

(For JSPS Fellow)

Form B-5

Date (日付)

18/9/2014

(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): Niklas Bergström (ID No. P12740)

- Participating school (学校名): Fukushima High School

- Date (実施日時): 12/9/2014 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) An Introduction to Computer Vision

(in Japanese)

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

Recent year's explosion of cheap cameras and fast computers, as well as smartphones, has generated great advances in the field of computer vision. In our daily lives we notice this in applications such as the face detector or the panorama function in our cameras and phones. In my talk I explained some aspects of this field of research. First I gave an overview of what is simple and what is hard in computer vision. This part was contrasted with our abilities as humans to understand what we see. Here the students were asked to participate in the lecture and finding out more about their own visual processing system through images and videos showing their strengths and weaknesses. I talked briefly in the second part about my main research, object tracking and segmentation, and some of the related research that is done at the Ishikawa-Watanabe lab at University of Tokyo. Since this can be quite technical I used several videos to demonstrate the results of my research. In the final part was about computational geometry, i.e. how it is possible to infer geometrical structures from images. This part was concluded with a demo where the students got to experience a device made at the lab that provides a natural way of visualizing slices of 3D objects by only moving a plastic sheet on which an image is projected.

- Language used (使用言語): English (with some Japanese)

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 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))

Projector for most parts, and in the end a demo

Must be typed

- ◆ 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))

_____ Provided some explanation in Japanese myself

- ◆ 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。):