

UNISEC-Global: 2022 Activities

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Outline

- UNISEC-Global
 - An overview
 - Vision
 - Local Chapters and Point of Contacts
 - UNISEC-Global's Approach
 - UNISEC-Global Past Activities
- 2022 activities
- Conclusion

UNISEC-Global: An overview

- UNISEC-Global is an **international, non-profit, non-governmental organization, consisting of local-chapters** across the world.
- Since its establishment in November 2013, it has provided an annual forum, training programs, competitions.
- In 2017, it was accepted **as permanent observer by UN Committee on the Peaceful Uses of Outer Space (COPUOS)**.
- Its primary objective is to help create a world where space science and technology is used by individuals and institutions in every country, rich or poor for peaceful purposes and for the benefit of humankind.

24 Local Chapters, 60 Points of Contact, 213 university members

UNISEC-Global “Vision 2030-ALL”

*“By the end of **2030**, let’s create a world where university students can participate in practical space projects in **all** countries/regions.”*



Changed from the original
“Vision 2020-100”

In every country, there must exist some space-related experts as they need to at least purchase some space-related products, such as communication satellites, GPS or earth observation services etc.

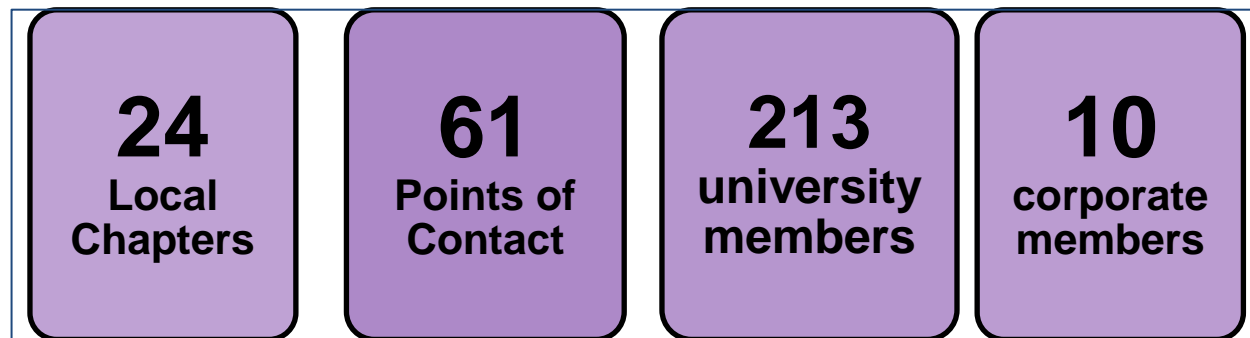
The 2030 Agenda for Sustainable Development
Key principle: No one will be left behind.

UNISEC-Global members

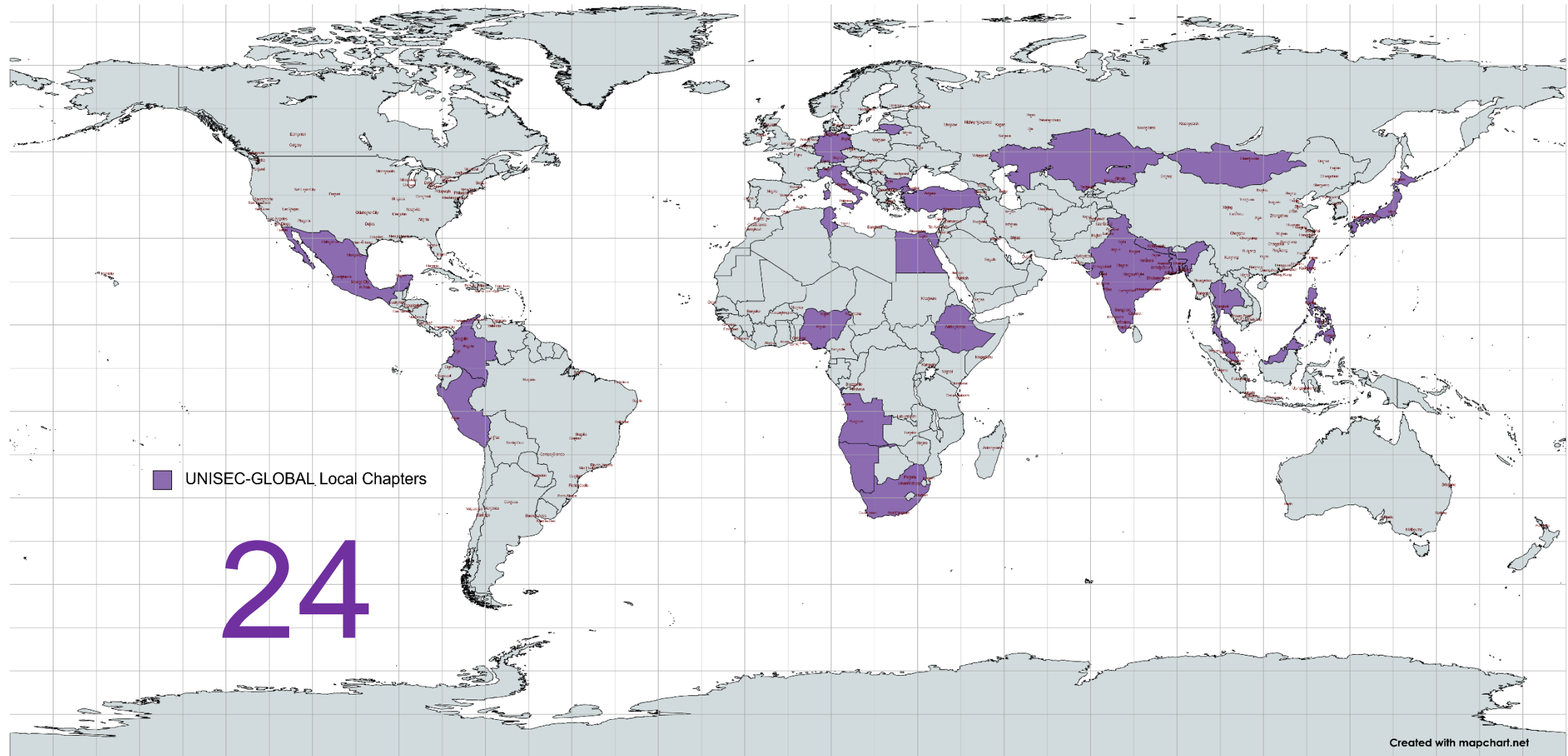
POC in 61 regions: Algeria, Argentina, **Bangladesh**, Belarus, Bolivia, Bosnia-Herzegovina, Brazil, **Bulgaria**, Canada, Chile, **Colombia**, Costa Rica, Dominican Republic, **Egypt**, El Salvador, **Ethiopia**, **Germany**, Ghana, Guatemala, **India**, Indonesia, **Italy**, **Japan**, **Kazakhstan**, Kenya, Lebanon, **Lithuania**, Luxemburg, **Malaysia**, **Mexico**, **Mongolia**, Morocco, **Nepal**, New Zealand, **Nigeria**, Oman, Pakistan, Paraguay, **Peru**, **the Philippines**, Romania, Saudi Arabia, Singapore, **Samara**, Slovenia, South Korea, Serbia, Spain, **South Africa/Angola/Namibia**, Sudan, **Taiwan**, **Thailand**, **Tunisia**, **Turkey**, Uganda, Ukraine, USA, Vietnam, and Zimbabwe



(Local Chapters are written in Red)









Local Chapters Geographic Distributions



UNISEC-Global's Approach



UNISEC-Global: Activities

Year/Activity	CLTP 	DMC/DDC 	MIC 	Nano-satellite Symposium 	UNISEC-Global Meeting 
2010				1 st	
2011	1 st and 2 nd		1 st	2 nd and 3 rd	
2012	3 rd		2 nd	4 th	
2013	4th		Pre 3rd	5th	1st (Japan)
2014	5 th		3 rd	-	2 nd (Japan)
2015	6 th		Pre 4 th	6 th (ISTS30)	3 rd (Japan)
2016 	7 th	1 st	4 th	7 th	4 th (Bulgaria)
2017	8 th	2 nd	Pre 5 th	8 th (ISTS31)	5 th (Italy)
2018	9 th		5 th	-	6 th (France)
2019	10 th		6 th	9 th (ISTS32)	7 th (Japan)
2020	Postpone		Postpone	Postpone	Virtual (monthly)
2021	Postpone		7th	10th (ISTS33)	Virtual (monthly)
2022	11 th		8 th	11 th	8 th (Turkey)

UNISEC-JAPAN
UNISEC-GLOBAL

2022 Activities

- UNISEC-Local Chapter Empowerment Program
- Presentation at UNCOPUOS (STSC, LSC, COPUOS)
- 11th CanSat Leader Training Program (CLTP-11)
- Signing MOU with IAA
- 11th Nano-satellite Symposium
- 8th UNISEC-Global Meeting
- 8th PreMIC workshop
- Conference Management Workshop

- Many other local chapter activities

UNISEC-Local Chapter Empowerment Program

- UNISEC Congruent Systems Seminars
- Hosting Virtual UNISEC-Global Meeting

Date	Local Chapter	Number of Participants
Jan 27, 2022	UNISEC-Bangladesh	11
Jan 31, 2022	UNISEC-Thailand	5
Feb 2, 2022	UNISEC-Philippines	3
Feb 15, 2022	UNISEC-Malaysia	1
Feb 18, 2022	UNISEC-Egypt	11
Feb 25, 2022	UNISEC-Mongolia	10

Seminars

Date	Local Chapter
November 19, 2022	UNISEC-Egypt
August 20, 2022	UNISEC-Philippines
June 18, 2022	UNISEC-SAR
May 21, 2022	UNISEC-India
March 18, 2022	UNISEC-Nepal
February 19, 2022	UNISEC-Turkey

Hosting Virtual Meetings

18th HOST: UNISEC-Türkiye (Feb.19, 2022)

18th Virtual UNISEC-Global Meeting

Host: UNISEC-Turkey February 19, 2022 Time: 22:00 - 24:00 (JST)

Moderator: **Mansur Çelebi**, Sabanci University

OPENING REMARKS

Alim Rustem Aslan, Istanbul Technical University

KEYNOTE SPEECH

Bülent Altan, CEO of Mynaric

Topic: What the space industry needs from the academic world?

KEYNOTE SPEECH

TBD, Airbus

Topic: Space Industry Expectations from Academia (UNISEC)

BREAKOUT SESSION

All Participants

Moderator: **Nate Taylor**, UNISEC-Global

Theme: How space researches contribute to the sustainable world?

ANNOUNCEMENT & CLOSING

Rei Kawashima, UNISEC-Global
and those who have announcements

Theme:
Space Industry
Expectations
from Academia



[HTTP://WWW.UNISEC-GLOBAL.ORG/VIRTUAL-MEETING.HTML](http://www.unisec-global.org/virtual-meeting.html)

19th HOST: UNISEC-Nepal (March 19, 2022)

19th Virtual UNISEC-Global Meeting



Host: UNISEC-Nepal March 19, 2022 Time: 22:00 - 24:00 (JST)

Moderator: **Dr. Abhas Maskey**, Antarikchya Pratisthan Nepal

OPENING REMARKS

Dr. Abhas Maskey, Antarikchya Pratisthan Nepal

PRESENTATIONS

Rajesh Bahadur Thapa/ Birendra Bajracharya, ICIMOD

Topic: Introduction to ICIMOD's Projects and Satellite Data use for Climate Change

Yubin Shrestha, Bird Conservation Nepal

Topic: Enabling Technology for Tracking and Conserving Nepal's Birds

Sagun Prajapati, Sanima Bank

Topic: Potential Satellite Data use for Financial Institutions in Nepal: Sanima Bank's Case

BREAKOUT SESSION

All Participants

Moderator: **Nate Taylor**, UNISEC-Global

ANNOUNCEMENT & CLOSING

Rei Kawashima, UNISEC-Global
and those who have announcements

*Theme:
Potential Use
Cases of Space
Technology in
Emerging
Nations*



[HTTP://WWW.UNISEC-GLOBAL.ORG/VIRTUAL-MEETING.HTML](http://www.unisec-global.org/virtual-meeting.html)

21st HOST: UNISEC-India (May 21, 2022)



21ST VIRTUAL UNISEC-GLOBAL MEETING



Moderator: Ms. Bhavana Savanth, 75 Satellites Project/TSC Technologies **May 21, 2022, Time: 22:00 - 24:00 (JST)**

OPENING REMARKS

Dr. L.V. Muralikrishna Reddy
President, UNISEC India, President, Indian Technology Congress Association and 75 Students' Satellites Consortium: Mission 2022

KEYNOTE SPEAKERS

Padma Shri Dr. Mylswamy Annadurai
Outstanding Scientist, Former Director, ISRO Satellite Centre, Project Director, Chandrayaan 1 & 2 and Programme Director, Mars Orbiter Mission (MoM)
Topic: Engineer Your CubeSat: 75 Students' Satellites Mission 2022 to Celebrate India's Freedom 75 Years

Er. Dušan Radosavljević
Head, Committee for Space Programme Development (CSPD), Serbia, Founder World CanSat Rocketry Consortium (WCRC) and POC, UNISEC Serbia
Topic: Introduction to World CanSat/Rocketry Championship – WCRC

Er. Nikhil Riyaz
Student Representative, UNISEC India, Founder CEO, TSC Technologies P Ltd and Core Technical Team, 75 Students' Satellites Mission 2022
Topic: Report on UNISEC India Chapter Activities and Noteworthy Events

ANNOUNCEMENT & CLOSING

Rei Kawashima, UNISEC-Global and those who have announcements

<http://www.unisec-global.org/virtual-meeting.html>



Ms. Bhavana Savanth



Dr. L.V. Muralikrishna Reddy



Dr. Mylswamy Annadurai



Dušan Radosavljević



Dr. Jayakumar Venkatesan



Prof. R. M. Vasagam



Nikhil Riyaz

Dr. Jayakumar Venkatesan
Director of Human Spaceflight Research, Analog Astronaut Training Center, Poland and Valles Marineris International Private Limited (Aerospace Company), India
Topic: Space Exploration and Analog Astronaut Training Opportunities

Padma Shri Prof. R. M. Vasagam
Eminent Scientist, ISRO. Project Director, India's First Geo-Stationary Communication Satellite "APPLE". Former Vice Chancellor, Anna University, Dr.MGR University
Topic: Space Applications for Early Warning Systems, Disaster Mitigation and Management

Theme: Engineer your CubeSat: Frugal Way to Access LEO



22nd HOST: UNISEC-SAR (June 18, 2022)



22nd Virtual UNISEC-Global Meeting

Host: UNISEC-SAR (South African Region)
Time: 22:00 - 24:00 (JST)
June 18, 2022

Moderator & Opening Remarks: **Arno Barnard**, Stellenbosch University

PRESENTATIONS

 **Ivandro Rodrigues**, GGPEN-Angolan Space Office
Topic: GGPEN Satellite Activities

 **Robert van Zyl**, AAC SPACE AFRICA
Topic: The Africa we want - how can nanosatellites contribute

 **Mike-Alec Kearney**, CEO CubeSpace Satellite Systems
Topic: TBD (Pre-recorded Presentation)

 **Khalid Manjoo**, CEO of Astrofrica Technologies
Topic: Astrofrica's 2020 Space Internship Program – A model for skills development and uptake into the Space sector

 **Johan Erasmus**, ISISPACE South Africa Branch Manager & Systems Engineer
Topic: ISISPACE Enabling offerings for HCD and Mission Success

BREAKOUT SESSION
All Participants
Moderator: TBC

ANNOUNCEMENT & CLOSING
 **Rei Kawashima**, UNISEC-Global and those who have announcements

Theme: Satellite Engineering Training in Southern African Region: The impact of Universities, Industry, and Government



[HTTP://WWW.UNISEC-GLOBAL.ORG/VIRTUAL-MEETING.HTML](http://www.unisec-global.org/virtual-meeting.html)

24th HOST: UNISEC-Philippines (August 20, 2022)



The poster features a vibrant, abstract background with geometric shapes and a color palette of yellow, blue, and green. On the right side, there is a detailed illustration of a satellite in orbit above a globe, with various icons representing space exploration, education, and industry. The text is arranged in a clear, organized manner, with speaker portraits on the left and their respective titles and topics on the right. The UNISEC Philippines logo is prominently displayed in the top right corner, and the UNISEC Global logo is in the bottom left corner.

24TH VIRTUAL UNISEC-GLOBAL MEETING

Host: UNISEC-Philippines
Time: 22:00-24:00(JST)
August 20, 2022

UNISEC PHILIPPINES

MODERATOR **Engr. Jeric Brioso**
Senior Science Research Specialist, STeP-UP Project

OPENING REMARKS **Prof. Paul Jason Co**
Secretary, UNISEC-Philippines

PRESENTATIONS

Engr. John Leur Labrador
Chief Science Research Specialist, Spacecraft Mechanical and Autonomous Systems Development Division, Philippine Space Agency
Topic: Philippine Small Satellites

Engr. Lorena Ilagan
Dean, College of Engineering, University of Perpetual Help System-DALTA
Topic: Shaping the World through a Cube: The journey of UPSHD in the ASEANSAT Project

Dr. Paul Leonard Atchong Hilario
Space Science and Technology Applications Researcher II, Spacecraft Payload and Communications Systems Development Division, Philippine Space Agency
Topic: Towards the Development of Satellite Payloads in the Philippines

Dr. Adrian Salces
Supervising Science Research Specialist, Spacecraft Payload and Communications Systems Development Division, Philippine Space Agency
Topic: Philippine Space Agency (PhilSA)'s Initiatives for Knowhow Sharing and Capacity Building

ANNOUNCEMENTS & CLOSING **Rei Kawashima, UNISEC-Global**
and those who have announcements

Theme: Space Synergy

Opening avenues for the academe, industry, and local and international partnerships

UNISEC GLOBAL
University Space Engineering Consortium

[HTTP://WWW.UNISEC-GLOBAL.ORG/VIRTUAL-MEETING.HTML](http://www.unisec-global.org/virtual-meeting.html)

27th HOST: UNISEC-Egypt (Nov. 19, 2022)



The graphic features a space-themed background with a satellite, a globe, and the Great Pyramids of Giza. It includes logos for UNISEC GLOBAL and UNISEC EGYPT, a list of speakers with their photos and topics, a central theme box, a QR code, and registration information.

UNISEC GLOBAL **UNISEC EGYPT**
University Space-Engineering Consortium

27th Virtual UNISEC-Global Meeting

Moderator-Prof. Mohammed Khalil Ibrahim, Cairo University

 <p>Prof. ATEF O. SHERIF Former Chairman of National Authority for Remote Sensing & Space Sciences (NARSS)</p>	TOPIC Capacity Building in Developing Countries
 <p>Prof. MOHAMED B. ARGOUN Professor of Space Dynamics and Control, Dept. of Aerospace Engineering, Former Director of Egyptian Space Program</p>	TOPIC Transfer of Space Technology to Developing Nations
 <p>Prof. MOHAMED B. ZHRAN Chairman of National Authority for Remote Sensing & Space Science (NARSS)</p>	TOPIC The role of NARSS in building up Egyptian Space Program, Case studies NARSSCube Satellites and NARSS Experimental Satellites

THEME

"Space Education, Transfer of Technology, and Capacity Building in Developing Countries"

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

Host: UNISEC-EGYPT
Time: 22:00-24:00(JST)
November 19, 2022

MOU with International Academy of Astronautics (IAA)

- **Date:** September 17, 2022
- **Venue:** IAC 2022, Paris, France
- Since MIC1 book publication, IAA has supported the UNISEC activities.

How can we contribute to IAA?



CLTP-11

- **Time:** August 17-31, 2022
- **Participants:** 21
 - Bangladesh(1), Bosnia and Herzegovina(1), Colombia(2), India(1), Kazakhstan(2), Kenya(1), Malaysia(1), Mexico(1), Mongolia (1) Nepal(2), Peru(1), Philippines (5), South Africa (1), Thailand(1)



CanSat Leader Training Program (CLTP)

Objective: CLTP is a training program for professors/instructors to learn how to conduct CanSat (or HEPTA-Sat) training by experience. Participants are expected to teach their students after training. It has contributed to capacity building in basic space engineering and technology.

Launched: October 2010 (1st CLTP was held in 2011)

Offered: Annually

Graduated: 117 participants from 50 countries



CLTP History & Participants (1)

117 participants from 50 countries

CLTP1 (Wakayama Univ. in Feb-March, 2011)

12 participants from 10 countries, Algeria, Australia, Egypt, Guatemala, Mexico, Nigeria, Peru, Sri Lanka, Turkey (3), Vietnam.

CLTP2 (Nihon Univ. in Nov-Dec, 2011)

10 participants from 10 countries, Indonesia, Malaysia, Nigeria, Vietnam, Ghana, Peru, Singapore, Mongolia, Thailand, Turkey.

CLTP3 (Tokyo Metropolitan Univ. in July-August, 2012)

10 participants from 9 countries, Egypt (2), Nigeria, Namibia, Turkey, Lithuania, Mongolia, Israel, Philippines, Brazil.

<2013~ iCanSat kit CLTP4-7>

CLTP4 (Keio Univ. in July-August, 2013)

9 participants from 6 countries, Mexico(4), Angola, Mongolia, The Philippines, Bangladesh, Japan.

CLTP5 (Hokkaido Univ. in Sept 8-19, 2014)

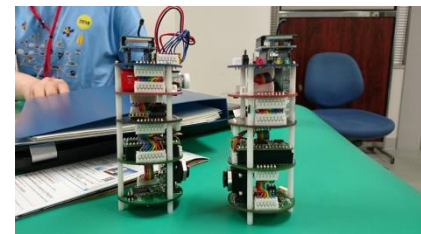
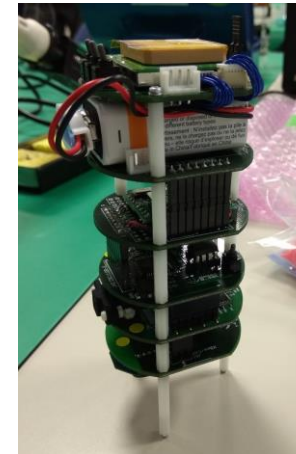
7 participants from 5 countries, Korea (2), Peru, Mongolia, Mexico (2), Egypt.

CLTP6(Hokkaido Univ. in August 24-Sept4, 2015)

8 participants from 8 countries, namely Angola, UN(Austria), New Zealand, Tunisia, Turkey, Egypt, Bangladesh, Mexico

CLTP7 (Hokkaido Univ. in Sep 21 - Oct 1, 2016)

8 from 7 countries, namely Egypt, Myanmar, Peru, Nepal (2), Mongolia, Serbia, Dominican Republic



CLTP History & Participants (2)

<2017~ HEPTA-Sat Kit: CLTP8-11>

117 participants from 50 countries

CLTP8 (Nihon Univ. in Sep 7 - Sep 16, 2017)

9 from 7 countries, namely Bolivia, Egypt, El Salvador, Malaysia, Nepal, Turkey, (+Japanese Students)

CLTP9 (Nihon Univ. in August 20- August 31, 2018)

8 from 6 countries, namely Argentina, India, Japan, Malaysia, Mongolia, UAE

CLTP10 (Nihon Univ. in August 19-August 30, 2019)

15 from 11 countries, namely Australia, Bhutan, Bulgaria, Cambodia, Colombia, Kenya, Morocco, Myanmar, Peru, Rwanda, Zimbabwe

CLTP11 (Nihon Univ. and AOTS in August 18-August 31, 2022)

21 from 14 countries, namely Bangladesh, Bosnia, Colombia, India, Kazakhstan, Kenya, Malaysia, Mexico, Mongolia, Nepal, Peru, Philippines, South Africa, Thailand



11th Nano-satellite Symposium, 8th UNISEC-Global Meeting, and Pre-MIC8 were Successfully concluded in Istanbul

11th Nano-satellite symposium

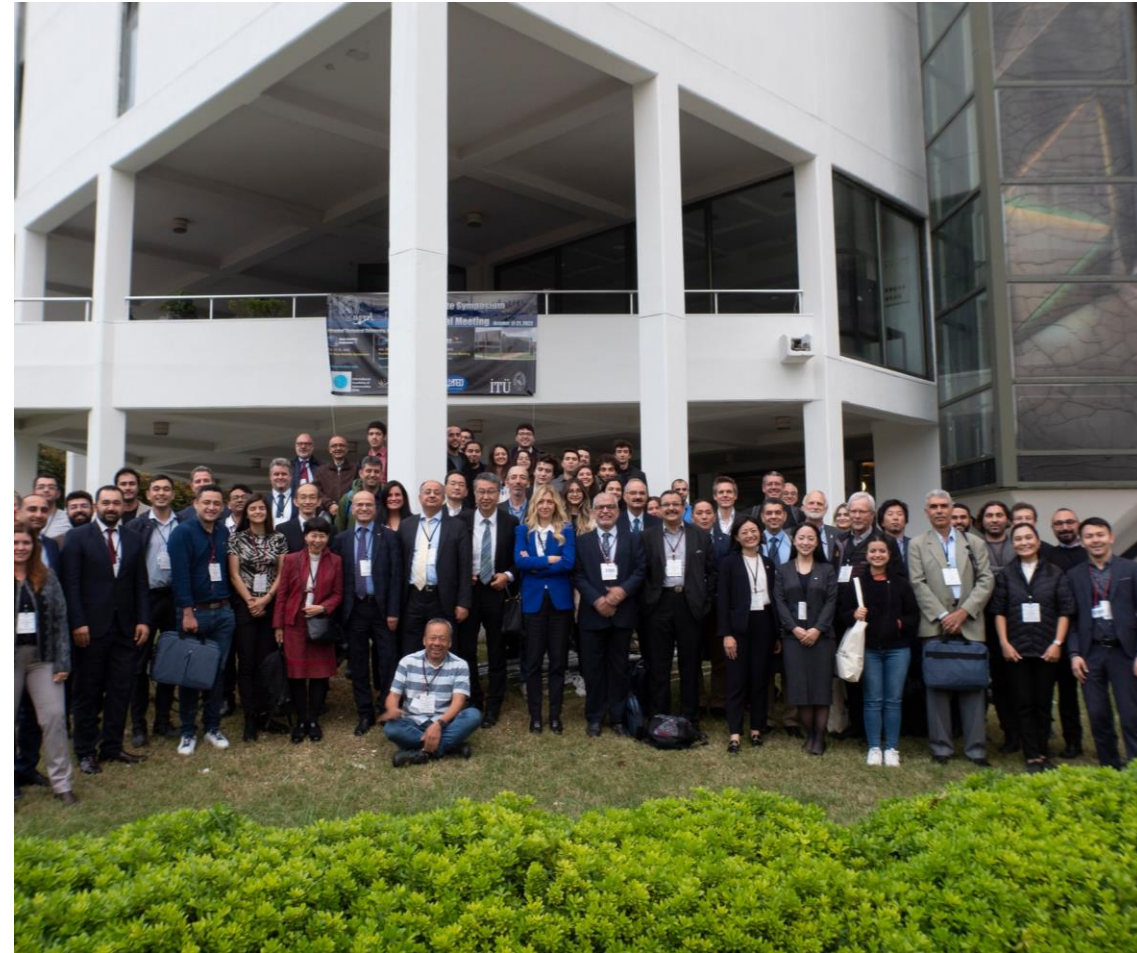
October 17, 18, 19(morning)

PreMIC8

October 19 (afternoon)

8th UNISEC-Global Meeting

- October 19: UNIGLO opening
- October 20: Local Chapter presentation and breakout session
- October 21: Local Chapter presentation and Local Chapter Empowerment Workshop



<http://www.unisec-global.org/meeting8.html>

Preliminary Workshop for 8th Mission Idea Contest

Title	Name	Affiliation	Region
The design of a 6U nanosatellite constellation for debris monitoring and passive tracking	Jeje Kudakwashe, John Paul Almonte, and Pema Zangmo	Kyushu Intsitute of Technology	Japan
Ocean Climate CubeSat Constellation (OCCC) Mission	Yi Hsuan Lee	National Tsing Hua University	Taiwan
CubeSat constellation for monitoring and detecting plastic wastes in water bodies & testing the moon-sun sensor	Abdulaziz Ahmed, Mohamed Hamdy, and Mohammad Khaled	Cairo University	Egypt
CUBESAT CONSTELLATION TO ANALYZE THE EFFECTS OF EARTH'S MAGNETIC TAIL ON THE MOON (MAGNETA-CUBE)	Ramírez Martínez Jonathan Gadiel	Instituto Politécnico Nacional	Mexico



<http://www.spacemic.net/index8pre.html>

MIC8 will be held in Japan, in 2023.

Conference Management Workshop

- **Date:** October 17-21, 2022
- **Venue:** ITU, Istanbul Turkey
- **Participants:** Egypt (2), Kazakhstan (2), South Africa (1), Nepal(1), Colombia (3)
- **Keynote lectures** were provided by Prof. Shinichi Nakasuka and Ms. Rei Kawashima
- **Practice** was done by circulating the participants among three groups: (A) Registration Guide, (B) Presentation Support, and (C) Public Relation
- **Final Proposal Presentation:** held on October 21 during the 8th UNISEC-Global Meeting



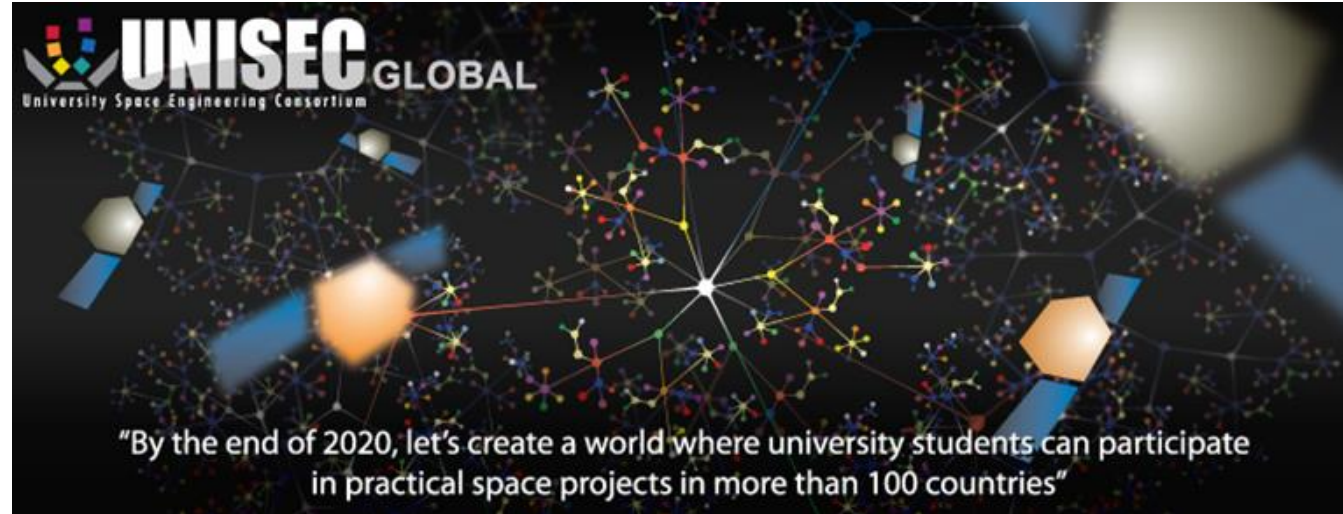
Photo of Public Relation Group

Funded by METI

Plan for 2023....

- Statement at UNCOPUOS
- CLTP12 in August
- HEPTA-Sat training in Africa?
- UNIGLO9 and MIC8 in Nov or Dec (Tokyo, Japan)
 - National/regional MIC is encouraged.
- Many unique local chapter activities will take place in each region.
- UNISEC-Global restructuring and new function

Thank you!



UNISEC-Global Secretariat

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Conclusion

- Local Chapter Empowerment program aims to share the operation systems of our original body of the University Space Engineering Consortium (UNISEC) with the local chapters (LCs). Local chapter has an opportunity to host a virtual UNISEC-Global Meeting and to attend a seminar organized by the Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS).
- Normal UNISEC-Global activities were resumed after almost two years of suspension due to the pandemic.
- AOTS Support conference management workshop with hands-on training during the 11th Nanosatellite Symposium, 8th UNISEC-Global meeting and 8th PreMIC meeting in Turkey for 9 participants from 5 countries.