



AUES



AL-FARABI
KAZNU



Local Chapter Activity Report

at the 8th UNISEC–Global Meeting

UNISEC–Kazakhstan

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History of Local Chapter Activities

- Participated 7th Nano-Satellite Symposium & 4th UNISEC-Global Meeting 2016 (Varna, Bulgaria)



Al-Farabi Kazakh National University

The 7th Nano-Satellite Symposium

Development of a first Kazakhstan student nanosatellite Al-Farabi-1

Al-Farabi Kazakh National University
Almaty, Kazakhstan

presenter: PhD student Nursultan Doszhan



Al-Farabi Kazakh National University

Contents:

- Introduction – Al-Farabi-1 background information
- Mission of Al-Farabi series
- Subsystems of Al-Farabi-1
- The power supply system
- Antenna deployment system
- The communication system
- The motion simulation model of Al-farabi-1
- Thermal and mechanical analyzes of Al-farabi-1
- Conclusion
- Lessons learned
- Future plan

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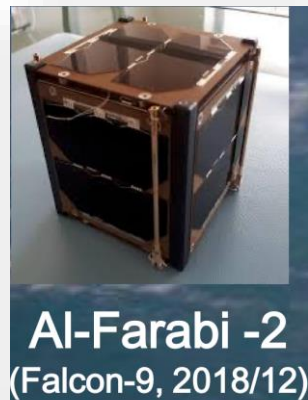
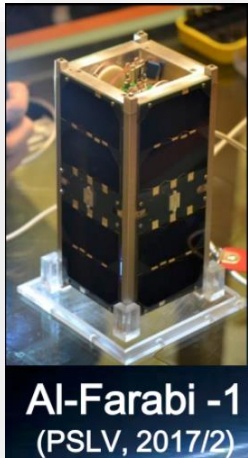
History of Local Chapter Activities

- Attended 31st ISTS & 8th Nano-Satellite Symposium 2017 (Matsuyama, Japan)



History of Local Chapter Activities

- *Practical Space Projects (al-Farabi-1,2 cubesats)*



- *Participated in Uniform-3&4 microsatellite EM integration and test (Vibro&TV) (Japan 2015)*



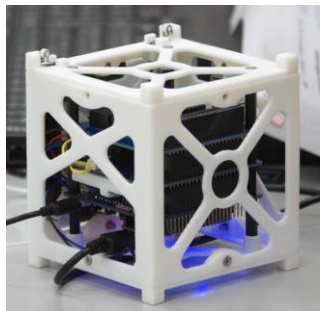
History of Local Chapter Activities

- Established in 2022
- Participated in CLTP in 2022 (CLTP11)

CLTP 11 was organized in Nihon University(Chiba, Japan) and AOTS (Tokyo, Japan)

Preliminary online-Lectures: August 1-15, 2022

Date: August 18-31, 2022



Toolkit:

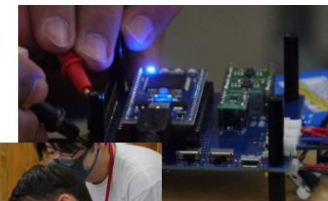
HEPTA-Sat (Hands-on Education Program for Technical Advancement)

The training consists of a hands-on learning steps with CubeSat type classroom satellite kit.



Covered lab0-lab6

- Introduction
- Electrical subsystem
- Command & data handling subsystem
- Sensor subsystem
- Communication subsystem
- Structure subsystem



History of Local Chapter Activities

- Established in 2022
- Participated in CLTP in 2022 (CLTP11)

Day 5

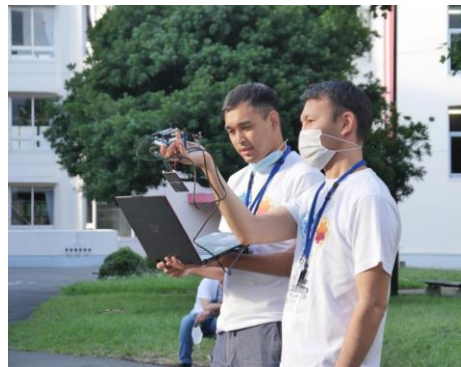
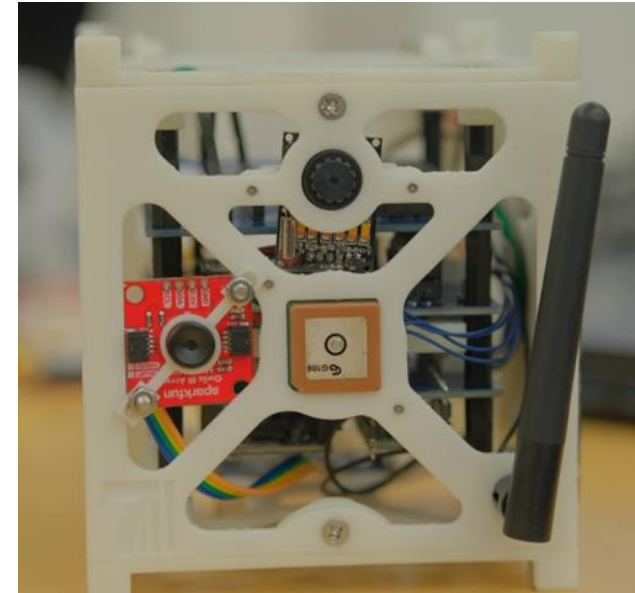
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Model Rocket Launch with CanSat



First launch failed!

Second launch was successful and finally our rocket get 90 m altitude!

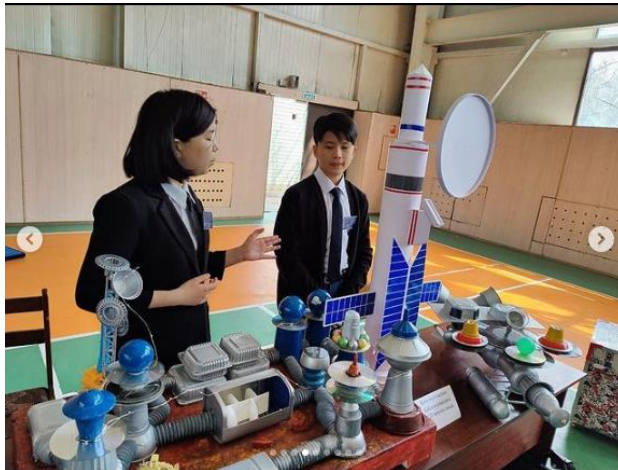


UNISEC-Global Activities in 2021-22

**Number of

- Member Universities: 3
- Students: 40
- Professors: 15
- Others (Corporate members, etc.): 8

- *Organized international student competition
Kazakhstan Smart Space March, 2022*



UNISEC-Global Activities in 2021-22

- *Participated in Space Open days in Kazakhstan*

Took part in an open day organized by the space company Ghalam LLP at the National Space Center. Ways of further cooperation were discussed.



UNISEC-Global Activities in 2021-22

- *Attended in rocket launch in Baikonur launch area*

Students participated in monitoring the launch of the launch vehicle "Soyuz-2.1a" with the spacecraft "Soyuz MS-22".



Plan for 2022-23 and beyond

- Republican engineering student competition (04.10.22-26.11.2022)
- CanSat competition between the domestic universities (2023, TBD)
- International Conference of young scientists – April 2023



Thank you for your attention!

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