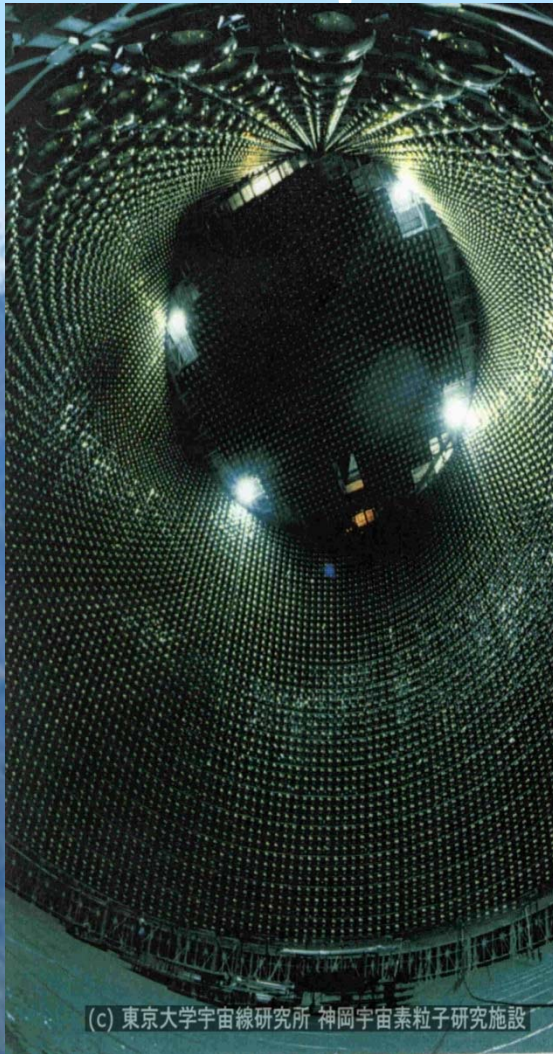


# Group8 Hida-Kamioka High School

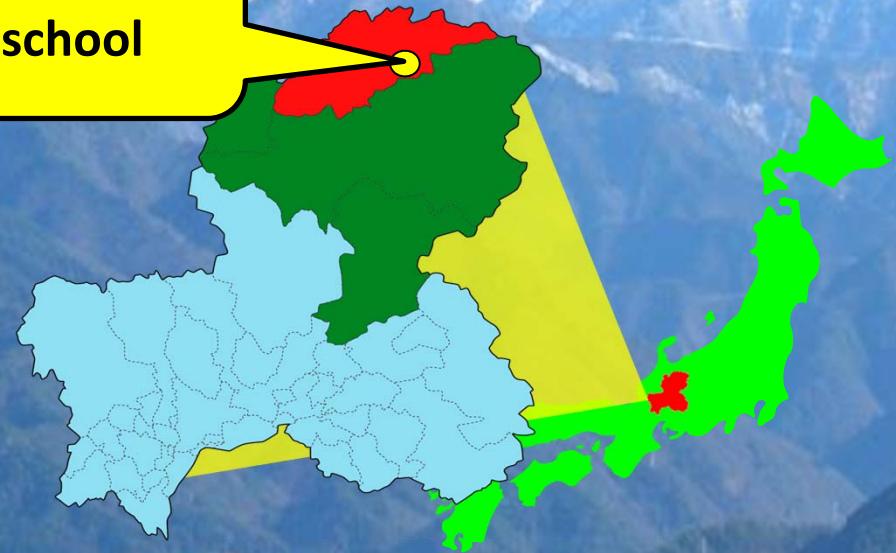
岐阜県立飛騨神岡高校

Theme 3 課題3



ICRR Super  
Kamiokande

Hida-Kamioka  
High school



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Haruki Ushimaru, Ibuki Suzuki, Genki Suzuguchi

Teacher : Hirohiko Taniwaki, Hideki Nakamura

# Source

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- RT
- ROBOTIS
- UFACTORY
- TOYOTA
- Kawasaki
- THK
- Universal Robots
- 3次元メディア
- 東京ロボティクス
- Denso
- Kawada
- HITACHI
- Yasukawa
- ABB
- NACHI

# social problems of Japan

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Ageing population

with declining birthrate



Shortage of labor!

**Using robots!!**

previous robots = Mainly industrial

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- Dangerous
- Setting costs is expensive
- Specialized skills are needed

# latest robots = Working Cooperation

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1 Safety

2 Setting costs is reasonable

3 Anyone can use

4 Abundant flexibility of usage

# 1 Safety

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Control to avoid injury

→ Touch and stop

EX · Torque control

Current limit (Torque limit) Torque control  
(Feed back control) real time control .

soft materials

→ rubber

Design

→ smooth shape · People can have familiarity

# 2 Setting costs is reasonable

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Easy construction



# 3 Anyone can use

---

Easy program not to use programming language.  
(EX Tablet operation )





# 3 Anyone can use

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Teaching



# 4 Abundant flexibility of usage

Use applications can be changed with software changes only.

AI- More flexible with deep learning.



# The appearance of the future robot



# Our robot introduction(^\_^)/

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Neutrino

Blue thunder

KAGRA



# Thank you for listening

