

(For JSPS Fellow)

Form B-2  
(FY2018)

Date (日付)

18/05/2018 (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): Robin Scheibler (ID No. P17049 )

- Participating school (学校名): 山梨県大月都留高等学校

- Date (実施日時): 17/052018 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Digital Ears: Helping computers listen to humans

- Name and title of your accompanying person (講義補助者 職・氏名) I went unaccompanied.

- Lecture format (講演形式):

◆Lecture time (講演時間) 80 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))

Lecture with accompanying slides on projector, practical demonstrations during the lecture and some free time at the end.

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

Human ears are very sensitive instruments. We can easily understand a friend in a noisy crowd, or pick up the sound of car in the distance. Like Zatoichi, the blind masseur and swordsman, we do not need our eyes to find someone in the dark. Our ears guide us.

Recently, it has become possible to talk to computers. However, and in contrast to humans, computers are not that good at listening. When recorded with a microphone, all sounds are mixed together and it becomes difficult for a computer to separate the important signal, the human voice, from all the surrounding noise (train, cars, etc).

Just like humans have two ears, computers can use multiple microphones to gain the ability to track sound in space. It is then possible to locate sound sources and selectively listen in some directions only. It is even possible to separate the voices of two persons talking at the same time. During this lecture, I will explain the fundamental concepts behind all these techniques and illustrate them with live demonstrations and experiments.

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

I would recommend in general to speak slowly and clearly, using simple words. Spend extra time/repeat difficult concepts. In general, the level of english of the students was better than I had anticipated, and it seems they followed through the lecture without losing much interest. I had peppered the lecture with demonstrations and some actions to try and keep the interest up. So hopefully, that worked.

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

It was a very good experience, the interaction with students was nice.

- 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。)