



IISEE Newsletter



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International Institute of Seismology and Earthquake Engineering BRI Japan

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The 2022 Global Seismological Observation Training Course Closed

By Mr. Takahiro Yamada, Head of Administration Division, IISEE

The 2022 Global Seismology Observation course which started on January 10th, 2023 was closed on Friday, March 3th, 2023. At the graduation ceremony held by JICA Tsukuba, all the 8 participants from Algeria, Namibia, Nepal, Peru, Philippines, Samoa, Vanuatu received the certificates from Ms. Mutsuyoshi, Director general of Japan International Cooperation Agency (JICA) Tsukuba and Dr. Fukuyama, the president of Building Research Institute (BRI). Mr. Oualid from Algeria representing the participants expressed gratitude to them with his speech.

Although the training period was about two months, the participants were able to acquire the knowledge of the role of seismology in the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) regime and the International Monitoring System (IMS). They also studied global seismological observation technologies for monitoring nuclear tests and earthquakes and acquired data analytical techniques to differentiate nuclear tests from natural earthquakes, which we believe are useful in analyzing natural earthquakes in their own countries.

They also had the opportunity to experience the reality of the atomic bombing by visiting Hiroshima, where they visited the Atomic Bomb Dome and Hiroshima Peace Memorial Museum and listened to a lecture on the A-bomb experience.

We hope that the participants will share with many people in their home countries, what they've learned in Japan. We wish them the best of success in the future.

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IISEE-UNESCO Lecture Note



Ms. Emiko MUTSUYOSHI,
Deputy Director General,
Tsukuba Center, JICA



Dr. You FUKUYAMA,
Vice President of BRI



Mr. Yushi KUBO,
Secretary of MOFA



Mr. BOULAHIA Oualid
from Algeria



Receiving the Certificate



Receiving the Certificate



Group Photo

Earthquakes

Reports of Recent Earthquakes

Utsu Catalog

Earthquake Catalog

Closing Ceremony Speech on behalf of the Global Seismological Observation Course Participants

By Oualid BOULAHIA (Algeria)

Ms. Emiko MUTSUYOSHI, Director General, Tsukuba Center, Japan International Cooperation Agency

Dr. Hiroshi FUKUYAMA, Vice President of Building Research Institute

Mr. Yuji KUBO, Arms Control and Disarmament Division, Disarmament, Non-Proliferation and Science Department, Ministry of Foreign Affairs of Japan

Dear honorable assistant, Sensei, teachers, mentors, and fellow participants, Morning greetings.

As we come to the end of this training course, I have the honor of addressing this distinguished audience and thanking them for giving us a chance to participate in such a formative educational experience. It has been a privilege for us to learn, not only from but with you all.

Honorable guests, allow me to first express, on behalf of myself and my fellow participants, our sincere gratitude to :

- The Ministry of Foreign Affairs of Japan ;
- The Japan International Cooperation Agency ;
- The Building Research Institute ;
- The International Institute of Seismology and Earthquake Engineering ;
- The Japan Meteorological Agency ;
- The Comprehensive Nuclear-Test-Ban Treaty Organization ;
- and all other organizations that have contributed in any way be it big or small, to make this training course possible, useful, and enjoyable.

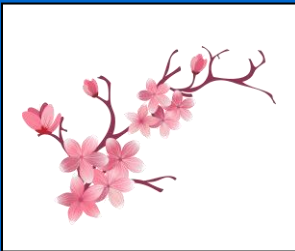
Ladies and Gentlemen, more than 280 participants from all over the world have taken part in this training course since its establishment in 1995. This year, there have been eight participants from seven different countries. On behalf of all the participants in the 27th Knowledge Co-Creation Program on Global Seismological Observation, I pay tribute to our Sensei, who are amongst the most knowledgeable professors and experts in the field of seismology, not only in Japan but throughout the world. Their dedication, their expertise, and their enthusiasm serve as an example to us all. Their unyielding guidance has made this training course a meaningful and engaging learning experience. Over the past two months, we have been able to enhance our understanding of seismology and gain new insights which have allowed us to discriminate nuclear tests from earthquakes. We have been able to participate in discussions and activities that

have played a fundamental role in broadening our perspective. We return to our home countries and respective institutions secure in the knowledge that we have the skills necessary to make a positive impact. We are extremely grateful for the field trips, which have not only helped us further our understanding of the impact of both natural and man-made catastrophes but have also given us the tools to mitigate or prevent damage that might occur in the future.

As an added bonus to our trip, we discovered the wonderful Japanese culture and saw first-hand how innovative the Japanese people really are. The town of Kyoto, Kinkaku-ji Temple, Mount Fuji, Mount Tsukuba, the Shinkansen bullet train, as well as Keiko Ogura-san, a bomb survivor, will stay imprinted in our minds forever.

As I reiterate our appreciation to our Sensei and the rest of the BRI staff, I'd like to thank Sakuma-san for her unyielding support in both our indoor and outdoor activities; we'll never forget you. Ladies and gentlemen, in closing, I feel justified in saying that the JICA Tsukuba Center / BRI and IISEE have been far more to us than an institute of learning. It has been, for these past two months, a home where a sense of family and friendship was nurtured into the strong ties of today ... ties that would never have been created without this program. I express my sincere wish that we remain close and that we continue to collaborate on our respective projects. I speak for both myself and my fellow participants when I say that we will miss this family and the beauty of this exquisite country, Japan.

Thank you so much !!! Dōmo Arigatō Gozaimasu !!! and in the Arabic language, "Shukran Jazilan Lakom.



Seismic Noise Survey at Mt. Tsukuba (February 9)

By Dr. Takumi Hayashida, Senior Research Scientist, IISEE

Mt. Tsukuba, located about 10 km north of BRI, is one of Japan's 100 famous mountains. The mountain is composed of hard rocks and is located away from urban areas with high cultural seismic noise, making it a suitable site for seismic observation. On February 9,



Global Seismological Observation Course participants practiced seismic noise measurement at Mt. Tsukuba.

The plum blossoms began to bloom, and it was a perfect day for the survey with a sense of spring coming.



Reports on Study Trip -Global Seismological Observation Course-

By ACHEMINE Yasmine (Algeria)

Day one:

We started the trip on Thursday, 2nd of February 2023 at TBIC and headed by bus straight to the capital Tokyo for a lecture held by Toyomi Sakamoto Sensei at the Japan Weather Association (JMA) titled "introduction of CTBT Regime Concerning Seismology in Japan and NDC" where we learned about the different organizations that work to prevent nuclear bomb testing and the relationships between them. We also learned about the various activities conducted at JMA and the tools used to do so. After a short visit in the headquarters, we made our way to the train



Enjoy, Now



Children's Peace Monument – 'This is our cry. This is our prayer. For building peace in this world'

station for three hours and half ride to Hiroshima by Shinkansen Nozomi train.

Contact Us

The IISEE Newsletter is intended to act as a go-between for IISEE and ex-participants.

We encourage you to contribute a report and an article to this newsletter. Please let us know your current activities in your countries.

We also welcome your co-workers and friends to register our mailing list.

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Day two:

As planned, we gathered at 8:15 am to take the bus to our first destination of the day; Hiroshima peace memorial where we got to see the Atomic Bomb Dome. It's the only remaining structure in the area where the first atomic bomb went off on August 6, 1945 and thanks to the efforts of the city of Hiroshima, it was maintained in the same condition as immediately after the bombing. The iconic story of Sadako Sasaki that inspired the building of the Children's Peace Monument is devastatingly and heart-breaking. After that, we were honored to attend a lecture by Keiko Ogura who is a survivor of the Hiroshima atom bomb. She is the epitome of hope, determination and strength. Her story is overwhelming, and one can never imagine the horrors that she lived through during and after the bombing. I had tears in my eyes when she pleaded with us to carry out her message and the whole time I remember thinking 'no-one deserves to go through this'. Finally, we visited the Hiroshima Peace Memorial Museum where we got to see pictures and read about all the stories Ogura-san told us. It is true that it takes a few seconds for a nuclear bomb to explode, but the consequences last for years spanning across generations.

At mid-day, we got on the road to Awaji Island for a guided tour of the Nojima Fault Preservation Museum. There, we clearly observed the distorted surface of the ground caused by the Southern Hyogo Earthquake of January 17th, 1995. The results of the seismic shock made me think about how suddenly a natural catastrophe can occur that will, in seconds, cause the loss of many lives, so the best way to prevent this is to be prepared. After the visit, we took the bus to Kyoto for the night.

Day three:

In the morning, we went to Kinkaku-ji (Golden Pavilion) after a bus tour of the city's famous monuments. The temple is gorgeous with its preserved architecture and golden walls that reflect the sun rays. The vast gardens and ponds inspire serenity and peace where interesting new things can be seen at every corner. After lunch, we took leave and returned to TBIC Tsukuba by Shinkansen Nozomi train.

By [CHAN KUM TONG Darcy Luuga Naivins \(Samoa\)](#)

Introduction to CTBT Regime by Toyomi Sakamoto

I attended a lecture on Instrumentation and Observation of seismic activities in Japan. I was introduced to the history of nuclear explosions relationship between CTBT and NDC. The tasks and responsibilities of Japan's NDC-1 were also clearly explained

with various new technologies used in each of the monitoring stations.

Atomic Bomb Dome, Hiroshima Peace Memorial Museum.

It was a pleasure and honor to visit one of the most famous and iconic Museums in the world, and I know not many people have had the chance to see and witness the ruins of the Hiroshima A-Bomb explosion. I could not find the exact words to express my emotions towards the chaos and evil that seems to linger on in this exact place, but my prayers for their souls to find peace. Witnessing inside the museum was more into depth of the tragic event, I could not stay in for long. I hope and pray that the flame burning outside of the park will go out soon as of nuclear technology because I know that it can be used in useful ways aside from weapons.



Talk by Ogura-san, an A-Bomb survivor.

Highest privilege and honor to meet one of the survivors, and I have so much respect for respected Madam Ogura-san. Experiencing this kind of chaos and pain in such a young age takes a lot of courage and mental strength to share and bare testimony of everything that happened during the A-Bomb explosion. It was almost as if I was there during the explosion, but I could not fit her shoes and have the strength to carry the burden and pain she had been through. During our lecture, it was very hard for me to make eye contact with her when she was sharing her experience when I walked over asking for a picture, I even had to sit beneath her feet when a photo was taken for in our culture, this action depicts so much respect and love. I can say that it was an experience of a lifetime for me to bear witness of the testimony being shared by one of the survivors of the most tragic event I grew up with only theoretical knowledge of. I hope and pray the world will be a better place in years to come and not repeat the evil that the past holds. For this madness is not of this world.

Nojima Fault Visit

This was my first time to ever witness and experience a Reverse – Strike slip fault and Right-lateral Reverse - fault in real life, and it was such an amazing experience to understand how some natural phenomena can work wonders in the natural world. Looking above the mountains from the museum it gave an understanding about how the level of the earth has elevated through time with respect to the Reverse - Strike slip fault, as mentioned before. I only had theoretical understanding about faults' properties and details.

Kinkaku-ji (Golden Pavilion)

Visiting the Kinkakuji Zen temple was a breathtaking experience witnessing it from across the pond. A peaceful place to reconnect with nature and meditation. Built to reflect the Kitayama culture and development during the Yoshimitsu times. A beautiful of place for tourist, and I had the honor of visiting during our trip.

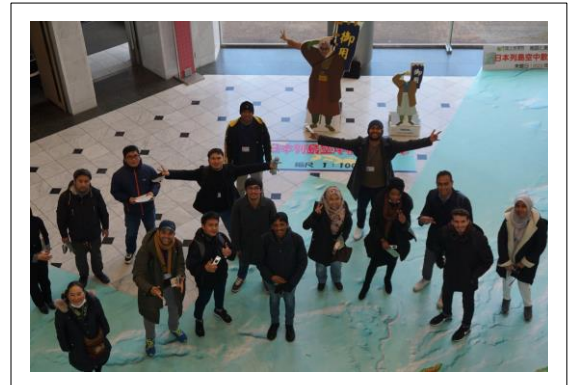


Group Photo

Visit to Geospatial Information Authority of Japan (January 25)

By Dr. Hiroto Nakagawa, Senior Research Engineer, IISEE

Fourteen participants visited the Geospatial Information Authority of Japan (GSI) on January 25th. First, two lecturers from GSI gave lectures on GSI's activities related to Global Navigation Satellite System (GNSS) and Interferometric Synthetic Aperture Radar (InSAR).



Then, other GSI staff introduced an outline of the main building of GSI with a seismic isolation system installed in 2010. The participants observed the seismic isolation system. After that, the participants visited the Science Museum of Map and Survey to learn about the history, principles, and new technologies of map and surveying technologies. During the visit to GSI, the participants had significant interests and active discussions.

Visit to National Research Institute for Earth Science and Disaster Resilience (February 10)

By Dr. Mai Ito, Senior Research Engineer, IISEE

Fourteen participants visited National Research Institute for Earth Science and Disaster Resilience (NIED) on February 10th. First, they watched an introductory video of NIED, then observed the Large-scale Earthquake Simulator. In the online lectures, a lecturer



introduced research activities of the Network Center for Earthquake, Tsunami and Volcano, and the Monitoring of Waves on Land and Seafloor (MOWLAS) that observes earthquakes/tsunamis/volcanoes covering all land and sea in Japan. The other lecturer from the Earthquake Disaster Mitigation Research Division gave the lecture on their research activities related to evaluation of seismic performance and functionality of structures based on the shaking table tests conducted by the Three-Dimensional Full-Scale Earthquake Testing Facility (E-Defense). The participants' high interests made active discussions.

Research Paper by Dr. Hayashida et al. Online in Geophysical Journal International

By Dr. Takumi Hayashida, Senior Research Scientist, IISEE

Vs30, the average S-wave velocity in the upper 30 m from the ground surface, is widely used to indicate ground-motion amplification. One way of the on-site Vs30 estimation is to conduct a microtremor survey. A research team of Dr. Hayashida (IISEE Senior Research Scientist), Dr. Yokoi (IISEE Visiting Research Fellow), and two former Seismology Course participants developed a new approach to estimate Vs30 quickly with minimal data processing without the influence of analysts or software. A part of this content was presented at last year's IISEE seminar. Anyone interested in applying the methodology is welcome to contact the first author.

The paper can be accessed free of charge at the link below.

<https://doi.org/10.1093/gji/ggad006>