

(For JSPS Fellow)

Form B-5

Date (日付)

5/10/2013 (Date/Month/Year: 日/月/年)

**Activity Report -Science Dialogue Program-**  
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): Xin-You Lü (ID No. P12204)

- Participating school (学校名): Junior High and Senior High School at Komaba, University of Tsukuba

- Date (実施日時) 5/10/2013 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Controllable superconducting qubit

(in Japanese) 制御可能な超伝導量子ビット

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

In the lecture, first of all, I introduced myself and my own country. The common and different points between china and Japan were presented. Also, I introduced the detail information of RIKEN to the students. Then, I presented my motives for becoming a scientist. It is the amazing quantum world pushes me to do research. The simple principle of quantum mechanics was explained. As an example, the Schrödinger's Cat state was talked in detail. Last, I talked about my main research topic, superconducting qubit. Superconducting circuits are the very small and very cool circuit, and its size is in nanoscale and temperature can be close to absolute zero. I explain how to design and cooling the superconducting circuits. The application of the superconducting circuits also is talked in detail. I also show my recent work in the topic of how to control the superconducting circuit.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 (分), Q&A time (質疑応答時間) 15 (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

used projector

◆Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

◆Name and title of accompanied person (同行者 職・氏名)

◆Other note worthy information (その他特筆すべき事項):

---

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。):