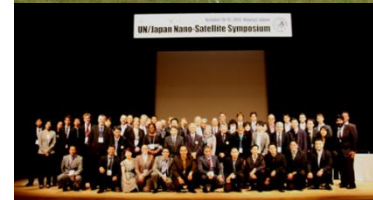


# UNISEC-Japan Regional Report 2023

**Mengu Cho, Kyushu Institute of Technology**  
**Board member of UNISEC-Japan**

# Overview of UNISEC-Japan

- UNISEC: “University Space Engineering Consortium”
  - UNISON: UNISEC Student Organization
  - UNISAS: UNISEC Alumni Organization
- Established in 2002
- NPO/NGO to facilitate/promote university level students’ practical space development activities, such as designing, manufacturing and launching small satellites and hybrid rockets.
- 59 laboratories/groups from 40 universities
- 843 student members, 248 individual supporters, and 28 corporate supporters
- 3 pillars: Human resource development, Technological development, Outreach



# Activities in 2022

- July 30: General assembly
- Aug.11-19: Noshiro space event (CanSat, Rocket)
- Sept.11-16: ARLISS
- Sept.12-16: Kata joint launch campaign
- Nov.12-13: Izuoshima joint launch campaign
- Nov.23: UNISEC SPACE Job Fair
- December 3, 4: Annual Workshop
- December 9: Space Engineering Conference
- October-May: UNISEC Academy
- Mission Assurance Activities
- J-Cube promotion

# Student activities



Rocket

<https://izuoshimarocket.wixsite.com/izuoshimarocket/2021-3>



CANSAT Credit:長崎大学

# University satellites launched in 2022



Credit: JAXA



Credit: JAXA

MITSUBA (Kyutech)  
 MAGNARO A (Nagoya Univ.)  
 MAGNARO B (Nagoya Univ.)  
 Waseda-SAT 0 (Nagoya Univ.)  
 EQUULEUS (Univ. Tokyo)

KITSUNE(Kyutech)  
 BIRDS-5 x 3 (Kyutech)  
 IHI-SAT (Tohoku Univ.)  
 SpaceTuna1 (Kinki Univ.)  
 FUTABA (Kyutech)

12 satellites went to space this year including deep space!

# Mission Assurance Activities

Promotion of mission assurance activities with the support of JAXA

- Mission assurance handbook
- Information sharing portal site



# Mission Assurance Handbook

- Target satellite projects at universities and polytechnic-colleges in Japan
  - Not only the first project of the universities, but also the second and later projects
- Summary of points to be kept in mind of faculty members and students to improve the mission success rate
- English version is also available online
- Contents
  1. Introduction
  2. Project management (9)
  3. Mission definition (4)
  4. Conceptual design (4)
  5. Detail design (10)
  6. Production (3)
  7. Testing (15)
  8. Operation (3)
  9. Post-operation (3)
  10. Sustainability of university satellite program (4)

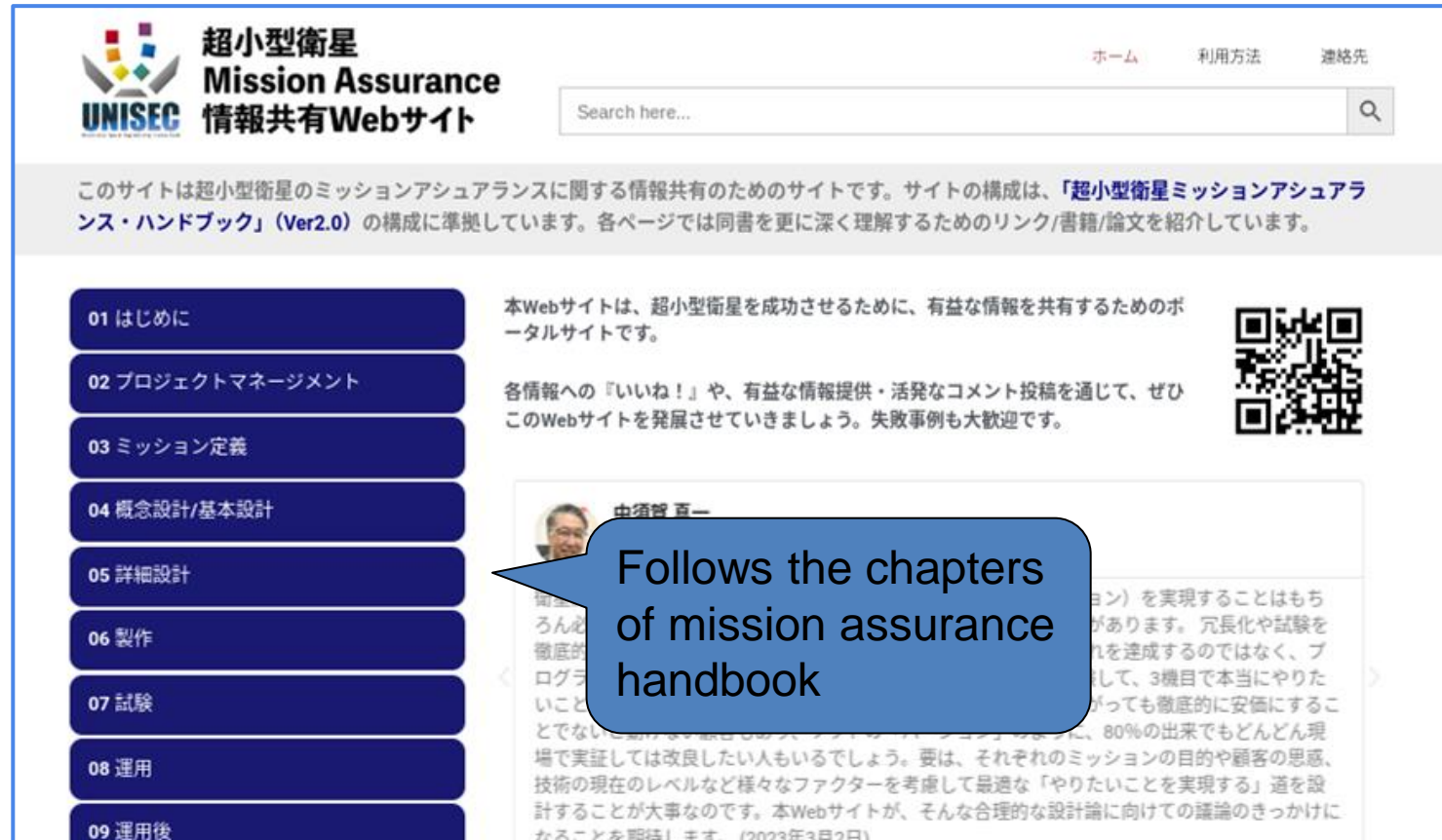


If you missed the last page



# Information sharing portal site

<https://ma.unisec.jp/>

The screenshot shows the homepage of the '超小型衛星 Mission Assurance 情報共有Webサイト'. It features a navigation menu with 9 items: 01 はじめに, 02 プロジェクトマネージメント, 03 ミッション定義, 04 概念設計/基本設計, 05 詳細設計, 06 製作, 07 試験, 08 運用, and 09 運用後. A search bar is located at the top right. The main content area includes a welcome message and a QR code. A blue callout box points to the navigation menu with the text: 'Follows the chapters of mission assurance handbook'.

If you missed the last page

- Portal site to get useful information to have a successful satellite mission
- Access to documents written in Japanese (and English)



# J-Cube

We will have a J-CUBE session on Friday afternoon



## Introducing



**J-CUBE**

A new collaboration between JAXA and UNISEC to help emerging space nations get their first CubeSats deployed into Low-Earth Orbit via the ISS.



**Your  
Future  
CubeSats**



**UNISEC**  
University Space Engineering Consortium

# Conclusion

- Since 2002, UNISEC has been successful to provide valuable engineering talents to Japanese society
- UNISEC-Japan celebrated 20<sup>th</sup> anniversary this year
- Supported by individual, corporations, government, agency
  - But most of all, students
- UNISEC Japan continues working hard to promote the university space activities despite the pandemic.