

(For JSPS Fellow)

Form B-5

Date (日付)

19/07/2012 (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): Tracy Becker (ID No. P 12070 )

- Participating school (学校名): Siga Prefectural Hikone Higashi High School

- Date (実施日時): 18/07/2012 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Seismic Isolation for Buildings

(in Japanese) 建築物の免震機構

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

Base-isolation is used in architectural engineering to help protect buildings in earthquakes. In base-isolation a flexible layer is placed between the ground and the building; when there is an earthquake the building can then move separately from the ground. This helps to do two things: 1) protect the building from damage and 2) protect the building contents (computers, furniture, lights, plumbing etc) from damage. There are many methods in architectural engineering that are used to protect buildings in earthquakes; for example, the building can be made stronger. However, making a building stronger can actually increase the damage to the contents by making the building stiff which can cause very high accelerations. Isolated buildings are flexible which normally results in low accelerations. To make sure that isolation works well for many types of applications and to develop new isolation technology, researchers need to use computer models of isolation systems and buildings as well as run physical experiments. We will talk about how base-isolation works and show an example of developing a model for a new type of isolation system.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 40 min (分), Q&A time (質疑応答時間) 20 min (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))

\_\_\_\_\_ Power point presentation \_\_\_\_\_

◆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))

\_\_\_\_\_ Interpretation done by accompanying person \_\_\_\_\_

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

\_\_\_\_\_ Mayako YAMAGUCHI, 1st year Masters student \_\_\_\_\_

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

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- 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。):

大学生でも理解が難しい内容なので、高校生には一層理解しづらいことだったと思います。それでも、事前に配布した要約(英文)と専門用語の解説(日本語)を使って予習してきた生徒は、専門的な内容も少し理解できたようでした。