

様式 A-1
(FY2023)

R6 年 4 月 3 日

サイエンス・ダイアログ 実施報告書

1. 学校名・実施責任者氏名: 北海道登別明日中等教育学校・小林 夢仁
2. 講師氏名: Dr. Fucheng TIAN
3. 講義補助者氏名: Haixin Zhang 様
4. 実施日時: R6 年 3 月 12 日 (火) 13:30-15:20
5. 参加生徒: 1 年生 人、 2 年生 57 人、 年生 人 (合計 57 人)
備考: (例: 理数科の生徒)
6. 講義題目: ダブルネットワークゲル
7. 講義概要: 講義
8. 講義形式:
☒ 対面 ・ ☐ オンライン (どちらか選択ください。)
1) 講義時間 80 分 質疑応答時間 20 分
2) 講義方法 (例: プロジェクター使用による講義、実験・実習の有無など)
プロジェクター使用による講義、実験
3) 事前学習
有 (どちらかに○をしてください。)
使用教材 本校担当が CDC よりダウンロードした論文資料
9. その他特筆すべき事項:

Form B-2
(FY2023)
Must be typed

Date (日付)
12/03/2024 (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): Fucheng Tian (ID No. P23023)
- Name and title of the accompanying person (講義補助者の職・氏名)
Haixin Zhang, Master
- Participating school (学校名): Hokkaido Noboribetsu Akebi Secondary High School
- Date (実施日時): 12/03/2024 (Date/Month/Year: 日/月/年)
- Lecture title (講義題目):
Understanding the fracture of materials: numerical modeling
- Lecture format (講義形式):
◆☒ Onsite ・ ☐ Online (Please choose one.)(対面 ・ オンライン)((どちらか選択ください。))
◆Lecture time (講義時間) 70 min (分), Q&A time (質疑応答時間) 20 min (分)
◆Lecture style(ex.: used projector, conducted experiments)
(講義方法 (例: プロジェクター使用による講義、実験・実習の有無など))
used projector
- Lecture summary (講義概要): Please summarize your lecture within 200-500 words.

This lecture consists of three parts: presentation, code demonstration, and Q&A session. In my presentation, I first introduced myself, including my background, education, work experience, and research interests. Then, I presented the background and application scenarios of my research. In my presentation, I started by introducing myself, including my background, education, work experience, and research interests. Then, I presented the background and application scenarios of my research. My research mainly focuses on the numerical modeling of fracture problems, which involves some complex mathematical and mechanical knowledge. In order to make it easier for students to understand and be more interested, I created many simulation animations to showcase the algorithms and codes I developed, as well as some practical soft material fracture problems using the developed algorithms and codes. Finally, I shared some of my experiences and feelings of doing research with the students, hoping to inspire their passion for scientific research. In the code demonstration part, I took a specific soft material fracture problem as an example to demonstrate the basic simulation process of finite element mesh generation,

numerical modeling, solving, and visualization of simulation results, so that students can have a more intuitive understanding of numerical simulation. In the Q&A session, I answered students' questions about my choice of research, my decision to come to Japan to do research, and the applications of my research.

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

Overall, I felt that the interaction with the students was a bit lacking. This could be because my presentation was too specialized, making it difficult for the students to ask questions.

- 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。):

I am very fortunate to have participated in this project. The enthusiasm and active participation of Japanese high school students deeply impressed me. I am also extremely grateful for the kindness and warmth of the teachers. I hope to have the opportunity to participate in this project again.