

(For JSPS Fellow)

Form B-5

Date (日付)

23/11/2015 (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): Miklós Pálfia (ID No. P14320)

- Participating school (学校名): Hiroshima University Fukuyama High School

- Date (実施日時): 14/11/2015 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) My life as a mathematician

(in Japanese)

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

First I have introduced the students the history of my country, Hungary. I gave a short historical outlook and some basic facts about the Hungarian language and culture. Then I talked about the Hungarian educational system and some famous Hungarian scientists. I explained the system for mathematics education in Hungary and the reasons of its success. Then I briefly introduced my cv and the story of my life so far, in particular how I became a researcher and how I became interested in mathematics.

The second part of the lecture was about my research topic and interests in mathematics. I introduced some basic notions of metric geometry and topology. I discussed the recently solved, long standing problem of the Poincaré conjecture. I introduced the basic notion of a gradient flow, which was one of the key tools in the resolution of this conjecture. Further I introduced my other topic of interest, operator theory. I have linked the two fields to one another by introducing some optimization problem which can be formulated either as an operator theoretic or metric geometric problem. I briefly explained how to solve such an optimization problem with gradient flows and how this solution leads to some interesting set of operator functions to study.

After the lecture we continued the discussions at the blackboard, talking about some famous formulas in function theory and infinite series. In particular the Basel problem was mentioned which was solved by Leonhard Euler.

My impression was that the students were motivated by this event and were encouraged to read certain books about mathematics.

- 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))

used projector and blackboard

◆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))

none

◆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。):