

平成29年度「学術交流協定校との国際シンポジウム開催支援事業」報告書
 “Grant for International Symposium with Academic Partnership University in FY 2017” Report Form

申請区分 Type of Symposium	Bタイプ（大学院学生支援型）		
部門名 Division	Division of Field Engineering for the Environment	実施責任者 職・氏名 Organizer(Title, Name)	Associate Professor Michael Henry
	Division of Field Engineering for the Environment	実施担当者 職/学年・氏名 Applicant(Title./School Year, Name)	Joel Opon (D2, Field Engineering for the Environment) Hayato Takahashi (D2, Field Engineering for the Environment)
シンポジウム名 Symposium Title	6 th International Doctoral Symposium “Synergy in Civil Engineering Research towards the Realization of a Global Sustainable Society		
実施期間 Date, Time	November 8, 2017 (8:30 – 20:00) November 9, 2017 (8:30 – 20:00) November 10, 2017 (7:40 – 17:30)		
シンポジウムの具体的な開催内容 Describe the contents of the symposium	<p>The 6th International Doctoral Symposium with the theme ‘Synergy in Civil Engineering Research towards the Realization of a Global Sustainable Society,’ was held on Nov. 8-10, 2017 at the School of Engineering Building, Hokkaido University. The major goal of the symposium was to be an avenue for discussion of issues relevant to sustainability in various Civil Engineering research fields, which are contributory efforts for the attainment of various Sustainable Development Goals (SDGs) of the United Nations, particularly Goals 9, 11, 12 and 13. About 89 on record attended the 3-day symposium composed of the students coming from different sister universities overseas and in Japan together with the graduate students (both presenters and not) and professors of Hokkaido University, and the invited speakers.</p> <p>The event was formally opened by the Dean of the Graduate School of Engineering, Prof. Yukinori Kobayashi. The first day of the symposium unfolded with a series of lectures in the morning and two Ph.D. Student’s oral presentation sessions thereafter. The lecture series began with the Keynote Speaker Dr. Koji Sakai, representative of Japan Sustainability Institute, Sapporo, and one of the leading experts on concrete sustainability, who talked about the mysterious word sustainability. Dr. Sakai pointed out that several actions, publications, organizations, and standards were created and are being created or modified to address sustainability issues encompassing from research works towards application stages. He further detailed the benefits of integrating the concept of sustainability into one’s own research. The keynote was followed by two lectures from our distinguished guests. Director Tomoki Kanenawa, of the Japan International Cooperation Agency (JICA), discussed on JICA’s development initiative for road asset management an effort directed towards the attainment of safe and resilient civil infrastructure systems, a program targeting developing countries, particularly around Asia. He was followed by Dr. Yasuyuki Hirai, the Director of the River Management Division of Hokkaido Regional Development Bureau, who lectured about the water resources of the world and in Japan, he also emphasized how the management of such present several benefits ensuring availability of water and improving sanitation, the main theme of SDG 6.</p> <p>On the afternoon of the first day, Ph.D. students had their oral presentations for the first two sessions. Four students discussed their research on the topic Green and Resilient Infrastructure, which is the session 1, and five Ph.D. students presented for the Sustainable Construction Materials topic, the session 2. The presentations in session 1 focused on pipeline maintenance, use of radar for concrete structure inspection, and cost management using BIM. Whereas session 2 presentations discuss primarily the sustainable concrete indicators, and the use of alternative materials to make concrete. The activities of the first day ended with a welcome dinner held at the engineering cafeteria.</p>		

On November 9, 2017, the second day of the symposium, the remaining 4 sessions for 15 Ph.D. student's oral presentation continued as well as the poster presentations by the graduate students of HU and Kagoshima University. The oral presentations was composed of 3 major topics, one was on Sustainable Transportation, Urban Planning and Contributions to Climate Change (session 3), another on Sustainable Construction Materials (sessions 4 and 5), and lastly on Water Resources and Consumption (session 6). Session 3 presenters talked on different areas related to the topic, specifically on the correlation of hurricane and damage, and on dyke slope strength both of which are issues relevant to climate change. Also presented are the travel time reliability and the efficiency economy indicators. In the two sessions for sustainable construction materials, most presenters discussed on the use of alternative materials to make concrete for specialized applications and functions, some discussed on concrete deterioration mechanics due to chemical attacks, and the use of modeling to predict corrosion damage. The last oral presentation session focused their discussion on river morphology, particularly on bank erosion's effect on river bar formation, the use of modeling to describe bed wave's formation in rivers, and two students presented new technologies with an application on water treatment using magnetic core dendrimer and titanium-doped nanotubes. Part also of the activities of the second day of the symposium is the poster presentation by graduate students. In total there were 31 poster presenters who joined this activity, and several topics were presented from almost all areas of civil engineering. Students were able to exchange insights on areas they are most familiar with and it also introduced them to other research areas of the field through open and direct discussion with the poster presenters.

The second day was concluded by awarding 3 best presenters for oral presentation sessions and 3 best poster presenters were also selected during the closing ceremony. The research discussion activities, both the oral and poster presentations were formally ended by a closing remark from Assoc. Prof. Michael Henry, the main organizer of the symposium. After the closing ceremony, the participants then proceeded to a planned banquet and fellowship.

The third day was dedicated for a technical tour wherein the team went to several sites around Otaru City. They headed first from Sapporo to Otaru Port where they were able to tour around the total stretch of the port area by boat. They also learned how the port was constructed, which involved a series of concrete materials tests to find the right mixture and constituent materials necessary to reduce the deteriorating effect of the marine environment on concrete. In the afternoon the participants went to NEXCO construction site where an expressway project is under construction. The construction managers explained to the participants the details of the construction procedure which is designed to minimize wastage and reduce the impact of construction to the environment as well as on the social activities of the people living around the area. After which the team headed back to Otaru downtown area to for a free time tour and sightseeing since part of the purpose of this tour was also to introduce some famous tourist destination especially to the participants coming from overseas and to other international students studying in Japan.

The 3-day symposium manifested according to plan and schedule, with several activities held to engage all participants into a healthy research discussion and fellowship with one another, which is the start of future collaborations research in a multi-disciplinary research that integrates the principles of sustainability.

合計/Total 55 人/Participants			
内訳/Details (Ph.D. Students, Master's Students, Research Students, & B4 Students)			
人数/ Number of Participants	身分/Status	国/Country	所属機関名/University Name
2	Ph.D. Students	Australia	University of Sydney
2	Ph.D. Students	South Korea	Hanyang University
2	Ph.D. Students	Thailand	Kasetsart University
1	Ph.D. Student	Germany	Technical University of Munich
1	Ph.D. Student	Philippines	De la Salle University
2	Ph.D. Students	Canada	University of British Columbia
2	Ph.D. Students	Thailand	SIIT – Thammasat University
1	Ph.D. Student	China	Harbin Institute of Technology
1	Ph.D. Student	Japan	The University of Tokyo
1	Ph.D. Student	Japan	Saitama University
9	Ph.D. Students	Japan	Hokkaido University

出席者数
Number of
Participants

	5	Master's Students	Japan	Kagoshima University
	20	Master's Students	Japan	Hokkaido University
	2	Research Students	Japan	Hokkaido University
	4	B4 Students	Japan	Hokkaido University
シンポジウム 開催による成果 Outcome	<p>The symposium is guided by specific objectives, hence the series of activities were planned out to achieve them. In conclusion, the 3-day symposium successfully attained all the objectives since we are able to introduce the concept of sustainability and how it affect our research in general, and our speakers further showed that they are attainable in areas of different perspectives, such as on concrete material research, construction, water resources, and even agency goals such as in JICA can be aligned for sustainability. We are able to introduce and promote through our invited keynote speaker and lecturers crucial Sustainable Development Goals of the UN, in which researchers in the Civil Engineering field can contribute to.</p> <p>Through a series of oral presentation sessions and even through poster presentations activities, we attained our goal to have a free exchange of ideas among participants with diverse perspectives, this will provoke the improvement of their research quality and more importantly on widening the scope of their respective research to include the sustainability principles.</p> <p>Not only through research presentation activities, but other soft activities such as welcome dinner and banquet, and even the technical tour were able to create an atmosphere wherein participants from all over can freely communicate, talk about research and new ideas, build new friendship, which is anticipated create future research collaborations and strengthen the linkages of Hokkaido University and her sister universities.</p> <p>Through the poster presentation by master's, research, and few B4 students, they were exposed to an international research environment which likely honed their presentation skills and it also introduced them to a wider audience where diversity of idea is a norm.</p> <p>Lastly, despite being shorthanded most of the time, the student organizers of this symposium were able to develop their organizational skills, communication skill, ability to socialize with new people, and many other soft and transferable skills. These skills equip them to become better leaders and researchers in the future.</p> <p>In this symposium, several seeds of sustainability were planted in the young minds of the young researchers coming from a diverse background, country, and expertise, and opportunities such as this can nurture that seed so that in the future it can have a chain reaction effect to help us realize a global sustainable society.</p>			
今後の展望と課題 Future prospects and issues	<p>The open and free exchanges between participants of the symposium created lines of communications which could lead to future linkages and collaborations of researchers working on relatively similar ideas, or create trans- and multidisciplinary researches while making central the concept of sustainability. These are some of the expectations that this symposium is hoped to achieve in the long run as fruits of our labor.</p> <p>We are truly grateful that as organizers we made this event a success, but there are several items that need to be pointed out to guide and help future organizers from what we learned from this experience. Firstly, we recognize the importance of our previous experience in handling projects as one of the major factors that helped us hurdle the challenges that we faced while preparing for all the activities. The openness to new ideas and constructive criticism by others improved our plan and some mishaps were identified earlier on, which gave us the time to correct them. Transparency between the organizers and all people involved helped us build trust with one another. And, more importantly, the ability to multi-task, and delegating responsibilities or if possible outsourcing talents from others who are willing and are capable to do the expected jobs are our core tactics to free our full hands, and focus our energies towards more important matters. Lastly, the strong linkages of the main organizer of this symposium, Assoc. Prof. Michael Henry, with overseas universities, colleagues abroad and to international organizations propelled us to reach our goals for this event. Patience also played a central role in everything that we do. Perhaps, what we will suggest to future organizers is to make clear the relevant accounting rules and discuss them thoroughly with the accounting personnel prior to inviting overseas participants.</p>			

その他
(本事業の要望等)
Comment for the
Grant

We are thankful that this kind of opportunity fell into our hands in the first place, and with the grant, we are able to initiate and eventually made the symposium happen successfully and overshooting the initial target that we expected to achieve after adjusting our budget to match with the actual amount than what we originally proposed. Our original proposal was to invite 15 overseas students from HU's sister universities abroad, what we managed to fund is 12 students from overseas, despite the fact that what we actually received is only 75% of the proposed amount which could have only accommodated 9 students. Thankfully, the strong linkages of the main organizer as mentioned in the previous section, another student was able to attend and fully funded by Kasetsart University, increasing the number of overseas students to 13, just 2 students away from our original target.

The connection of the main organizer with JICA also helped us reduce the budget for the speakers, and by inviting local but internationally renowned speakers also substantially reduced the cost intended for the speakers, and this surplus were used to augment our budget in order to invite more students from overseas, and had it not been because of these strategies we won't be able to increase the number. If our proposed budget was not reduced maybe we could have invited more students over and create even more dynamic activities.

The reduced grant made us more resourceful and even more constrained since we recognized that flight fares fluctuate with time, which gave us lesser opportunity to invite people from far places, but with our quick invitations, we were able to invite 5 students outside Asia (from Canada, Germany, and Australia). There were also items that we did not anticipate from our previous application, such as items D, H, and J shown in the following section, and these items are also crucial to be considered by future applicants of the grant, however despite that, we are able to apportion part of surpluses and the contingency fund to cater these items.

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申請区分 Type of Symposium	Bタイプ（大学院学生支援型）			
部門名 Division	Division of Sustainable Resources Engineering	実施責任者 職・氏名 Organizer(Title, Name)		Professor Mayumi Ito
	Division of Sustainable Resources Engineering	実施担当者 職/学年・氏名 Applicant(Title,/School Year, Name)		M2 Kenta Noto
シンポジウム名 Symposium Title	1st KAMPAI Symposium Sustainable Management of Resources and Environment in the 21 st Century			
実施期間 Date, Time	November 6-8, 2017			
シンポジウムの具体的な開催内容 Describe the contents of the symposium	<p>The conference on <i>1st International KAMPAI Symposium</i> on Sustainable Management of Resources and Environment in the 21st Century, organized by Hokkaido University, Division of Sustainable Resource Engineering was the first of its kind to bring together scholars from various parts of the world to share knowledge and state of the art technologies to help solve the challenge of heavy metal contamination in Kabwe, Zambia, Africa as well as other contaminated sites in the world. The conference was attended by 87 scholars from 4 countries from Zambia and Japan as well as countries such as Serbia and Thailand. The theme of the symposium was well interpreted by the scholars in areas such as:</p> <ol style="list-style-type: none"> 1. Environmental Risk Assessment and Management; 2. Remediation of Contaminated Sites; 3. Mining Engineering; 4. Environmental and Resources Geology; 5. Waste Management and Recycling; and 6. Contribution to Global Environmental Problems. <p>As an indication of the seriousness with which the issue of contamination poses to both human health and the environment, JICA representative Professor Hosoi emphasized the need for scholars to network to tackle the issue of heavy metal contamination. The conference had three section which include keynote speeches and lectures, poster presentation as well as oral presentations.</p>			
出席者数 Number of Participants	合計/Total 87 人/Participants			
	内訳/Details			
	人数/ Number of Participants	身分/Status	国/Country	所属機関名/University Name
	8	Professor	Zambia	University of Zambia
	1	Professor	Thailand	Chulalongkorn University
	68	Student/ Professor	Japan	Hokkaido University
	5	Student	Serbia	Mining and Metallurgy Institute Bor, Serbia
5	Student/ Professor	Japan	Akita University	
シンポジウム開催による成果 Outcome	<ol style="list-style-type: none"> 1. Goals and objective of the conference were met which were exchange of ideas and recent advances in the fields of sustainable resources management and environment protection. 2. Causes of lead contamination status of Kabwe, Zambia, how challenges can be addressed and opportunities can be leveraged for better community. 3. Actions needed to further advance the cleanup in Kabwe to ensure the achievement of its goals and objectives are met for each group in the KAMPAI 			

	<p>project; and</p> <p>4. Conference presentations were proceeded from knowledge to application to evaluation of the contamination.</p>
<p>今後の展望と課題 Future prospects and issues</p>	<p>1. Interact with many colleagues with expert experience of the theme.</p> <p>2. Share in the experiences and work of colleagues from the best-known universities and industry across the world, such as in USA and Europe that have had research work in heavy metal contamination and remediation</p> <p>3. Establish international networks and contact colleagues from other countries working on the same issues</p>
<p>その他 (本事業の要望等) Comment for the grant</p>	<p>none</p>