Science, Technology, Education and Health News from China

Number 113 – November 2013

Please note that the previous newsletters can be downloaded from the website of the Embassy of Switzerland in China: www.eda.admin.ch/beijing[1]. To subscribe/unsubscribe or send us your comments, please send an email with the corresponding subject to chenchen.liu@eda.admin.ch.

Introduction

Story of the month features the institutional reform of Chinese Academy of Sciences. In science and technology, China plans to build a second Antarctic station; UC-Berkeley opens an engineering R&D center in Shanghai; Chinese "maker-space" boost innovation by offering cheap prototyping possibilities. In education, Chinese government continues talent incentives to attract overseas graduate home. In health, the decades long one-child-policy was further eased.

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[1] Please click on the blue texts to activate the hyperlinks to either email addresses or related websites.

Story of the Month

Chinese Academy of Sciences Facing Reform Pressure

Starting 1978, when the 3rd plenary session of the 11th Communist Party of China Central Committee decided on the reform and opening up policy under Deng Xiaoping, the "3rd session" of each Party Congress has always been perceived as a platform for reform. In November 2013, half a year after the new government under Xi and Li was sworn in, the 3rd plenary session was an opportunity to reflect and adjust reform policies. As the plenum concluded on November 12 2013, apart from the main "communiqué", it announced a 42 point CPC Central Committee's Decision on Addressing Several Issues on Socialist Market Economic System (hereinafter referred to as "the decision") which outlined a domestic reform agenda which touched upon science, technology, education and innovation.

The biggest adjustment in science policy is the emphasis on reforming research institutes. This will without doubt concern the flagship research institutes of the Chinese Academy of Sciences (CAS). The decision states more explicitly than earlier strategic papers that

- "research institutes that focus on applied research should stick to and accelerate the transformation towards modern enterprises".
- "research institutes in basic research, strategic high-technology research, key innovative research on non-profit areas that have to depend on government funding support should adopt a modern research institute administration system that has clear responsibilities and priorities, emphasizes transparency and modern governance and implements a more scientific evaluation system."

Such a policy change is expected to have a direct impact on the overall operation of CAS, which owns more than 100 research institutes across China. CAS 2012 data shows that applied research accounts for 53.3% of the overall research being conducted at CAS. Basic research accounts for 39.9%.[2]

The reform of CAS has already started earlier this year and privatizing applied research institutes has been an on-going subject within the academy In 2012, the CAS headquarter in Beijing requested that all research institutes submit a development plan with their "unique positioning, 3 planned major research breakthroughs and 5 priority fields". After this survey, an institutional reform was officially launched in August 2013 after a visit from President XI Jinping to CAS.[3] The implementation of the re-shuffling only took 3 weeks, according to the President of CAS.

After the institutional reform, the administration of the 104 research institutes at CAS headquarter has shifted from field-specific 4 departments to function-specific 5, namely the Bureau of Frontier Sciences and Education, Bureau of Major Research and Development Programs and the Bureau of S&T for Development[4]. The reform aims at streamlining administration, promotes interdisciplinary research and strengthening the autonomy of research institutes. As the institutional reform of CAS continues, the concrete implications of the policy stated in the decision might further reveal.

[2] Key Figures of Chinese Academy of Sciences in 2012 (in Chinese): http://www.cas.cn/jzzky/nb/nianbao2013/201305/P020130525450291115397.pdf

[3] There is no official communication on the institutional reform of the Chinese Academy of Sciences, state media including People's Daily, Xinhua News Agency picked up the story on the same day in October after the reorganization is completed. The report from Xinhua News Agency (in Chinese): http://news.xinhuanet.com/tech/2013-08/15/c_116961329.htm

[4] The current CAS organizational structure: http://english.cas.cn/Administration/OB/images/P020130929632520661399.jpg

News

1. China's Tianhe-2 Retains Title as World's Fastest Supercomputer

(Xinhua, 18-11-2013)

China's Tianhe-2, a supercomputer capable of operating as fast as 33.86 petaflops per second (Pflop/s), remains the world's most powerful system, according to a biannual Top500 list of supercomputers released on November 18th .

Tianhe-2, developed by China's National University of Defense Technology, put China back at the top of the list in June. It is almost twice as fast as the next computer on the list, Titan of the U.S. Department of Energy (DOE), which has a performance of 17.59 Pflop/s.

"The Tianhe-2 is a very powerful computing system," Jack Dongarra, professor of the University of Tennessee and Top500 editor, told Xinhua. "It has almost two times the performance of the number 2 system, Titan. I wouldn't be surprised if it was in the number 1 position for another year."

Except for its computing chips, Tianhe-2 uses technologies that have almost all been developed and built in China, including the interconnect system, operating system, front-end processors and software.

"The major challenge is for China to develop the computing chip technology so it can build the whole computer with Chinese parts. Application software also presents a great challenge," Dongarra said.

In November 2010, Tianhe-2's predecessor, Tianhe-1A, took the first spot but was overtaken by Japan's K computer six months later. Tianhe-1A is now No.12 on the list. Sequoia, installed at the DOE's Lawrence Livermore National Laboratory, is again the No. 3 system with a performance of 17.17 Pflop/s. Japan's K computer is the No. 4 system with 10.51 Pflop/s, followed by Mira, installed at the DOE's Argonne National Laboratory, which has a performance of 8.59 Pflop/s.

The new entry in the Top10, Piz Daint, is at No. 6. The machine installed at the Swiss National Supercomputing Center achieved 6.27 Pflop/s. It is now the most powerful system in Europe and also the most energy efficient system in the Top10.

The total combined performance of all 500 systems on the list is 250 Pflop/s, according to the list. Half of the total performance is achieved by the top 17 systems on the list, with the other half of the total performance spread among the remaining 483 systems.

Overall, the United States is "clearly the leading consumer" of the supercomputing systems with 265 entries on the list. As a nation, China holds the No. 2 position with 63 entries, behind the United States but ahead of Japan, Britain, France and Germany, the list showed.

The Top500 list, released twice a year since June 1993, is considered the authoritative ranking of the world's supercomputers. It is compiled on the basis of the machines' performance on the so-called Linpack benchmark by Dongarra and other experts from the United States and Germany.

(http://news.xinhuanet.com/english/sci/2013-11/18/c_132898377.htm)

2. Bringing China's Best Minds Home to Roost

(China Daily, 18-11-2013)

On the face of it, the fact that more than three times as many Chinese students now go abroad to study compared with a decade ago does not seem to bode well for China's "brain drain" dilemma. But the tide may be turning. The number of students who return is four times higher now than a decade ago and the government appears to have a renewed eagerness to tackle the problem.

In 2012, some 400,000 students went to study abroad, up from 120,000 in 2003. The Ministry of Education says 330,000 returned last year, up from 80,000 a decade ago. China still has a trade deficit of talent, but it is a much smaller deficit than at any time in decades.

"The Chinese government thought about it as a serious problem after 1987," says David Zweig, a professor at Hong Kong University of Science and Technology who has researched the subject extensively and is now working on a book about returnees. In 2010, Zweig adds, the issue was taken over by the Coordination Group on Specialists of the Communist Party of China. The goal of this group is to coordinate the myriad efforts in place to bring back talent to China.

Between 1990 and 2010, the Ministry of Education spent close to $98 million in seed funding for about 20,000 returnees. A program by the Chinese Academy of Science, launched in 1994, offers as much as 2 million yuan ($328,500) for research to returnees. In almost 20 years, almost 1,600 professionals have taken advantage of the plan.

In 2008, China launched the Thousand Talents plan, through which the government tries to convince overseas Chinese to return. The plan offers top scientists and entrepreneurs as much as $150,000 in cash, office and laboratory space, housing allowances and school entry for children.

Another program, the Medium- and Long-Term Talent Development Plan (2010-2020) aims to attract another 2,000 specialists in IT, biotechnology, aerospace, environmental protection, agricultural technology and transportation.

China still has a huge imbalance with more developed Western countries, in particular the United States, says Wang Huiyao, director-general of the Center for China and Globalization, based in Beijing. It is not only about attracting students who have gone abroad to study, it is also about attracting more international students who can provide a booster shot of innovation and entrepreneurship.

China is now offering more permanent residency permits to attract talent, taking a different approach to combat the ongoing brain drain. The number remains relatively small but it is growing. In 2012, authorities issued 1,202 permits, 83 percent more than a year earlier, according to Zheng Baigang, head of the Bureau of Exit and Entry Administration at the Ministry of Public Security. The majority of the applications came from the US, Japan, Canada, Australia and Germany.

But it is hard to tell how effective these programs truly are at bringing back top talent. There have been criticisms of poor management, particularly in city level programs. At times, "returnees" who have taken advantage of programs were already back in China but were enrolled to shore up the numbers. At other times, the people offered spots in these programs did not necessarily fit the bill.

Quality can be an issue. The lower end of the talent spectrum tends to swell the ranks of the returnees. Weak students, often supported by their parents after they come back to China, return in droves. The best and the brightest are often hired in the US and Europe. Luring these candidates back is expensive.

In a 2008 survey, Duke University in the US found that half of 637 returnees polled had five years or less of experience in the US. They were hardly top executives.

The issue is made more pressing by the fact that business and investors regularly complain of shortages of top-tier talent, particularly high level executives or researchers across a variety of industries from logistics to biotechnology.

Since 1978, more than 2.6 million students have left China to study abroad; only 1.1 million have returned, according to China's Ministry of Education. But as China grows, quality of life improves and salary levels rise, more students who left to study are coming back. In 2011, there were as many as 186,000 returnees, about 40 percent more than in 2010, according to the Ministry of Education.

At the same time, a greater percentage of students who go out to study do so with the intention of returning once their studies are over, says Zweig. "Now it is about 50 percent of people going out who are

coming back, but most of them are going for a one or two year (master's)," he says. That is not really brain drain. Brain drain, he explains, is when an entire graduating class at one of the top schools such as Peking University or Tsinghua University in Beijing goes out of China to do PhDs.

And the tide may also be shifting among Chinese professionals who studied, trained and worked abroad. Some have returned, often lured back by the improving quality of life, increasing prospects and greater opportunities, particularly since the global financial crisis and the slowdowns in the US and Europe. Many of those who leave are finding that there are fewer opportunities than in China, says Huang Jing, professor and director of the Centre on Asia and Globalization at the Lee Kuan Yew School of Public Policy in Singapore. "They don't have an advantage and the economies in the US and Europe are not doing as well," says Huang. "I would stick my neck out and say that the 'brain drain' will become less of an issue."

(http://www.chinadaily.com.cn/business/2013-11/18/content_17111425.htm)

3. China in the Antarctic: Polar Power Play

(the Economist, 7-11-2013)

IN 1912, at the height of the heroic age of Antarctic exploration, six men got stranded on a rocky outcrop of Terra Nova Bay. Their relief ship was unable to get through the heavy ice and so, instead of conducting six weeks of research in the region as they had planned, they were forced to winter on what they called Inexpressible Island, supplementing their rations with the odd seal. When, half-starved and frostbitten, they returned to base the following spring, they reported that hell itself "would be paved something after the style of Inexpressible Island".

One hundred years later, countries take a fonder view of Terra Nova, which is positioned in the resource-rich Ross Sea. Italy has had a research station there since 1986, and South Korea is putting the finishing touches to a new base of its own. China intends to join them by building its fifth station on the continent, though its fourth, Taishan, is not yet finished. On November 7th, China's 30th Antarctic expedition, complete with construction crew, set sail from from Shanghai. They are travelling aboard the Xuelong, or "Snow Dragon", a $5m icebreaker built in Ukraine.

China is steadily implementing its considerable polar ambitions. Over the past two decades its yearly Antarctic spending has increased from $20m to $55m, some three times the country's investment in the Arctic. There are many reasons to stake a claim, not least to bolster national pride and global geopolitical clout. The goal of the current five-year polar plan, according to Chen Lianzeng, the deputy head of China's Arctic and Antarctic administration, is to increase the country's status and influence, in order to protect its "polar rights".

It was not until 1983 that China signed the Antarctic Treaty, which had then been in force for 20 years. As a latecomer it has had to play catch up. Sovereignty is disputed in the Antarctic, so states assert themselves by building research stations. "You put a huge great flag on a flagpole close to the research station. It is not very subtle," says Klaus Dodds, a professor of geopolitics at Royal Holloway, a part of the University of London. If China builds all five planned stations it will have more than either Britain or Australia, and only one fewer than America. Still, science matters too. It gives states cachet, and influence in matters of joint governance. In 2008 China built Kunlun Station at Dome A, an operation with deep-space research capabilitiesa in a location that is so remote it took six attempts to get there. The ice under Dome A could help scientists reconstruct the planet's climatic record of the past 1.3m years—which would be a major coup.

In the past decade, an influx of new Antarctic players has rattled the old establishment. The consensual nature of dealings—the treaty maintains Antarctica as a demilitarised science preserve—has been held as proof of the fruits of international co-operation. The reality is less virtuous. Countries often squabble over land. Last year, when Britain renamed a disputed territory as Queen Elizabeth Land, Argentina decried the country's "anachronistic imperialist ambitions".

Meanwhile, new countries with impressive research budgets threaten the scientific hegemony that has long been enjoyed by more established powers. The Australian press is also annoyed by "Queen Elizabeth Land", but it positively worried by China's growing presence around the south pole. "China is saying, 'We don't give a damn about Shackleton, Scott, Mawson, all these white European heroes. You can keep that. What we're interested in is the future.'" says Dr Dodds. The country has not staved off fears by giving over 350 places Chinese names.

With some justification, Chinese scholars refer to the Antarctic Treaty as a "rich man's club", in which China has only second-class citizenship. Publicly, though, it buries its grumbles and complies with Antarctic protocol, employing its customary "do but don't say" foreign policy. It seems to be in China's best interest to go along with the status quo. An inspection regime installed by the treaty is ineffectual, and in reality there is little check on individual states' affairs. Many countries benefit from this non-accountability, even as it fuels mistrust about the security of orbiting satellites, intelligence gathering and the "dual use" of personnel for military purposes.

Antarctica is the last unexploited continent. To some, this warrants a raft of conservation measures. To others, it is all potential, waiting to be reaped. As with the Arctic, China is explicit about its resource-acquisition objectives. The Southern Ocean is full of fish. Recently, Ukrainian scientists found a 600 sq-km (230 square-mile) petroleum field. Antarctica also has deposits of coal and other valuable minerals, though the scale is unknown. The Protocol on Environmental Protection upholds a mining ban until 2048, when it is to be reviewed. Anne-Marie Brady, author of an upcoming book on China's polar strategy, says that despite this protection and the fact that change has to be consensual, the eventual exploitation of Antarctic resources is inevitable.

That time may come sooner than predicted. In early November, at a meeting of the Commission for the Conservation of Antarctic Marine Living Resources, delegates from 24 countries and Europe failed, disastrously, to agree on proposals for two marine protected areas. Plans for the reserves, already scaled back after it became clear that some states were fretting over fishing restrictions, have been researched and discussed for decades. Still, consensus was required and China, Russia and Ukraine withdrew support.

While arguments about science and the heroic past of Antarctica's exploration have long buoyed the established powers, the dynamics are clearly shifting. If Antarctica and the Southern Ocean are to remain as some of the planet's last unspoiled wilds, it is time to conduct the discussion within an updated framework.

(http://www.economist.com/blogs/analects/2013/11/china-antarctic)

4. UC-Berkeley Linked R&D Center Opens in Shanghai

(China Daily, 20-11-2013)

The Shanghai Zhangjiang Berkeley Engineering Innovation Center (Z-BEI) - developed by the University of California-Berkeley College of Engineering and Zhangjiang High-Tech Park, one of China's industrial parks dedicated to tech start-ups and research - opened its doors on November 15th in Shanghai.

"Z-BEI is a platform for expanding Berkeley engineering's industrial and academic research collaborations in Asia, and for fostering global learning opportunities for Berkeley engineering students," said Connie Chang-Hasnain, Whinnery chair professor of electrical engineering and computer science. "Berkeley's College of Engineering engages in partnerships with innovators around the world to develop new ideas, new technologies, and new products to benefit global communities. Zhangjiang High-Tech Park is one of the world's most dynamic innovation ecosystems."

As the college's newly appointed director of China partnerships, Chang-Hasnain said her role includes facilitating research partnerships between Berkeley and Shanghai-area industry and academic colleagues, overseeing programs in professional and executive education offered through Z-BEI, and facilitating opportunities for Berkeley engineering students to gain global experience. "Our faculty will be

collaborating with academic and industry research colleagues on a wide range of topics, beginning with areas such as information engineering, systems engineering, bioengineering, precision manufacturing, and green technology," Chang-Hasnain said.

At the same time, the team will be expanding their offerings in professional and executive education. Their recent offerings in China have included courses on innovation policy for government officials and a program called "Silicon Valley Entrepreneurship for New Chinese Entrepreneurs".

"With the opening of Z-BEI, we will be able to conduct more such programs both in Zhangjiang and at Berkeley," the director said. "Programs will range from live and teleconferenced programs in China to five-day certificate programs at Berkeley and in Silicon Valley."

Given the high-profile Chinese presence, Berkeley has a close academic bond with China. According to the university's website, About 1,568 Chinese students enrolled in Berkeley for 2013-14 academic year, more than one-fourth of its total 5,645 international students (not including Summer Sessions or UC Extensions), making China the largest country of origin of international graduate students at Berkeley.

Meanwhile, students at Berkeley are eager to gain experience in countries outside the US, and many of them are especially interested in China, Chang-Hasnain said. "In China, companies have found Berkeley engineering students to be invaluable short-term additions to their company," she said.

The new Z-BEI center is not only expected to allow Chinese educators and students to get more opportunities for close collaboration with Berkeley researchers and scholars, but also to enable Berkeley students to interact with Chinese businesses and colleagues based in China.

"Internships and other experiential learning opportunities offered through Z-BEI will expose our students to a broad set of technology and global marketplace challenges beyond the realm of Silicon Valley," she said.

(http://usa.chinadaily.com.cn/epaper/2013-11/20/content_17118231.htm)

5. Hurdles Seen for Change to China's One-Child Rule

(The New York Times, 17-11-2013)

The Chinese government's decision to relax a decades-old one-child limit on couples has already encountered two problems likely to test dozens of social and economic changes promised by President Xi Jinping — vagaries about implementation and magnified public expectations of even bigger changes ahead.

The limited curtailing of rules that restrict most city-dwelling couples to raising just one child was a highlight of 60 proposed reforms endorsed by a Communist Party Central Committee, which were released to the public on Friday. The change will allow couples to have two children if either the husband or wife is an only child. Couples can now have two children only if each of the spouses is an only child. Most rural families are already allowed to have two children.

The Chinese state-run news media have celebrated the shift as demonstrating that Mr. Xi's government is willing to make changes that have been debated, and delayed, for many years. But over the weekend, a senior official in the National Health and Family Planning Commission said that provincial-level governments would decide when to carry out the new policy, and he stressed that the government had no plans to further relax family size restrictions.

"There will not be a uniform nationwide timetable for starting implementation," Wang Pei'an, a vice minister of the commission, said in a question-and-answer transcript issued by Xinhua, the state-run news agency. "But it would be inadvisable for the lag in timing of implementation between each area to be too long."

Wang Feng, a demographer who teaches at the University of California, Irvine, and Fudan University in Shanghai, has estimated that the policy change could lead to one million to two million extra births in China every year, on top of the 15 million or so births a year now. But that limited change has aroused hopes among experts and citizens that the government could let all couples have two children, and eventually even scrap state limits on family size.

“Two children should be the standard,” Zhang Yuan, a civil servant in Nanjing, a city in Jiangsu Province, eastern China, said in a telephone interview. She said she was already eligible to have two children, as both she and her husband were only children. “Even if the policy was further relaxed, it’s not necessarily so that every couple will have more kids,” she said. “It’s a huge pressure to raise a kid, especially in China.” But, she said, she and her husband were thinking about having a second child in two or three years, in addition to their 2-year-old daughter. “I’m not very concerned about the financial pressure. Rich or not, you can raise the kids either way.”

Mr. Wang, the health commission official, emphatically said no to ideas of a further relaxation of the general one-child rule. “Adjusting and improving family-planning policy is not tantamount to relaxing that policy,” Mr. Wang said. Allowing all urban couples to have two children would create too many burdens for society. “There would be a quite serious concentration of births that would impose very heavy pressure on basic public services. In the longer term, that would create a cyclical surge in births, so the total population would experience sustained growth, and the arrival of the population peak would be delayed.”

The relaxation was possible because of China’s slowed population growth, and in the longer term it will help to offset the pressures of coping with an aging society, Mr. Wang said. But the policy change will not significantly alter China from its course toward an increasingly old society with a slowly shrinking labor force, said Hua Sheng, an economist at Southeast University in Nanjing.

“There’s unlikely to be a major short-term impact,” Professor Hua said. “The economic impact also will depend on how much actual behavior changes. But the real significance is that it’s a positive signal — the first major change in family planning after many years.”

For eligible couples, the question of whether to have a second child will come down to choosing between the pleasure and benefits of another child against the pressures in a society where health care, schooling and housing costs can be daunting even for prosperous members of the middle class.

(http://www.nytimes.com/2013/11/18/world/asia/chinas-vow-to-relax-one-child-policy-faces-reality-check.html?ref=china)

6. Made in China

(the Economist, 30-11-2013)

IT IS a drizzly October day in Shanghai, and beneath a few dozen bright orange tents, set up in the plaza of a shiny new innovation park, hundreds of electronics hobbyists and entrepreneurs are attending China’s second Maker Carnival. The “maker” movement, an offshoot of do-it-yourself culture whose adherents design and build their own technology products, is more established in America: the most recent Maker Faire New York, for example, held in September, boasted some 75,000 participants and over 650 stalls. But size isn’t everything, even in China.

Under those orange tents some surprisingly innovative companies that supply hobbyists and startups were strutting their stuff. There were robot-construction sets, build-it-yourself electronics kits and 3D printers galore. None of the companies that make them is a familiar name yet. But some of them could one day challenge the likes of MakerBot, an American manufacturer of 3D printers, or Arduino, an open-source microcontroller platform invented in Italy, as the darlings of the worldwide maker movement.

What gives these young Chinese firms a potential edge is their close connections with the so-called shanzhai production networks centred on Shenzhen, China's high-tech manufacturing hub. The term shanzhai is often used pejoratively to refer to Chinese copycat producers of mobile phones and other electronic devices, based on copied designs and knock-off brand names. But its literal meaning is "mountain village", and it refers to bandits who opposed corrupt rulers and hid in the countryside—much like Robin Hood in English folklore. David Li, co-founder of XinCheJian, Shanghai's first "maker space" (essentially, an open-access workshop), says the Robin Hood spirit is inspiring legitimate and often quite innovative products, as the socially progressive maker movement teams up with hard-nosed manufacturers.

Seeed Studio, a startup based in Shenzhen, is a good example. The company specialises in open-source hardware, which means the design of the hardware and the software code that goes with it are both freely shared. As the success of Arduino has demonstrated, open-source hardware is ideal for quick prototyping and small-scale production runs of digital devices. But Seeed goes one step further, supporting a whole ecosystem of open-source production. People pitch ideas on its website, and if they garner enough community support, Seeed will manufacture them. More than 70,000 people are participating on its site, and over 130 projects were crowdsourced this way in 2012. Those numbers are expected to more than double in 2013.

Eric Pan, the founder of Seeed Studio, exemplifies a new breed of Chinese entrepreneur. He quit his tech-industry job in 2008 to start making hardware with a friend, based in his apartment (the urban Chinese equivalent of a garage). Now his company employs more than 100 people, and the unassuming Mr Pan is a rock-star among young Chinese geeks. Even so, he is quick to admit that not all Seeed Studio products are hits, and humble about the challenge of surviving as a business in an open-source world, where copying good ideas is not merely allowed but encouraged. Yet he is also bullish about the future: his firm is expanding its range of kit to include wearable electronics and new kinds of sensors.

Proximity to shanzhai manufacturers could make it easier for Chinese makers to turn prototypes into mass-produced products. At the same time, the maker community could boost innovation among shanzhai firms, which are in fact more inventive than is often assumed. Silvia Lindtner, an ethnographer at University of California, Irvine and Shanghai's Fudan University, notes that shanzhai producers have long adapted mobile phones to the needs of people in the developing world. For example, unlike mainstream manufacturers, they championed mobile phones with dual SIM slots, ideal for Africa and India where users often switch networks to reduce costs.
For their part, Chinese government officials are taking an interest in the maker movement because of its economic and educational potential. Shanghai's municipal government has backed a plan to build 100 maker spaces throughout the city. Four of these new spaces are already up and running, with several more to be completed by the end of the year. Each will have a 3D printer, and will also teach traditional crafts such as woodworking.

One of the attractions of maker spaces like XinCheJian, however, is that they operate independently of the state, supported by users' monthly membership fees. Although expats played a big role in initiating XinCheJian, more recent maker spaces such as Beijing's Maxpace and Shenzhen's Chaihuo were entirely home-grown. China's distinctive take on the maker movement—makers with Chinese characteristics, to paraphrase Deng Xiaoping—is worth keeping an eye on.

(http://www.economist.com/news/technology-quarterly/21590756-technology-and-society-china-has-its-own-distinctive-version-maker-movement?zid=306&ah=1b164dbd43b0cb27ba0d4c3b12a5e227)

Events (December 2013 – January 2014)

Science, Technology and Education-related Events in China

Marintec China 2013
Date: December 3rd to 6th
Place: Shanghai
Contact: http://www.marintecchina.com/

International Conference on Information Science and Cloud Computing
Date: December 7th to 8th
Place: Guangzhou
Contact: http://paris.utdallas.edu/iscc13/

BGI Bioinformatics Workshop on Diseases
Date: December 16th to 20th
Place: Shenzhen
Contact: http://events.genomics.cn/en/training/show_training?id=119

International Conference on Future Trends in Computing and Communication Technologies
Date: December 27th to 29th
Place: Beijing
Contact: http://ftcom.org/

International Conference on Mechanical, Electronics and Computer Engineering
Date: January 24th to 26th
Place: Sanya
Contact: http://www.cmece.net/

Swiss-related S&T, Education and Health Events and Announcement

5th St. Gallen Symposium Beijing Reception
Date: December 4th
Place: Beijing
Contact: Embassy of Switzerland in China

Vision Day on Sustainability / Social Innovation (Seminar/ Workshop)
Date: December 10th
Place: Shanghai
Contact: swissnex China

Shanghai Bioclouds Lecture
Date: December 11th
Place: Shanghai
Contact: swissnex China

Sino-Swiss Vocational- Professional Education Training Workshop
Date: January 9th
Place: Shanghai
Contact: swissnex China