

Form B-5

Date (日付)

18/12/2012 (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): Faezeh Arab Hassani (ID No. PE 12023)

- Participating school (学校名): Kanazawa university- Fuzoku High School

- Date (実施日時): 17/12/2012 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) How I made my career in micro/nano-electro-mechanical systems (MEMS/NEMS)?

(in Japanese)

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

In the social part of my talk, first I presented the life, culture, a few of famous scientists, and education in my home country, Iran, where I did my BSc and MSc and then the life and education in United Kingdom where I did my PhD. This part also includes some information about Japan Advanced Institute of Science and Technology (JAIST) university where I am currently doing my postdoctoral research as a JSPS fellow. In the scientific part, first I talked about the reason that I chose micro/nano-electro-mechanical systems (MEMS/NEMS) as my research area since I was doing my BSc then I explained the concept, applications, fabrication and operation of MEMS/NEMS followed by the integrated-circuit (IC) technology especially the operation of a transistor. I have showed a short movie and did a demonstration to explain them the concept of resonance frequency that is an important parameter for MEMS/NEMS. Then I presented my PhD research and postdoctoral research in the NEMS area that consists of the operation and characterization of the designed and fabricated NEM sensors during my PhD in more details. I told them how the NEM sensors are fabricated by the integration of NEM and transistor parts and what are the applications of these ultra sensitive sensors. I gave them some friendly advices to be used for their future life and career.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 min (分), Q&A time (質疑応答時間) 50 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, powerpoint, a demonstration to show the concept of resonance frequency, a short movie on the concept of resonance frequency

- ◆ 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))

My supervisor helped me for the Japanese explanation

- ◆ Name and title of accompanied person (同行者 職・氏名)

Prof. Hiroshi Mizuta

- ◆ 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。)

My supervisor gave me a nice feedback on my talk and my demonstration.

今回の講演では、講演中に2回、また講演後に1回の質疑応答時間を設けましたが、学生側から多くの質問がありました。また途中の休憩時間にも個別に何人かの学生が質問に来るなど、全体をとおして大変活発な雰囲気でした。講演内容はナノテクノロジーですが、高校生にも理解できる範囲の物理と、具体的な応用を豊富に紹介することで、聴衆の興味を引くことができましたと感じています。また、講演者 Faezeh Arab Hassani さんが女性であり、イラン(学部・修士)→英国(博士)→日本(JSPS Postdoc)と国際的なキャリアパスを実践していることから、将来グローバルに仕事をしたいと考えている学生には、大変良い刺激になった様子でした。私にとっても現役高校生の声を直に聞ける大変貴重な機会となりました。ありがとうございました。