

大学名	愛媛大学		
University	Ehime University		
学部/研究科	大学院理工学研究科		
Faculty/Department	Graduate School of Science and Engineering		
研究指導者	矢田部 龍一	職名	教授
Research Advisor	RYUICHI YATABE	Position	Professor
帰国留学生	ティミルシナ マニタ		
Former International Student	Manita Timilsina		
派遣期間	2016年12月21日 ~ 2016年12月28日 (8日間)		
Period of Stay	8 days (Dec 21, 2016 - Dec 28, 2016)		

< 帰国留学生プロフィール/Profile >

国籍	ネパール
Nationality	Nepal
所属機関	コパ工科大学 / ヒマラヤ保全会・講師
Affiliation	Khwopa Engineering College, Himalaya Conservation Group / Lecturer
現在の職名	講師
Position	Lecturer
研究分野	地すべり防災学
Major Field	Landslide Mitigation Science



Prof. Yatabe explains to me the technique of using wirenet as debris slide barrier.

< 研究指導者からの報告/Research Advisor Report >

① 研究指導概要 / Outline of Research Guidance

当初予定していた内容を少し変更し、研究指導の内容として数回の地すべり斜面崩壊現場視察調査とGIS解析や地震時斜面安定解析について教えた。現場視察に2015年の地震でもっとも被害が激しかったアラニコ国道と被害の少なかったカトマンズ～ポカラ間国道を訪れ、地震時発生した斜面崩壊と一般的に地すべり斜面崩壊について指導し、それぞれの特徴を把握する方法についても指導を行った。また、屋内作業として、GISを用いた分布解析や最大加速度を用いた簡易斜面安定解析法について指導した。今回の研究指導内容を中心1~2本論文を仕上げるよう指導している。また、ネパールの今後の防災なり方や防災教育の重要性について指導し、将来防災教育者として活躍されるようアドバイスを与えた。

② 研究指導の成果 / Results of Research Guidance

帰国留学生のManita Timilsina氏への今回の指導は修士・博士論文研究指導と異なっていて、現場視察しながら指導を行ったので彼女にとって分かりやすかったと思っています。彼女の学問的理解がまだ不十分なところもあり、現場を見ながら学問を説明してあげると大体理解することが分かりました。彼女は留学時代にGISを中心にした地すべりハザードマッピング法の研究を行っていたが、今回土質力学の観点から地すべりや自然斜面の安定性評価方法について触れる機会になり、地すべり学者として彼女に自身が付いたと思っています。また、彼女は現在設計マニュアルに基づくロックネットを用いた落石、土砂崩壊対策技術やその設計法に携わっており、これらの対策設計の基礎を教えたことにより、彼女の理解が深まったと思っています。ある防災セミナーにおいて、私の基調講演を通じてネパールの防災のあり方や防災教育の必要性についても教えることができました。

③ 訪問大学等での学術交流 / Scholarly Exchanges Done at Universities Visited, etc.

愛媛大学は2007年以来ネパールの主要大学と学術交流を行っており、今回訪問したコパ工科大学も協定校のトリブバン大学とブルバンチャル大学の組織である。帰国留学生のManita Timilsina氏はコパ大学で講師として過去3年間修士課程の授業を担当しています。また、同時に大学以外の時間をNPO環境防災の研究組織であるHimalaya Conservation Group (ヒマラヤ保全会)の事務所長として勤めています。愛媛大学はコパ工科大学とヒマラヤ保全会と常に交流があり、今回新たな学術交流について会合を持てなかつたが、帰国留学生を通じて両機関との共同研究や交流への意向を示しました。

また、今回ネパールを訪れる機会があったため、元愛媛大学留学生の同窓会が中心に関係者を招いて防災セミナーも開催されました。そのセミナーにおいて、私は基調講演を行うことになり、もちろん帰国留学生のManita Timilsina氏も参加させ関係者皆さんと交流をはかった。約80名の参加者が集まり、愛媛大学関係者が30名参加しました。基調講演の内容は「ネパールの防災のあり方や防災教育の必要性」でありました。

<帰国留学生からの報告/Former International Student Report>

①研究指導の成果 / Results of Research Guidance

※Attached on a separate page.

②今後の計画 / Further Research Plan

※Attached on a separate page.

③本事業に対する意見・感想等 / Your general impression and opinion about the Follow-up Research Guidance

※Attached on a separate page.



Prof. Yatabe handover a digital camera and a handy GPS device for my field investigation/survey use.



Prof. Yatabe looks at Jure Landslide (occurred in August 2014) and explains to me the effect of earthquake.



Prof. Yatabe delivers keynote lecture in a seminar with disaster-related people and invitees.



Prof. Yatabe talked about the reason of his visit to Nepal this time and introduced me to the seminar participants.

JASSO Follow-up Research Guidance Report

Submitted by: Manita Timilsina

Academic Advisor: Prof. Ryuichi Yatabe (Ehime University)

1. Contents of Research Guidance:

Prof. Ryuichi Yatabe arrived in Kathmandu on 21 Dec. 2016, and on this day we had a brief meeting at my office to discuss the schedule and confirm overall program. Next day morning, we headed for field inspection of slope failures and landslides along Arniko Road on the northeast of Kathmandu, which has been severely damaged by the 2015 earthquake. In the field, Prof. Yatabe specifically taught me the tricks to estimate the size of the slope failures and to identify the type of material involved in the failure. Different from our earlier plan, on the third day we participated in a seminar organized locally in which Prof. Yatabe was scheduled to make a keynote presentation on importance of disaster risk reduction education in disaster-prone countries. I had a great time learning many different things in the field of disaster mitigation science.

On 24 Dec., differing from our earlier plan, we went around in the Kathmandu valley for visual survey of building and historical monument damage and learned about the basic damage pattern of the old traditional structures in the valley. On 25 Dec., Prof. Yatabe took me to Kathmandu-Pokhara road on the west of Kathmandu for a day long visual survey of existing roadside landslide areas, where I had another chance to learn about the situation of large-scale landslide in mid Nepal Himalaya. Next day, we had an overall review meeting at my office and discussed my further research plan. Prof. Yatabe promised to help me in my research plan and encouraged me to continue working in the field of landslide science and engineering. At the same time, he taught me the basics of designing rockfall protection net in Japan because we have been working on this field in Nepal for last one year. On 27 Dec. I took him to my college for a brief tour but unfortunately due to unavailability of college officials, we were not able to see anyone at the college. On the way back from my college, we stopped over at a place where there was a massive ground displacement during the 2015 earthquake. He taught me a little about liquefaction risk in Kathmandu Valley. Finally, in the same evening we had a dinner meeting for about two hours, and during the dinner too, he taught me many different things about importance of disaster education in Nepal.

2. Results of Research Guidance:

As a result of Prof. Yatabe's research guidance to me this time, I have had a greater confidence in my understanding of landslides and slope failures especially those induced by earthquakes. He has motivated me to write a few research papers and submit them in international journals, which I plan to do within this year although it is not really easy to concentrate on research papers due to teaching work load. I have promised to him that I will do my best to write papers, especially focusing on the work we have done this time. Moreover, he encouraged me to write landslide issues in national newspapers so that general public can also be aware of roadside landslides and slope failures. I hope I will also do it soon. He has also asked me to plan a collaborative research with his team at Ehime University, and I hope I will be able to write a proposal on studying earthquake-induced landslides in the Nepal Himalaya.

3. Further Research Plan

As stated in No. 2 above, I plan to write and prepare a few research papers, newspaper articles, and a research proposal on earthquake-induced landslides in the Nepal Himalaya for a collaborative research with Ehime University. I have been basically working in field of GIS (Geographic Information System) and landslides, so I plan to use the GIS techniques in

preparing earthquake-induced landslide hazard maps for different parts of mountainous area of Nepal. I hope Prof. Yatabe and his research team will help me in this plan.

4. Your general impression and opinion about the Follow-up Research Guidance

This program is very helpful in having a chance to meet with our former research supervisors as well as continue research collaboration. This time, I had a great time with Prof. Yatabe because he taught me what he did not while I was in Japan doing Master and PhD studies under him. This program has also helped me acquire a set of handy GPS device and a handy digital camera, which will help me in my future research work. I very much appreciate the JASSO follow-up research guidance program, which made it possible for me to have Prof. Yatabe here in my country especially for my research guidance.

Thank you.

Manita Timilsina
Kathmandu, Nepal
6 January 2017