

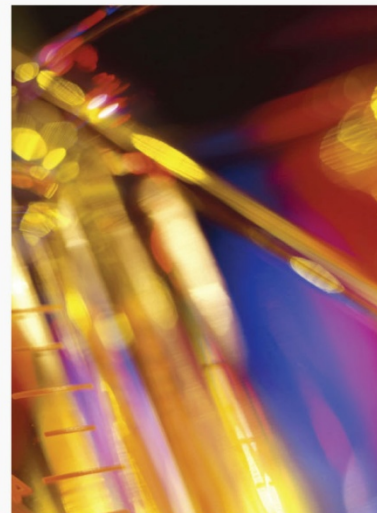
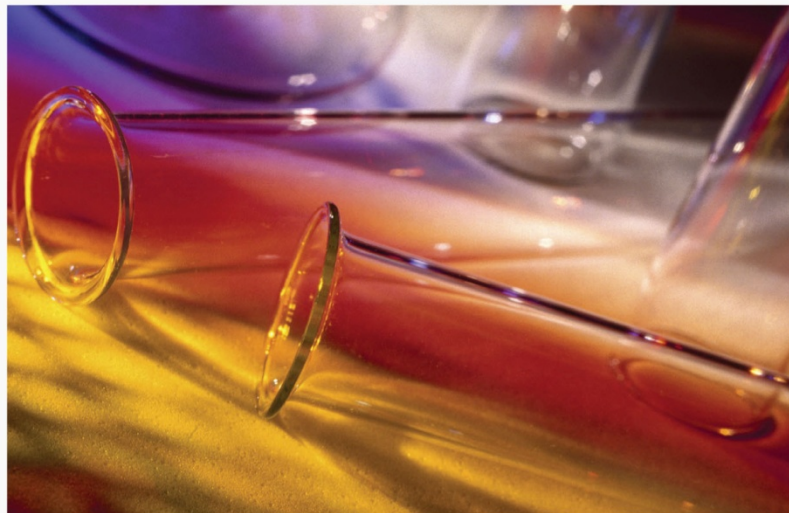
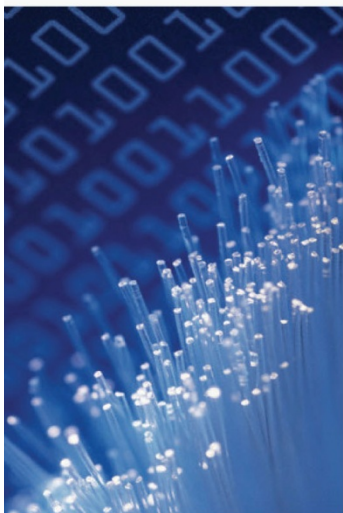


DRAGON | STAR

Case Study - Monitor the participation of EU researchers/innovation actors in Chinese programmes

DRAGON-STAR

SUSTAINING TECHNOLOGY AND RESEARCH (EU-CHINA COLLABORATION)



Sociedade Portuguesa de Inovação

European Commission
Framework Programme





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Introduction

This report is the deliverable of Task 3.2 - Monitor the participation of EU researchers/innovation actors in Chinese programmes - a booklet with cases regarding collaboration between EU and China.

The aim of this booklet is to monitor the participation of EU researchers/innovation actors in Chinese funding programmes and share the experiences with other researchers. In order to reach the case study results, the project team approached more than 30 researchers. The researchers were selected based on their field of research, current interactions with the Chinese research organizations, and most importantly their involvement in Chinese research funding programmes. After corresponding by email and telephone, the project team was able to identify four leading researchers that were interested in committing to the case study development process. The case study content was obtained through phone interviews with each of the four researchers. The interviews followed a set of discussion topics (see Annex) to ensure consistency among the case studies.

The case study presented how the researchers approached Chinese research networks and individual researchers, preparation of the application, benefits through collaborations and barriers encountered, lessons learned and recommended actions to improve the participation of European researchers in Chinese programmes.

Table 1 presents the name of European researches and their organizations. The different case studies are presented in the next section.

Table 1: Name of the interviewees

No.	Name	Organization
1	Dr. Claudio Petti	Salento University, Italy
2	Dr. Cristiano Varrone	Danish Technical University, Denmark
3	Professor Werner Breitung	Sun Yat Sen University, China
4	Dr. Kelly Bérubé	Cardiff University, UK



Case Study 1: Dr. Claudio Petti

Basic Information on the Interviewee

Dr. Claudio Petti obtained his PhD. degree in Management Science from the Sun Yat Sen University, and has a Masters degree in Business. Currently, he is a senior researcher and assistant Professor at the Department of Engineering for Innovation at Salento University. Dr. Petti's research activities integrate the fields of technology innovation management, entrepreneurship and strategic management for the study of technological entrepreneurship. He participated in the Science & Technology Fellowship Programme in China (STF China)¹, funded by European Commission and promoted by EU delegation in Beijing, in which 30 researchers were selected all over the Europe to spend two years in China. In the first part of the programme, Dr. Petti studied Chinese in Beijing through 6-month courses in Beijing Foreign Studies University (<http://en.bfsu.edu.cn/index.html>), while participating in additional joint-research project with a partner university for the remaining time. The project focused on technology entrepreneurship in Chinese enterprises. The research was undertaken at the Sun Yat-Sen University Business School, with which before the STF programme, a cooperation agreement was established.

Approach to Chinese Research Networks and Researchers

Dr. Petti edited a [book](#) about technology entrepreneurship in China which involved several Chinese researchers, professors and government officers who contributed to book's chapters. This book was an important vehicle to start and strengthen relationships with Chinese professors and researchers, established since 2007 when in a Shanghai's Conference the first approach with the former Dean of Sun Yat Sen University' Business School took place.

Now, Dr. Petti is also coordinating a European project called [ENTICE](#), under Marie Curie Action, which includes four Chinese universities and one Spanish university. All the partners have met during and as a consequence the STF programme.

The STF project, gave Dr. Petti the chance to stay in China consecutively for more than one year. During this time he learned how to build the relationship with Chinese partners from conferences and other networking opportunities. In this period Dr. Petti learned Chinese and acquired the level of intermediate which enables him

¹ <http://www.euchinastf.eu/?q=node/6>



to establish and carry out basic and research work-related conversations.

After the STF programme, he pursued the opportunity to have meetings with Chinese researchers whenever he travels to China. Dr. Petti has already established partnerships in Guangzhou and Beijing so he visits these two cities regularly, while exploiting any chance to add new contracts through visits, seminars and conferences. Generally the aim is to leverage on existing projects to build new initiatives and exchanges.

Preparation of the Application

For the preparation of the application, Dr. Petti pointed out that when dealing with Chinese professors as with any other category of busy people; he benefitted to have already a clear scheme in his mind (including the specific knowledge needs). That means, for example, that when he went to meet people in Peking University and Renmin University in China for building the ENTICE Project, he knew exactly what their contribution to the project could be. Dr. Petti also studied beforehand the specific project scheme to know and communicate to potential partners the project factsheet and the relevant information from guide for application with specific regards to the EU contribution, conditions and the constraints.

Benefits through Collaborations

In the STF programme, Dr. Petti not only had a chance to deepen the cooperation with Chinese partners, but also he had more chances to make contacts that were related to his research fields. For example, he worked with an Institute of the Chinese academy in Shenzhen, which helped his research especially in finding a case study, doing interviews and help him joining the hi-tech fairs. These activities were very helpful for his research in China during the STF Programme. He achieved all the three results he set for himself during the STF programme: an edited book (about technological entrepreneurship in China), a PhD exchange agreement (with Sun Yat-sen University Business School) and an EU project (the ENTICE Project).

Currently he is already in the stage of leveraging on the ENTICE project, having settled a specific cooperation agreement with Jinan University, discussed and set up during the above-mentioned project exchanges. Well before its signing, both sides are already engaged in scouting funding opportunities in both European and Chinese Programmes.

He pointed out that through extensive periods of face-to-face meetings and joint projects, the two parties developed a strong and reciprocal professional trust between each other. In addition, he mentioned that the



development of personal relationships besides professional relationships is very important in China. This helps to deal with unexpected and uncontrollable occurrences that may happen during agreements setting and implementation. In any case it is important that a common interest and mutual benefits are sought and exist between parties, and then it is easier to set and achieve successful partnership.

Barriers Encountered, Lessons Learned and Recommended Actions to Improve the Participation of European Researchers in Chinese Programmes

Dr. Petti stated that the barriers he encountered were related with the Chinese procedures. For example, it is difficult to understand the policies and regulations of Chinese funding programmes. In addition different universities may apply different rules. Second, when building cooperation with Chinese partners, it is sometimes difficult to understand the effective level of commitment on which an initiative can rely.

When talking about lessons learned, it is important to look at things also from the Chinese partners' point of view and perspective. Dr. Petti thought it is more important to set the 'value proposition' of the initiative at hand focusing on the researcher career, the research topic and mobility. In addition, from Dr. Petti's experience within the ENTICE mobility project, several points should be followed:

- To be sure to select the appropriate people that should participate in the project.
- To make sure all people called to coordinate the project activities have been met each other and, ideally have known each other closely
- To confirm the people are capable or can commit someone who is able to manage the work
- To make sure activities of junior figures involved into the project are closely and regularly supervised
- Attribute punctual responsibilities within the partners for each unit of work (i.e. work package).
- Continuous adjustment, refinement, and close interactions are constantly needed to keep the partnership on track.

When starting a project, try to accommodate for flexibility, but also set clear mechanisms to avoid that the project changes too much at the implementation stage. That is: be sure that all the partners read and approve the project, and, more importantly that each of them understand what is expected that he/she (or his/her group) has to contribute in the project. Should there be any doubt about, give time to clarify and work on it at the beginning, better if still in the writing phase, to avoid that misunderstandings and implementation issues emerge later on. To sum up, keeping it flexible but within clearly defined shared boundaries, is very important to the achievement of



the project objective.

Regarding the recommendations, Dr. Petti believed that researchers need to engage in an extensive dialogue with Chinese researchers to build significant relationship that is the most effective way to further improve EU researchers' participation in Chinese programmes. Based on Dr. Petti's experience, not all Chinese researchers and professors are interested in cooperating, so finding the right partner and people who have common interests, is the first step towards the development of a fruitful and sustainable relationship. But this takes trials and time, and leads back to the issue of the need to engage in significant exchanges to make it work.



Case Study 2: Dr. Cristiano Varrone

Basic Information on the Interviewee

Dr. Cristiano Varrone obtained his Master degree in Natural Sciences from the University of La Sapienza in Rome in 2003. After that, he started working at the Italian National Agency for New Technology, Energy and Environment Development (ENEA). He has been working at ENEA for about ten years, focusing on ecology and conversion biomass into bio fuels. In 2010, he started his PhD. at Harbin Institute of Technology, China, specializing in environmental engineering. He developed a research project in China about the linking of biohydrogen and biodiesel production, using the waste from the biodiesel as a source for biohydrogen production.

Since 2008, Dr. Varrone started his research about waste of biodiesel and conversion to higher value products and wrote his first collaboration project with China in the field of Glycerol Biorefinery.

From 2009 to 2011, Dr. Varrone participated in the Science and Technology Fellowship (STF programme) in China. The idea of the project was to create long term collaboration between European and Chinese researchers. There were 30 European researchers who went to China and studied Chinese and cultures. They stayed in Beijing for six months and worked with Chinese researchers in different institutions, which enabled him to create a stronger connection with his partners. In 2011, Dr. Varrone went back to Italy where he worked on a new project with the involvement of researchers from Harbin Institution of technology, China.

From 2013 to 2015, Dr. Varrone has been working as Scientific Coordinator of a China-Italy bilateral agreement project ("*Optimized bioconversion of crude glycerol into hydrogen and ethanol using Geo-Chip and coupling with MEC*") with the involvement of the Harbin Institute of Technology. This can be considered as a further step in addition to the experience in STF programmes.

Now, Dr. Varrone is based in Denmark for the FP7 KBBE project GRAIL, which is related with knowledge based bio-economy. It is a four-year project with 15 partners, and the topic focuses on Glycerol Bio-refinery. Dr. Varrone is also member of the Scientific Advisory Board as well as the Quality Assurance Committee of GRAIL.

Approach to Chinese Research Networks and Researchers

In 2008, Dr. Varrone realized that he did not have too much information on Chinese institutions that wanted to



cooperate with European institutions. The only way he found was to go through the publications related to his field of research and to find out who are the partners that have published papers in the same field. Dr. Varrone started to send emails presenting cooperation opportunities to Chinese researchers and trying to establish the contacts. He wrote emails presenting the possible projects opportunities through the STF programmes, and thus he gradually established the contacts with Chinese researchers.

Preparation of the Application

There is a China Italy bilateral agreement project from 2013-2015. Based on the agreement, the partnerships worked together to decide on a topic that would be of interest to both sides. In addition, the partnerships would make use of each other's complementary skills to yield the benefit of working together.

Regarding the difficulties when applying for the Chinese funding programmes, Dr. Varrone believed that it was difficult to communicate via emails as some replies may be delayed and it was hard to get a timely response which might affect the time frame for submitting the proposal.

Dr. Varrone also pointed out that sometimes he found it was very helpful to approach an assistant of the Chinese professor. He mentioned that he met a young researcher that helped him through sending emails and solved the questions timely.

Benefits through Collaborations

Dr. Varrone mentioned that as a researcher, the benefits are international experiences and mobility - he has opportunities to work in different labs and countries. In other words, Dr. Varrone is able to experience how he can do research with people with various points of views. Moreover, it creates more networks to build new partnerships, and this is important when applying for future projects.

On the other hand, regarding the funding programmes, EU and Chinese researchers can provide the knowledge of different funding instruments. Complementary skill is important, as both sides may provide different experience and work together to get a better result. Moreover, another helpful training was an intercultural training in China. Since then, Dr. Varrone had chance to visit many Chinese universities and talk with many Chinese professors, which was very helpful to open the way of thinking for further cooperation.



Barriers Encountered, Lessons Learned and Recommended Actions to Improve the Participation of European Researchers in Chinese Programmes

For the barriers encountered, Dr. Varrone pointed out that at the beginning he did not get too much information about Chinese research institutions, while he needed to identify suitable partners in this regard. It was a challenge finding the first contact. Secondly, mutual understanding is a key issue. For people who are not familiarized with different cultures, sometimes it results in misunderstanding not only in language but also in the way of thinking. Even though people know the words, these can be interpreted in different ways.

Finally, Dr. Varrone stated that it is important to be flexible, because things can be changed many times even if there are written agreements and signatures from professors or officials. Be prepared when sometimes things may evolve in a different way and/or different direction: European researchers need to learn how to solve the problem in that situation.



Case Study 3: Professor Werner Breitung

Basic Information on the Interviewee

Prof. Breitung is a geographer teaching at the Department of Urban Planning and Design of Xi'an Jiaotong-Liverpool University in Suzhou near Shanghai. He has previously for 10 years worked in the School of Geography and Planning of Sun Yat-Sen University in Guangzhou, China. His research interests are related to cities, cultures and social structure of cities, urban landscape and urban tourism. Prof. Breitung graduated from Freie University in Germany and obtained his PhD degree from University Basel in Switzerland. In 2001, he started working in University of Macau and University of Hong Kong.

Approach to Chinese Research Networks and Researchers

Prof. Breitung lived in Hong Kong before his academic career, so for him it was more about building networks with European researchers than with Chinese ones. In regard to how to build the relationship with Chinese or European partners, Prof. Breitung stated that in most cases, the existing contacts have been developed through conferences.

Prof Breitung has organised a conference funded by the German Chinese research centre in Beijing, which was an opportunity to get more European contacts. Prof. Breitung is also co-supervising some PhD students from the Netherlands and Germany working with colleagues from these countries. There are a number of different interaction experiences, and in each case the collaboration was based upon pre-existing contacts.

Preparation of the Application

To prepare the application, Prof. Breitung pointed out that they would have a meeting with the European counterpart to fix the basic idea, but the actual phase and intensive writing has to be communicated through phone or online communication. In some cases, misunderstandings which later affect the success of the project come from lack of communication during this application period.

When he applied for the calls in China, the main problem is that the funding system in China is quite different from European system. Prof. Breitung found that it was not easy to hire a proper researcher in China, while it was much easier in Europe.

Benefits through Collaborations



Prof. Breitung pointed out that compared with Chinese researchers the European researchers have different ways of thinking, so he found that it was valuable for his project to have people from different countries. Normally, he worked with many researchers in China and realized that European partners are not in the position to give better answers but to raise better questions. Secondly, it is helpful to further improve the network with Chinese researchers through the collaboration.

About the added value, Prof. Breitung mentioned that he benefited from all his collaborative projects whether funded by the National Natural Science Foundation of China or by European counterparts, in particular for his students that were able to improve the quality of their reports.

Barriers Encountered, Lessons Learned and Recommended Actions to Improve the Participation of European Researchers in Chinese Programmes

Not only the rules of Chinese funding are different compared with the European ones, but also the selection criteria are different. He believed that it would be much easier if it only has one unified procedure for the application to joint calls. On the other hand, the communication is still a problem, and it is still quite hard to solve this. The expectation from Europe and China is quite different: for EU researchers, they collect the data and publish it, while they expect the role of the Chinese counterpart in these cases is related with providing the data.

The main solution for this problem is to meet with the Chinese partners face-to-face in order to build up trust. For European researchers, they are more practical and do not take a lot of time for trust building.



Case Study 4: Dr. Kelly BéruBé

Basic Information on the Interviewee

Dr. Kelly BéruBé is the Director of the Lung & Particle Research Group of the School of Biosciences, Cardiff University, UK. The Lung & Particles Research Group (LPRG) specializes in 'Molecular Environmental Health'. The principal research focus is the determination of intelligent biomarkers of exposure and harm in the human respiratory system following exposure to aerial xenobiotics.

With a background in electron microscopy and lung toxicology, Dr. Kelly BéruBé has built an international reputation in the field of air pollution and human health. She holds numerous appointments in the USA and UK on funding bodies, advisory councils, professional societies and journal editorial boards that focus on environmental health. Her research focuses on the determination of intelligent biomarkers of exposure and harm in the respiratory system, with a particular interest in understanding how pollutants compromise lung biochemistry and alter gene and protein expression to drive disease mechanisms.

Approach to Chinese Research Networks and Researchers

Basically, Dr. Kelly BéruBé approached the Chinese researchers and institutes through specific grant calls by Research Councils UK (RCUK, www.rcuk.ac.uk), which is a Non-Departmental Government Body whose purpose is to manage a strategic partnership between seven individual research councils that coordinate and fund research in the arts, humanities, science and engineering. Research Councils UK has built strong links with relevant Chinese authorities, such as the Ministry of Science and Technology, PRC (MoST, most.gov.cn) and the National Natural Science Foundation of China (NSFC, www.nsf.gov.cn). There are many joint programs of RCUK and Chinese authorities.

Beside the case of these grant calls, Dr. Kelly BéruBé was also contacted directly by some Chinese researchers after they have read one of her papers.

Preparation of the Application

Dr. Kelly BéruBé encountered no issues other than translation of English into Chinese for her UK-China grants. The Chinese grant calls always requires full application materials in Chinese to the Chinese authorities, so she had to finish the English application of a joint grant from her side one week early to give the Chinese counterparts enough time to do the translations.



Benefits through Collaborations

Dr. Kelly BéruBé stated that Chinese colleagues have specific scientific skills and specialized equipment that her research group and/or her university does not possess. The partnership with Chinese researchers and organizations complements her research capability. Another added value is that Dr. BéruBé's research work can be published in China through arrangements in advance with the Chinese colleagues, which increases its impact on international audiences.

Barriers Encountered, Lessons Learned and Recommended Actions to Improve the Participation of European Researchers in Chinese Programmes

Dr. Kelly BéruBé pointed out that the financial support is really needed to enable international exchanges of joint research team members between EU and China universities. It is important for the graduate students' education as well as for principal investigators' career development, especially women scientists.



FINDINGS AND RECOMMENDATIONS

Based on the case studies, interviewees have given their views regarding the difficulties they encountered as well as suggested some recommendations. Some interviewees mentioned that it is difficult to understand the policies and regulations of Chinese funding programmes. The rules of funding programme between EU and China are very different such as funding system, section of criteria.

In addition, it is about the cultural differences. Misunderstanding happens due to cultural differences related to language but also to the way other people think. Therefore, this requires more communication and it is important to know from Chinese partners about their point of view and perspective, and what they can contribute to the cooperation. Building trust is necessary for EU and Chinese partners, and it usually requires more face to face meetings.

When dealing with Chinese authorities and organizations, some interviewees also pointed out that it is important to be more flexible. This means sometimes the project changes too much in terms of project plan, people involved, budget and so on, so it would be hard to adapt in such a situation. It is recommended that European researchers need to learn how to be more flexible. When changes happen, European researchers should try to understand the real reason behind the changes and discuss with the Chinese counter partner in an open and honest way. Thus the two parties could have a better solution instead of simply doing the changes in order to keep the project on the right way.



ANNEX: INTERVIEW DISCUSSION TOPICS

i. Information on research stakeholder and the research network (research team)

(e.g. Name; Research Institution; Research Team; Position within Research Team;
Science Area; International impact of the research work; Presence/Representative in China)

ii. Approach to Chinese research networks and researchers

(1) Identify opportunity:

a) How did you identify the opportunity (personal referral, website, conference, etc)?

b) Name(s) of the Chinese research programme(s) you participated in and name(s)/area of the participated projects

(2) Find partner(s): when and how did you identify the Chinese partner(s)? What specific research field or subject in common brought you together? What are the follow-up activities?

(3) Did you know your partner(s) prior to the opportunity?

iii. Preparation of the application

(1) When you prepared the application together with your Chinese partners, did you meet any difficulties?

(2) How did you solve them?

(3) What kind of help did you get from your Chinese partners?

(4) How did you communicate with the Chinese researchers? (e.g. email, phone, in person)

v. Benefits through collaborations and reasons of collaborating with China

(1) What additional benefits came from the collaboration? Please mention some examples (e.g. extra funding or manpower; access to innovative approaches; joint authorship and better citation rates of scientific publications; increased exposure to state-of-the-art resources; benefit of research facilities; learning through different cultural experiences)

(2) What was the added value that the collaboration with China brought to your organisation's research activities?

vi. Barriers encountered, lessons learned and recommended actions to improve the participation of European researchers in Chinese programmes

(e.g. barriers encountered and lessons learned from the previous experience, special rules/ points of Chinese funding programmes you want to share with other European researchers, tips for selecting Chinese partners)