



SOCIETY OF ECONOMIC GEOLOGISTS, INC.
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Student Chapter Annual Report Cover Page

Submission Deadline: September 30th

Submit to: studentprograms@segweb.org

Month/Year Reported: From 02/2022 (mm/yyyy) – To 02/2023 (mm/yyyy)

Check if update
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STUDENT CHAPTER:

Name: Akita University

University Affiliation: Akita University

Mailing Address: 1-1, Tegata-Gakuenmachi, Akita010-8502 Japan

Dedicated E-mail: segsc.akitauniversity@gmail.com

Website: _____

Logo: _____

Facebook: Society of Economic Geologists- Akita University Student Chapter

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LinkedIn: https://www.linkedin.com/company/seg-sc-akita-university

YouTube: https://www.youtube.com/@segakitauniversitystudent

Chapter Executive Committee (*in office during the time frame captured on this report*) (type “Vacant” if position not filled):

The new committee is reported on the Student Chapter Membership Information form (SCMIF).

President:	<u>Leeysmon Hulijeli</u> Name	<u>leeys.hulijeli@gmail.com</u> E-mail
VicePresident:	<u>Kotaro Seno</u> Name	<u>koutarou_apophyllite_323@yahoo.co.jp</u> E-mail
Secretary:	<u>Shoma Yamada</u> Name	<u>yamashowaterpolo@gmail.com</u> E-mail
Treasurer:	<u>Mallika Intachai</u> Name	<u>mallika_i@hotmail.com</u> E-mail

Chapter Academic Sponsor:
Yasushi Watanabe Check if SEG Fellowship in good standing
Name E-mail 018-889-3083
1-1, Tegata-Gakuenmachi, Akita 010-8502 Japan
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Chapter Industry Sponsor (*not affiliated with the student chapter’s institution*): Check if SEG Fellowship in good standing
Kazuyo Hirose hirose-kazuyo@jspacesystems.or.jp
Name E-mail Phone
The Kikai Shinko building 3F, 3-5-8 Shibakoen, Minato-ku, Tokyo 105-0011 Japan
Address Fax

Sponsoring Institution or Company(name): Akita University

The SEG Student Chapter of Akita University (SEGAU-SC)

Student members of SEGAU-SC as of January 31st, 2023.

No.	Name	Degree	Nationality	SEG student member
1	Leeysmon Hulijeli	PhD	Papua New Guinea	<input type="radio"/>
2	Kotaro Seno	MSc	Japan	<input type="radio"/>
3	Mallika Intachai	MSc	Thailand	<input type="radio"/>
4	Shoma Yamada	MSc	Japan	<input type="radio"/>
5	Bui Tinh	PhD	Vietnam	<input type="radio"/>
6	Omar Soberano	PhD	Philippines	<input type="radio"/>
7	Joseph Santos	MSc	Philippines	<input type="radio"/>
8	June Born Born	MSc	Myanmar	<input type="radio"/>
9	Fadlin Fadlin	PhD	Indonesia	<input type="radio"/>
10	Mohammed Ali	PhD	Egypt	<input type="radio"/>
11	Micky Mmanga	MSc	Tanzania	<input type="radio"/>
12	Marilyn Moshi	PhD	Tanzania	<input type="radio"/>
13	Treenay Tungrat	MSc	Thailand	<input type="radio"/>
14	Renaldi Suhendra	PhD	Indonesia	<input type="radio"/>
15	Abir Kaoula	MSc	Algeria	<input type="radio"/>
16	Masahiro Sunada	MSc	Japan	<input type="radio"/>
17	Enrico Suharjo	PhD	Indonesia	<input type="radio"/>
18	Junmpei Akita	MSc	Japan	<input type="radio"/>
19	Naoki Igarashi	MSc	Japan	<input type="radio"/>
20	Taiyo Okazaki	MSc	Japan	<input type="radio"/>
21	Jonathan Macuroy	PhD	Philippines	<input type="radio"/>
22	Euclesia Cossa	PhD	Mozambique	<input type="radio"/>
23	Masaya Koseki	PhD	Japan	<input type="radio"/>
24	Mudasirullah Stanikzai	MSc	Afghanistan	<input type="radio"/>
25	Tom Arnold	MSc	Germany	<input type="radio"/>
26	Mhd. Adiansya Gurusisinga	PhD	Indonesia	<input type="radio"/>
27	Jaish Chand	MSc	Fiji	<input type="radio"/>
28	Kazuki Hirata	MSc	Japan	<input type="radio"/>



秋田大学
Akita University



ANNUAL REPORT

SOCIETY OF ECONOMIC GEOLOGISTS AKITA UNIVERSITY - STUDENT CHAPTER

2022/2023

Prepared by:
2022 Executive Committee

Acknowledged by:
Prof. Yasushi Watanabe – Academic Advisor



SEG Student Chapter of Akita University

2022 – 2023 Annual Report



1. Introduction

The Society of Economic Geologists Student Chapter of Akita University (SEGAU-SC) was formally established on April 13th, 2015. Since its establishment the SEGAU-SC has been an active student chapter carrying out numerous field trips, presentations and activities in affiliation with the immense support of its parent SEG organization. Even with covid travel and meeting restrictions the chapter still endeavored this year to host major events involving several SEG international guest lecturers and organize and execute a major field excursion to the Iwate Prefecture of Japan covering several geological deposits and sites of interest. In addition, this year we sought greater cooperation with our sister SEG student chapter at Kyushu University, this has led to joint seminar sessions with increased participant attendance, as well as future plans to organize a combined field excursion event for both chapters in Japan.

This report will briefly highlight the following activities the chapter was involved in:

- ❖ Seminar – “Sediment-hosted Gold Deposits of SE Asia” by Douglas Kirwin
- ❖ Public Seminar Event – SEG visiting lecturers: Keiko Hattori and Jeffery Hedenquist, as well as student presentations (June 9th, 2022)
- ❖ Seminar – “Witwatersrand: The Great Controversy on the Genesis of the World’s Richest Gold Province” by Hartwig Frimmel (August 5th, 2022)
- ❖ Seminar – “Introduction to Practical Mining Geostatistics” – Dr. Rogelio Laraya (August 19th, 2022)
- ❖ SEGAU-SC Field Excursion – Iwate Prefecture, Japan (September 10th – 12th)

The SEGAU-SC has a diverse cast of members, some of which hail from Africa, Central Asia and East Asia as well as the Oceania. The research being pursued by our members focus on a wide range of economic resource deposits from Cu-Au porphyry to REE bearing carbonatite and Fe-Ti placer deposits. In total our chapter comprises of 28 active student members, 24 of which are registered SEG student members.

Students in our student chapter are expected to conduct various activities to improve their skills and knowledge in the economic geology field, as well as broaden their networking with other SEG members from other institutions and professionals from the mining industry. The present document summarizes the activities conducted by SEGAU-SC for the period of between January 2022 to January 2023.



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2. Chapter membership and structure

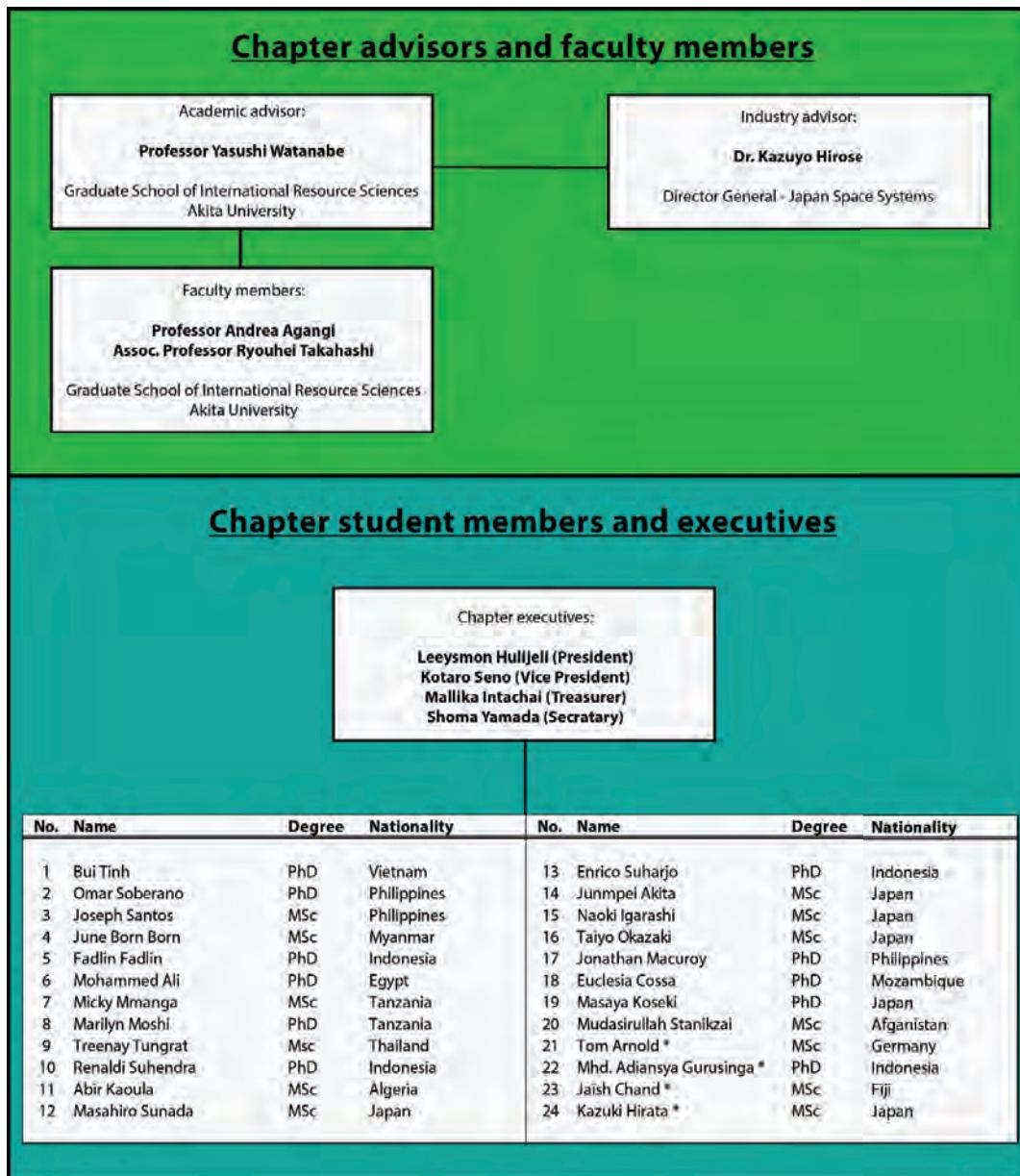


Figure 1. Organization structure of the SEGAU-SC for 2022. Names marked with an asterisk (*) are not currently SEG student members.



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3. Student Chapter Activities and Organized Events

Event 1: “Sediment-hosted Gold Deposits of SE Asia” presentation by Douglas Kirwin

We were quite fortunate to have Douglas Kirwin (SEG Honorary Lecturer) to present his talk titled “Sediment-hosted Gold Deposits of SE Asia” to our members via online in May this year. The seminar was conducted online via Zoom and was attended by 44 participants.

During the talk he went through in detail the characteristics of sediment-hosted gold deposits (SHGD) in terms of their mineralogy, petrography, geochemistry and genetic model, as well as the linking them to the best exploration methods and techniques to use for SHGDs. The presentation was very well received, especially with many of our student members who hail from Myanmar, Thailand, Indonesia, Vietnam, and Laos, some of which are conducting research specifically into sediment-hosted and orogenic gold deposits in this region. Participants in this event were mainly students from Akita University and Kyushu University here in Japan, as well as the University of Gadjah Mada, Indonesia. We were also fortunate to have several exploration geologists experienced in SHGD in SE Asia attend adding their immensely valuable insight to the discussions.

It was a pleasure to have Douglas present his very interesting talk and share with us his wealth of knowledge. We look forward to welcoming him back hopefully this time in-person to Japan and Akita University in the future.



Figure 2. Banner for the first SEGAU-SC organized online seminar for 2022.



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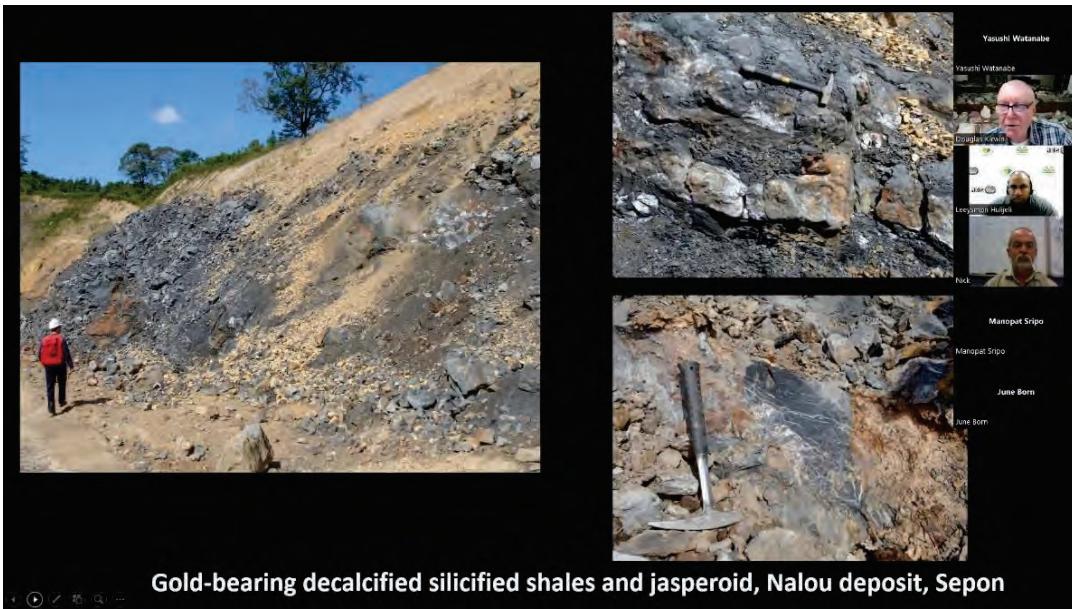


Figure 3. Screen shot of online seminar session presented by SEG honorary lecturer - Douglas Kirwin

Event 2: Public Seminar presented by SEG visiting lecturers Keiko Hattori and Jeffery Hedenquist (June 9th, 2022)

The major seminar event hosted by the SEGAU-SC for 2022 was a public seminar event held on the 9th of June at the Faculty of International Resource Sciences, Akita University Japan. We were so fortunate to have distinguished SEG lecturers Keiko Hattori and Jeffery Hedenquist attend in-person and present their very interesting talks. We had close to 100 participants attend the event consisting of mainly student and academic faculty members from the Faculty of International Resource Science, Akita University.

The list below shows the presentations that were made during the event.

SEG visiting lecturers

1. "Use of Zircons in Mineral Exploration: Opportunities and Cautionary Notes" by Keiko Hattori
2. "Multiple formation environments of advanced argillic alteration; exploration implications" by Jeffery Hedenquist

Student Oral Presentations

1. "Trace elements and U-Pb dating of zircon from the Humpa Leu East porphyry Cu-Au prospect, Sumbawa Island, Indonesia: Implications for petrogenesis and magma fertility assessment" by Fadlin (PhD student)
2. "The Awak Mas Metamorphic-hosted gold deposit, South Sulawesi, Indonesia: Controversy on its genesis" by Renaldi Suhendra (PhD student)



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3. "Sediment-hosted gold mineralization at the Gegalaw Deposit in Central Myanmar" by June-Born Born (MSc student)
4. "Provenance of detrital magnetite in Orokolo Bay Fe-Ti placer deposits, Papua New Guinea: implications for source rock petrogenesis" by Leleysmon Hulijeli (PhD student)

Poster presentations

1. "Overview of Rare Earth Elements in Vietnam" by Bui Thanh Tinh (PhD student)
2. "Geochemical discrimination of zircon source rocks using machine learning techniques" by Keita Itano (Faculty member, Akita University)

We were very fortunate to have both Keiko Hattori and Jeffery Hedenquist visit and give their very interesting lectures to our participants. The program was a resounding success as it gave to opportunity to interact and receive valuable advise from both visiting lecturers. We look forward to future engagements and visits in the future.

Society of Economic Geologists (SEG)
Akita University
Student Chapter

PUBLIC LECTURE EVENT 2022-02

"Successful use of indicator minerals in exploration"

Including Student Oral and Poster Presentations

Thursday 9th June
13:00 – 16:00 (JST)

Akita University, Faculty of
International Resource Science
Building, Room No. S302

Professor Keiko Hattori & Professor Jeffery Hedenquist

SEG International Exchange Lecturers
University of Ottawa, CA

For more information contact: segsc.akitauniversity@gmail.com

Please follow us on: [in](#) & [YouTube](#)

Figure 4. Banner for the Public Seminar Event.



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Figure 5. Jeffery Hedenquist is seen here discussing with one of our student members, Bui Thanh Tinh about his poster presentation (left). Keiko Hattori is presenting her talk to their audience consisting of both student and faculty members (top-right). Group photo taken with both visiting lecturers and the SEGAU-SC members after the public seminar event (bottom-right).

Event 3: “Witwatersrand: The Great Controversy on the Genesis of the World’s Richest Gold Province” presentation by Hartwig Frimmel (August 5th, 2022)

During the month of August we had the pleasure of inviting the SEG Thayer Lindsey lecturer of 2022 Professor Hartwig Frimmel of Julius-Maximilians-Universität of Würzburg (JMU). He presented he's very interesting lecture one of most debated topics in economic geology titled “Witwatersrand: The Great Controversy on the Genesis of the World’s Richest Gold Province” via online seminar which was attended by 38 participants from Akita University and Kyushu University, Japan. This meeting was special since a number of our student members have research projects in that deposit and have even had the chance to visit South Africa to see the rock outcrops mentioned in the presentation firsthand.

In his presentation, Professor Frimmel described in the controversy surrounding the Witwatersrand Basin and existing models that have been proposed for its genesis, going into detail on the mineralization, structures and controls on ore enrichment that have been identified so far. For many of our student members the presentation provided a rare opportunity to gain insight into Pre-Archean geology and Paleo-environments. It was fascinating to how biological processes and the unique paleo-atmospheric conditions had an influence role to play in the genesis of this deposit especially with regard to metal accumulation and endowment. The talk was a great opportunity to learn more about one of the greatest gold rich provinces in the world as well as the interesting debate and controversy surrounding its genesis.



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Figure 6. Banner used for the online seminar by Professor Hartwig Frimmel

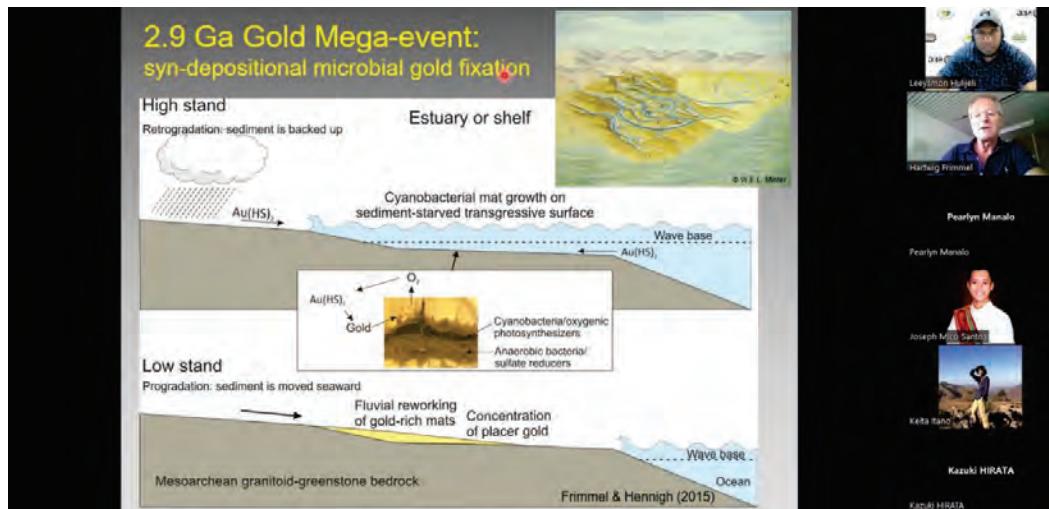


Figure 7. Screen shot of the webinar session during the presentation by SEG Thayer Lindsey lecturer - Professor Hartwig Frimmel



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Event 4: “Introduction to Practical Mining Geostatistics” presentation by Dr. Rogelio Laraya (August 19th, 2022)

One of the aims for the SEGAU-SC during our tenure as executives was to broaden the scope of visiting lecturers so not only lectures focused on economic geology were presented, therefore we were fortunate to have Dr. Rogelio Laraya present his talk titled “Introduction to Practical Mining Geostatistics” to us. This done to garner interest from student within our faculty that had engineering (mining, petroleum and mechanical) backgrounds to participate in our chapter run activities. Dr. Laraya’s presentation was held online and was attended by 23 participants.

Dr. Laraya is a very experienced geophysicist from the Philippines who has over 40 years working in the mining industry from exploration, mining right up to the financial and management aspects of the mining industry. He was instrumental in the recently accredited Philippine mineral Resource Reporting Code (PMRC). His lecture covered the basic concepts in mining geostatistics including topics such as ore tonnage and cut-off grades, hedging and marketing, and finally the financial measures of feasibility. He’s talk was well received by our students many of which do not have much if not no experience in this aspect of the mineral industry.

We were very lucky to have Dr. Laraya present hs talk to our chapter, we have plans in the future to invite Dr. Laraya back to Akita to not only present more talks but run a short course on mining statistics for our students.

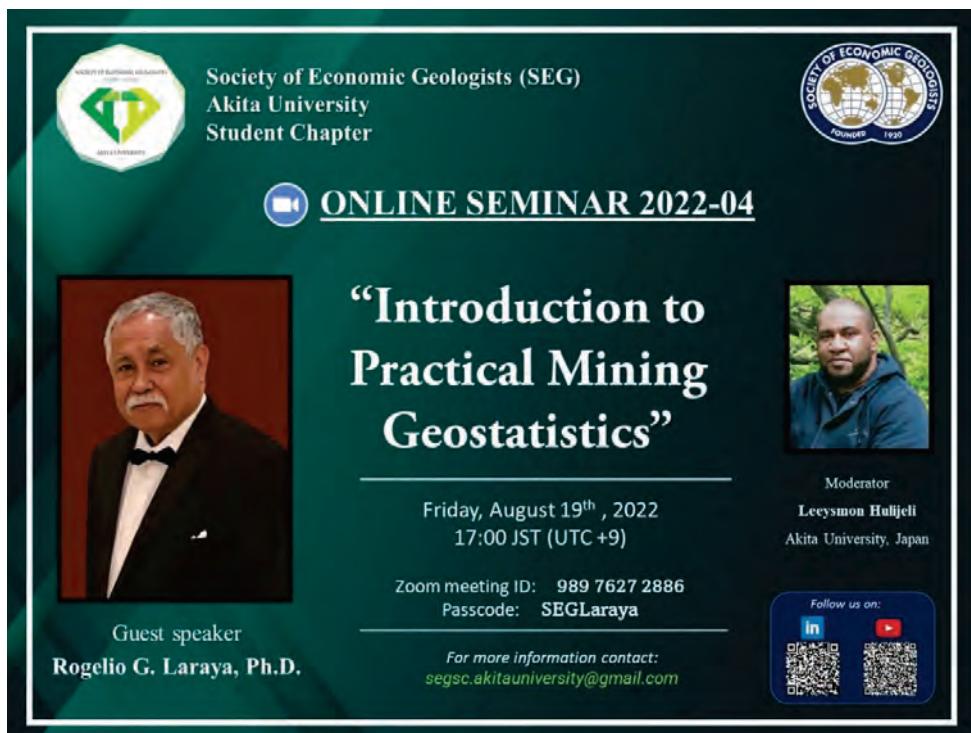


Figure 8. Banner for the online seminar presented by Dr. R Laraya



SEGAU-SC Field Excursion – Iwate Prefecture, Japan (September 10th – 12th)

In September 2022, the Akita University SEG Student Chapter (AU-SEGSC) organized a three-day field excursion to visit six separate sites within the Kitakami region of Iwate Prefecture, Japan. Some of the best-preserved and most coherent records of the evolution of the Japanese island arc predating the opening of the Sea of Japan are contained within geological units exclusive to this area.

The sites that were visited include: the Kuji Amber Museum, the Noda Tamagawa metamorphosed strata-bound Mn deposit, the Ryusendo limestone caves, Jodogohama adakitic rhyolite outcrop near Miyako City, the Tamayama pegmatite-vein hosted Au deposit, and the Kamaishi Fe-Cu skarn deposit and mine (Fig. 9). The theme of the excursion centered on field study of skarn and orogenic Au deposits in the Kitakami region of NE Honshu and its associated magmatic, hydrothermal, and metamorphic activities related to the Paleozoic-Mesozoic evolution of the Japanese island arc. It was extremely interesting to learn about the varied geology at each site and the different styles of mineralization.

The field excursion had twenty participants consisting of eighteen student members currently pursuing MSc and PhD research projects related to economic geology and was led by our chapter advisors Professor Yasushi Watanabe and Professor Andrea Agangi of the Faculty of International Resource Sciences, Akita University. The SEGAU-SC is deeply grateful to the Stuart R. Wallace Fund and Akita University for the immense support given to make this field excursion possible. We are also thankful for the support and time our chapter advisors Professor Yasushi Watanabe and Professor Andrea Agangi during the field excursion.

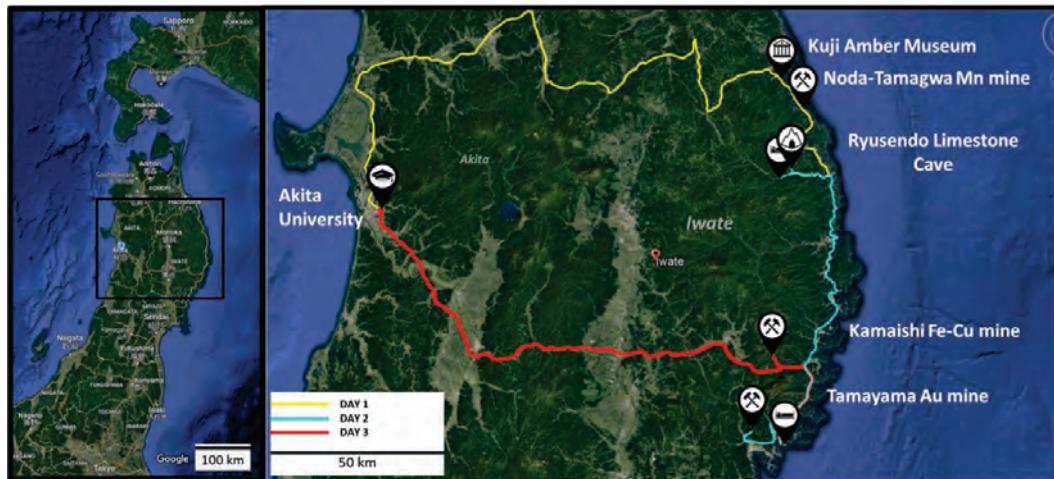


Figure 9. Location sites and route travelled during the field excursion.



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Figure 10. Collection of group photos taken at the different sites visited during the field excursion (2022)

Financial Report

The financial report from the 2022-2023 period is provided in the table below (Table 1). Much of funding for this year's activities especially for the field excursion was made possible through the generous support of the SEG Steward R. Wallace Fund and complimented by Akita University with contributions from field excursion participants. A lump sum of 195,760 JPY (USD \$1,500) was received from the SEG - Stuart R. Wallace Fund and put towards covering costs associated the field excursion. Contributions from field excursion participants (20 participants) amounted to 230,000 JPY. The total combined funds used for this field excursion equal 421,453 JPY. After acquitting for all associated costs, the remaining balance comes to 6,172 JPY. Scanned copies of all relevant receipts have been attached to the submitted field excursion report for 2022.



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Financial Statement

Date of receipt/payment	Reference	Description	Quantity	Unit Income	Unit Cost (JPY)	Line total (JPY)	Balance (JPY)
Contributions and Funding							
28-02-22		Opening balance - carry over funds from 2021	1		1,865	1,865	1,865
08-09-22		SEG Stuart R. Wallace Funding (US\$1,500)	1		195,760	195,760	197,625
09-09-22		Participant fee (11,500 JPY / Person)	20		11,500	230,000	427,625
Expenses							
07-09-22	01	Outdoor cooking supplies	1		-5,287	-5,287	422,338
08-09-22	02	Outdoor cooking supplies	1		-3,948	-3,948	418,390
10-09-22	03	Admittance fees (Kuji Amber Museum)	20		-400	-8,000	410,390
10-09-22	04	Admittance fees (Noda Tamagawa Mn Mine)	20		-600	-12,000	398,390
10-09-22	05	Highway toll - Car 2	1		-2,260	-2,260	396,130
10-09-22	06	Hiraiga Kaiso (Accommodation Day 1)	1		-70,000	-70,000	326,130
10-09-22	07	Gasoline - Car 3	1		-1,290	-1,290	324,840
10-09-22	08 - 13	Outdoor evening meal - food and preparation (assorted receipts)	1		-56528	-56,528	268,312
11-09-22	14	Entrance fee (Ryusendo Cave)	20		-930	-18,600	249,712
11-09-22	15	Entrance fee (Tanayama Au deposit)	20		-2,400	-48,000	201,712
11-09-22	16	Gasoline - Car 1	1		-3,172	-3,172	198,540
11-09-22	17	Gasoline - Car 2	1		-6,953	-6,953	191,587
11-09-22	18	Fureai Land Osaki (Accommodation Day 2)	1		-54,000	-54,000	137,587
11-09-22	19 - 22	Outdoor evening meal - food and preparation (assorted receipts)	1		-49,353	-49,353	88,234
12-09-22	23	Admittance fee - Kamaishi skarn deposit and mine	20		-250	-5,000	83,234
12-09-22	24	Highway toll - Car 2	1		-3,720	-3,720	79,514
12-09-22	25	Gasoline - Car 1	1		-1,000	-1,000	78,514
12-09-22	26	Gasoline - Car 1	1		-3,515	-3,515	74,999
12-09-22	27	Gasoline - Car 2	1		-8,257	-8,257	66,742
12-09-22	07	Gasoline - Car 3	1		-960	-960	65,782
12-09-22	07	Gasoline - Car 3	1		-2,410	-2,410	63,372
12-09-22	28	3-day lease of Car 3 (10 seater mini bus)	1		-57,200	-57,200	6,172
Summary							
						JPY 427,625	
						JPY 421,453	
						JPY 6,172	

Table 1. Financial statement of SEGAU-SC for the periods 2022 - January 2023.

Future plans and the closing statement

The SEGAU-SC has plans for the future to increase the cooperation between our own chapter and that of our sister chapter at Kyushu University. We have already taken steps in this direction by combining online seminar events so that more participants can attend thereby encouraging greater participation and discussion. We are also planning to host a combined field excursion which will involve members from both chapters to investigate interesting geological sites in Japan, this plan is still being formulated and it is our hope that this will be possible sometime later this year.



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These are some of the proposed SEGAU-SC aims and objectives that are planned for the 2023-2024 period:

- ❖ Election of new SEGAU-SC executive committee members on the 3rd of February 2023 for the 2023-2024 term.
- ❖ To plan and implement the Stewart R. Wallace Funded field excursion. We are tentatively considering Hokkaido (Japan) as the next destination for our field excursion.
- ❖ Organize public seminars and symposiums, both remotely and in person, permitting the Covid-19 situation in Japan.
- ❖ Promote the exchange of experiences and research ideas between our chapter members and the wider SEG community. This includes encouraging member participation in events organized by SEG as well as our sister SEG student chapters, such as the 2023 SEG Conference and 2023 PDAC-SEG Student Mineral Colloquium.
- ❖ Foster stronger ties with mining industry players in Japan and the wider Asia Region for new research, support, and collaboration opportunities.

In closing, we would like to sincerely thank SEG, the Stuart R. Wallace Fund and Akita University for the immense support of our chapter activities. We are also especially indebted to our chapter advisors Professor Yasushi Watanabe, Dr. Kazuya Hirose and Professor Andrea Agangi for their dedication and mentorship. On behalf of the outgoing executives of 2022 we thank you all for your support in one way or another, we look forward to further exciting challenges and opportunities with the SEGAU-SC and SEG in the future.

Contact information

segsc.akitauniversity@gmail.com

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This report has been prepared by the 2022 executive committee members of the Society of Economic Geology Student Chapter of Akita University.