

# T-semi Activity Report

As of November 2020



- Ryuhei Hibi
- Dan Oku

# • About New Students

## Number of new students

We have 20 new members in our circle!

## New Student Classification



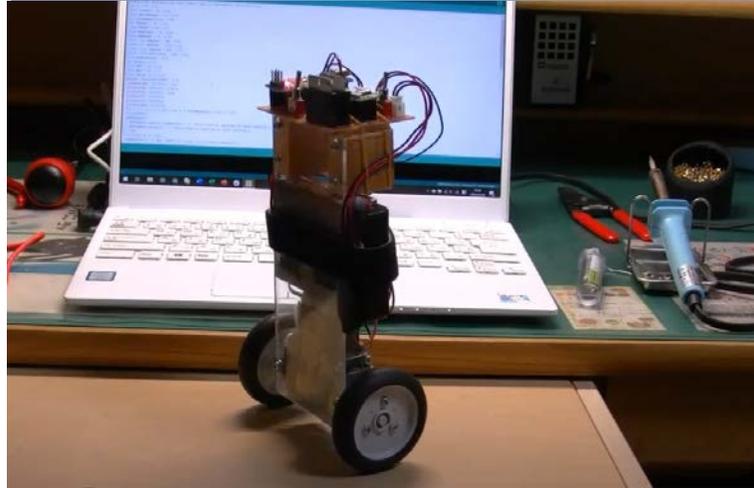
■ Machining ■ Circuit Maker ■ Programmer

## Activities for new students

- Arduino beginner session  
Explanation of microcontroller and points to use safely.  
Writing easy program and testing LED blink.
- Line tracer program  
Teams of 3 new students each make line tracer robot.  
It has 3 factors of machining, circuit and software.



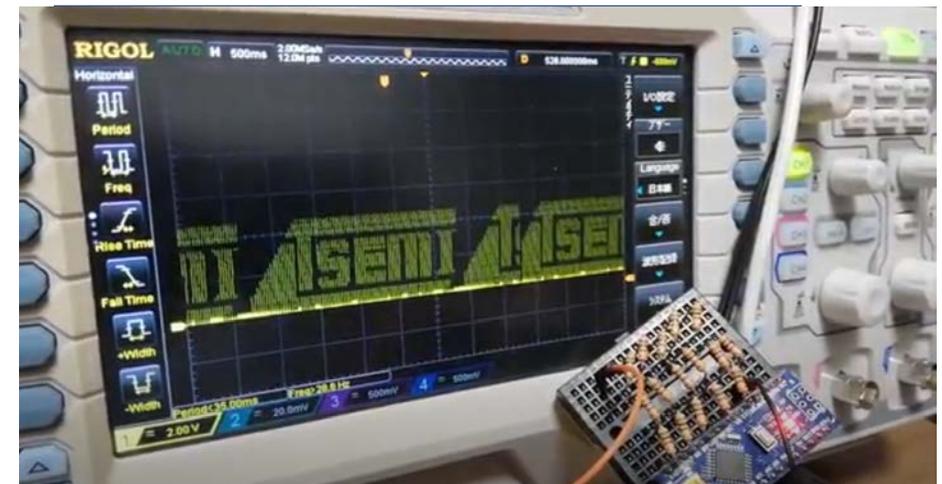
# • Activity Report



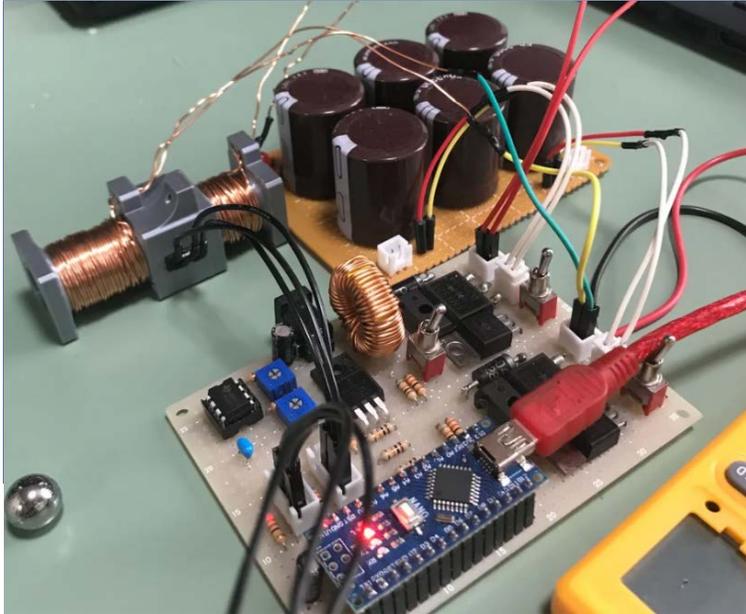
Inverted pendulum

Arduino adjust the motor output by PID control from the value of the accelerometer.

5bit D/A converter by 15 pieces  $1k\Omega$  resistance  
+  
Image to Raster scanning line Convert system



# • Activity Report



Coil iron ball accelerator

DC/DC converter boosts voltage to 150V.

Stored electrical energy in capacitor is released and accel iron ball.

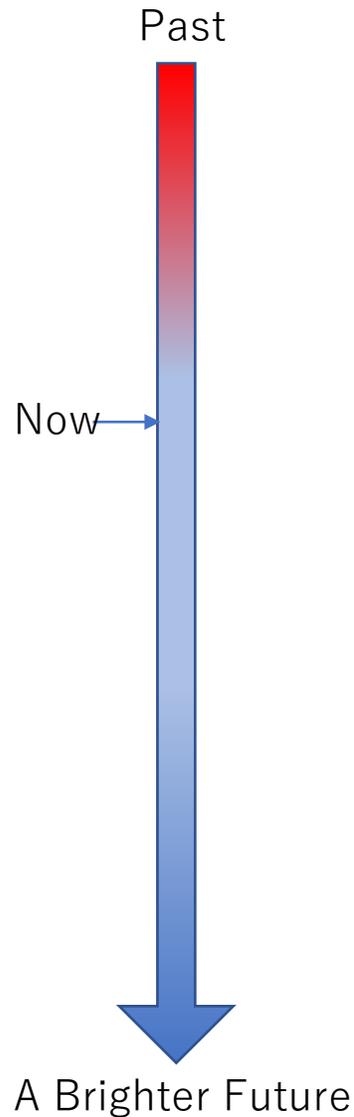
Step up DC/DC converter

Chopper circuit boosts voltage to 250V.

Connecting contact of capacitance, generate spark and sound.



# • Schedule



## • COVID-19 Details of the inactivity period

2020/3/13~11/19 : No entry to club rooms

2020/6/10 : Sendai Intelligent Robot Contest was canceled

2020/5/01 : Abandoned participation in the NHK Robot Contest

## Now

- Be very careful of infections  
(Until the infection subsides)

- Interaction with online

- Increasing personal activities

- Participate in competitions in groups

Ex) Sendai Intelligent Robot Contest (Date undecided)

NHK Robot Contest ABU ~Asia-Pacific Robot Contest~ (Date undecided)