

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付)
15/11/2018 (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): Longobardi Giorgia (ID No.P178009)
- Participating school (学校名): Ikeda high School, Kagoshima
- Date (実施日時): 22/10/2018 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Italy, UK, Japan the research path and discoveries of a Power Electronic Engineer
- Name and title of your accompanying person (講義補助者 職・氏名)

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- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 120 (分), Q&A time (質疑応答時間) 20 (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))
Projector, video material

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

The lecture focused on 2 main points: 1) The country I am from (Italy) and the country where I have carried out most of my research (UK). The main cities of Italy and their tradition in art and physics were discussed. The experiment by Galileo Galilei from the Pisa tower was shown in this context. Customs and traditions of the Italian culture were also shared with the students with the aim of showing a different culture and way of living. Similarities were also discussed. In fact Napoli, the city where I am from in Italy, and Kagoshima have been sisters cities since 1960 and the two cities have many things in common. Cambridge University and the unique system of the College education was then shown. I discussed about the importance of travelling for doing research and the importance of the language. 2) I introduced my research on semiconductor devices. A video on the principle of operation of a transistor was shown and the use of it in a simple LED drive circuit was discussed. This triggered an interesting discussion on doping techniques and transistors applications. The use of efficient power devices, which is the focus of my research, and the need of them to reduce the energy wasted in power conversion circuit was highlighted. In the discussion with the teacher Nakazono-san, I have also discovered that Hikeda high school was the high school of Akasaki sensei, 2014 nobel prize in Gallium Nitride. Gallium Nitride is the

material I research so it was a pleasant surprise for me.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

It was a great experience and I strongly recommend to participate to this programme. It is a way to share your research and your origins and trigger in you and potential future scientists the curiosity that is the source of scientific success.

- Other noteworthy information (その他特筆すべき事項):

- Impressions and comments from the accompanying person (講義補助者の方から、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。)