

# Space Structures Laboratory MAKIHARA · OTSUKA · HARA Lab.



#### Vibration Control of Space Structures

Vibration controls are developed for **space stations**.



Next-generation space station



Space truss structure

#### **Energy-Harvesting Using Smart Structures**

### Structural Health Monitoring for Aerospace

Structural damage is detected using data science. 



#### **Experiments for Space-Debris Impacts**

**Smart materials** generates electricity from vibration. 







Smart materials

## **Aeroelastic Modeling for Mars Aircraft**

Experiment and analysis are performed for Mars aircraft.





We have implemented measures to mitigate hypervelocity impact in collaboration with JAXA.



Space debris



Hypervelocity impact experiments conducted in JAXA

## Numerical Design of Large Space Structures

We develop a design method of large space structures. 





Wind tunnel experiment in IFS Dynamics of Mars aircraft

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