

(For JSPS Fellow)

Form B-5

Date (日付) 30/9/2015

(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): KONSTANTINOS SKALOMENOS (ID No. P 15066)
- Participating school (学校名): KYOTO PREFECTURAL YAMASHIRO HIGH SCHOOL
- Date (実施日時): 05/11/2016 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) EARTHQUAKE ENGINEERING – BASE ISOLATION
(in Japanese) 地震工学 – 免震技術
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Base isolation is used in structural engineering to protect buildings in earthquakes. In base isolation a flexible layer is placed between the ground and the building; when an earthquake is acting the building can 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 structural 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. The lecture presented how base-isolation works and showed examples of developing models for a type of isolation system.

- Language used (使用言語): English
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 30 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))
With projector, many videos, conducted simple experiments in front of the students, bring a base isolation device
 - ◆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))
Assistance by accompanied Japanese person
 - ◆Name and title of accompanied person (同行者 職・氏名)

Mr. Hironari Shimada, 1st year Master Student in Kyoto University

◆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。):

講演者である Konstantinos Skalomenos 氏は、90 分間を最大限に活用して、たくさん
の写真や動画、実演やディスカッションを交えた面白くアクティブな授業を展開してく
れました。事前準備では、科学への関心はあるが免震構造についてはよく知らない日
本の高校生に対して、いかに直感的で分かりやすい授業を行おうかと試行錯誤し、コ
スタス自身にとってもいい経験になったと思いますし、学生の皆さんにとってもギリシャ
の文化に触れながら地震工学について学べる非常にいい機会になったと思います。

学生の皆さんは、少々英語が難しいところや、英単語を知らないところであっても、
写真や動画から内容を推測しようと取り組む姿が見受けられ、普段の「英語」に特化し
た授業とは一味違った経験ができたのではないかと思います。