

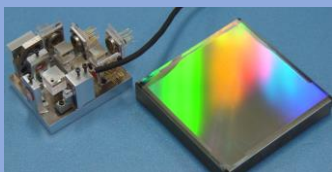
Department of Finemechanics Gao & Matsukuma Lab.

Precision measurement in manufacturing

"You cannot manufacture what you cannot measure." For instance, smart phones are made of very small, highly precision elements such as semiconductors, lenses, and liquid crystal elements. In order to make them work properly, it is necessary to correctly measure the shape of the product and the motion of the manufacturing equipment. Precision measurement is driving the frontier of modern manufacturing, which requires ever higher precision.

Cutting-edge research

Sensors for the future manufacturing



Measure the movement in nanometers



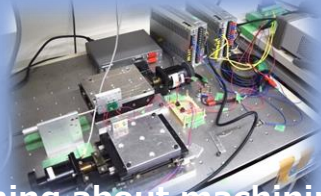
Ultra-Precision
Machining System



Laser angle sensor
for extremely small
angle ($1/10000^\circ$)

One year of third grade

- You can use a PC in the lab.
(To use for classes)
- Introduction training
- Listening to senior students' research in seminars to get an idea of their thesis research



Learning about machining and programming in the training

Environment

- Students gather on the one room
- Very friendly senior students
- Monthly sports activities and tea party

Three years from 4th grade

World top-class equipment



Create innovation with your device

Experience in machining, electronic circuits, and programming



- Thinking fundamentally about the principles of measurement and building your own equipment
- Acquire a lot of knowledge of materials, optics, semiconductors, electrical measurement, processing, programming, etc.

Supports

- Seminars and discussions



Sports



Tea party

Online openlab.

Faculty staffs or students will answer your questions via e-mail, video call, etc. if you want.

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http://web.tohoku.ac.jp/nanometrology/for_students.html

