

# UNISEC-Global The 28<sup>th</sup> Virtual Meeting

December 17, 2022, 22:00-24:00  
(Standard Japan time GMT +9)



**28th Virtual UNISEC-Global Meeting**

Host: UNISEC-Global  
Time: 22:00-24:00(JST)  
December 17, 2022

**Moderators**

- George Maeda, UNISEC-Global
- Nate Taylor, UNISEC-Global

**TOPIC**

- "Dream comes true" - 10-year experience in Mongolian Space Education
- Rei Kawashima, Secretary-General, UNISEC-Global
- Samuel Ndayizweye, UNISEC-Global Intern, Tokai University
- 12 Months with UNISEC-Global, "Bridging health and space"

**Year End Party, Reflecting on our journey**

Register here! <http://www.unisee-global.org/virtual-meeting.html>

Participants (Grid):

- G Maeda
- Samuel | UNISEC-Global Intern
- Bianca Szasz
- Enkhjargal Natsagdorj
- Rei Kawashima
- MC | Nate Taylor | UNISEC-Global
- Dr. Jorge Kurita
- Renzo Wee PH
- Bonny Omara
- Mohammed Khalil
- Munetaka UENO
- Toshi Yoshida
- Cristian Chavez (Chile)
- SU Nguyen Tien (VNSC)
- Edgar Mujuni
- Gladys Bajaro (UNISEC-PH)
- Judiel Reyes PH
- John Decena (UNISEC-PH)
- Jose Fernando Jimenez vargas
- Giovanna Ramirez Colombia
- Jyh-Ching Juang (Taiwan)
- K.Kitamura (Kyutech)
- Juan Saavedra

The following report was prepared by UNISEC-Global Secretariat  
November 19, 2022  
Japan

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## 1. Opening Remarks

George Maeda, UNISEC-Global

George Maeda graduated from the University of Maryland in 1981, with a BS degree in electrical engineering. He then received a master's degree in the same field from Cornell University in 1982. George has worked in AT&T Bell Laboratories, Panasonic and Kyushu University. At Kyushu Institute of Technology, he worked with Prof. Mengu Cho to bring the multi award-winning BIRDS program to over 15 countries helping to launch their first satellites for at least half of those nations. Currently, he works for a space startup ArkEdge Space as a business developer and is one of the regional coordinators for UNISEC-Global.



*Pictured: Maeda-sensei gives the opening remarks for 28<sup>th</sup> UNISEC-Global*

### Highlights:

- Overview of 28<sup>th</sup> UNISEC-Global Virtual Meeting
- Appreciation for continuous support for the whole year, UNIGLO conducted for 12 times
- Several new POCs this year, Nate will introduce them later
- Do you think 2023 will be better than 2022?
  - Optimists way more than pessimists
- New York Times bestseller of 1998's Wealth of Nations last paragraph:
  - The last paragraph stresses the importance of being an optimist
  - Optimists brings positivity that can bring achievement, correction, improvement and success
  - Pessimism can only offer the empty consolation of being right
  - Page 524 of the hardback edition

## 2. Presentation on “Dream Come True: 10 Year Experience in Mongolian Space Education”

Enkhjargal Natsagdorj, Speaking on behalf of Dr. Tsolmon Renchin.

Dr. Enkhjargal Natsagdorj holds a PhD degree in Geoinformatics and Remote Sensing from Ghent University in Belgium. Prior degrees were earned at the National University of Mongolia (M.S.) and the Mongolian State University of Agriculture (B.S.) in Mongolia. She has done her exchange research at the University of Vienna, Austria. Currently, she is a researcher of the NUM-ITC-UNESCO Remote Sensing and Space Science laboratory at the National University of Mongolia. Her research interests include Remote Sensing and GIS application for environment, ecology and natural resource management.



*Pictured Prof. Tsolmon Renchin*



*Pictured: Dr. Natsagdorj Enkhjargal Natsagdorj*

### Highlights:

- On behalf of Prof. Tsolmon of National University of Mongolia (NUM)
- Mongolia is located between China and Russia and is landlocked country, generally extremely cold
- Remote Sensing and Space Laboratory established in 2003
- UNISEC-Mongolia has 7 universities in Mongolia
- CanSat Leader Training Program in 2021 first
- Mongolia has joined CLTP many times in the decade, most recently in 2022
- “Temuulel” NUMSAT-2 satellite project through Mongolian Space Technology Association (MOSTA)
- Temuulel satellite development team has a big team including graduate and undergraduate students
- NUMSAT-2 started in 2019 mainly for capacity building and design testing
- The budget is about \$150,000 and the launch will be on 2024
- The project is based on BIRDS-1 and BIRDS-3 design
- Kyutech, ONDO Space LLC and the National Space Council of Mongolia met in Japan in Nov 2022
- Grand Sumo legend Mr. Hakuho Sho signed the signing ceremony
- Agreement for cooperative project
  - Kyutech supports research and testing of satellites
  - ONDO Space provides opportunities for Mongolian engineers to build satellites
  - National Space Council provides support Mongolian engineers to study at Kyutech
- MJEED (Mongolian Japan Education Development) Project since 2016 to send students to Japan
- Partners: NUM, Kyutech, Chiba Uni., Hokkaido Uni. and National Astronomical Observatory of Japan
- Liquid Crystal Tunable Filter Camera for spectral measurement with drone at Hokkaido University
- Multispectral camera to calculate NDVI which can be used for crop/environmental sector
- Future mission to develop MicroSat development with the hyperspectral camera mission
- Citizen Science Project: MARS\_V
  - Goal to connect mankind’s vision to reach Mars
  - Make environment for people to train and conduct experiments for Mars to colonize the planet
  - Mongolian Gobi is close to Mar’s landscape, with harsh climate with +40 to -40 C
- Amateur courses for high school students
- STEM programs for high school and university students
- Unique role in facilitating space programs, thanks to UNISEC-Global for opportunity for collaboration

### Q&A:

**Rei Kawashima:** Thank you for that nice presentation. I heard that the new company in Mongolia, they got some investors from Japanese company. That company and UNISEC-Mongolia has some relationship?

**Enkhjargal Natsagdorj:** Ondo Space LLC is from Mongolian company and they have a connection already in Japan.

**Rei Kawashima:** The newly developed company is UNISEC-Mongolia’s member or not?

**Enkhjargal Natsagdorj:** Ondo Space LLC is not yet member of UNISEC-Mongolia

**Rei Kawashima:** The reason why I am asking is that the corporate membership is very important for funding or sponsorship. It would be nice if you could involve them in UNISEC-Mongolia activities.

**Enkhjargal Natsagdorj:** Yes, I agree with that.



### 3. Presentation on “The UNISEC-Global 2022-Activities Review”

Rei Kawashima, UNISEC-Global

Ms. Rei Kawashima has contributed to micro/nano/pico satellites for education and business applications through her leadership role in the UNISEC that she co-founded in 2002. In 2013, she was appointed as the Secretary-General of UNISEC-Global, an international NGO that she co-founded in 2013 and was accepted as a permanent observer of UNCOPUOS in 2017. She organizes training programs and technology competitions to facilitate university's participation in space projects worldwide and especially in emerging countries.



*Pictured: Kawashima-san highlights activities done by UNISEC-Global for 2022*

#### Highlights:

- UNISEC-Global non-profit, non-governmental and international organization
- 24 Local Chapters, 60 Points of Contact, 213 University Members
- In 2017, accepted as a permanent observer by UN Committee on the Peaceful Uses of Outer Space
- Primary objective is to create a world where space technology is used by all for benefit of mankind
- Vision 2030-ALL: every country should have space-related experts to use space technology
- In UN's agenda 2030, no one should be left alone
- Activities include: Training programs, conferences, debris related activities and international collab
- Before 2013, CLTP, MIC, Nano-satellite Symposium and UNISEC-Global Meeting conducted
- In 2020, all programs postponed and virtual meetings began
- UNISEC-Global conducted both virtual and in-person events in 2022
- February 2022: UNISEC-Turkey organized 18<sup>th</sup> Virtual UNISEC-Global Meeting, was interesting
- March 2023: UNISEC-Nepal showed diverse research activities in space in 19<sup>th</sup> Virtual Meeting
- May 2023: UNISEC-India hosted 21<sup>st</sup> Virtual Meeting with more than 1000 participants
- June 2023: UNISEC-SAR (South African Region) organized 22<sup>nd</sup> Virtual Meeting
- August 2023: UNISEC-Philippines organized 24<sup>th</sup> Virtual Meeting
  - Education, research, government policy and industry coordination in parallel
- November 2023: UNISEC-Egypt organized 27<sup>th</sup> Virtual Meeting and had important people over
- MoU with International Academy of Astronautics (IAA), supported since 2011
- How can we contribute to IAA? is the next question
- CLTP11 resumed after two years, in person event with 21 participants from Aug 17-31, 2022
- CanSat Leadership Training Program (CLTP) is a training program for trainers
- CLTP was launched in Oct 2010, first training in 2021
- 117 participants from 50 countries have taken part in the annual training
- From CLTP-4 to CLTP-7 used i-CanSat kit and from CLTP-8 onwards used HEPTA-Sat
- Reduce the gap between CanSat and real satellite (CubeSat) using HEPTA-Sat
- 11<sup>th</sup> Nano-satellite Symposium, 8<sup>th</sup> UNISEC-Global and Pre-MIC8
  - October 17-21 in Istanbul, Turkey
  - Website: <http://www.unisec-global.org/meeting8.html>

- Multiple satellite mission and formation flying for Preliminary Workshop for 8<sup>th</sup> Mission Idea Contest
- Unfortunately, not all participants could come, Q&A also done virtually
- Conference Management Workshop was a unique program funded by METI on Oct 17-21, 2022
- Practiced several tasks of registration, presentation and public relation; presentation also done
- UNISEC-Taiwan organized HEPTA-Sat training in Taiwan in November 2022
- 2023 important year as 20<sup>th</sup> anniversary for UNISEC, 10<sup>th</sup> anniversary for UNISEC-Global
  - Statement at UNCOPUOS
  - CLTP-12 in August
  - HEPTA-Sat training in Africa?
  - UNIGLO9 and MIC8 in Nov or Dec in Tokyo in Japan
  - Local chapter activities should take place in each region
  - UNISEC-Global restructuring and new function
- UNISEC-Global Secretariat
  - Email: [secretary@unisecc-global.org](mailto:secretary@unisecc-global.org)
  - Website: <http://www.unisecc-global.org>

## 4. Presentation on “Bridging Health and Space”

Samuel Ndayizeye, UNISEC-Global

Samuel Ndayizeye is a native of Rwanda and is perusing his BioMedical Engineering undergraduate studies at Tokai University in Japan. Fluent in Japanese, Samuel worked as an interpreter in Global Peace Foundation and Tokyo International Conference on African Development. From March 2022, Samuel joined UNISEC-Global as Secretariate staff intern and has been part of UNISEC-Global events since.



*Pictured: Kawashima-san highlights activities done by UNISEC-Global for 2022*

### Highlights:

- Focus on the important word “journey”
- Three main components of journey include the start, process and destination
- Destination: bridge health and space
- The main component is not the start nor destination but it’s the process
- Process includes UNISEC-Global because provided the opportunity to learn, grow and get wiser
- Joined UNISEC-Global in March 2022 which was start of the internship
- Posed to graduate in March 2023, but would have loved to stay on with UNISEC-Global
- Expectation before joining UNISEC-Global
  - Bridge: Health and Space (Primary Target)
  - Explore: The possibility of establishing a new local chapter
  - Pick: To pick up new skills
  - Brush: To brush up on current skills

- Expand: Expand my professional network
- Working in series of events such as Virtual UNISEC Global Meeting as organizing team
- Mission Idea Contest (MIC) to understand missions that exist and are planned in the future
- CLTP to learn more about the satellite (worked behind the scenes instead of directly being involved)
- Contact through emails with UNISEC-Members
- In August 2022, funding to travel to Rwanda to seek possibility of establishing a new local chapter
- Very thankful for UNISEC and Nakasuka-foundation
- Got to meet Chief Strategic Officer at Rwanda Space Agency (RSA)
- Homework showed that space technology had so much to offer in health innovations
  - Always about saving lives through space technology
  - Monitoring, Medical Consultations and Diagnosis
  - Space technology involved in
    - Treating emergencies remotely
    - Creating medical databases
    - Tracking infectious diseases
    - Monitoring life signals remotely (example of monitoring of pacemaker)
- Involved in youth organization that tracks malaria
  - Track habitats, human activities that affects those habitats from space
- Main takeaway:
  - Journey continues until next March (2023) at least
  - Professional feedback received and thank you to Kawashima-san
  - Professional networking
  - Work experience which is rare for university students
  - Extensive knowledge on space technology while working for UNISEC
- In 2023: career exploration, joining professional world, learn and growing, and global networking
- African Proverb “If you want to go fast go alone, if you want to go further go together”
- Modified and created new proverb:
  - “If you want to go fast go alone, if you want to go further/learn/grow and develop, go together”
  - What UNISEC and Kawashima-san stands for
- Thanks to UNISEC and Kawashima-san for the support in the journey towards the destination

Q&A:

**Nate Taylor:** I understand your point of view in terms of walking the road less travelled in space because a friend of mine also studied medicine and is now working as a doctor. Pursues space medicine as a profession. What’s your opinion of outlook of bridging space and medicine. Obviously it’s something that has been needed for a very long time but also lacks the same level of funding compared to other areas of space right?

**Samuel Ndayizeye:** That’s a good question, I will answer it in two ways. One, I am still in the initial phase and I am actually finding out what space tech has to offer. And also find out what I can contribute to this booming industry. Two, when it comes to the outlook, I would say that, this is still a new thing and not many people are familiar with it but like I mentioned earlier, what really matters is the process. The start of the idea is already there and that’s where you get to meet new people with new ideas. I am not sure if I answered your question correctly.

**Nate Taylor:** Yes, because it was overall optimistic which is an outlook of itself right? And I think if you seek those opportunities, you will find them. There are lot of people looking for the same thing so you will find the people you will need to work with.

## 5. New Point of Contacts for UNISEC

Nate Taylor, UNISEC-Global

UNISEC-Global presents new Point of Contacts (POC) for UNISEC from around the world. In 2022, Dr. Jorge Kurita from Paraguay, Ngugen Tein Su from Vietnam, Bonny Omara from Uganda, Edgar Mujuni from Uganda, Dr. Bianca Szaz from Romania and Kerim Hadizc from Bosnia and Herzegovina. Each of the new POC were asked to provide a short introduction, give three space facts about their countries and ask the audience to vote the one which is entirely false. After the fact reveal, POCs then explained why UNISEC was important for their country.



*Dr. Jorge Kurita, Paraguay*



*Nguyen Tein Su, Vietnam*



*Bonny Omara, Uganda*



*Edgar Mujuni, Uganda*



*Dr. Bianca Szaz, Romania*



*Kerim Hadizc, Bosnia & Herzegovina*

*Pictured: New POC for UNISEC from different parts of the world*

### Highlights:

- Dr. Jorge Kurita from Paraguay
  - General Director of Planning and Management at the Paraguay Space Agency
  - Local researcher for Universidad Nacional de Asuncion in Paraguay
  - Adolfo built the first satellite for Paraguay at Kyutech
  - Fact A: only South American country without a satellite until 2021 (correct)
  - Fact B: first satellite mission was to monitoring birds and insects from space (correct)
  - Spread more about UNISEC at university level, building CanSat, HeptaSat
- Nguyen Tien Su from Vietnam
  - Researcher at Vietnam National Space Center
  - Electronic and thermal design, analysis and testing engineer
  - In process of establishing local chapter in Vietnam
  - Instructs building CanSats and 3U CubeSat for university students
  - Fact A: we can get funding for space project in Vietnam if we have a good idea (incorrect)
  - Fact B: we are bringing space education to as many universities as possible (correct)
  - Fact C: no private company developing satellites in Vietnam (correct)
- Bonny Omara and Edgar Mujuni from Uganda
  - Fact A: Uganda is the 13<sup>th</sup> country to launch satellite (correct)
  - Fact B: Uganda is currently building its own satellite inhouse (incorrect)
  - Fact C: Three Uganda engineers built Uganda's first satellite (correct)
  - Bonny and Edgar built the first satellite for Uganda
  - EduSat that mimics 1U CubeSat with LoRa with 3D printed structure and ground station
  - Use it as a tool for educating students in space
  - UNISEC helps us to interact with students who are motivated in space engineering
- Dr. Bianca Szaz from Romania
  - PhD from Kyushu Insititute of Technology
  - Fact A: Goliat was the first satellite for Romania in 2011 (incorrect was in 2012)
  - Fact B: High school students will launch PicoSat in 202 and parents funded it (correct)
  - Fact C: Romanian Space Agency is part of the European Space Agency since 2011 (correct)
- Kerim Hadizc from Bosnia and Herzegovina



## 6. Announcement and Acknowledgement

Rei Kawashima, UNISEC-Global



*Pictured: Kawashima-san making announcements of 29<sup>th</sup> UNISEC-Global Meeting*

- **29<sup>th</sup> Virtual UNISEC-Global Meeting**
  - January 21, 2023 22:00-00:00 JST time (every third Saturday of every month)
  - Theme: Space Weather Research Using Nano Satellites
  - Kentaro Kitamura, Kyutech on “Introduction to Space Weather Research using CubeSats”
  - Dr. Shiju Abe, Kyushu University on “Geomagnetic Observation by Yotsuba-KUlover”
  - Prof. Iku Shinohara ISAS/JAXA on “High-energy Electron Observation by PINO/BIRDS5”
  - Dr. Necmi Orger, Kyutech on “Ionospheric TEC observation by KITSUNE”
  - Prof. Mengu Cho, Kytech on “BIRDS-X Global Competition”
  - Hosted by **UNISEC-Japan**
  - Feb 18, 2023 host by UNISEC-Colombia
  - Looking for local chapters to host in March, April, May, throughout 2023

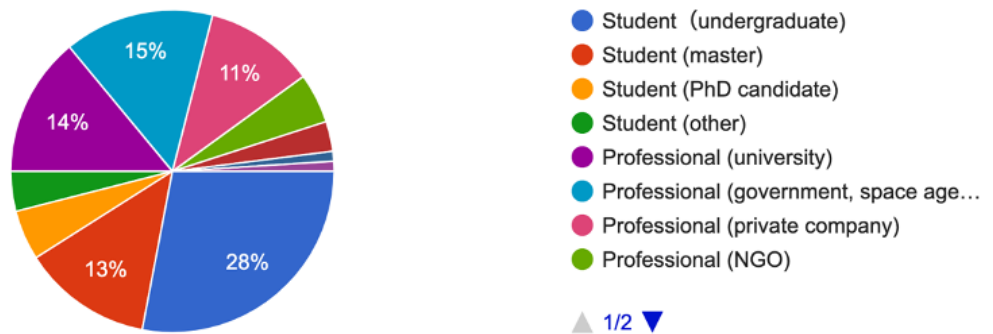
## 7. Participant Statistics

**100** registered participants from **31** countries and regions for the 28<sup>th</sup> Virtual UNISEC-Global Meeting.

Country/Region	Number of registrations	Country/Region	Number of registrations
Afghanistan	1	Mexico	1
Argentina/Córdoba	2	Nepal	3
Australia	1	Netherlands	1
Bangladesh	3	Pakistan	2
Bulgaria	1	Philippines	12
Cambodia	1	Russia	1
Canada	1	Rwanda	2
Germany	1	South Africa	2
Egypt	26	Tunisia	1
Ghana	1	Turkey	2
India	7	UAE	1
Italy	1	Uganda	1
Japan	14	United Kingdom	2
Kazakhstan	2	USA	1
Kenya	4	Zimbabwe	1
Malaysia	1		

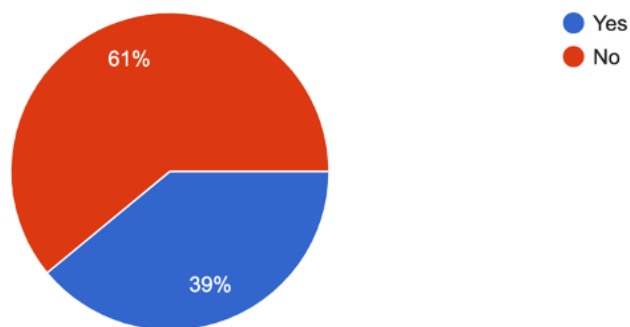
### Student or professional?

100 responses



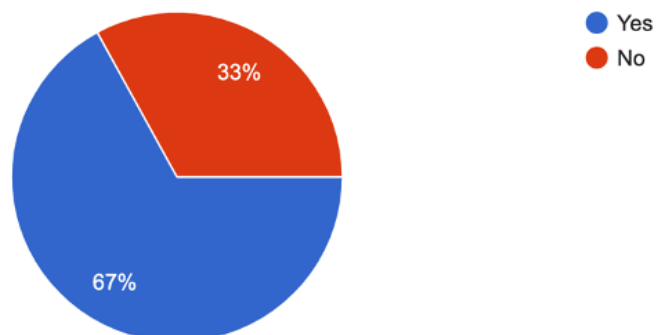
### Are you familiar with space education and projects in Egypt?

100 responses



### Have you participated in the UNISEC-Global Meeting previously?

100 responses



## UNISEC-Global Social network accounts



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<https://www.facebook.com/unisecglobal/>



@unisec\_global

[https://www.instagram.com/unisec\\_japan/](https://www.instagram.com/unisec_japan/)



<https://www.linkedin.com/groups/8982613/>

Thank you