

Quarterly Newsletter Issue 2 2016



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EURAXESS China

Dear readers,

Welcome to the 2nd issue of our quarterly newsletter.

In this edition's "In Focus", we zoom in on the Kingdom of the Netherlands. With the help of the Dutch Embassy, we provide you with a comprehensive overview of <u>the Sino-Dutch research collaboration landscape and</u> <u>opportunities.</u>

We also present you news regarding a recently concluded EU-funded project on innovation "made in China" through the eyes of <u>E.N.T.I.C.E. project</u> (Technological Innovation with Chinese Characteristics).

Finally, in our <u>"Meet the Researcher</u>" interview, you can read insightful information about ERC-China collaboration opportunities from the <u>President of</u> <u>the ERC, Prof Jean-Pierre Bourguignon</u>, who visited China and granted us an exclusive interview.

Best regards

EURAXESS China team

1 Briefing







Dr Claudio Petti (University of Salento) coordinator of the ENTICE network

1.1 Innovation Made in China? EU and Chinese researchers gathered to discuss "Technological Innovation with Chinese Characteristics"

On April 7 and 8, "Technological Innovation with Chinese Characteristics: Perspectives, Insights and Impacts" conference was held at the University of Salento (Lecce, Italy).

The event marked the end of the E.N.T.I.C.E. project, funded through the EU's FP7 Marie Curie Actions. It gathered speakers from Europe, China and Africa and more than 100 attendees. By relying on results of a comprehensive research on the determinants of Chinese enterprises technology innovation, the conference promoted **a wide-ranging reflection about the impacts of China's technology scale up** and pushed further new partnership on these topics.

In this last regard, the event closed with the launch of an **East-Asia Multilateral Research and Mobility Network in Technology, Innovation and Entrepreneurship,** which by now includes 11 universities & research institutions that extends from Morocco to Japan passing by China, and spans from Engineering, to Economics and Management through Psychology and Social Science and Humanities.

Therefore, as the Coordinator Dr. Claudio Petti, mentioned, the Conference marked not the conclusion, but the **real beginning of E.N.T.I.C.E.**, which the **original vision and motivation was to build a bridge between EU and China**, with bi-directional mobility and joint research as the pillars to build on better reciprocal knowledge, understanding and friendship.

For more information click <u>here</u>. You can reach Dr Claudio Petti by writing to <u>claudio.petti(at)unisalento.it</u>.



EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by over 40 countries, of which we will profile one in each of our quarterly EURAXESS Links China e-newsletters. In this edition, we will zoom in on the Netherlands.

2 In Focus: The Netherlands



Photo credit @EU Delegation to the US

The Netherlands, often referred to as Holland, was created by the Dutch in the delta where three large rivers flow into the North Sea. Due to its strategic location, the country is known already for centuries for its international traders and the world's first multinational corporation, which originates from the 17th century. Presently ranked 5th on both Global Innovation Index and Global Competitiveness Report 2015-2016, the Netherlands offers a truly innovative and creative environment.

The Dutch research environment stands amongst the best in the world. All 14 Dutch universities are ranked in the top 200 of the overall Times Higher Education Rankings and in the top 50 by specific subjects. A <u>study</u> <u>commissioned by the European Commission</u>, in relation to the Europe 2020 strategy, places the Dutch research system among the very best in terms of openness, excellence and attractiveness.

1. The Netherlands' Research & Innovation System

Public Sector research institutions in the Netherlands consist of 14 universities, 18 KNAW Institutes¹, 6 Netherlands Organization of Scientific Research (NWO) Institutes, 5 Large Technological Institutes (GTIs)², 14 TNO³ Institutes, and a number of other state owned research and advisory centres. All Dutch universities are ranked in the top 200 of Times Higher Education Rankings. Together, these universities and institutes form the backbone of the research and innovation landscape in the country.

In 2014, Dutch institutions published 50,000 publications, ranking 4th in the

¹ So called because KNAW acts as the umbrella organization for these institutes.

² Conducting applied research in aerospace, water management, hydraulic engineering, maritime research and energy research.

³ TNO stands for Netherlands Organization for Applied Scientific Research which is an independent organization focusing on applied science.





The Dutch government follows a top sector approach where nine sectors have been identified as priority areas including Agri-Food, Horticulture, High-Tech, Energy, Logistics, Creative industries, Life Sciences & Health, Chemicals, and Water. The Government, private sector and academia together form a 'Golden Triangle' also known as 'Triple Helix' model, in which interactions among each other are highly encouraged. In the Netherlands, the private sector is a major contributor to overall R&D expenditure and there exist strong linkages between academia and industry.

world in publications per capita⁴. The Netherlands has consistently offered high quality of research. Of all countries with more than 100,000 publications from 1996 to 2015, the Netherlands ranks second in terms of citations per publication⁵. The total number of European patents with Dutch origin in 2015 stood at a total of 1998.

1.1 Research Excellence in The Netherlands

The Netherlands is very successful in securing European research funding both from the <u>Marie Sklowdowska Marie Funding program</u> (video) and <u>ERC funding</u>. In order to promote research excellence, NWO offers two types of funding – 'Innovation Research Incentive Scheme' for talented, creative researchers who engage in innovative research, which provides three types of grant (<u>Veni, Vici</u>) geared to different stages in a researcher's career and '<u>Spinoza prize</u>' which is offered yearly to 3 or 4 excellent researchers, who stand out with groundbreaking research conducted in the Netherlands.

Dutch research universities are top-class and highly ranked worldwide. In 5 out of the 6 education clusters as identified by the Times Higher Education World University Rankings (THES 2015), Dutch universities are ranked in the top 50.

- Life Sciences: University of Wageningen (16th), Utrecht University (43rd) and Delft University of Technology (48th)
- Arts & Humanities: Leiden University (17th), University of Amsterdam (30th) and Utrecht University (37th)
- Engineering & Technology: Delft University of Technology (19th)
- Social Science: University of Amsterdam (32th) and Utrecht University (49th)
- Clinical, Pre-clinical & Health Sciences: Erasmus University Rotterdam (36th), Maastricht University (44th) and Leiden University (49th)

1.2. Recruitment Opportunities

1.2.1 Public Sector Recruitment Opportunities:

The Netherlands offers various recruitment opportunities for international candidates. All university research positions that are open to international researchers, are listed on the job portal <u>www.euraxess.eu</u> and <u>www.academictransfer.org</u>. One can also visit <u>FOM Research vacancy</u> page, which lists vacancies available at FOM research institutes. Individual institutes also list such opportunities on their websites, further details can be found here.

PhD position

⁴ Data from Web of Science.

⁵ Scimago ranking (http://www.scimagojr.com/countryrank.php?order=cd&ord=desc).



A large part of R&D in the Netherlands is carried out by private companies and they often recruit researchers at various levels. Many of these companies are located in organised hubs such as 'Brainport' Eindhoven in which is well known as Europe's leading high-tech region, and 'Health Valley' which is a network of 700 health related organisations working on innovation in healthcare space. (Note1)

FactCards

Academic Transfer has set up a great tool to accommodate international researchers coming to the Netherlands. Visit: Fact Cards The Netherlands is a very attractive destination to pursue a PhD degree. In the Netherlands it is not regarded as study but as independent research and PhD candidates are often paid a salary. A PhD from a Dutch university is highly regarded because of high academic standards. Between 2010 and 2013, Dutch research scored 53% above the global average for citation scores. This landed the Netherlands the second place, after Switzerland. Almost all PhD positions are linked to a university, but PhD-candidates may find place at other institutes industrv. More information be found or even in can here: https://www.studvinholland.nl/education-system/degrees/phd.

1.2.2 Private Sector Recruitment Opportunities: (see Note 1)

Many Dutch companies, both large MNCs as well as SMEs, such as **Philips**, **ASML**, **Xelvin**, **Cosine and OctoPlus** among others are continuously looking for Bachelors, Masters and PhDs with specialist knowledge. To give an example, Cosine, which is a high-energy optics specialist, recruits PhDs in physics from time to time. To apply, candidates should hold a PhD degree in physics related to high-energy optics with 3 years of experience in development and testing of high-energy optics during or after his/her PhD.

1.3 Funding Opportunities

There are various funding agencies in the Netherlands – The Netherlands Organization for Scientific Research (NWO), Dutch Technology Foundation (STW), The Netherlands Organization for Health Research & Development (ZonMW) and The Royal Netherlands Academy of Arts and Sciences (KNAW), which offer various grants and fellowships for individual researchers.

NWO provides <u>71 grants</u> for researchers, from PhD candidate level onward. <u>Veni</u> is an attractive grant for international researchers, which allows those who have recently obtained their PhD to conduct independent research and develop their ideas for a period of three years. More information about funding opportunities for junior-level and senior-level researchers in the Netherlands can be found on the Euraxess Netherlands website: <u>http://www.euraxess.nl/fellowships-grants</u>

1.4 Important information for incoming researchers

The Netherlands belongs to the EURAXESS initiative that provides support to researchers and their families when coming to the Netherlands (in key areas such as visas, housing, schooling, etc.). EP-Nuffic is the national coordinator of the Dutch network. Euraxess Netherlands has a dedicated network of service centres which you can contact for specific questions. Additional information can be found at <u>www.euraxess.nl</u>.

2. Research Cooperation with China

China is a key partner for scientific collaboration with the Netherlands and the national governments and national science agencies from both countries have established formal scientific relations for over 30 years.

The following research programmes have been established with China.

China-Netherlands Joint Scientific Thematic Research Programme - Joint Research project and Dialogue Seminars (JSTP):



The following bilateral agreements between the national governments of China and the Netherlands have been signed in the field of science and innovation.

MoU on educational and scientific cooperation and exchange between the Ministry of Education, Culture and Science of the Netherlands with the Chinese Ministry of Education (2014)

- MoU on scientific cooperation and exchange between the Ministry of Education, Culture and Science of the Netherlands with the Chinese Academy of Sciences (2014)
- MoU on scientific cooperation and exchange between the Ministry of Education, Culture and Science of the Netherlands with the Chinese Academy of Social Sciences (2014)
- MoU on cooperation in the field of innovation between the Ministry of Economic Affairs, Agriculture and Innovation of the Netherlands with the Chinese Ministry of Science and Technology (2012)
- MoU on scientific cooperation and exchange between the Ministry of Education, Culture and Science of the Netherlands with the Chinese Ministry of Science and Technology (2011)
- MoU on scientific cooperation and exchange between the Netherlands Organisation for Scientific Research (NWO) and Guangdong province (2016)

The JSTP-programme aims at stimulating sustainable research collaboration. Research teams of Dutch and Chinese researchers, with a senior Principal Investigator on both the Dutch and the Chinese side can apply for funding for joint research projects and dialogue seminars. The last call was launched in 2015. For more info click <u>here</u>.

China Exchange Programme (CEP):

The CEP programme of the Royal Netherlands Academy of Arts supports cooperation between Chinese and Dutch researchers by subsidising exchanges of senior researchers and joint research projects. The programme offers grants for individual senior researchers who wish to lecture and conduct research in China. The programme also provides financial support for Dutch universities, research institutes, laboratories, or research groups wishing to carry out a joint research project with Chinese counterparts. For more info click <u>here</u>.

NWO-NSFC Co-operation – Joint Research Projects:

The programme of the Netherlands Organisation for Scientific Research (NWO) and the National Natural Science Foundation of China (NSFC) gives Chinese researchers the opportunity of a short stay in The Netherlands and Dutch researchers the chance to visit China, and also funds joint seminars held in China or The Netherlands. Visit for a short stay in China must take place in the context of a research programme receiving a grant from NSFC. For more info click <u>here</u>.

Programme Strategic Scientific Alliances (PSA):

The PSA Programme of the Royal Netherlands Academy of Arts and Sciences and the Chinese Ministry of Science and Technology aims to establish a new form of structural long-term scientific cooperation. These "strategic scientific alliances" are of mutual benefit to the Netherlands and China. Projects are limited to the priority research fields in material sciences, biotechnology/drug research, and environmental science. For more info click <u>here</u>.

Many individual universities and research institutes from the Netherlands have established joint research institutes with China. The following list gives a non-exhaustive list of existing **Sino-Dutch research institutes in China**:

- Dutch Studies Centre Fudan-Groningen, Shanghai
- FERIM, Fudan Erasmus Research Institute in Medicine, Shanghai
- Hohai-TUD Water Research Centre, Nanjing
- SCUT-TU Delft Research Centre for Urban Systems & Environment (USE), Guangzhou
- SIMIT-IMEC Joint Laboratory on Internet of Things, Shanghai
- Sino-Euro Brain & Vision Institute, Shenyang
- Sino-Europe Agricultural Development Centre, Zhangzhou
- Sino-Dutch Biomedical and Information Engineering School (BMIE), Shenyang
- Sino Dutch Centre for Preventive and Personalized Medicine (SD PPM), Dalian (Liaoning)
- Sino-Dutch International Business Center (SDIBC), Nanjing
- Sino-Dutch International Open Lab on Genomics of Horticultural Crops, Beijing
- Tsinghua-Groningen Research Cooperation on China-EU Relations, Beijing
- TU Delft Beijing Research Centre (BRC), Beijing
- Wuhan University-TU Delft Research Centre on Geo-information, Geodesy and Remote Sensing, Wuhan

4. Conclusion

If you are interested in learning about research opportunities or would like to have more information about research and innovation in the Netherlands, please contact the Embassy and Consulates General of the Kingdom of the Netherlands to China at <u>www.hollandinchina.org</u>.



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President of the ERC since 1 January 2014

Professor Jean-Pierre Bourguignon was the Director of the Institut des Hautes Études Scientifiques (IHÉS) from 1994 till 2013. This international research institute located near Paris, France, was built as the European counterpart of the Institute for Advanced Study in Princeton. He was also the first ERC Panel Chair in Mathematics, for Starting Grants.

A mathematician by training, he spent his whole career as a fellow of the Centre National de la Recherche Scientifique (CNRS). He held a Professor position at École polytechnique from 1986 to 2012. From 1990 to 1992, he was President of the Société Mathématique de France and President of the European Mathematical Society from 1995 to 1998. He is a former member of the Board of the EuroScience organisation (2002-2006) and served on EuroScience Open Forum (ESOF) committees since 2004.

In 2008, he was made Doctor Honoris Causa of Keio University, Japan, and, in 2011, Doctor Honoris Causa of Nankai University, China.

3 Meet the Researcher: Prof. Jean-Pierre Bourguignon, European Research Council (ERC) President in China

Since its creation in 2007, the European Research Council (ERC) has awarded research grants worth nearly 11 billion euros to more than 6,000 scientists and scholars from all over the world, both early-career and senior, carrying out their ambitious research projects in all scientific disciplines. This includes researchers of non-European nationality working in prestigious institutions across Europe and the ERC encourages more talent top researchers from around the world to apply, joining the ranks of the ERC grant holders. Currently, there are **16 Chinese researchers holding ERC grants**. What's more, an estimate shows that some **1200 Chinese nationals** works as team members in the ERC-funded teams.

In conjunction with the ERC's participation in the World Economic Forum's Annual Meeting of the New Champions, also called Summer Davos, in Tianjin, the ERC President also **delivered a public lecture at the University of Chinese Academy of Sciences.** EURAXESS China had the chance to talk to him about the European Research Council's international commitment.

What does the ERC have to offer researchers outside Europe? Does the international researcher need to be based in Europe to be an ERC grantee?

First and foremost, the ERC grants are appealing because researchers are totally free to propose topics they find the most challenging and to organise their support the way they find the most appropriate. The funding is substantial, both in terms of grant amount - up to 2.5 million euros - and in terms of length - up to five years. They are open to researchers working in all research disciplines. What's more, the grants are very flexible and give researchers tremendous autonomy to pursue their scientific ideas. By now the "prestige" of the ERC label of excellence makes the grants coveted by scientists. ERC grantees I meet often underline that the application process is very simple and user-friendly and that red tape is kept to a minimum. We want scientists to focus on what they are best at – doing science!



European Research Council Established by the European Commission

ERC Open and Coming calls

OPEN CALLS:

ERC Advanced Grant | ERC-2016-AdG Call for Proposals Information for applicants Deadline Date: 1 Sep 2016

ERC Proof of Concept Grant I ERC-2016-PoC Call for Proposals Information for applicants FAQs Deadline Date: 4 Oct 2016

COMING CALLS:

The next round of annual calls for all grants will be announced in the ERC work programme in July. Stay tuned with ERC (https://erc.europa.eu/) Researchers of any nationality, regardless of their current place of work, can apply for ERC funding, provided that they have a contractual relation with an institution based in Europe and are ready to spend at least 50% of their working time there. This means that – after being awarded an ERC grant – they can keep the affiliation with their research organisation in their country of origin, if they so wish, for the rest of the time. Several ERC grantees who moved to Europe have testified that leaving their country does not mean leaving their networks behind or burning bridges.

There are also other incentives for international researchers to apply for ERC funding, such as additional funds to cover start-up costs for those moving to Europe, amounting to up to 1 million euros extra. What is also worth noting is that team members taking part in an ERC-funded project can be based in non-EU countries as long as it is justifiable and well explained in the candidate's application.

How important is it to the ERC to engage researchers working outside Europe in its funding schemes?

It is part of the ERC's mission to attract the best scientists from outside Europe. Top research is an intrinsically international endeavour. We know that bright minds exchange ideas across borders and continents, so we should let them collaborate freely to progress and to make ground-breaking discoveries. The ERC encourages such "brain circulation" and ultimately also aims to make Europe a prime location for top talent globally.

Does the ERC give priority to younger researchers? If so, how is this done?

Yes, the ERC is serious about early-career researchers. Two thirds of the overall ERC budget go to the most promising young minds. They should be empowered early in their careers and be given maximum scientific freedom. Top scientists with as little as two years of experience after their PhD are already eligible to apply for ERC grants.

Let me also point out that, on average, each ERC grant holder employs around six team members, of which many are post docs and PhD students. In this way, the ERC also supports a new generation of researchers. An estimate shows that around 17%, or some 6,500, of these team members are nationals of countries outside Europe.

Which percentage of the total ERC grantees (2007-2015) are female principal investigators? What is the ERC doing to attract promising female researchers to become grantees?

The ERC Scientific Council takes the view that women and men are equally able to perform excellent frontier research. Currently, around 21% of grantees are women; this lower share of women mirrors the overall situation in science in Europe. It has created a dedicated Working Group on gender balance in 2008



Prof Bourguignon speaking at UCAS on 23 June 2016

to work towards closing the gap, without deviating from the principle of having scientific quality as its sole criterion for selection. The Working Group focuses on counteracting gender bias and encouraging more female scientists to apply for ERC grants. For example, to help female scientists who are mothers, the ERC allows them to have their eligibility window extended by 18 months per child, when applying for ERC funding. So for example, if a scientist has one child, and she obtained her PhD eight years earlier, she can still apply for a grant in the category of the youngest researchers (although the general rule is that only those who received their PhD between two to seven years are eligible).

Is it possible for researchers who do not hold an ERC grant to be associated with an ERC grantee's team?

Yes, the ERC wants to encourage its grantees to engage even more with fellow scientists in the global research community and motivate international talent to take part in ERC-funded projects in Europe, in particular young researchers. As said, we believe in "brain circulation". To inspire such global scientific exchange, the ERC has already a number of agreements (so called "implementing arrangements") in place with renowned research funding agencies outside Europe to provide opportunities for early-career scientists to temporarily join research teams run by ERC grant holders. In 2012, the ERC launched the first of such initiatives with the US National Science Foundation (NSF). By now, agencies in another six countries on four continents have signed such agreements, namely South Korea, Argentina, Japan, China, South Africa and Mexico. And there are more countries lined up, so stay tuned!

Let's focus on the Implementing Agreement with ERC's Chinese partner, the National Science Foundation of China (NSFC).

We have signed the agreement with NSFC in 2015, and we launched the call for expression of interest on our side in October 2015. On our side, we saw more than 400 ERC grantees who showed interest in hosting Chinese researchers in their teams. A significant number already had in mind a specific person who they wanted to host. However, the response from researchers funded by NSFC was relatively low. This is a new agreement so we still need to promote it better, identify obstacles, if any, and work on them.

Some researchers may have also confused it with the new H2020 co-funding Mechanism with China – which has nothing to do with the ERC-NSFC Agreement. This should now be clarified and researchers will hopefully be open to the new opportunity to work in ERC-funded teams. We'd like to see this agreement with NSFC flourish, for top talent to get to know each other better, to discover the resources and ideas of the other side. After a slow start, I hope this initiative will soon be successful.

Do you have any tips for potential ERC grant applicants?



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Plan it well in advance. Competition is tough, so take the time to carve out the best possible application. You also need to show in your proposal that your research project will push the frontiers of knowledge, and that it is not just incremental research. Before applying, ask yourself "what is it that is innovative about my project?". I would also advise applicants to try to speak to ERC grantees in the same field of research who can share their experience and provide advice. Lastly, the researcher needs to apply with a host institution in Europe, so it is crucial to establish contacts and find one early on before applying for ERC funding.

You have extensive experience with China; your collaboration with Chinese mathematicians spans over 35 years. What impression do you have about the current state of China's S&T?

The first time I came to China was in 1981. This is my thirty-seventh visit here, so I have witnessed the massive change the country has undergone. The government's current strategy is to develop research and innovation, in terms of both facilities and training of people. Development of both applied and fundamental research is in demand by the Chinese scientific community. This need is recognized by the government.

Improving the quality, and proper evaluation of research is becoming an important issue. Growth of large-scale research facilities in China is another important area. They might be relevant only for specific areas, but for those they are critical. However, such facilities - think for instance of Europe's CERN - are complex to manage, as you need not only top scientists, but also engineers and managers.

With China and other emerging economies becoming scientific powerhouses, what advice do you have to European researchers? How can they embrace the situation?

Europe has a long tradition of higher education and research, but because of the economic crisis, a number of governments cut their national research budgets. On the contrary, the EU increased its budget for research and innovation in its programme, Horizon 2020, of which ERC is a part of. A few years ago China has surpassed the EU in terms of R&D spending. What that means for European researchers is that they can focus on searching for quality in Chinese research.

Collaboration with emerging powerhouses, not just China, is critical. European researchers should not be shy to engage with their Chinese colleagues. We have to be present in China, have to be involved with China. We have to be open to collaboration and to all challenges it might bring, as this will make us stronger. The ERC is open to the world.

Thank you for your time, professor Jean-Pierre Bourguignon!

4 In case you missed....

4.1 Event Outlook

Name	Field	Date	Location	Website
1. New European Research on Contemporary China Conference (NERCC)	China Studies	5-6 July 2016	EU Delegation to China and Mongolia, Beijing	Send an email us at <u>china@euraxess.net</u> if you want to join
2. Visit of DG Vladimir Šucha of the Joint Research Centre	Not open	4-7 July 2016	Beijing and Shanghai	No public events
3. 2016 EU-China Think Tank Workshop on Science, Technology & Innovation	All fields	5 September 2016 (tbc)	Beijing, Sino-German Centre for Research Promotion	<u>Dragon Star +</u>
4. EU outreach event in Lanzhou	All fields	12 September 2016	Lanzhou	tbc

About us

EURAXESS China is a networking tool for European researchers active in China and for Chinese researchers wishing to collaborate and/or pursue a career in Europe. EURAXESS China provides information about research in Europe, European research policy, opportunities for research funding, for EU-China and international collaboration and for trans-national mobility. **Membership is free**.

Visit us at china.euraxess.org and Join the EURAXESS China community.

EURAXESS Links networks have thus far been launched in North America (USA & Canada) Japan, China, India, in ASEAN (currently focusing on Singapore, Thailand, Malaysia, Vietnam and Indonesia) and Brazil.