS SEMOS™, will be offered in October later this year.



### **Prof. Graetzel Gives Special Lecture in Tokyo**

(The Science & Technology Office Tokyo, July 28, 2014)

Prof. Dr. Michael Graetzel, whose name regularly appears on the short list of those predicted to win the Nobel Prize, gave a special lecture to at the University of Tokyo. The approximately 90 students studying advanced material engineering were informed of the most recent developments in the research of dye-sensitized solar cells and related technologies. The Swiss Federal Institute of Technology, Lausanne (EPFL) professor also gave up-to-date examples on the application side by industry partners around the world.



## **2. Science and Technology Policy in Japan**

- Japan's public universities to double as venture capitalists
- Abe eyes fresh initiatives to fight Japan's population decline
- Japanese companies set targets for adding women managers
- Japan will offer 2 million yen subsidy for fuel cell vehicles
- Govt to fund start-up CEOs

## **3. Education**

- Kyoto U. chooses insider as president
- Toyota hopes to attract female talent through new scholarship
- Japan competitiveness getting regulated away
- More university students prefer repeating senior year over working

#### **4. Life Science / Health Care**

- Scientist creates 'invincible' strain of H1N1 flu
- NEC to help China's diabetics take charge of their health
- Japanese scientists find aging cure for flowers
- Tokyo firm to launch DNA testing service for cancer, other conditions
- A matter of taste? Kyoto University to explore the science of Japanese food
- Japan IT firms, drugmakers to join in genetic cancer research
- Japan aims to cut metabolic syndrome by 25%
- Of all animals, elephants have best sense of smell, Japanese team says
- Schizophrenia risk genes identified
- Biopesticide ladybug developed
- Gifu University banking iPS cells created from wisdom teeth
- Microwaves stanch wounds with pinpoint accuracy
- Panasonic sprouts vegetables in Singapore
- Japanese men's life expectancy tops 80 for 1st time

#### **5. Nano and Micro Technology / Material Science**

- New materials mend their own wear, tear and damage
- In 3-D chip race, Toshiba, Samsung vie for 48-layer threshold

#### **6. Information & Communications Technology**

- Japan will make carriers remove SIM shackles from smartphones
- Japan universities plan supercomputers for 2016
- Sony e-paper notepad for college melds best of analog, digital
- Sharp to spend big on LCD panels for tablets, smartphones
- Seiko Instruments to let smartphone designers buy chips online
- Fujitsu to exit chip production
- Fujitsu's exit to end an era for Japanese chip industry
- Japan electronics makers turn to digital signage to recover TV losses

#### **7. Software / Mobile Services & Applications**

- Japanese smartphone comics heading to other Asian markets
- Japanese startups making it rain with venture capitalists
- Japan's Kadokawa launching tweet-and-read service
- Budget phones challenge the majors
- Line applies to TSE for IPO that could see value exceed ¥1 trillion
- Rail staff can access 27 languages/Keikyu using new app for foreign visitors
- Sony sows tech far and wide to replace card swipes with a wave
- Chat app provider Line files to list on US stock market
- Smartphone game makers seek profits elsewhere
- NTT pivoting to cloud computing overseas
- Yamaha releases app that 'translates' engine sounds
- Gree to step up investment in non-game businesses
- Chat app Line to offer cut-rate shipping at virtual mall

#### **8. Energy / Environment**

- 'Nuclear-free summer' could hit western Japan harder
- Largest LED veggie factory built in quake-hit city
- Kyushu Electric to get go-ahead for nuclear restart

- Aichi researchers track dox in bid to reduce crop damage
- Toshiba to win ¥500 billion reactor order in Bulgaria
- Electricity gold rush heralds end for monopolies
- TEPCO urged to alter water-damming bid
- TEPCO: 90 out of 1,550 freezing ducts built so far
- Japan's airlines hope to power planes using biofuels by 2020
- Unmanned vessel to explore Arctic
- Japan gets its first commercial hydrogen station for vehicles
- 'Smart cities' seek to save energy
- A new battery utilizing a redox between oxide and peroxide
- Abe says he will see to nuclear plant restart in southwestern Japan
- Ocean currents, tides rise as new renewable energy candidates
- Sensationalism of Science: Is Japan's Fuji in a "Critical State" for an Eruption?
- Orix plans to build as many as 15 geothermal plants in Japan
- Trade restrictions likely for vanishing Japanese eel
- Government to build large storage battery facility in Osaka
- Fukushima monkeys show possible effects of radiation, study suggests
- Japan eager to join Mexico shale gas development
- Gov't drops plan to purchase land for Fukushima nuclear soil storage
- Scientists racing to develop microbial fuel cells
- Japan's Nuclear Roadmap To Economic Destruction
- Hokkaido Electric applies for electricity markup

## 9. Space Development

- Govt plans to land probe on the moon
- Myanmar airline to buy six jets from Mitsubishi Aircraft
- Construction of world's largest telescope to begin in October
- JAXA, U.S. firm to cooperate on Dream Chaser spacecraft
- HondaJet prepares for take-off with aviation venture
- Micro-satellites "Hodoyoshi-3 & 4" start capturing Earth images

## 10. Engineering / Robotics / Automotive

- Consortium sets sights on robots that do household chores
- Parties to discuss funding for early Shinkansen openings
- Cheap hydrogen key to spreading fuel cell revolution
- Cyberdyne's HAL suits give lift to mobility-challenged
- Robots can solve labor woes: Son
- Reactor restart a plus for economy, but new rate hikes loom
- Japan gives homegrown electric sports car the green light
- Japan's vision for hydrogen cars lacks oomph
- Japan Wants 2020 Robot Olympics Alongside Human Olympics
- Svelte new humanoid robot easily clad as anime character
- Japanese government to make fuel-cell cars the official vehicle for all ministries

## 11. Nuclear Development

- US nuclear regulator close to approving new GE Hitachi reactor
- Mitsubishi Heavy to help French next-gen nuclear project
- Japan nuclear plant clears safety hurdle toward restarting
- Japan needs more efficient reactor safety checks
- Layered systems fortify Sendai N-plant
- Govt steps up final N-waste disposal site selection work

## 12. Physics

- Gravitational wave detection lab unveiled
- A hotspot of highest-energy cosmic rays
- 5 Japanese students win awards in Physics Olympiad

## 13. Intellectual Property Rights / Technology Transfer / Alliances

- Sony embarks on big shake-up to get back on feet
- Panasonic to farm out system chip production to Intel
- Canon allies with Google, SAP against patent trolls
- KDDI teaming up with top firms to nurture startups
- Japan's KDDI, Sumitomo set out to develop Myanmar's wireless frontier
- Japan, Brazil to collaborate in tapping hard-to-reach offshore oil
- A\*STAR collaboration spawns advanced semiconductor project
- Panasonic, Hokuriku Electric to help cut power use in Mexico
- Panasonic, Tesla agree to partnership for US car battery plant

## 14. General Interest

- Cereal makers gear up to fuel granola boom
- New space museum opens in Tokyo on Tuesday
- Cool Japan academies to open across Asia
- Cyberattacks on government surge in Japan
- Public asked to help build moving giant Gundam
- 43% of women want wives to be at home
- New line to halve travel time between Haneda, downtown Tokyo
- 60% of top Keidanren firms set targets for women execs
- Mitsubishi Estate to tap Otemachi for new hot spring facility
- Talking dolls seen as salve for elderly isolation
- Fujifilm conjures comeback with old-school cameras
- Japan, China neck and neck in Asian popularity contest
- TV shows to get foreign-language subtitles by 2020
- Low license fees help Japan cartoon characters find fame abroad
- Japanese high school students shine at Intl Science Olympiads
- 'Cool Japan' to provide solutions for global problems: Minister
- Japan removes work disincentive by raising wage floor
- Blood type 'plays no role' in personality

## Calls

### > **IMD Executive MBA Program**

For the IMD **EMBA** program there are now two Master stage sessions per year: one graduating in June and one in November. The new session launched will kick-off in April 2014 and will run in addition to the current November session. For further information: <http://www.imd.org/executive-mba/#/home/>

### > **Master of Advanced Studies in Intercultural Communications**

The Master of Advanced Studies in Intercultural Communication (MIC) is a part-time post-graduate program for professionals engaged in managing operational or strategic situations in a multicultural context and in managing multicultural human resources.

For further information: <http://www.mic.usi.ch>

Deadline: As class size is limited, candidates are advised to apply as early as possible and at least two months before the beginning of the Master's program.

### > **Matsumae International Foundation Research Fellowship Program for 2015**

Matsumae International Foundation (MIF) offers a research fellowship program in 2015. Fields of study such as **natural science, engineering and medicine** are given first priority. Applicants indicate the period of Fellowship with the length of stay needed for the Research Project between 3 months to 6 months, and the commencing month and ending month between April 2015 and March 2016. For more details please consult the MIF website: <http://www.mars.dti.ne.jp/mif/>

Deadline for submitting application document: **August 31, 2014**

- > **EPFL International Institute for the Management of Logistics “Creating Supply Chain Excellence”**  
The study program “Global Supply Chain Management” has been designed to provide all participants with the know-how, the competence and confidence necessary for the planning and implementation of logistical and supply chain projects at the strategic as well as the operational levels. The participants will develop a broad logistical culture based on technical, economical and managerial knowledge enabling project evaluation to be made by adding considerations from an entrepreneurial point of view.  
**Program 2015 is now available.** <http://iml.epfl.ch>

## Upcoming Science and Technology Related Events in Japan

- > **150 Years Anniversary: Switzerland-Japan Friendship Year 2014**  
The year 2014 will mark a milestone in the friendly relations between Switzerland and Japan which will celebrate the establishment of diplomatic relations 150 years ago.  
<http://www.eda.admin.ch/anniversary2014>
- >> More events on the Science and Technology Office Tokyo homepage:  
<http://www.stofficetokyo.ch/events/upcoming-events/>

## Background Reports

- > **Selection:**
  - WPI – The World Premier International Research Center Initiative
  - Induced Pluripotent Stem (iPS) Cells
  - Japan SERI Policy Update
- > **Further Background reports:**
  - <http://www.stofficetokyo.ch/japan-news/reports/>

## Information Contact

**If you wish to receive more detailed information or would like to introduce new readers, please feel free to contact the Science & Technology Office Tokyo. Email: [tok.science@eda.admin.ch](mailto:tok.science@eda.admin.ch)**  
**Thank you for your interest!**