

Form 7/様式7

FY 2011

(Report 1)

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE (JSPS)
Report on JSPS BRIDGE Fellowship Activities
 by individual BRIDGE Fellows

1. Fellow's BRIDGE Fellowship ID											
BR110203											
2. Affiliated JSPS Alumni Association											
French Alumni Association: Association des anciens boursiers francophones de la J.S.P.S, Strasbourg, France											
3. Name in Full											
BARON			Michel				Jean-Pierre				
FAMILY			First				Middle				
4. Host Researcher											
Name in Full						Affiliation					
Prof. SAITO Fumio						IMRAM, Tohoku University, Sendai					
5. Period of BRIDGE Fellowship tenure											
From	03		03		2012	To	27		03	2012	
	Day	/	Month	/	Year		Day	/	Month	/	Year

7. Please write on the attached form.

8. Please write on the attached form.

9. Please write on the attached form.

Date: 19/04/2012

NAME (Print): Michel BARON

Signature: 

(Notes)

1. Please send this completed form to both JSPS's Tokyo headquarter and your affiliated alumni association within one month after finishing your tenure under the BRIDGE Fellowship program.
2. The names and affiliations of Fellows and hosts and their reports may be given public access.

7. Research network created, sustained and/or strengthened with Japanese researchers through your visit. (Please add lines if needed)

7-1) Research network created:

During my JSPS Bridge fellowship, I decided to investigate the possible collaborations mainly in 3 directions of my research activity: Powder technology and processing, Pharmaceutical technology and processing, Organic mechanochemistry. For this, my host researcher was Pr Fumio Saito (IMRAM, Tohoku University) and I visited or had contacts with researchers from 16 Institutions of various sizes, but performing excellent research in their area: Aichi Gakuin University, Nagoya; Doshisha University, Kyoto; Gifu Pharmaceutical University, Gifu; Hosokawa Micron Corporation, IMRAM, Tohoku University, Sendai; IMR, Tohoku University, Sendai; Keio University, Yokohama; Kobe Gakuin University, Kobe; Kyoto Institute of Technology, Kyoto; Kyoto University, Kyoto; Osaka Prefecture University; Osaka University, Osaka; Rikken, Kobe; Soka University, Tokyo; The city of Sendai; TIRI, Tokyo.

The network created is with the following Institutions:

Doshisha University (Powder Technology & students exchanges), Kobe Gakuin University (Drug Delivery Systems), Kyoto University (organic reaction mechanisms), Osaka University (powder technology as coating and mechanosynthesis), TIRI (green processes), Soka (particle charges and powder electrostatics), Osaka Prefectural University, Kyoto Institute of Technology (possible students exchanges).

Is there a possibility of the above network yielding an application for a JSPS program?

Yes

If yes, please state the name of the program and researchers who may participate on both sides.

We will apply for a research program in the area of organic chemical transformations - Bilateral Joint Project (T. Sato & al. / M. Baron et al.)
Prof H. Ichikawa will probably visit the Ecole des Mines in september 2012, to discuss about possible collaborations (Drug Delivery Systems).
Prof T. Matsuyama will probably visit the Ecole des Mines in march 2013, to investigate some possible collaborations (Powder electrostatics)

7-2) Research network sustained:

The network with the Tohoku University is of course sustained, as well as the network with the Aichi Gakuin University, Gifu Pharmaceutical University, and Keio University.

Prof. Fumio Saito plans to visit the Ecole des Mines d'Albi & Ecole des Mines de St Etienne in July 2012 as a Ph'D reviewer and defense jury member of our Japanese student Akira Sato.

Some possibilities exist to develop a research program in the area of simulation and Discrete Element Method (DEM; Dr Kano), and in experimental powder technology (Dr. Zhang).

The Frontier workshops will continue and will be held in Rennes University, France in December 2012 (Prof. Tanaka)

Is there a possibility of the above network yielding an application for a JSPS program?

Possibility to discuss in the near future.

If yes, please state the name of the program and researchers who may participate on both sides.

7-3) Research network strengthened:

I also continued to develop the research network between the Tohoku University and Institutions located south-ouest of France, initiated during the annual editions of the workshop Frontier launched in 2008, between Tohoku University and Ecole des Mines d'Albi.

A discussion is in progress with Prof. A. Chiba & al.(IMR) to imagine a collaboration with our colleagues from ICA, Albi (G. Bernhart & al.).

Is there a possibility of the above network yielding an application for a JSPS program?

Possibility to discuss in a near future.

If yes, please state the name of the program and researchers who may participate on both sides.

Prof. A. Chiba & al. will visit the Ecole des Mines d'Albi in july (ICSAM 2012) and discuss about possible collaborations with ICA-Albi.

Prof M. Hisada and Prof R. François (INSA-Toulouse) are in contact to develop possible collaborations for optimized waste allocation.

Some possibilities are to be discussed with Aichi Gakuin University and Gifu Pharmaceutical University, in the field of Pharmaceutical technology. Also, a possibility a students exchanges was discussed with Tohoku University and Keio University.

8. Results of your research and networking activities in Japan

Concerning the networking activity, I drastically developed the network with many universities and institutions; Some research program will hopefully emerge in 2012 and 2013 from this work, as well as some students exchanges in the future.

Concerning my research activity, I could confirm some points concerning the possible mechanism in the case of mechanochemistry. Also, some new questions and ideas occurred. But this must be definitively further developed by a research program between Japan and France, since the fellowship period was rather short and I shared my time between different Institutions. We will apply in 2012 for a bilateral joint project in this research field.

I would like to acknowledge all my Japanese colleagues and people involved in one way or another in doing their best to arrange for me a very intellectually stimulating and enjoyable stay during my Bridge activity in Japan:

Hiroya Abe, Akihiko Chiba, Makoto Fukudome, Yoshinobu Fukumori, Naoki Haruta, Jusuke Hidaka, Keiko Hojo, Hideki Ichikawa, Junichi Ida, Hiroaki Imai, Yohei Inoue, Hiroyuki Kageyama, Junya Kano, Kenji Kakuta, Yoshitaka Kasukabe, Junichi Kawamura, Kango Koyama, Hiromi Kobayashi, Yoshiaki Kawashima, Akira Kondo, Kango Koyama, Hironori Makita, Hiroaki Matsumoto, Tatsushi Matsuyama, Hirohisa Miyamoto, Tomoya Miyoshi, Koichi Mizukami, Hidefumi Mukai, Mikie Nagai, Makio Naito, Fumio Nishimura, Toshiyuki Nomura, Shinnosuke Obi, Noriko Ogawa, Satoshi Ohara, Fumio Saito, Shouichi Somekawa, Tohru Sato, Mamoru Senna, Kenichi Shimizu, Yoshiyuki Shirakawa, Satoko Tada, Kohei Tahara, Hirofumi Takeuchi, Yoshiko Takeuchi, Haruna Tamaki, Kozue Tamayama, Shun-Ichiro Tanaka, Katsumi Tsuchiya, Yuichi Tozuka, Yuko Tsuda, Hiroto Watanabe, Hiromitsu Yamamoto, Qiwu Zhang.

I apologize to those I did not mention unintentionally, due to my poor knowledge of their exact names in Japanese.

9. Contributions to networking between researchers in your alumni association's country and colleagues in Japan

This JSPS Bridge fellowship was for me a great opportunity to develop and improve the scientific network I began to initiate in 1999 during my stay as visiting Professor at the Tohoku University, and I continued to develop thanks to JSPS-CNRS joint projects and seminars with Japanese Universities from 2002, and thanks to the Rencontres de l' Enseignement Supérieur organized in 2010 (RES 2010) by the French Embassy.

My Bridge fellowship stay and activities have been extremely fruitful. It was the first time for me to visit in such a short time so many laboratories and Institutions in Japan, with the research as main objective. It gave me an overview of the research in Japanese Institutions, and I could confirm the high level of research carried out in Japanese Institutions.

It helped me a lot to have a clearer vision of the possible collaborations in a near future, and some applications will be proposed to various JSPS programs in 2012 and 2013 by myself and my colleagues.

Aknowledgements:

I would like to aknowledge sincerely:

- The JSPS for selecting my candidature and providing me this opportunity of this Bridge fellowship FY 2011.
- My French JSPS alumni association in Strasbourg, its president Marie-Claire Lett, and Yoichi Nakatani, Director, JSPS, Strasbourg.
- Rapsodee Center (CNRS UMR 5302), Ecole des Mines d'Albi (Université de Toulouse), Institut Mines Telecom, Ministry of Economy, Finances and Industry, France, for accepting and supporting this exceptional mission.
- My host researcher, Prof Fumio Saito, for his kindness, welcoming me and taking care of me despite his very busy schedule, due to his retirement end of March 2012.
- All the Professors, researchers, staffs and students who kindly received me in their Institutions in Japan to allow me to develop the research network between Japan and France.

In the end, I would like to dedicate my work and this report to the people of Tohoku, Japan, who are under the great difficulties by the consequence of earthquakes 2011, in testimony of respect for their courage and dignity. I am sure they will overcome these difficulties and their hard experience will contribute to build an even better future for Japan.