

2014
July
Issue 51

EURAXESS LINKS CHINA

Dear colleagues,

Welcome to the July 2014 edition of the **EURAXESS Links China Newsletter**.

[EU Insight](#) takes a closer look at the ‘Gender Summit 4 – Europe 2014 from Ideas to Markets: Excellence in mainstreaming gender into research, innovation and policy’ which was held from 30 June to 1 July 2014 in Brussels.

This month’s interview [“Meet the researcher”](#) is slightly different from previous editions. We decided to focus on science policy and EU-China science diplomacy, and interviewed Dr Philippe Vialatte, Head of the Science and Technology Section of the EU Delegation in China. Dr Vialatte is leaving the country, and we took up this opportunity to talk to him about his work in the past four years.

Let us draw your attention to two new brochures released by the EU Delegation, **Horizon 2020 “Practical Guide to China”** in both English and Chinese, as well as **“Testimony of Excellence” – Europe-China research collaboration**. You can download them on p. 15.

As for our EURAXESS events, we would like to thank all participants of our EURAXESS Connect: “New European Research on Contemporary China” conference which took place 2-4 July at the EU Delegation. Plus, the [EURAXESS Science Slam](#) selection period continues! We are looking for researchers willing to show their work in a creative way. The first prize is a trip to Europe. [Watch a short trailer](#) and spread the news to all China-based researchers!

The latest R&I EU-China cooperation as well as EU policy developments are featured in the **News & Developments** section, and you will find new funding opportunities as well as calls advertised in previous editions of this newsletter under **Grants & Fellowships**. We have also hand-picked several new job

**About this newsletter**

EURAXESS LINKS CHINA NEWSLETTER is a monthly electronic newsletter, edited by EURAXESS Links China, which provides information of specific interest to European researchers and non-European researchers in China who are interested in the European research landscape and in conducting research in Europe or with European partners.

The information contained in this publication is intended for personal use only. It should not be taken in any way to reflect the views of the European Commission nor of the Delegation of the European Union to China.

Please email china@euraxess.net for any comments on this newsletter, contributions you would like to make, or if you think any other colleagues would be interested in receiving this newsletter, or if you wish to unsubscribe.

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EURAXESS Links China
Country Representatives

announcements across China (Beijing, Shanghai, Xi'an) and Europe (France, Italy or the UK).

Finally you will find some news and highlights from the Chinese research, innovation scene, taken from the Chinese and international media, in the **Press Review**.

We hope that you are enjoying the summer, and as always, we will be happy to hear your comments or additions!

With best regards,

Jacques de Soyres

Andrea Střelcová

[EURAXESS Links China](#) Country Representatives



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1 EU Insight – Gender Summit 4 - Europe

Gender is one of the cross-cutting commitments in Horizon 2020 and centers around the following objectives:

- Gender balance in research teams
- Gender balance in decision-making
- Integrating gender/sex analysis in R&I content [1].

Being also an important criteria in the European Research Area, the ERA Progress Report 2013 found that “in terms of gender, European research still suffers from a substantial loss and inefficient use of highly skilled women and from a lack of gender dimension in research content. In 2010, women represented 46% of EU PhD graduates, 32.4% of researchers, 19.8% of senior academic staff. Gender unbalance is more striking in decision-making, where only 15.5 % of women are heads of institutions and 10% are rectors in the higher education sector.” [2]

The ‘Gender Summit 4 – Europe 2014 from Ideas to Markets: Excellence in mainstreaming gender into research, innovation and policy’ was held from 30 June to 1 July 2014 in Brussels. There were a total of 350 participants from 40 countries representing over 200 science organisations.

Commissioner Máire Geoghegan-Quinn stated in her Welcome to the Gender Summit 4:

"The 4th Gender Summit is focused on Horizon 2020. There's a lot of money at stake in Horizon 2020 and the new rules ensure that women are at the centre of the decisions on how it should be spent and at the heart of the research and innovation that is funded. Horizon 2020 provides a clear incentive to applicants to ensure a better gender balance in their research teams. If two proposals receive exactly the same scores on all other evaluation criteria, the gender balance will be one of the factors in deciding which proposal is ranked higher. Horizon 2020 also promotes the gender dimension in research and innovation content to ensure that it takes into account the needs, behaviours and attitudes of both women and men. This is the way to excellence, jobs and growth. In Horizon 2020, the gender dimension is explicitly integrated from the outset in many of the specific programmes – in more than 100 topics so far out of 610 in total, spread across 13 different programmes. This gives us a promising idea of the number of projects that will develop a gender dimension and of the new knowledge that they will produce. I hope that those attending the Gender Summit and the science community will respond to these opportunities to create better research and more sustainable technological innovations."



Under the first pillar of Horizon 2020, the ERC has published its own ERC gender equality plan 2014-2020 [3].

Key objectives include:

- (i) To continue raising awareness about the ERC gender policy among potential applicants;
- (ii) To improve the gender balance among researchers submitting ERC proposals in all research fields and within the ERC teams;
- (iii) To continue identifying and removing any potential gender bias in the ERC evaluation procedure;
- (iv) To continue monitoring possible differences in gender specific careers and academic posts, following the ERC grant
- (v) To embed gender awareness within all levels of the ERC processes - from creating awareness about the ERC to grant signing - while keeping the focus on excellence
- (vi) To strive for gender balance among the ERC peer reviewers and other relevant decision making bodies.

In line with the ERC gender equality plan the Summit concludes that gender balance and diversity should be emphasized in all Horizon 2020 calls as well as in the evaluation process.

Furthermore, more detailed information on gender as an evaluation criterion should be shared by NCPs, applicants, evaluators and experts to ensure that each has the same understanding of the process. A broader training of evaluators on all of the criteria that could be relevant for ranking applications, including the gender dimension was encouraged by the participants of the Summit [4].

Since 2011, the evidence- and consensus-based approach advanced by Gender Summit – Europe has spread to other continents with new platforms created for North America, Africa, Asia and South America regions. Incorporating institutions, leaders, practitioners and experts from different continents transforms the Gender Summit into a global alliance for promoting harmonization of rules and practices to facilitate international collaboration and mobility, excellence and societal advancement [4].

The next Gender Summit will be hosted by the Human Science and Research Council from 28-30 April, 2015 in Cape Town, South Africa. The overarching topics will be poverty alleviation and economic empowerment through scientific research and innovation [5].

Sources

[1] [Factsheet Gender Equality in Horizon 2020](#)

[2] [European Research Area Progress Report 2013](#)

[3] [ERC Scientific Council Gender equality plan 2014-2020](#)

[4] [Gender Summit Report](#)

[5] [Prof. Olive Shisana's announcement of the Gender Summit 2015](#)



2 Feature – Meet the researcher

Dr Philippe Vialatte, Head of Science, Technology and Environment section, Delegation of the European Union to China and Mongolia.

Dr Vialatte, you are the Minister Counsellor, Head of Science, Technology and Environment at the EU Delegation. What are your roles and responsibilities?

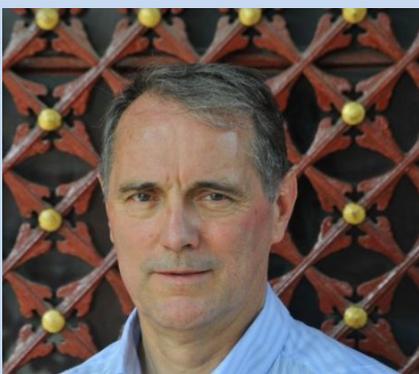
On one side, we work with Chinese colleagues and promote Europe-China Research and Innovation cooperation and the participation of Chinese researchers and innovators in the European Framework Programme – Horizon 2020, the EU's instrument for research and innovation. The second half of our work concerns our European colleagues in charge of science and technology, Science Counsellors, of the 28 member states that constitute the European Union, but also of countries that are associated to EU's Framework Programme. Together we coordinate our actions and research and innovation activities vis-à-vis China. We act as a European bloc, working with China on issues of high interest for both sides. We also work well with the European Union Chamber of Commerce in China, especially on the innovation dimension of our work.

And since the EU Delegation in China also represents EU interests in Mongolia, we also want to encourage Mongolian researchers to participate more in Horizon 2020. For example we discussed with the Mongolian authorities the creation of a Mongolian National Contact Point for Horizon 2020 which is now in place. It will promote the opportunities offered by the European Framework Programme to researchers in this country.

You are originally a vet. How did you make the transition to science diplomacy?

I always wanted to be a vet. During my veterinary studies, I travelled around the world – there were possibilities to earn some money in private practices in France during my studies. That is how I discovered developing countries, and the idea of devoting my time to development came to me. Afterwards, I did an MBA in Paris and Canada, joined the European Commission and worked in different African countries for fifteen years.

When I came back to Brussels, the EU headquarters, in 1998, I continued working in development but one of the dossiers I was in charge of was agricultural research for development. This is how I got to work with people in the European Commission's Directorate General for Research. At a certain



Dr Philippe Vialatte was trained as a Doctor of Veterinary Medicine specialised in tropical medicine. After some years in private practice, he started working on development issues in Mali. Subsequently, he earned an MBA and then joined the European Commission. He worked in Central African Republic, Burundi and Kenya in the Delegations of (at that time) the European Commission. He is now saying goodbye to China after four years as Head of the Science, Technology and Environment section of the Delegation of the European Union to China and Mongolia.



moment, I was proposed to move from DG Development to DG Research. I first worked on all Asian countries, India, China, Japan, Korea, which was quite a challenge. Then I concentrated on China and Japan, and for some time I worked on Japan only, although I continued keeping an eye on China – both were still a magnet for me.

And when the position in China opened five years ago, I obviously applied! I was selected after several rounds of interviews among 18 applicants. It was a fantastic chance to get to China. So it all followed quite a logical course of events.

So you were looking for an opportunity to work in China?

Yes, it was not a coincidence, and there was also a personal explanation. I have been practicing martial arts for many years, and going to the east side of the globe was a personal objective. My wife and I wanted to leave Africa at a point when our children were entering high school college – which is when we moved out of Kenya. And we planned that when our kids would be out of university, we would go to Asia. So it worked out well, by chance, and it turned out to be a major source of discoveries. We wanted to get familiar with China, and we really fell in love with the country.

Looking back at the four years in your position, what can you see as your biggest achievements?

We have tried to do many things and it is hard to choose one or two! We have established very good relations with Chinese partners at national and provincial level – MoST, MIIT, CAS, CAAS, NSFC, CCUD, EUPIC, and many others. We promoted the Framework Programme, and we also developed co-funded projects whereby we select the topics together with the Chinese authorities, which is another - quite political - dimension of what we do. The results are very positive. One of the last examples is the participations of Chinese researchers in the calls of proposals open last December in the field of Food, Agriculture and Biotechnologies. The participation of Chinese researchers in these calls has been massive, far beyond what we expected, even in our dreams!

We have also worked intensively with a very active group of European Science Counsellors. We have done many things together, such as the “Tour of China”, where we went together around China for three consecutive years to present our respective instruments of research collaboration. We also worked closely with our friends from EURAXESS, published booklets and brochures, and worked on mobility of researchers from/to Europe and China. We organized and participated on countless events to present opportunities Europe offers in cooperation in research and innovation. But nothing would have been possible without the fantastic team I was lucky to have in the Science, Technology and Environment Section. We worked long days, and it was all to do our utmost to strengthen EU-China research cooperation.



Also, in these four years, I have had about a dozen interns, European and Chinese. These young bright minds have been a tremendous help to our section. I enjoyed changing their views on the European Union and science diplomacy; challenging the deeply-rooted misperceptions about the EU, Brussels, or the European civil servants. I am happy I gave them a taste of the reality, and made them feel the fruits of our work. And above all, I got the impression that an internship in our section was a big plus for their future careers.

The EU Delegation in Beijing is split into nine sections; one of them is the Science, Technology and Environment. It is responsible for the conduct of official relations between China (and Mongolia) and the European Union.

Learn more on

www.eu-in-china.com



The team of [the Science & Technology Section](#) has the responsibility to use diplomacy to advance cooperation with China in the framework of the EU-China S&T agreement. The team plays also a key role in the collaboration on research and innovation between the EU member state embassies in China. It supports the coordination and development of joint activities and approaches vis-a-vis China. Finally, the S&T Section raises awareness about EU policies and EU programmes in China.

Were there any challenges you were confronted with, unexpected situations or disappointments?

Of course, when you work with people with different cultural backgrounds, different approaches to problems, you have to adapt and find solutions. Without the language, you can't speak, read or understand anything, which was complicated. But with the team around me, and with support of the Delegation, adaption was smooth.

I worked on China for many years before coming here, so I didn't have many surprises. My biggest challenges didn't concern the amount of work, as I was used to that. It was rather the variety of topics we have to discuss and negotiate. Jumping from a discussion on food and agriculture, to space research, through energy efficient buildings, well, this entails flexibility. But it was relatively easy as I was simply taken by the stream of dynamism in China. Everybody is working seven days a week, so we do it too.

Sometimes it was challenging to prepare things for our colleagues who come from Brussels to China, and explain to them what we are doing, why we are doing it and what we should all do to continue work in the right track. We have a system of weekly video conferences to make sure we are constantly on the same line, same understanding, going in the same direction.

How does the work of Science and Technology fit in the work of the Delegation in China in general?

We have to integrate our team in the overall work of the EU Delegation, and contribute to the political cooperation and strategic partnership between EU and China. Urbanisation is a very good example; a partnership was signed between President Barroso and Premier Li Keqiang, with its research and innovation element. It will hopefully be soon translated into visible joint calls between Europe and China.

What are your plans for the future?

Sadly, I am leaving China at the end of July, but this is life. We always knew we were here for only four years. I am going back to DG Research, and I am lucky to work on international affairs again. I will be deputy head of unit in charge of



strategy but also Asia-Pacific, so I will still have a chance to keep an eye on China in the future.

What are you going to miss?

I will miss my team a lot, and also my Chinese counterparts from different ministries, academies, funding agencies. I will miss the ambience of the EU Delegation itself, and weekly meetings with the EU Ambassador where we all exchange ideas. I will miss the group of European Science Counsellors, as in fact they became my friends. When we travelled around China together, it created a lot of personal links that made our work much easier.

My wife and I will surely miss the Chinese way of living in general. In particular, we feel comfortable here and one of the reasons is the security. Whether you go in the street at night, bike in a hutong, ride in the metro, or you negotiate prices at the Silk Market... Everything is in a friendly and secure atmosphere, so we feel relaxed, and I am not sure this will be the same in Europe.

We will miss Chinese cuisine from different provinces, because in Europe, you cannot really find this. We will miss travelling opportunities – although I admit I had too few opportunities to visit the country due to the workload. But I have seen some fantastic spots, such as in Yunnan or Gansu provinces. And I will miss the Great Wall. Walking on this spot full of mystique and legendary force is amazing. To our European mind, a construction of something like this from a political and social perspective is quite amazing. To feel the idea of continuity and to realize the number of people that might have died during the construction – it is simply bewildering.

We will miss Chinese people a lot. My impression is that many people in Europe think we are different from each other, but I don't have this feeling whatsoever. We have so much in common and we like the same things – enjoying good food together, a nice drink or cultural sites. So, I hope I will come back! I wish all the best to my team and my successor who will arrive in September and I have no doubt they will have also a great time and achieve even better results.

Dr Vialatte, thank you for your time!



3. EURAXESS Links Activities



Explore the EURAXESS Science Slam 2014!

The **EURAXESS Science Slam** is a contest giving researchers based in China the chance to **use their creativity and communication skills**. Through the Slam, researchers can showcase their project to their peers as well as the wider public. They can share their work through entertainment, and show the exciting side of research in a fun event.

Researchers (all levels starting from PhD candidates) of **all nationalities and research fields** currently based in China are invited to participate!

How to join the competition:

1. **Be creative** and develop an original idea to present your research project to the world: Tap dancing, singing, old-school presentation, scientific equipment - everything is allowed.
2. **Make a 5-minute max. video** of the presentation to be held in the LIVE finals with your camera phone (or equivalent). Make sure the presentation is in English!
3. **Post your video** on our [Youku account](#) or any other online platform and send to us your contact details.

Submission deadline is 20 October. The scientific committee will select five best candidates who will be invited to the **LIVE finals** in Beijing on **6 November 2014**.

You can watch a **short video of last year's finals** [here](#).

The first prize for the best final slammer is a free trip to Europe, including field visits and top communication training!

Watch the [EURAXESS Science Slam China 2014 Trailer](#) now and **join the competition!**

The competition is open to **researchers of all nationalities and from all fields of research currently based in China** (including Hong Kong and Macau).

> scienceslamchina.euraxess.org



Mr Mattias Lentz (on the right), Head of the Political Section of the EU Delegation, giving final remarks

EURAXESS Connect: 2nd New European Research on Contemporary China conference

The first EURAXESS Connect event of 2014 successfully took place between 2-4 July at the EU Delegation in China.

Together with the French Center for Research on Contemporary China (CEFC) and Sino-French Academic Center at Tsinghua University (CFC), EURAXESS co-organized a two-day conference for young researchers called “New European Research on Contemporary China”. The main purpose of this event, which took place in Beijing for the second time, was to provide a forum for young researchers in China studies at the European level.

The first edition was held in 2012 with the presence of fifty researchers from fifteen countries, selected among 130 applicants. The second edition attracted the attention of 149 applicants, out of which 45 young researchers came to the EU Delegation to present their work. Next to the speakers themselves, the conference attracted around eighty other guest attendees from universities, research institutes and European embassies as well as the European Delegation, making the total number of attendees around 130.

The topics of the panels were related to current and emerging problematic issues in China studies from a multidisciplinary social science perspective, concerning a range of topics, such as religion or monetary policy.

The second edition of the EURAXESS Connect: “New European Research on Contemporary China” was a major success, and all attendees left with an impression that such creative space for junior researchers at the European level should be organized again in the future.





Find more photos on our [Facebook](#) or on [CEFC](#) website.

4 News & Developments

4.1 EU & Multilateral Cooperation

Horizon 2020 Practical Guide for China now available online in both English and Chinese languages

Access the website of the Delegation of the European Union to China on [this link](#) and download the publication, alongside other useful information on EU-China research and innovation cooperation.

Research and innovation stakeholders from China are encouraged to become partners in collaborative research projects or to apply for fellowship grants and mobility schemes provided by the European Research Council and Marie-Sklodowska-Curie Actions.

In addition to the general openness of all topics, in the 2014/2015 calls several topics are specifically flagged for cooperation with China - for instance in the field of Food, Agriculture and Biotechnology, Energy, Water, Information and Communications Technologies, Nanotechnology, Space and Polar research. In these flagged topics the participation of Chinese partners is strongly encouraged and will add value to the proposals.

- [Click on this link for the Chinese version](#) or send us an email at china@euraxess.net
- If you wish to download the [English version, click here](#).

"A Testimony of Excellence" brochure on Europe-China research and innovation

Apart from the H2020 Practical Guide, the European Delegation in Beijing has released a new publication that might be of tremendous use to Europe-China research community.

"A Testimony of Excellence: Cooperation between EU Member States, Associated Countries, the European Union and China" can be downloaded in PDF [here](#).

You can also look at the [Research & Innovation Section](#) of EU Delegation's website (www.eu-in-china.com) a pool of other useful information concerning





EU and China collaboration in research and innovation (S&T relation, priority areas, H2020, events...)

The booklet provides a great overview of current activities between European countries and China in research and innovation.

Horizon 2020 Work Programmes for 2015 published

The revision of the Horizon 2020 Work Programme for 2014 - 2015 have been published on 22 July on the website of the Horizon 2020 Participant Portal.

The Work Programmes 2014 - 2015 were published in December 2013. The parts that relate to 2015 (topics, dates, budget) have now been updated.

You will have access to the revised versions of the Work Programmes of various Horizon 2020 priority areas at the [Participant Portal](#).

For those specifically interested in the grants provided by the European Research Council, see the revised [ERC Work Programme](#) (Summary of Calls p.4)

EU-industry partnerships seek innovation boost with first €1 billion for projects

Research partnerships between the EU, the private sector and Member States presented their first calls for projects and partners under Horizon 2020, the EU's €80 billion research and innovation programme. Worth a total of €1.13 billion in public funding, which will be complemented by a comparable amount from the private partners, the first round of funding will go into projects that will improve people's lives as well as boost international competitiveness of Europe's industry. Topics include new treatments for diabetes and eye disease and a roll out of dozens of hydrogen-powered road vehicles and refuelling stations.

José Manuel Barroso, President of the European Commission, said: "Only if the best brains from academia, industry, SMEs, research institutes and other organisations come together can we successfully tackle the huge challenges that we are facing. This is what public-private partnerships are about, the joining of forces to make the lives of Europeans better, create jobs and boost our competitiveness. We are committed to prioritising the impact of the European budget on the recovery, and these partnerships are doing just that, with first calls for proposals for 1,1 billion euros to be matched by industry, within a package representing an overall 22 billion euros boost to growth and jobs creation over seven years. They will continue delivering results that no single country, company or even the European Union as such would achieve alone."

The launch of first calls comes almost exactly one year after the European Commission put forward the Innovation Investment Package, a set of proposals to establish seven public-private and four public-public partnerships. They will





work in several key areas such as medicines, transport, electronics and bioeconomy, and are worth over €22 billion in total.

Source: [European Commission](#)

EPO introduces new scheme to improve legal certainty of pending patent applications

Under the "Early Certainty from Search" scheme, the EPO aims to issue all search reports and written opinions on patentability within six months of filing, to prioritise the completion of examination files it has already started over beginning work on new files, and to expedite grants once a positive search opinion has been issued.

In addition, it will seek to prioritise processing of those cases where substantiated observations are filed by third parties who identify themselves, and also of oppositions and requests for limitation or revocation.

The new scheme will benefit companies and inventors seeking patent protection in Europe by ensuring timely delivery of all search reports and opinions on their applications, giving them a sound basis for their patenting strategies early on. It will also benefit the general public by enhancing the transparency of pending patent rights in Europe, providing an overview of prior art and patentability at an early stage in the proceedings.

The scheme now being implemented enjoys the support of users of the patent system, which they expressed during the consultation exercise conducted in the first half of 2014.

Source: [EPO](#)

Launch of European science & technology network on unconventional hydrocarbon extraction

To deepen the knowledge on extraction technologies and practices of unconventional gas and oil and minimise potential health and environment risks, the European Commission has launched the European science and technology network on unconventional hydrocarbon extraction. The network will be established and managed by the JRC, on the basis of the guidance provided by the Steering group. The network aims to bring together practitioners from industry, research, academia and civil society, so as to ensure a fair and balanced exchange of ideas. It will collect, analyse and review results from exploration projects and assess the development of technologies used to extract unconventional gas and oil.

Source: [JRC](#)





What do you think of the future of science? European Commission launches public consultation on Science 2.0



The European Commission has launched a public consultation on 'Science 2.0', in order to gauge the trend towards a more open, data-driven and people-focused way of doing research and innovation. Researchers are using digital tools to get thousands of people participating in research, for example by asking them to report if they catch flu in order to monitor outbreaks and predict possible epidemics. Scientists are being more open too: sharing their findings online at an early stage, comparing and debating their work to make it better. Increasingly, scientific publications are available online for free. By some estimates, 90 percent of all available data in the world has been generated in the past two years, and scientific data output is growing at a rate of 30 percent per year.

The consultation will look at awareness of and participation in these trends, as well as get views on the opportunities created by 'Science 2.0' to strengthen the competitiveness of European science and research. [Look at the survey online and participate](#) - the deadline for responses is 30 September 2014.

Source: [European Commission](#)

Forecasting the development of breakthrough technologies to enable novel space missions



A new report, Technological Breakthroughs for Scientific Progress (TECHBREAK), has been published by the European Science Foundation. The foundation had been contacted at the end of 2009 to conduct a foresight activity for the European Space Agency (ESA), addressing the matter of technological breakthroughs for space originating in the non-space sector. A "Forward Look" project jointly funded by ESA and ESF and called 'TECHBREAK' was initiated as a result. Its goals were to forecast the development of such breakthrough technologies to enable novel space missions in the 2030-2050 timeframe and to identify related partnerships through synergies with non-space specialists. The result of this exercise is a report to ESA's Director General and High-level Science Policy Advisory Committee (HISPAC). It was published in mid-July and is available [online](#).

The report was not prepared to serve as a definitive guide for very specific technologies to be developed for future space missions but rather to inform on, and flag up, the main developments in various technological and scientific areas outside space that may hold promise for use in the space domain. The report does this by identifying the current status of research for each domain, asserting the development horizon for each technology and providing entry points, in the form of key European experts and institutions with knowledge of the domain. The European Union's concept of Key Enabling Technologies (KETs) was chosen as a guide through this technological search.

Source: [ESF](#)



Towards an Energy Union

Technology will have an important role to play in helping to secure EU energy independence. According to Dominique Ristori, Directorate General for Energy, technologies are now maturing for a real energy revolution however we still need to bridge the gap between research and industry. The Directorate General elaborated on this point within the context of EU efforts to transform into an 'Energy Union' at a European Policy Centre (EPC) briefing in Brussels. Particularly in the shadow of the crisis in Ukraine, energy is at the heart of the EU's core geopolitical concerns.

In an effort to address the problem, the European Commission published a European Energy Security Strategy in late May. Developing energy technologies is one of the medium/long term goals in the strategy. The document specifies the Commission's intention to 'mainstream energy security in the implementation of the priorities of the Horizon 2020 programme'. Other research-related aspects include launching a European science and technology network on unconventional hydrocarbon extraction and promoting the development of renewable energy technologies in multilateral and bilateral negotiations.

Speaking to the crowd gathered at the EPC briefing, Director-General Ristori noted that at least EUR 6 billion within the Horizon 2020 pot is dedicated to energy. However while EU programmes like Horizon 2020 would be important to helping us implement the strategy, according to Ristori, the majority of finance should come from the private sector: 'The return on investment for energy projects is good - better in comparison to other sectors such as transport. The private sector should be the dominant source of financing.' When it comes to transforming into an 'Energy Union', the Directorate General insisted that the technology is mature enough to move forward. He noted, however, there is a gap between the research and industry that needs to be bridged.

According to Ristori, in the next three to four years, conditions will be met to produce an energy box that gives full command of energy consumption to each individual. He noted, 'Technologies are mature enough. There is no obstacle to going rapidly into that phase and to produce 3-4 million 'smart homes' over the next years'. Ristori concluded however that this would require that we improve the capacity of our industry to produce products and we build a bridge between the research and industrial sectors.

Source: [European Commission](#)

EU Research Highlights - Tracking the history of hepatitis C to help tackle epidemics

Gkikas Magiorkinis, a clinical research fellow from the Department of Zoology at Oxford University in the United Kingdom, has traced history at a microscopic level. By combining epidemiological and molecular data, he has shown how



hepatitis C spreads in a population, underlining early diagnosis as a key to preventing the spread of epidemics.

Symptoms can take up to 20 years to emerge and in that time the disease can spread to other parts of the body. This means that unlike other diseases, such as the flu, where symptoms are apparent within days, it is difficult for people to know where a hepatitis C infection originates. Through his research, Magiorkinis discovered that the most prevalent types of hepatitis C spread worldwide soon after the Second World War, coinciding with the expansion of blood transfusions and intravenous drug use.

His research is a part of the European Union (EU)-funded C THE LIGER project, which comes from the Marie Curie programme of support for research fellows.

Magiorkinis, who won the European Commission's inaugural Marie Curie Prize for Promising Research Talent in 2012, says his model helps build a solid argument to improve early diagnosis and antiviral treatment in high-risk groups. He believes this could be useful for other populations and in other infections, such as HIV.

Hepatitis C is currently thought to infect 180 million people worldwide and most are unaware that they have the disease.

Source: [European Commission](#)

EU Research Highlights - The smartphone app that helps patients with bipolar disorder

For most people today, the rapid development of mobile computing and smartphones and the way these have revolutionised our daily lives is a familiar story.

What is less well known is the potential this same technology offers to improve the lives of patients with mental illnesses. UBICOM MENTAL HEALTH is an EU-funded project which stands at the forefront of this new area of research, developing a smartphone app to run on Android and Apple's iOS devices which could help manage and mitigate the effects of bipolar disorder and deliver significant benefits to patients.

The app is the brainchild of Dr Mark Matthews, a former English teacher turned computer scientist who specialises in human-computer interactions. Named MoodRhythm, the app is based on the idea that the body's natural rhythms, known as circadian rhythms, are a major influence on human wellbeing, especially in patients with bipolar disorder, a mental condition characterised by extreme mood swings, from manic highs to depressive lows.

Designed to be used either as part of treatment with a therapist or as a standalone app, MoodRhythm uses a simple diary to help people keep track of their moods and energy levels, but the main focus of Dr Matthews' research, in collaboration with Dr Tanzeem Choudhury, is the app's use of smartphone sensors to automatically track daily routines and reduce the need to rely on



patients to record behaviour patterns themselves. “This is very important because people with bipolar disorder are more susceptible to stress events in their lives or changes in their routine,” explains Dr Matthews. “These can lead directly to changes in people’s biological rhythms, which in turn can lead to a depressive or a manic episode,” he says.

(Source: [European Commission](#))

EU Research Highlights - Why cancer drugs affect young children differently

Cancer drugs save lives, but they are highly toxic. Using the right amounts is crucial. EU-funded research focusing on doxorubicin, one of the main drugs used in chemotherapy, has generated new knowledge that will help to refine the dosages for children.

The findings of the EPOC project indicate that clearance rates for doxorubicin, corrected for body size, are similar in older children and in adults, but that children under three eliminate the drug more slowly.

This observation, which suggests that the drug concentrations achieved in very young children may be higher than in those in older patients, has implications for cancer treatment and could help to develop strategies to reduce the risk of serious side effects.

Dosages for children are often derived from those used for adults, adjusted for body size, and may also be specific to the type of tumour. While the success rates of these treatments are very high, this approach does not necessarily account for the fact that children aren’t simply small adults. New insights could, therefore, help to make the treatment of childhood cancers more effective and safe.

(Source: [European Commission](#))

4.2 EU Member States*, China & Bilateral Cooperation

France – 2014 Edition of CAI Yuanpei Programme 16 projects selected

Since its launch in late 2009, Cai Yuanpei programme has supported a total of 100 projects for mobility between France and China for students and researchers.

In this year’s 5th edition of the programme, 16 new joint projects were selected by the Embassy and the China Scholarship Council (CSC). The new winners

* Including countries associated with Horizon 2020.



were awarded financial support for mobility to encourage scientific exchanges of excellence between the two countries.

The thematic breakdown of the 16 projects selected this year is as follows:

- Engineering: 5 projects
- Science and information technology and communication: 1 projects
- Earth science and world space: 2 projects
- Chemistry: 2 projects
- Physical: 2 projects
- Biology, medicine, health: 2 projects
- Humanities and Social Sciences: 1 project
- Mathematics: 1 project

(Source: [La France en Chine](#))

France - 23 projects selected for 2014 edition of Xu Guangqi programme

For the fifth consecutive year, Xu Guangqi programme accompanies the start of scientific cooperation projects between Chinese and French laboratories, including support for mobility.

Nearly a third of eligible projects were selected this year by the service of science and technology and the Cooperation and Cultural Action of the Embassy of France in China.

In addition, for the first time in 2014, the "Discover China" programme was launched in parallel, allowing Xu Guangqi to focus on more technical projects related to the Franco-Chinese collaboration and less on the general discovery of Chinese research system.

The 23 winning projects responded to various evaluation criteria such as scientific excellence, innovative projects or the dynamism of French teams. Their thematic breakdown is as follows:

- 8 projects in economics and social sciences
- 15 projects in exact sciences

Funding, which will cover the costs of travel and accommodation for one or two missions in China, will be awarded to 23 successful applicants.

The next edition of Xu Guangqi program will be launched prematurely in September 2014 to allow missions throughout 2015.

(Source: [La France en Chine](#))



The UK - New Centre of Excellence for Plant and Microbial Science to Further Sino-UK Collaboration

Scientific partnerships between China and the UK are being strengthened with the establishment of a £12m center for plant science and microbiology spanning the two countries. Two research institutes affiliated to the Chinese Academy of Science (CAS) signed an agreement to jointly establish a Center of Excellence in Plant and Microbial Science with John Innes Centre (JIC) on 11 July in London.

The joint CAS /JIC Center will enhance research to support the agricultural technology and microbial genetics agendas of both countries. Scientists with the Institute of Genetics and Developmental Biology (IGDB) in Beijing and the Shanghai Institute of Plant Physiology and Ecology (SIPPE) will investigate challenges facing agriculture and human health.

(Source: [CAS](#))

The UK - The First NSFC-RCUK Biennial Strategic Meeting held in Beijing

On May 30th, the first Biennial Strategic Meeting between NSFC and RCUK was held at NSFC, chaired by Prof. Liu Congqiang, Vice President of NSFC and Prof. Paul Boyle, RCUK International Champion.

Representatives from the six research councils under RCUK and the eight scientific departments and the Bureau of international cooperation of NSFC attended the meeting. Issues addressed and discussed include priority areas for the future 2-year cooperation and new cooperation mechanism, etc. The meeting set directions for substantial cooperation for the next 2 years.

In 2013, NSFC and RCUK set up the high-level strategic meeting mechanism. Vice President Liu Congqiang signed the agreement on the behalf of NSFC. Both parties agreed to hold the meeting once every two years alternatively in China and U.K. Objectives of the meetings include review of the past 2 years' cooperation, future cooperation area, perfecting the existing cooperation mechanism and exploration for new cooperation approaches, etc.

(Source: [NSFC](#))

China - Multilateral Workshop on Frontiers in International Critical Zone Science Held in Beijing

From May 21st to 24th, 2014, the Multilateral Workshop on the Frontiers in International Critical Zone Science co-sponsored by National Natural Science Foundation of China (NSFC), National Environmental Research Council (NERC), National Science Foundation (NSF), German Research Foundation (DFG) and National Center for Scientific Research (CNRS) was held in Beijing.



70 experts in relevant fields from China, U.K, U.S.A., Germany and France gathered in Beijing and held heated discussion on research progress and key issues about international critical zone observatory (CZO), which laid a solid foundation for further strengthening international exchange and cooperation in this area.

(Source: [NSFC](#))

Sweden - Taking cultural and creative dialogue to the next level

A number of Nordic and Chinese experts, entrepreneurs and cultural profiles met for a two-day seminar in June at Tsinghua University to discuss the challenges and trends of digital content within the cultural and creative industries.

Cultural & creative industries and digital content was the topic of the seminar, arranged by the Cultural Section of the Embassy of Sweden on 10-11 June together with China's think-tank on cultural industries: National Research Center for Cultural Industries, Tsinghua University. Opportunities and challenges in the digitalized world were discussed among researchers, industry associations, entrepreneurs, and artists.

The present situation, policies and trends, of the cultural & creative sector and digital content in China and the Nordic countries were presented. Other topics were copyright, entrepreneurship within the digital media sector, how internet changes the economy, and last but not least a special discussion on the Swedish music industry.

Source: [Sweden Abroad](#)

The UK - Groundbreaking British innovation set to captivate a Beijing audience

The China Science Festival opened its doors this morning (18 July) to young visitors from throughout the country.

With the UK designated this year's "Country of Honour", many are expected to head for the British area, showcasing the best of British innovation in the fields of digital technology, satellites, automotive engineering and eco-technology.

Visitors to the UK area can expect to find an array of mind-blowing technologies: A booth sponsored by BP and Castrol will feature a scale model of the Bloodhound Super Sonic Car – a British-led project to build a car that will attempt to reach 1000 miles per hour and break the land speed record. The British Council will display a model of a bicycle developed by Brunel University which converts polluted water into safe drinking water.

Surrey Satellites' booth will include the technology from their micro-satellites developed to provide images for the purposes of land monitoring and natural



disaster response in China, as part of a wider exhibit showing how the University of Surrey has facilitated the commercialization of university research. Other participating universities will include Hull University and University College London (UCL). UCL will showcase digital technology including a project to provide affordable digital microscopes for high schools and an app for 3D imaging of archaeological finds. And for those itching to get involved, the Royal Society of Chemistry and Institute of Physics will invite young visitors to try out some simple science experiments for themselves.

(Source: [Gov.uk](http://gov.uk))

The UK - The 5th UK-China Architecture Forum held in Guangzhou on 4 July

The 5th UK-China Architecture Forum explored solutions to "Urbanisation in China", with a theme "Constructing A Greener Future". Opening the 5th UK-China Architecture Forum (UKAF) on Friday 4 July in Guangzhou, Alastair Morgan, British Consul-General said "Urbanisation will bring China unprecedented challenges".

With over 200 participants, including: Chinese Government policy makers, opinion leaders from the mainstream media, as well as the key industry players from both Chinese and British architecture and construction companies, the forum was well placed to answer this difficult question.

The 5th UK Architecture Forum is a joint event, hosted by of the British Consulate General Guangzhou, UK Trade & Investment, the China Britain Business Council (CBBC) and the British Chamber in Guangdong in response to the significant opportunities for UK-China cooperation on the theme of urbanisation.

(Source: [Gov.uk](http://gov.uk))

5. Grants & Fellowships

5.1 Calls announcements for international researchers

International – Human Frontier Science Program Post-doc Fellowship

The Human Frontier Science Program (HFSP) post-doc fellowship offers different mobility opportunities to post-docs from all countries. HFSP postdoctoral fellowships encourage early career scientists to broaden their research skills by moving into new areas of study while working in a new



country.

HFSP fellowships are for three years. Fellows may choose to stay for up to three years in the host country or use the last year of their fellowship to return to their home country or to move to another HFSP member country.

Long-Term Fellowships (LTF) are for applicants with a Ph.D. in a biological discipline.

Cross-Disciplinary Fellowships (CDF) are for applicants with a Ph.D. from outside the life sciences (e.g. in physics, chemistry, mathematics, engineering or computer sciences).

The fellowship initiation deadline is **13 August 2014**.
The fellowship submission deadline is **28 August 2014**.

More information on [HFSP website](#).

Denmark - International Network Programme

International Network Programme supports network activities between Danish and foreign researchers from China (incl. Hong Kong), India, Israel, Japan, USA, Brazil and the Republic of Korea. The programme is for recognised scientists employed at Danish universities and research institutions and recognised scientists and research experts employed in R&D intensive companies and GTS Institutes in Denmark who wish to conduct network activities with researchers from China (incl. Hong Kong), or other above-mentioned countries.

Applications for funding can be made for operating expenses for workshops and conferences, international travel including airfare, accommodation and daily expenses for food and local transport and overhead/administration expenses.

More information [here](#); deadline **1 September**

Denmark – Danish Council for Independent Research - Individual Post-doc Grants

The purpose of DFF-Individual postdoctoral grants is to maintain and develop the research competencies of researchers who are in the beginning of their research careers. DFF-Individual Postdoctoral grant will contribute – to the widest possible extent – to promoting the national and international mobility among research environments and, where relevant, between research environments and the business community.

The grants are awarded to researchers of any nationality who in an independent manner carry out specific research projects at research institutions in Denmark or abroad. For postdocs from other countries who apply for funding to carry out



research projects in Denmark, it is DFF's expectation that they will bring considerable new expertise to the Danish host environment.

The deadline for the autumn call depends on the respective research council (Humanities, Natural Sciences, Social Sciences, Medical Sciences, Technology and Production Sciences), between **27 – 30 October 2014**.

Read the [full call for proposal](#).

Denmark – Danish Council for Independent Research (DFF) – Sapere Aude

In order to promote the education of researchers and strengthen internationalisation, the Danish Council for Independent Research has launched the programme Sapere Aude, made of three steps. Sapere Aude: DFF-Research Talent, Sapere Aude: DFF-Starting Grant and Sapere Aude: DFF-Advanced Grant.

DFF-Research Talent grants are awarded to the most talented candidates among the recipients of a DFF-Individual Postdoctoral grant. Sapere Aude: DFF-Starting Grant is aimed at younger, very talented researchers who at the time of the application deadline and within the last eight years have obtained their PhD or achieved equivalent qualifications. Sapere Aude: DFF-Advanced Grants are geared towards excellent researchers who, at the time of the application deadline and within the last 20 years, have obtained a PhD or achieved equivalent qualifications. Typically, they also possess professor-level qualifications.

More information [here](#).

Finland – CIMO Fellowships

The CIMO Fellowships programme is open to young **Doctoral level** students and researchers from all countries and from all academic fields.

The scholarship period may vary from **3 to 12 months**. The monthly allowance is **900-1200 euros** (for fellowships applied after 1 September, the monthly allowance is 1500 euros). The scholarship is intended to cover **living expenses in Finland for a single person**; expenses due to international travel to and from Finland are not covered.

Applications may be considered at all times but applications should be submitted **at least 5 months before the intended scholarship period**.

Look at the [Study in Finland](#) website to find out more.



Finland – Post-doc Pool

The pool grants are intended only for sending researchers abroad from Finland (outgoing fellowship). The central idea of the Pool is to offer full funding for postdoctoral scholars who go abroad to do research after their doctoral dissertation. The funding may also cover e.g. the expenses of the researcher's family, when necessary.

The grants awarded from Säätiöiden post doc -pooli are intended for at least one academic year for scholars, who have recently completed their doctoral degree and wish to conduct research abroad. Grants may also be awarded for periods longer than one year. They are also available for non-Finnish nationals. The Pool's grant is may cover all expenses for conducting research abroad, including travel and moving costs and schooling expenses and insurance. The total sum of the grant awarded is based on the applicant's own cost estimate.

The autumn application round will run from 15 Aug until 15 Sept 2014.

Access more information [here](#).

France – Zheng Heng program

The objective of the "Zhang Heng" program is to help a group of young scientists and engineers in France (under 40 years) **discover** research conducted in China in their field and possibly enable them to identify potential partners for future collaborations. It grants young French scientists a short customised trip in Chinese labs.

Every year a new topic is selected according the priorities of the scientific cooperation – this year, "**genomics and metagenomics**" theme was chosen, specifically targeting the following areas:

Pharmacogenomics; Susceptibility factors for diseases; Research on rare diseases; Metagenomic analyzes physiology, commensal flora.

French researchers can apply for a travel grant and a duration of stay for seven days.

More on [French Embassy website](#).

The deadline is **21 September**.

EFEO Field Scholarship

The École française d'Extrême-Orient awards scholarships to research students tenable for periods of research in an [EFEO or ECAF \(European Consortium for Asian Field Study\) Centre in Asia](#).



The scholarship is a monthly stipend varying between 700 and 1 360 € according to the academic level of the applicant (MA or PhD student) and the country of field research in Asia. Duration: 1 to 6 months.

Applicants must conduct research in humanities or social sciences applied to the history and civilizations of Asia; hold a BA, MA degree or a recognized equivalent qualification and have good command of the language(s) required to successfully complete the field research project, as well as a working knowledge of French.

The deadline for this scholarship is **30 September**, learn more [here](#).

Ireland – SFI Research Professorship

Suitable applicants for a Research Professorship Award will be outstanding researchers in academia or industry, recognised as world-leaders in their discipline, with a demonstrated capacity for strategic and dynamic leadership on an international stage. Full proposals are only accepted following invitation by SFI. Host Research Bodies must be situated in the Republic of Ireland.

Find more information on the current call and other SFI funding opportunities on [SFI website](#). The call was open at the end of June and accept applications **on a rolling basis**.

Ireland – SFI's PIYRA Award

The President of Ireland Young Researcher Award (PIYRA) is Science Foundation Ireland's most prestigious award to recruit and retain early career researchers to carry out their research in Ireland. This programme emphasises the importance that Science Foundation Ireland places on the early development of academic careers. The award recognises outstanding engineers and scientists who, early in their careers, have already demonstrated or shown exceptional potential for leadership at the frontiers of knowledge. The aim is to provide funding to up to 5 years and retain Irish talent as well as help Irish research bodies attract top-tier young researchers to Ireland.

The call was announced on **2 July** and accepts applications on a **rolling basis**.

Read more on the [SFI website](#).

Poland - SKILLS – Mentoring

The programme's aim is to enable its participants (young scientists working in Poland) to make contacts and gain mentors among experienced scholars – in Poland and abroad – with recognised academic achievements to their name. The programme supports one-to-one mentoring.

Scientists selected for the programme are offered **funding for 4 short meetings of the mentor and mentee**. The Foundation will buy or reimburse



the ticket for the travel and within the limit will return costs of accommodation, meals and local transport incurred.

The call will close on **1 September**. Read more [here](#).

Poland - SKILLS – Praxis

The programme's aim is to enable researchers from Poland to improve their work skills by completing an internship at a research performing organisation or a company abroad. The programme focuses on following areas: research project management, research team management, interdisciplinary collaboration, technology transfer and entrepreneurship.

Programme is open to applicants from all disciplines, residing in Poland.

The deadline for application is **15 September**.

Portugal - PhD Studentships, PhD Studentships in Industry and Post-doctoral Fellowships

Fundação para a Ciência e a Tecnologia (FCT) offers various grants for researchers of any nationality. **PhD Studentships** are for applicants who are accepted as doctoral students in a Portuguese or foreign university. **PhD Studentships in Industry** support graduates who wish to carry out research projects leading to a PhD in an industry setting. **The Postdoctoral Grants** are intended for individuals who have completed a doctoral degree, less than six years ago, in order to carry out advanced research in Portuguese or foreign scientific institutes of recognized merit. The call opens at the end of July and will close **at the end of September** and information can be accessed [here](#).

Sweden – KVA in Biosciences, Engineering and Social Sciences

The Royal Swedish Academy of Sciences offer different scholarships that support PhD students and postdoctoral researchers to do research in Sweden.

In addition to the funding available by means of general applications, special foundations and research exchanges are allocated.

Scholarships are for applicants of any nationality and various disciplines; different disciplines have different deadlines. For Biosciences, Engineering and Social Sciences, the closing date for applications: **31 August 2014**.

Learn more on respective webpages of [Biosciences](#), [Engineering](#), and [Social Sciences](#).



Sweden - STINT Postdoctoral Transition Grants

The aim of the Postdoctoral Transition Grants for Internationalisation programme is to support promising young researchers in Sweden after a postdoc period of at least one year abroad in order to maintain and further develop their international network early in their careers. Projects may last for up to three years.

The funds are to be used for mobility, stays abroad or foreign researcher's stays in Sweden. Applicants should be employed at a university in Sweden and have obtained their PhD.

Deadline **1 October 2014**

[Read more](#) on STINT website.

Turkey - Research Fellowship for International Researchers (2216)

The Scientific and Technological Research Council of Turkey (TÜBİTAK) grants fellowships for international highly qualified PhD students and young post-doctoral researchers to pursue their research in Turkey in the fields of Natural Sciences, Engineering and Technological Sciences, Medical Sciences, Agricultural Sciences, Social Sciences and Humanities.

Maximum duration for the fellowship is 12 months, it includes a monthly stipend and travel expenses. The program aims to promote Turkey's scientific and technological collaboration with countries of the prospective researchers.

Applicants should be non-Turkish citizen and should have an invitation from the universities or research institutes in Turkey.

The application can be submitted between. 22 September 2014 - 31 October 2014. Access more information on [TÜBİTAK website](#).

UK – Ernest Rutherford Fellowship

STFC (Science and Technology Facilities Council) offers 12 Ernest Rutherford Fellowships annually which provide five years of funding to outstanding researchers at an early stage of their career. The aim is to support future scientific leaders to establish a strong, independent research programme.

The fellowship encourages talented researchers in UK universities to remain in the country, and at the same time attract outstanding overseas researchers to the UK. Each Fellowship will last for five years, with 12 being offered annually.

Ernest Rutherford Fellowships are intended for early career researchers who do not have an academic position. However, applicants must have a PhD and a minimum of five years' research experience from the start of the postgraduate programme and normally, a minimum of two years' postdoctoral experience.



Applications must fall within the remit of the STFC core Science Programme (astronomy, solar and planetary science, particle physics, particle astrophysics, cosmology, nuclear physics). The STFC also offers additional [Returner Fellowships](#), for outstanding candidates returning from a career break or from working outside academic research.

The deadline for application is **25 September 2014**.

Find more information on [STFC website](#)!

5.2 Calls still open

Calls first announced in [previous editions of the newsletter](#)

EU – EMBO Long-Term Fellowships

The next application deadline is **15 August, 2014**.

Find out more details about this fellowship on the [EMBO website](#).

EU – Dragon-STAR Travel Grant Scheme 2nd call

Submission deadline is **19 September, 2014**.

Find out more on the [Dragon-STAR website](#).

EU – Marie Skłodowska-Curie Individual Fellowships (IF)

Application deadline is **11 September, 2014**. Access the online call and get all details on the [Horizon 2020 Participant portal](#).

EU – CERN Fellowship and GET Programmes

Application deadline is **1 September, 2014**.

Further details available on the [CERN website](#).

EU – ERCIM “Alain Bensoussan” Fellowship programme

The next application deadline is **30 September, 2014**.

Visit the [programme's website](#) for further details.

EU – Fernand Braudel Senior Fellowships



Deadline **30 September** (for applications at the Department of Political and Social Sciences and Department of Economics).

Find out more about this scheme on the [EUI website](#).

EU – ESO Fellowship Programme

The application deadline is every year on **15 October**. Applications are done online. Learn more on the [ESO website](#).



EU – ERC Advanced Grants

Call open until **21 October 2014**.

Learn more and apply on the [ERC website](#).

EU – Max Weber Programme for Postdoctoral Studies

Application deadline is **25 October, 2014**.

Further details available [here](#).

EU – Jean Monnet Postdoctoral Fellowships

The next deadline for applications is **25 October, 2014**.

Further details available [here](#).

Austria – Marietta Blau Grant

The next closing date for application is **1 September, 2014**.

Further details available [here](#).

Belgium – Gustave Boël-Sofina Fellowships to China and India

The application deadline is **3 November, 2014**.

Further details available [here](#).

Denmark – Exchange of scientists between the Danish Rectors' Conference and the Chinese Academy of Sciences

The next application deadline is **1 October 2014**.

Click [here](#) for more information (page in Danish, but application material in English).



Estonia – Scholarship Estophilus

The next application deadline is **1 October, 2014**.

Further details are available on the [Estonian Institute website](#).

Germany – German Chancellor Fellowship – new call for applications from tomorrow’s leaders

The deadline for applications is **15 September, 2014**.

Read more about this programme on the [Humboldt Foundation website](#).

Germany – DAAD-K.C.Wong Fellowships

The next application deadline is **15 November, 2014**.

Learn more about this programme and how to apply on the [DAAD website](#).

France – Paola Sandri Research Travel Grant

PhD students in France of all nationalities are eligible to apply. The next application deadline is **5 September, 2014**.

Further details can be found [here](#).

France – Researchers Exchange Programmes CNRS-CAS and CNRS-CASS

The application deadline for both programmes (with CAS and with CASS) is **17 September, 2014**.

Further details about the programme and the current call with CAS can be found [here](#). Further details about the programme and current call with CASS can be found [here](#).

The list of all Researchers Exchange Programmes of CNRS can be found on its [website](#).

Luxembourg – AFR PhD and Postdoc Grants

The next application deadline is **23 September, 2014** (PhD grant) and 9 September 2014 (Post-doc grant)

Further details available on the [FNR website](#).



Netherlands – KNAW Visiting Professors Programme

The deadline for submission is **1 November, 2014**.

More details available on the [KNAW website](#).

Netherlands – Rubicon programme

Next application deadline is **3 September, 2014**.

Further details available on the [NWO website](#).

Slovakia – Slovak Government Incoming and Outgoing Scholarships

The next application deadline is **31 October, 2014**.

Further details can be found on the [programme's website](#).

Sweden – VINNMER Marie Curie Incoming and Industry Outgoing Fellowships

Application deadline of current call: **16 September, 2014**.

[VINNMER Marie Curie Incoming](#)

[VINNMER Marie Curie Industry Outgoing](#)

UK – Royal Society International Exchanges Scheme – Cost-share programmes with Mainland China and Taiwan

In China, the partner organization is the NSFC. Application deadline is **21 October 2014**.

In Taiwan, the partner organization is the NSC. The deadline for application is **28 October 2014**.

Read more about the cost-share programme [here](#).

Further details available on the [Royal Society website](#).

5.3 Open calls under Horizon 2020 and Euratom

Access all open calls on the [Horizon 2020 Participants' portal](#).

Excellent Science programme

10 open calls including:



European Research Council:

[ERC Proof of Concept Grant](#) – Deadline **1 October, 2014**

[ERC Advanced Grant](#) – Deadline **21 October, 2014**

Marie Skłodowska-Curie Actions:

[Marie Skłodowska-Curie Individual Fellowships \(IF\)](#) – Deadline **11 September, 2014**

[COFUND – Co-Funding of Regional, National and International Programmes](#) -
Deadline **2 October 2014**

Industrial Leadership

[9 open calls](#)

Societal Challenges

5 open (and 13 forthcoming) calls including the following ones particularly encouraging collaboration with China (*however, it should be kept in mind that ALL calls are open to Chinese participation!*):

[SFS-13-2015: Biological contamination of crops and the food chain](#) – Deadline **24 February, 2015**

[MG-1.8-2015: International cooperation in aeronautics](#) – Deadline **31 March, 2015**

[WASTE-7-2015: Ensuring sustainable use of agricultural waste, co-products and by-products](#) – Deadline **16 October, 2014**

[ICT 2014 - Information and Communications Technologies](#) – Deadline **25 November 2014**

Science with and for society

8 open calls including the following one including China in its scope:

[ISSI-5-2014: Supporting structural change in research organisations to promote Responsible Research and Innovation](#) – Deadline **2 October, 2014**

[ISSI.5.2015: Supporting structural change in research organisations to promote Responsible Research and Innovation](#) – Deadline **16 September, 2015**

Euratom

[1 open call](#)



6. Jobs

Access thousands of jobs and fellowships announcements in Europe and worldwide on the [EURAXESS Jobs portal](#)!

Lecturer at the ESSCA School of Management, Shanghai

ESSCA School of Management in Shanghai is looking for part-time lecturers to teach the following courses or course-modules in the fall semester of 2014:

- 1) Country Risk Analysis (36 contact hours); Master's level
- 2) Cross-Cultural Management and Negotiation: Module focusing on China (9 contact hours); Master's level
- 3) Doing Business in China: Module on Business Culture in China (9 contact hours); undergraduate level

The language of instruction is English. Course content and material will be provided.

Applicants must have relevant academic qualifications (PhD in the field and a research agenda with relevant publications) and / or relevant professional experience.

Interested applicants should kindly send their cover letter and CV to Frauke.Austermann@essca.fr.

Dean, Fuli School of Food Science and Engineering (FSFSE) of Xi'an Jiaotong University (XJTU) : Xi'an, China

Xi'an Jiaotong University (XJTU), known as Nanyang College founded in 1896, is one of the nation's most renowned higher institutions. XJTU was among the first group of universities in China funded by the Project 211 and Project 985, with the goal of becoming a world famous university.

Fuli School of Food Science and Engineering (FSFSE) of XJTU is jointly-established by XJTU and the Fuli Charitable Fund of Zhejiang Province. In line with the fast development of food industry and the great demand of high-calibers in the field of food safety, FSFSE aims to cultivate innovative and interdisciplinary talents with specialized knowledge of both food science and mechanical engineering.

To further promote the development of FSFSE, XJTU offers a Dean position for an open worldwide application and welcomes elites to join.

Deadline 15th September; more details and contact on [Nature Jobs](#).



Postdocs in developmental biology and neuroscience: Shanghai, China

Postdoctoral positions are available immediately to study molecular mechanisms in mammalian development, with an emphasis on neuroscience. Candidates with a strong background in neuroscience, RNA biochemistry, mouse genetics, stem cell culture, bioinformatics, and/or molecular biology are strongly encouraged to apply. Competitive salary and benefits. Candidates will be working full time at Shanghai Jiao Tong University in Shanghai, China. Successful candidates have the opportunity to be promoted to positions equivalent to Assistant Professor in a short period time at Shanghai Jiao Tong University. Please send cover letter, research interests, CV, publications and three names who can provide recommendation letters in Word or PDF files by email to Ms. Guo at spring_gzm@sjtu.edu.cn.

More on [Nature Jobs](#)

PhD Studentships at University of Ningbo China

Applications are invited to undertake postgraduate research within the new Ningbo Nottingham International Academy for the Marine Economy and Technology (IAMET), a new centre of excellence for marine-related research and business engagement. The IAMET is collaboration between The University of Nottingham in the UK and Ningbo, China, Zhejiang Wanli Education Group and the Ningbo Municipal Government, and will engage with both local and international companies providing opportunities for collaboration and commercialisation.

With 10 positions available, the scholarships are based at The University of Nottingham's campus in Ningbo, China. They are available from September 2014 for a period of three years, with a stipend of up RMB 3,000 per month (c. GBP 300 per month) and an accommodation allowance of RMB 4,800 per year (c. GBP 480 per year) for local students and RMB 12,000 per year (c. GBP 1,200 per year) for international students. Tuition fees are fully funded and medical insurance and health insurance are provided.

Teaching assistantships with extra payment may be available for talented PhD students.

More information on EURAXESS Jobs or [here](#).

Shanghai Research Center for Translational Medicine Leading Scientists Positions Open: Shanghai, China

Shanghai Research Center for Translational Medicine (the Center for short hereinafter) is a national key scientific infrastructure, formally approved to be founded by National Development and Reform Commission of China in 2013.



As a national academic institution, the Center will be co-administrated by Ministry of Education and Shanghai Municipal Government. While affiliated to Shanghai Jiao Tong University, the Center will also integrate the biomedical forces of universities and scientific institutions in Shanghai including Fudan University, Tongji University, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, and in the same time will closely collaborate with industries, with a goal to be developed into a multidisciplinary, open and internationally influential base for translational medical research.

The Center is seeking highly qualified scientists to fill leading scientist positions to take charge of the infrastructure and supporting platforms for the translational studies of cancer, cardiovascular and cerebrovascular diseases, metabolic diseases, as well as infectious and immunological diseases.

The Center will provide competitive salary and benefits depending on candidate's qualifications. The candidates will be encouraged and supported to apply for "1000 Talent Program".

More on [Nature Jobs](#).

Principle Investigator Positions at Tsinghua University School of Medicine

As a top-ranked research university in biomedical sciences in China, the Tsinghua University School of Medicine wishes to invite applications from suitably qualified individuals for a number of tenure-track faculty positions in the following areas:

- 1) Cancer biology, including but not limited to cancer genomics & epigenetics, DNA damage response and genome instability, cancer cell signalling and metabolism, regulation of oncogenes and tumor suppressor genes, animal models of cancer progression and metastasis, and cancer bioinformatics,
- 2) Immunology, including but not limited to inflammasome, innate lymphocytes, immune memory, human and clinical immunology, microbiota and mucosal immunity, and animal disease models,
- 3) Infectious Diseases, including but not limited to bacterial pathogenesis, host-pathogen interactions, parasitology,
- 4) Pharmacology and Pharmaceutical Sciences, including but not limited to pharmacology, cancer pharmacology, drug discovery, pharmaceuticals, drug and vaccine delivery, biological drug discovery and development,
- 5) Neuroscience, including but not limited to cellular, molecular, system and computational neuroscience,
- 6) Stem Cell and Regenerative Medicine, including but not limited to signaling, transcriptional and chromatin regulations in stem cells, pluripotency, adult stem cells, stem cell niche, reprogramming.





Candidates from all nationalities are encouraged to apply.

Learn more on [Science Careers](#)

Positions in Europe:

France – INRA is recruiting 49 experience scientists:

6 Experienced Research Scientists (CR1) on the basis of a project. The candidates' projects should be in the fields of food and nutrition, agriculture or the environment.

43 Research Directors (DR2) on the basis of a project. Candidates' projects should be in one of the following fields of research:

- agronomy and environment, economic and social sciences, digital sciences,
- human nutrition, food safety and process engineering,
- ecology, plant and animal health,
- genetics and animal and plant physiology,
- research management.

The candidates profiles, further details and application documents can be reached [here](#).

The deadline is **1 September** 2014.

Italy - 46 permanent positions of Associate Professor

The University of Pisa offers 46 permanent positions as associate professor in the following research fields: Chemistry, Biological science, History, Geography Economics, Pharmacological science, Language science, Physics, Engineering Mathematics, Medical science, Agricultural science for: Experienced researcher or 4-10 yrs (Post-Doc) or more Experienced researcher or >10 yrs (Senior)

The applications must be received by **1st September 2014**.

You can access more information on [EURAXESS Jobs](#).

The UK - Project Manager (REVAMMAD, EU Marie Curie ITN), University of Lincoln

The project, an EU-funded Marie Curie Initial Training Network Project, includes nine project partners from the UK, France, Germany, Denmark, Italy and Greece, and will train thirteen Early Career Researchers in computer vision and biomedical engineering approaches to the analysis of retinal images for vascular modelling, measurement and diagnosis.



The Project Manager will be expected to oversee the research programme and associated researcher training programme, organizing, coordinating, reporting, marketing and tracking finances. Project management, oral and written communication skills are essential; and a scientific background would be an advantage. A willingness to travel overseas is essential. The Project Manager will report to the Project Coordinator, Professor Andrew Hunter, based in the School of Computer Science at the University of Lincoln, UK. This is a unique opportunity for an early-career, R1 researcher to undertake a challenging management role in a major, complex EU project in a thriving a growing department. (Source: [EURAXESS Jobs](#))

7. Events

7.1 EURAXESS Links China recommends

France - Technology in France: “So French, so innovative”

On the occasion of the fiftieth anniversary of the establishment of Sino-French diplomatic relations, the France-China Committee launches the "France-Technology: So French, so innovative" campaign, to promote all facets of French technological innovation.

France is a land of innovaton with a strong tradition of excellence in scientific research, which includes global technology pioneers in all sectors. The champions are able to meet the huge challenges and needs of tomorrow's world, especially in the priority areas of sustainable cities, energy, transport, industry, health, food, new technologies, services and lifestyle.

During this campaign, which runs until the end of 2014, the France-China Committee and its partners will hold two flagship events:

- **Innovation Award** – 4 December: awarded to Franco-Chinese team of innovation and sponsored by the French Ministry of Higher Education and Research. Prizes in different categories will be awarded to excellent projects jointly developed by Franco-Chinese teams.
- **Innovation Fair** - from 1 to 15 November: a discovery of French technology through open door days held by local branches of French companies. The fair will enable the audience to discover industrial plants, skilled professions, know-how and technological achievements of the participating companies.

Source: [France en Chine](#)

7.2 Upcoming scientific events in China



Field	Date	Location	Title (click for more details)
Gas Hydrates	28 July – 1 August 2014	Beijing	The 8th International Conference in Gas Hydrates
Ceramics	17 – 21 August	Beijing	5th International Congress on Ceramics
Marine biology	4-9 August, 2014	Shanghai	ClimEco4
Drug discovery	25-29 August, 2014	Suzhou	CSHA Disease Modeling and Drug Discovery
Agriculture	29-31 August, 2014	Changchun	BIT's 3rd Annual World Congress of Agriculture-2014 (WCA2014)
Immunology	2-6 September, 2014	Suzhou	Frontiers of Immunology in Health and Diseases
Bioinformatics	9-12 September, 2014	Shenzhen	Joint Conference of the 9th International Conference on Genomics (ICG-9) and the 3rd Shenzhen International Biotechnology Innovation Forum & Expo (SIBIFE-3)
Systems biology	9-12 September, 2014	Suzhou	Systems Biology of Gene Regulation and Genome Editing
Neuroscience	15-19 September, 2014	Suzhou	Neurobiology: Diverse Species and Conserved Principles
Bioinformatics	15-18 September, 2014	Shenzhen	2014 BGI International Bioinformatics Workshop
Engineering	20-21 September, 2014	Beijing	The 2nd International Conference on Mechatronics and Automatic Control Systems
Molecular biology	22-26 September, 2014	Suzhou	CSHA GTPases: Mechanisms, Interactions and Applications
Ecology	8-12 October, 2014	Suzhou	CSHA Evolutionary Genetics and Genomics
Physics	9-12 October, 2014	Beijing	The 55th ICFA Advanced Beam Dynamics Workshop on High Luminosity Circular e+e- Colliders – Higgs Factory



Marine Biology	12-16 2014	October,	Qingdao	World Conference on Marine Biodiversity 2014
Remote sensing	13-17 2014	October,	Beijing	9th SPIE Asia-Pacific Remote Sensing Symposium
Computational biology	13-17 2014	October,	Suzhou	CSHA Quantitative Biology
Cell biology & Genetics	15-17 2014	October,	Shanghai	2014 International Experimental Biology and Medicine Conference
Molecular biology	16-18 2014	October,	Hong Kong	EMBO workshop: Cancer Stem Cells and Epigenetics
Engineering	16-19 2014	October,	Beijing	The 6th International Conference on Hydrometallurgy-ICHM2014
Molecular Biology	20-24 2014	October,	Suzhou	CSHA Genetics, Genomics, Phenomics of Fish
Diabetes research	24-26 2014	October,	Taiyuan	BIT's 2nd Annual World Congress of Nutrition and Health (WCNH2014)
Molecular Biology	27-31 2014	October,	Suzhou	CSHA Mechanism of Transmembrane Signaling
Physics	2-6 2014	November,	Hefei	12th International Conference on Quantum Communication, Measurement and Computing
Physiology	3-7 2014	November,	Suzhou	CSHA Bone and Cartilage: from Development to Human Diseases
Medicine	7-9 2014	November,	Shenzhen	International Rare Disease Research Consortium Shenzhen Conference
Cancer research	9-11 2014	November,	Beijing	Cell Symposium - Hallmarks of Cancer: Asia
Molecular biology	10-14 2014	November,	Suzhou	CSHA RNA Biology
Diabetes research	13-16 2014	November,	Haikou	BIT's 7th Annual World Congress of Regenerative Medicine & Stem Cells-2014 (RMSC2014)
Diabetes research	13-16 2014	November,	Haikou	BIT's 4th Annual World Congress of Endocrinology-2014 (WCE2014)



Hypertension research	13-16 November, 2014	Haikou	BIT's 6th International Congress of Cardiology (ICC2014)
Emergency medicine	13-16 November, 2014	Haikou	BIT's 4th Annual World Congress of MolMed-2014 (MolMed2014)
High-technology	16-21 November, 2014	Shenzhen	China High-Tech Fair
Cell biology	17-21 November, 2014	Suzhou	CSHA Dynamics of Cellular Behavior During Development and Disease
Drug discovery	21-23 November, 2014	Suzhou	BIT's 12th Annual Congress of International Drug Discovery Science & Technology
Synthetic biology	1-5 December, 2014	Suzhou	CSHA Synthetic Biology
Physics	7-10 December, 2014	Hangzhou	AES 2014, the 3rd Advanced Electromagnetics Symposium
Cell biology	8-12 December	Suzhou	CSHA Single Cells



8. Press Review*

Policy & Papers

Air quality tops public environmental complaints in China

Air pollution is still public enemy number one in China's war against pollution, according to the country's environmental watchdog.

Among the 696 complaints received by the Ministry of Environmental Protection in the first half of this year, 558 of the total, or 80 percent, were related to air quality, an 8.4-percent year-on-year increase, according to a ministry statement.

All the complaints were lodged through the telephone hotline "12369." Other major reasons for complaints were water and noise pollution.

The ministry said 474 of the complaints have been investigated, with problems confirmed in 382 cases, or 80.6 percent. Companies found responsible for the problems received punishments ranging from warnings to suspension, closure and fines.

"Some enterprises became involved in disputes because of a lack of planning in how industrial parks and residential quarters are located," said the statement.

In one case, it said, the Foxconn Industrial Park in Taiyuan City in Shanxi Province is located just across the street from a residential quarter. Though monitoring results show that the factory is discharging legally, residents still are affected by strange odors.

In other cases, big projects have caused outrage in neighborhoods by starting operations without passing an environmental impact assessment or paying fair compensation.

(Source: [Shanghai Daily](#))

Most Influential Scientific Minds: 2 From Asia Make Top 15

The Intellectual Property and Science business of Thomson Reuters has released a report titled [The World's Most Influential Scientific Minds: 2014](#), listing the top researchers in science around the globe. The top 15 list includes

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two researchers in Asia: Dr. Gao Huijin from the Harbin Institute of Technology (HIT) and Dr. Zhang Hua from the Nanyang Technological University (NTU).

The report is based on two separate studies, both drawing on data and commentary from Thomson Reuters bibliometric experts. The analysts used a compilation of science performance metrics and scientific trend data based on journal article publication counts and citation data from the Web of Science™.

Dr. Gao Huijun Gao, director of the Research Institute of Intelligent Control and Systems at HIT, China, had 15 hot papers concerning computation and filtering for the control of networks and other systems.

(Source: [Thomson Reuters](#))

Public invited to see top science

Nineteen of the latest scientific findings and applications produced by the Chinese Academy of Sciences in 2013 are being presented to the public in Beijing. A series of demonstrations that began on 29 July can be viewed as part of a free short-term exhibition at the China Science and Technology Museum. The demonstrations include simulations of lunar probe Chang'e-3, with rover Yutu aboard, landing on the moon; Shenzhou-10 docking with the orbiting space lab Tiangong-1; and the Jiaolong vocal system application. The exhibition will run through Aug 31, when it begins a national tour. The annual technology innovative tour, started in 2012, aims to connect high-technology to people's daily lives and help people understand and appreciate some of the country's top scientific progress. (Source: [China Daily](#))

China bolsters government presence on WeChat

Chinese government agencies are opening more accounts on WeChat, an instant messaging application, to increase their online presence in a fast-changing age of social networking. According to a report released on 20 July by the Communication University of China (CUC), there were 3,600 governmental WeChat accounts at the end of 2013, and the number was nearly 6,000 at the end of March 2014. The report said that governmental WeChat accounts have mushroomed in the past year, as both central ministries and lower-level government agencies have been using WeChat to interact with netizens on public issues.

(Source: [China Daily](#))

Voices & Opinions

Gov't Throwing Money away on Bullet Trains, Expert Says

The government should develop regular railroad networks and urban mass transit systems instead of throwing money away on bullet trains, a transportation expert says.



It is unwise to continue building high-speed rail lines and trains while the current high-speed network has a hard time getting enough passengers and is operating at a loss, said Zhao Jian, a professor at the School of Economics and Management at Beijing Jiaotong University.

He made the comments after Premier Li Keqiang visited a construction site on July 3 for a high-speed rail line linking Shanghai and Kunming, the capital of the southwestern province of Yunnan.

Li's visit has received much attention in the media amid signs recently that the government is leaning again on infrastructure, especially rail development, to shore up the flagging economy.

The rush to build high-speed rail networks indicates that the old investment-driven growth model has hardly changed, Zhao said.

(Source: [Caixin](#))

It's a golden time for China's Internet industry

President Xi Jinping called for all countries to work together to establish a multilateral, democratic and transparent international Internet governance system during his recent state visit to Brazil.

This is the first time that China's State leaders have promoted China's proposal on Internet governance in the world. Xi pointed out that the information sovereignty of each state must be respected in cyberspace, and no country should safeguard its own information security at the cost of sacrificing the other countries' information security.

His hope is that the BRICS nations - Brazil, Russia, India, China and South Africa - can reach a consensus on network information security and the needs of founding a global Internet governance system to counterbalance the United States' information hegemony.

(Source: [China Daily](#))

Thematic Activities

Health

Gallbladder Cancer Pathway Identified

Scientists have found that mutations in the ErbB signalling pathway are a major cause of gallbladder cancer, a disease which disproportionately affects East Asians and Northern Indians. The results of their genetic analysis have been published in the journal *Nature Genetics*.

Gallbladder cancer is a relatively rare cancer, affecting 2.5 out of every 100,000 individuals. However, incidence rates have been increasing, particularly within



certain ethnic groups such as Chinese and Northern Indians, suggesting that there is a strong genetic component.

“The incidence and mortality of gallbladder cancer is increasing in many parts of the world, including China,” said one of the study’s corresponding authors, Dr. Liu Yingbin, a biliary tract surgeon in Xinhua Hospital affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai.

(Source: [Asian Scientist](#))

pH Switch Helps EV71 Invade Cells

A study shows that pH-dependent changes of the receptor SCARB2 are crucial for enterovirus 71 (EV71) attachment, entry and uncoating; valuable information that could be used to design drugs against the virus which causes hand, foot and mouth disease (HFMD).

EV71 is the major causative agent of HFMD in the Asia-Pacific region, having caused 8.8 million infections and 3,000 deaths in China alone over the past five years. Unlike other enteroviruses (e.g. Coxsackievirus), EV71 can cause severe aseptic meningitis, encephalitis, myocarditis and acute flaccid paralysis, thus leading to significant fatality rates.

Unfortunately, the molecular mechanism of EV71 invasion remains poorly understood and there are still no clinically approved therapeutics. Researchers from the Institute of Biophysics, Chinese Academy of Sciences, reported in a study published in *Protein & Cell* a novel mechanism for EV71 entry mediated by its receptor SCARB2. These findings make a significant conceptual advance in the understanding of non-enveloped virus entry, to which EV71 belongs.

(Source: [Asian Scientist](#))

Scientists Discover New Formation of Coronary Vascular Population

Scientists have discovered new formation of a distinct coronary vascular population in the neonatal heart, a finding that may provide new strategies for the treatment of myocardial infarction.

The breakthrough, published on the Science magazine website, points out that a substantial portion of postnatal coronary vessels form in the neonatal mouse heart instead of expanding from preexisting embryonic vasculature.

According to Professor Zhou Bin with the Chinese Academy of Sciences, lineage conversion of neonatal endocardial cells during trabecular compaction generates a distinct compartment of the coronary circulation located within the inner half of the ventricular wall. This lineage conversion provides an efficient means of rapidly augmenting the coronary vasculature. The finding is expected to provide clues for understanding and stimulating cardiovascular regeneration following injury and disease.

Myocardial infarction caused by coronary artery disease is a major cause of deaths.



(Source: [CAS](#) via Xinhua)

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Food, agriculture & fisheries, biotechnology

Chinese Scientists Cure Wheat Fungal Infection by Gene Editing

Chinese scientists have used advanced genome-editing techniques to create a strain of wheat resistant to a destructive fungal pathogen called powdery mildew. To stop the mildew, researchers at the Chinese Academy of Sciences deleted genes that encode proteins that repress defences against the mildew. "

The gene-deletion trick is particularly tough in wheat because the plant has a hexaploid genome, that is, it has six copies of each of its seven chromosomes. Multiple genes must be disabled or the trait will not be changed.

Using gene-editing tools known as TALENs and CRISPR, the researchers were able to do that without changing anything else or adding genes from other organisms. They pointed out that it was no different from a natural mutation.

"We now caught all three copies, and only by knocking out all three copies can we get this mildew-resistant phenotype," said Caixia Gao, who heads a gene-editing research group at the State Key Laboratory of Plant Cell and Chromosome Engineering at the Institute of Genetics and Developmental Biology in Beijing.

Scientists point out to the fact that this knocking out of genes is a non-transgenic technology. The worry is that the government will confuse this with modification. While China has greatly increased investments in basic biotech research, including for genetically modified crops, no new field trials of genetically engineered plants have been approved in more than a year due to public concern over GMOs.

(Source: [CAS](#) via International Business Times)

* * *

Information & communication technologies

CAS New Petascale Supercomputer "Era" Now Online

"A new generation of super computer 'era' on-line opening ceremony" was held in the Super Cloud Computing Center, Huairou, Beijing, 19th June, which co-hosted by Computer Network Information Center, Beijing Super Cloud Computing Center and Dawning Information Industry Co., Ltd. As the innovative combination of supercomputing and cloud computing, the new generation of super computer "Era" will lead the industry and set an example. Meanwhile, it will form a huge boost to the HPC and cloud computing industry.



This system can fulfill the application demands of multidisciplinary, achieve high speed calculation and fast process and analyze the calculation results. "Era" system will greatly promote the application of domestic independent technology, marking the Beijing city opens a new era of super computing.

The corresponding English Word of “元” is Era, which represents a new period of enhancing CAS supercomputing from terascale to petascale. (Source: [CAS](#))

World's Fastest Supercomputer Gets even Faster

China's Tianhe-2, the world's fastest supercomputer, began an upgrade on Wednesday, said the National Supercomputer Center in Guangzhou, in south China's Guangdong Province.

The upgrade will continue till the end of Aug. or early Sept. and increase overall computing speed from 54 to more than 100 petaflops per second, said Yuan Xuefeng, center director. It is still able to handle high levels of analyzing, computing and processing during the upgrade.

Tianhe-2 was developed by the National University of Defense Technology and has been in commercial operation since April. (Source: [CAS](#) via Xinhua)

World's 1st holographic phone released in Beijing

The first holographic phone in the world invented by a Chinese firm is released on 17 July in Beijing.

Holographic technology can project light directly to the spot where your eyes focus. The light beams travel through that point and hit your eyes as if they'd come from an object that's actually there.

ShenZhen Estar Displaytech Co., Ltd. has brought the 3D holographic display to mobile phones for the first time in the world.

Called the "Takee," the phone has a 5.5-inch screen and allows users to view the visual effect. For example, when the phone is displaying a Rubik's cube, users can shift their perspective to see each side of the cube.

Liu Meihong, CEO of the company, said they have been researching stereoscopic technology and invested millions of yuan in the invention, which contains cutting edge technology such as eye-tracking and air touch screens.

(Source: [China Daily](#))

Revolutionary mobile-search products needed, analysts say

Although the mobile search market in China has entered a golden time, Internet companies need to come up with revolutionary products instead of simply



transplanting search engine services from personal computers to mobile devices, analysts said.

According to the latest report of the China Internet Network Information Center, mobile search has for the first time overtaken mobile news as the second favorite mobile app of Chinese netizens. By the end of June, China had more than 400 million mobile search users.

"We have noticed the trend that more users tend to search on their mobile devices," said the Beijing-based IT consultant Analysys International. "Mobile search has become the next growing point of Chinese Internet companies." (Source: [China Daily](#))

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Nanosciences, nanotechnologies, materials & new production technologies

Gold Nanoparticles Could Enable Antibacterial Implants

In a study conducted by researchers at the Shanghai Institute of Ceramics — part of the Chinese Academy of Sciences — scientists have devised a way to use gold nanoparticles as implantable antibacterial agents.

"Implant-associated infections have become a stubborn issue that often causes surgery failure," Xuanyong Liu, lead researcher on the project, said in a press release issued recently. "Designing implants that can kill bacteria while supporting bone growth is an efficient way to enhance in vivo osteointegration."

These tests were designed to solve the problem of implant-related infections, many of which occur when bacteria enters the body during surgery and then creates dangerous biofilms on the implanted devices or substances.

(Source: [CAS](#) via Med Device)

Chinese scientist plans parachutes for every plane passenger made of world's lightest material

Creating a parachute as small and as light as a shirt is now possible, says a Chinese scientist who has developed the world's lightest material with cutting-edge nanotechnology. Zhejiang University professor Gao Chao said the development of the material, known as carbon aerogel, had boosted the possibility of parachutes one day becoming standard safety equipment on civilian airplanes. The new material also makes it possible for parachutes to be shaped other than like an umbrella, and could even have its user warmly and securely wrapped within it, Gao said. The Hangzhou-based professor of polymer science and engineering led the government-funded study in creating the world's lightest material last year. (Source: [SCMP](#))



Inspired by Nature, Researchers Create Tougher Metal Materials

Drawing inspiration from the structure of bones and bamboo, researchers have found that by gradually changing the internal structure of metals they can make stronger, tougher materials that can be customized for a wide variety of applications—from body armor to automobile parts.

"If you looked at metal under a microscope you'd see that it is composed of millions of closely-packed grains," says Yuntian Zhu, a professor of materials science and engineering at NC State and senior author of two papers on the new work. "The size and disposition of those grains affect the metal's physical characteristics."

"Having small grains on the surface makes the metal harder, but also makes it less ductile—meaning it can't be stretched very far without breaking," says Xiaolei Wu, a professor of materials science at the Chinese Academy of Sciences' Institute of Mechanics, and lead author of the two papers. "But if we gradually increase the size of the grains lower down in the material, we can make the metal more ductile."

(Source: [CAS](#) via R&D)

Bacteria That 'eats' Odour Could Bring End to Smelly Toilets in China

Mainland scientists have developed a "bioweapon" that can wipe out the notorious bad smell in public toilets.

Up to 75 per cent of the odour can be removed, with the rest suppressed by a natural, pleasant fragrance, according to researchers with the Chinese Academy of Sciences.

The magic is mainly done by bacteria in the Lactobacillus family, which is used in the production of yogurt, cheese, beer and chocolate.

Lactobacillus feeds on human waste, releasing lactic acid that eliminates the growth of most odour-making bacteria.

The technology can be applied in either liquid or powder form, and it is cheap. A half-litre bottle costs about 20 yuan (HK\$25) and it can be used to treat several toilets as the bacteria grows rapidly on waste.

The "smell-free toilet" study was highlighted on the academy's website last month as offering an "ultimate" cure to an "urgent" national issue.

(Source: [SCMP](#))

* * *

Environment (including climate change)



Birds Show Fruit Color Pecking Order

A study published in *Scientific Reports* shows that tropical Asian birds seem to favor red and black fruits, suggesting that fruit color evolution is partially influenced by bird preferences.

Red and black are the most common colors for fleshy fruits distributed by birds, leading to the hypothesis that plants produce fruits in those colors to attract birds. To date, however, there have not been studies which definitively prove this idea.

In order to evaluate the color preferences of birds, Professor Quan Rui-Chang from the Xishuangbanna Tropical Garden under the Chinese Academy of Sciences tested the behavior of four species of fruit eating birds in response to artificial and natural fruit of five different colors. Artificial fruits were made from a mixture of apple, pear, banana, wheat and corn flour, and were dyed black, red, yellow, green or blue, matching the colours of the natural ripe fruits used.

(Source: [Asian Scientist](#))

China Exclusive: China boosts underwater archeological protection

As China attempts to register the Maritime Silk Road with UNESCO, protection of archeological sites in the South China Sea is underway.

Shipwrecks around Shanhu and Jinyin islands in the Xisha archipelago will be excavated over the next two years, Wang Yiping, head of cultural heritage for Hainan Province, told Xinhua. Stone building material and carvings dating back to the Qing Dynasty (1644-1911) have been discovered at the sites.

The material may have been carried by unfortunate Chinese emigrants whose ships sank. Such immigrants are known to have constructed traditional Chinese homes and temples at their destinations in Southeast Asia.

"A national underwater archaeological base, a working station and a museum related to the South China Sea are all planned to protect the Maritime Silk Road and help add it to the UNESCO World Heritage list," he said.

(Source: [Xinhua](#))

Tibet plans night-sky conservation zone

Ngari Prefecture in southwest China's Tibet Autonomous Region plans to have a 2,500-square-km plateau formally recognized for its unobstructed view of the night sky.

Ngari's tourist bureau told Xinhua on Thursday that it has applied to join the International Dark-Sky Association (IDA), a global organization that campaigns against light pollution, in order to build a conservation zone in line with international standards.



The IDA has acknowledged 16 "Dark Sky Parks," public spaces deemed to have exceptional starry skies with mitigated light pollution. If Ngari's application is successful, it will become the first such park in Asia, said Wang Xiaohua with the IDA's China branch.

According to Wang, Ngari has ideal natural conditions for astronomical observation, being located on the underpopulated Qinghai-Tibet Plateau with limited vapors and high air transparency.

(Source: [Xinhua](#))

Panda's bamboo banquets no random passion

Scientists have made an important step toward explaining why China's iconic giant panda is such an obsessive eater - munching up to 15 kg of bamboo varieties everyday - with collaborators from the Chinese Academy of Sciences (CAS) and the University of Sydney, and it's all part of the panda plan.

Their findings, which were published in the journal *Functional Ecology*, show that researchers now believe there is 'method to their madness', with the notoriously fussy eaters switching between different species and parts of bamboo plants to maintain a balanced diet and to reproduce.

The findings have profound implications for the conservation of China's wonderful national symbol, particularly given the accelerating environmental changes that threaten to transform the prevalence and location of the two bamboo species.

(Source: [Xinhua](#))

Shanghai Scientists Challenge Classical Phenomenon that Water always Completely Wets Water

The molecular scale behavior of water at a solid/liquid interface holds fundamental significance in a diverse set of technical and scientific contexts, ranging from the efficiency of oil mining to the activity of biological molecules. Recently, it has become recognized that both the physical interactions and the surface morphology have significant impact on the behavior of interfacial water, including the water structures and wetting properties of the surface.

In a new review, Chunlei Wang, Yizhou Yang and Haiping Fang of the Shanghai Institute of Applied Physics report recent advances in atom-level understanding of interfacial water that exhibits an ordered character on various solid surfaces at room or cryogenic temperature.

(Source: [CAS](#))

Area of Lakes Expands in Qinghai-Tibet Plateau



The area of inland lakes in the Qinghai-Tibet plateau has expanded 26 percent in the past 20 years, according to new research results.

The area of inland lakes in the region, which has an average altitude of 4,500 meters, has expanded to 32,300 square kilometers from 25,600 square kilometers 20 years ago, according to the Institute of Qinghai-Tibet Plateau Research with the Chinese Academy of Sciences.

Before the 1990s, the lake area in the region was shrinking, but began to expand after that, said Zhang Guoqing, an assistant researcher with the institute.

The rapid thawing of glaciers and increased precipitation contributed to the expansion of lakes, Zhang told Xinhua on 3 July.

(Source: [CAS](#) via Xinhua)

Functional Analysis Reveals Miocene Fossil Pig's Foraging Behavior

Foraging behavior and adaptations for feeding in the context of habitat condition have been studied widely in living suids (pigs) but rarely in their fossil relatives. A study published in [Science China: Earth Sciences](#) (5) compared the skull and mandible of a Late Miocene fossil pig from the Linxia Basin, Gansu Province, China, *Chleuastochoerus*, with those of extant pigs and peccaries, and revealed the foraging behavior of *Chleuastochoerus*, adding fresh evidence that the area of the Linxia Basin was open but still relatively humid in the middle-late Late Miocene.

Chleuastochoerus is a small Asian endemic Late Miocene fossil pig, and its geographic range may be limited to northern China and the southwestern part of Asiatic Russia. In recent years, abundant specimens of *Chleuastochoerus* have been found in the Linxia Basin, Gansu Province, China. These new finds have included skulls and mandibles of juveniles and adult males and females, and even a nearly complete skeleton. These new specimens provide an opportunity for more detailed studies of the genus. (Source: [CAS](#))

Scientists Find Long Intergenic Non-coding RNAs Genes and Determine Their Roles in Domestications of Pigs

The long non-coding RNAs (lncRNA) are transcripts longer than 200 nucleotides and were initially considered as background noises of genomic transcription. Studies of these years showed that lncRNA actually plays active roles in many vital biological processes, such as inactivation of X chromosome, pluripotency maintenance of stems cells, transcriptional regulations and epigenetic regulations. As an important member of lncRNAs, the long intergenic non-coding RNAs (lincRNA) have already been relatively well identified in the human and mouse genomes. However, although pigs have gone through thousands of years of selection and now are a significant large domestic animal, the contributions of changes of lincRNAs to its domestication are still poorly understood.



To clarify these issues, based on the NCBI EST dataset and the published RNA sequencing dataset, Dr. ZHANG Yaping's research group (Kunming Institute of Zoology) conducted a comprehensive genome-wide searching of lincRNAs in pigs and have successfully identified 4515 gene loci (6621 lincRNAs transcripts).

In this study, the expression levels and functional correlations between lincRNAs and their proximal protein coding genes from ten tissues of wild boars were compared. The results showed that the expression level of lincRNA genes is lower than that of protein coding genes, whereas, their expression patterns are correlated and may share cis-regulatory modules.

(Source: [CAS](#))

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Energy

Offshore wind power target elusive

China's offshore wind power sector is expected to see massive growth this year, but the country still has a long way to go if it is to achieve its 2015 target, industry watchers said.

Projects set to launch this year are expected to add 1,566 megawatts of capacity, or more than three times the national total as of the end of 2013, according to a report released yesterday by the Chinese Renewable Energy Industries Association.

"The pricing scheme for offshore wind power unveiled last month provided a stimulus for the sector, but there are still challenges in terms of technology, management and policy if China is to achieve its 2015 goal," said Yi Yuechun, deputy chief engineer of the China Renewable Energy Engineering Institute.

Speaking at the Offshore Wind China Conference & Exhibition yesterday, Yi said the country's offshore wind sector is still in its infancy, with immature technologies in the areas of surveying, construction and installation.

(Source: [Shanghai Daily](#))

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Transport (including aeronautics)

China produces world's largest amphibious aircraft

Trial production of the TA600 aircraft, intended to be the world's largest amphibious aircraft, has started in China following completion of the design process, a company executive said 27 July. The aircraft, with a maximum takeoff weight of 53.5 tons and a maximum range of more than 5,000 kilometers, is larger than a Boeing 737 and could be used for firefighting and



air-sea rescue, said Fu Junxu, general manager of China Aviation Industry General Aircraft Co. Ltd's Zhuhai branch. China began developing the aircraft five years ago. Its maiden flight is expected to happen in late 2015, said Fu.

"After a period of trial flights, the aircraft will be put onto the market," he said.

Upon completion, it will replace Japan's ShinMaywa US-2 aircraft as the largest amphibious aircraft in the world. (Source: [China Daily](#))

Regional jet flying high

CHINA'S domestically produced regional jet took another step toward its commercial debut yesterday as it completed a function and reliability test flight in Shanghai.

The ARJ21-700 — one of two delivered to Chengdu Airlines — took off from an airstrip at the Shanghai Aircraft Manufacturing Co base in Baoshan District.

The 90-seat jets are scheduled to go into commercial operation next year, flying out of Chengdu Shuangliu International Airport. (Source: [Shanghai Daily](#))

Open road ahead for unmanned vehicles

China is speeding up the development of unmanned ground vehicles, which will play an important role in future battlefields and civilian sectors, according to a senior expert.

"The UGVs can be used in a wide range of military and civilian fields," said Meng Hong, deputy director of the China North Vehicle Research Institute of China North Industries Group. "In fact, they have been extensively deployed by foreign militaries to handle tasks in hazardous environments."

Since starting in the mid-1990s, China's UGV development has made remarkable strides, but it still lags behind the United States, Germany and Israel, which outdistance their competitors, according to Meng. (Source: [China Daily](#))

China's *Jiaolong* submersible finishes first dive this year

China's manned deep-sea submersible, *Jiaolong*, finished its first dive of this year's expedition mission Wednesday in the northwest Pacific Ocean.

During an over nine-hour dive, the vehicle reached a depth of 2,424 meters in the open sea, and tested a remotely-operated underwater vehicle aboard the submersible.

Jiaolong also took sediment and water samples, and surveyed the microtopography of the sea floor via sonar systems.



The vehicle, developed by Chinese scientists, will make its second dive in this voyage on 17 July, with a task to film benthic animals and cobalt-rich crusts in the deep sea areas. (Source: [China Daily](#))

Fund seeks private investors in railway

Chinese government unveiled a guideline on management of a fledgling railway development fund to attract private investment into the railway sector.

The China Railway Development Fund of the China Railway Corporation will last for 15 to 20 years and could be extended if approved by the State Council, according to the guideline jointly compiled by the National Development and Reform Commission, the Ministry of Finance and the Ministry of Transport.

The announcement of the guideline came after Sheng Guangzu, CRC general manager, said in April this year that China will increase railway fixed-asset investment to 720 billion yuan (US\$117 billion) in 2014. (Source: [Shanghai Daily](#))

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Socioeconomic sciences & the humanities, archaeology & paleontology

Ancient human skull in China has Neanderthal-like inner ear: study

The inner ear of a 100,000-year-old fossilized early human skull found 35 years ago in northern China displays characteristics long thought to occur only in Neanderthals, who prospered across Europe and western Asia from roughly 30,000 and 40,000 years ago, according to a study out Monday.

The findings, published in the U.S. journal Proceedings of the National Academy of Sciences, suggested the inner ear characteristics were not unique to Neanderthals and were more geographically widespread than previously believed.

The study is based on recent micro-CT scans revealing the inner ear structure within a temporal bone of the fossilized human skull found during 1970s excavations at the Xujiayao site in China's Nihewan Basin. (Source: [Xinhua](#))

500-million-year-old fossils found in NW China

Fossils dating back to 530 million years ago have been found in northwest China's Shaanxi Province, local public communication authorities said on 3 July.

The colorful coral rocks were found on a hill in Hanyuan Town, Ningqiang County. Circular patterns can be seen in the rocks.



Prehistoric fossil researcher Wei Binghua identified the rocks as fossils of molluscan invertebrate pelagos, a low-level marine animal. (Source: [Xinhua](#))

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Space

China to Launch HD Observation Satellite This Year

China will launch Gaofen-2, a high-definition Earth observation satellite, to space this year, according to the State Administration of Science, Technology and Industry for National Defense (SASTIND).

As one of China's major science and technology projects, the Gaofen satellite series will help in geographic and resources surveys, environment and climate change monitoring, precision agriculture, disaster relief and city planning.

Launched in April last year and still in service, Gaofen-1 provided data on the Lushan earthquake in Sichuan; floods in northeast China; and smog in north and east China during the test period. Wu Zhenyu, researcher with the Development Research Center of the State Council, said the project will boost the development of China's remote sensing industry and ensure more effective social management. (Source: [CAS](#) via Xinhua)

China's Jade Rabbit moon rover was crippled by a rock, experts reveal

The Chinese lunar rover likely became crippled after hitting a rock while it navigated difficult terrain, according to a senior mainland scientist involved in the investigation into the breakdown. Zhang Yuhua, deputy chief designer of Yutu or "Jade Rabbit", said the area where the rover landed was more challenging than expected, Xinhua reported. The distribution of rocks made the area look "almost like a quarry", with at least four rocks at least 20cm high every 100 square metres, Zhang was quoted as saying. The six-wheel rover suffered a "mechanical abnormality" in January, about a month into its planned three-month mission. (Source: [SCMP](#))

China's biggest moon challenge: returning to earth

China's lunar probe, Chang'e-5, will be launched around 2017 and its mission to collect samples from the moon and return to earth is the most challenging yet, according to Wu Weiren, chief designer of China's lunar exploration program.

The last phase of the three-phase lunar exploration program - after orbiting and soft-landing - requires a larger and more complex system, Wu said at an exhibition on China's lunar exploration program in Hong Kong. Phase three will use a new launch site, rocket, and lunar probe.

The team faces four major technical challenges: moon surface sampling; taking off from moon; lunar orbit rendezvous; and high-speed re-entry into the Earth's



atmosphere. In sampling, the drill could hit rocks, and technicians must make ensure the soil layer structure was unharmed.

(Source: [Xinhua](#))

Earlier launch possible for space station modules

The first of three experimental modules for China's planned space station is expected to be launched in 2018, with the other two set for launch in 2020 and 2022, a leading scientist said.

The modules will help form a 60-ton space station. "We set the date as a preliminary goal," said Gu Yidong, an academic at the Chinese Academy of Sciences and a leading research expert in manned space stations.

Previous media reports set the launch date for the modules at around 2020.

"The date might be changed because a number of factors can influence a launch date. This is a common feature in international research," Gu said at a Beijing forum on space research.

Since the International Space Station is expected to be retired in about 2024, China's station may be the only remaining base for mankind in space. (Source: [China Daily](#))

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People & Higher Education

Academics: would you teach in China?

Opportunities to work in China are growing, but expect to adapt your approach to teaching and research. When Simon Harrison joined the English department at Nottingham University's Ningbo branch – the first UK campus to open in China – he found that adapting his teaching style was essential if he hoped to engage students. "If you just come here and you expect to teach like you teach to students in England, then yes, you will think they don't give their opinions, that they don't like talking," he explains. "Actually there is some really good teaching going on here, and those classrooms are as lively as classes back in the UK."

Accessing research funding can also be difficult, adds Odette Paramor from the same institution: "In terms of setting up a career here one of the big issues for an international member of staff is trying to get research off the ground, that is extremely difficult. I've had bits and pieces of funding but most of it is international funding."

(Source: [The Guardian](#))



Professors Earn Highly Cited Researchers Distinction

Six professors from the University of Science and Technology of China were named as Highly Cited Researchers, a yearly distinction released by Thomson Reuters. A total of 143 Chinese researchers were named in the list, while the number of USTC is the largest among all Chinese universities. Among the six professors, Pan Jianwei, Chen Xianhui and Wang Xiangfeng majored in physics, Wu Yuanbao and Zheng Yongfei in geosciences and Yu Shuhong in material science. The Highly Cited Researchers 2014 list included more than 3,000 people who represent some of world's leading scientific minds.

The researchers earned the distinction by writing the greatest number of reports officially designated by Essential Science Indicators as Highly Cited Papers - ranking among the top 1 percent most cited for their subject field and year of publication, earning them the mark of exceptional impact. USTC is on track to become one of the most influential universities in China and Asia, in terms of academic research. (Source: [China Daily](#))

5 more universities set up human rights centers

Five universities opened educational and training centers devoted to human rights on 22 July as part of a national campaign. The centers are at Renmin University of China in Beijing, Fudan University in Shanghai, Wuhan University in Hubei province, Shandong University in Jinan, and the Southwest University of Political Science and Law in Chongqing. Li Weihong, vice-minister of education, said there was an urgent need for universities to update their human rights courses in line with the National Human Rights Action Plan of China (2012-15).

(Source: [China Daily](#))

University Seeks to Foster Creativity

Graduation marks a new beginning for all college students, but Tan Chang will not be starting from scratch. During the busy job-hunting season for college graduates, Tan, a PhD in computer science who graduated from the University of Science and Technology of China, is staying on a path he stepped upon two years ago. Tan always dreamed of starting his own company to improve modern businesses using his mastery of big data technology, a popular field these days worldwide. Tan founded Anhui Rong Data Information Technology Co Ltd in April 2013, with the company's core team consisting of him and several of his college friends.

"Traditionally, scholars at Chinese universities focus too much on academic research but care little about transferring their studies into commercial use," said Li Weiping, vice-president of the Institute of Advanced Technology, a research institute and high-tech park founded by the USTC. (Source: [China Daily](#))



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Research infrastructures

Imperial College London and Zhejiang University launch data science collaboration

Some of the UK and China's leading data scientists will team up at a new London lab thanks to a partnership between Imperial College London and Zhejiang University (ZJU). Professor Yike Guo, Director of the Data Science Institute at Imperial, where the joint ZJU lab will be based, said:

"Data is being produced at a relentless velocity and volume. Understanding and using this data could revolutionise scientific discovery. The Applied Data Science Lab will allow researchers from Imperial and ZJU to better access useful data to solve major scientific problems. Data is fast becoming a common language, unifying key actors - from different disciplines, sectors and countries - throughout science and innovation." (Source: [Science Business](#))

China Plans Super Collider: Proposals for two accelerators could see country become collider capital of the world

Scientists at the Institute of High Energy Physics (IHEP) in Beijing, working with international collaborators, are planning to build a 'Higgs factory' by 2028 — a 52-kilometre underground ring that would smash together electrons and positrons. Collisions of these fundamental particles would allow the Higgs boson to be studied with greater precision than at the much smaller Large Hadron Collider (LHC) at CERN, Europe's particle-physics laboratory near Geneva, Switzerland.

Physicists say that the proposed US\$3-billion machine is within technological grasp and is considered conservative in scope and cost. But China hopes that it would also be a stepping stone to a next-generation collider — a super proton-proton collider — in the same tunnel.

European and US teams have both shown interest in building their own super collider (see [Nature 503, 177; 2013](#)), but the huge amount of research needed before such a machine could be built means that the earliest date either can aim for is 2035. China would like to build its electron-positron collider in the meantime, unaided by international funding if needs be, and follow it up as fast as technologically possible with the super proton collider. Because only one super collider is likely to be built, China's momentum puts it firmly in the driving seat.

(Source: [Nature](#))

FMC opens research center in Shanghai

AMERICAN chemical maker FMC Corp yesterday opened a new research center in Shanghai as part of its strategy to expand in Asia.



“FMC has grown dramatically in recent years. An important element of our strategy has been to put a greater focus and investment in Asia where our products and technologies have tremendous opportunities,” said Pierre Brondeau, president, CEO and chairman of FMC.

He was speaking at an event for the Asia Innovation Center in the Zhangjiang High-Tech Park.

The diversified company makes insecticides and herbicides to increase crop yield, functional ingredients to enhance food texture and stability as well as lithium products to improve battery performance.

Agriculture could be one of the key growth areas for FMC in China as the central government has listed “modern agriculture” as one of its policy priorities, said Gordon Xu, president of FMC China.

(Source: [Shanghai Daily](#))

Big Data for International Scientific Programmes

There is little doubt that Big Data is a hot topic. Yet while the significance for Big Data may be demonstrable in certain research areas, there is also a lot of hype (particularly in relation to commercial applications), and its corollary, therefore, scepticism. Convened by CODATA and co-sponsored by a number of important international organisations, the International Workshop on Big Data for International Scientific Programmes took place on 8-9 June in Beijing, and aimed to shed more considered light on the potential role of Big Data in such international and interdisciplinary research activities.

As an interdisciplinary body of [ICSU, the International Council for Science](#), CODATA has a strategic commitment to raise the profile of data issues in ICSU-sponsored programmes like [Future Earth](#) and [Integrated Research on Disaster Risk](#). CODATA believes it can play an important role in improving understanding of challenges and opportunities relating to Big Data international scientific programmes where the integration and analysis of sometimes very large, but often complex and diverse datasets will be essential for achieving research goals which aim to improve decision-making on critical issues for humankind and the environment.

(Source: [CAS](#))

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International S&T relations

China to launch satellite for Venezuela

The China Aerospace Science and Technology Corporation (CASC) has signed an agreement with Venezuela for in-orbit delivery of a second remote sensing satellite for the country, the company said on 22 July. CASC subsidiary Great Wall Industry Corporation will be the major contractor of the project, the



corporation said. But the corporation did not give a specific timeframe for the project. Chinese President Xi Jinping, who is on a four-nation Latin America tour, told his Venezuelan counterpart Nicolas Maduro Sunday in Caracas that China is ready to expand satellite technology transfer to Venezuela. (Source: [China Daily](#))

Nation aims to boost research, commerce in region

China's growing role in the Arctic will foster a win-win situation for all, said the head of the polar strategic research division under the Polar Research Institute of China. "Infrastructure in the Arctic is weak, and it urgently needs Chinese labor and capital, while China can learn about advances in environmental protection and technologies during its engagement," said Zhang Xia, who is also deputy director of the China-Nordic Arctic Research Center. Besides academic research, China should strengthen international cooperation in the area because it could become a geopolitical arena for scientific research and commerce, he said.

The US Geological Survey estimated that the polar north may hold up to 13 percent of the world's undiscovered oil resources and 30 percent of its untapped natural gas supplies. With climate change in the Arctic resulting in higher temperatures and a reduction in ocean ice coverage, the area has become increasingly accessible. That heightens the potential for oil and gas development and the establishment of a shorter northern sea transportation route. (Source: [China Daily](#))

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