TRIBOLOGY AND PRECISION MACHINING (TRIPREM)

- Professor, Dr. Kanao Fukuda, Head of ikohza
- Associate Professor, Dr. Nur'azah Abdul Manaf
- Senior Lecturer, Dr. Jun Ishimatsu
- Senior Lecturer, Dr. C.Eng., Shahira Liza Kamis
- Post-Doctoral Researcher, Dr. Noor Ayuma Tahir
- Assistant Research Officer, Nur Rasyidah Rusli
- Research Assistant, Kua Loan Kiat
- Research Assistant, Bakhit Irfan Yusoff

NUMBER OF STUDENTS

- Ph.D : 3 students
- Master: 9 students
- Bachelor: 6 students

RESEARCH KEYWORDS

Tribology, precision machining, surface modification, polishing, lapping, griding, humidity

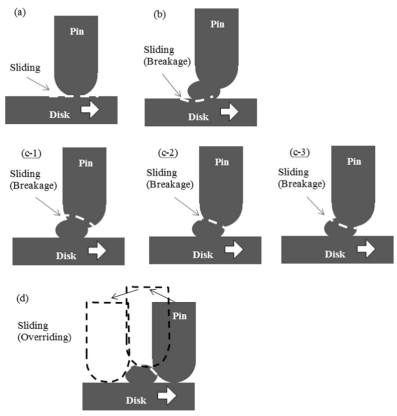
OUTLINE OF IKOHZA

Tribology and Precision Machining i-Kohza (TriPreM) is established to research fundamentals of tribological phenomena and support related industries through the research activities and cultivating students and i-Kohza members. Our philosophy and interest is to develop solutions for practical problems from scientific view point.

CURRENT RESEARCH

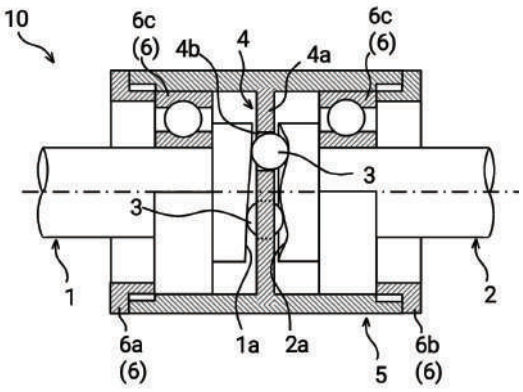
- **RESEARCH 1:**

  Adhesive wear mechanism study



- **RESEARCH 2:**

  Mechanical transmission development



- **RESEARCH 3:**
  Piano action tribology
- **RESEARCH 4:**
  Trace humidity controller development
- **RESEARCH 5:**
  Development of composite coating - Synthesis/growth of oxide and metal coating, as well as expand their potential as self lubricated coating
- **RESEARCH 6:**
  Development of bio-coating for biomedical applications
- **RESEARCH 7:**
  Development of Ultrasonically assisted effecter for cutting/grinding fluid
- **RESEARCH 8:**
  Development of ball screw shaft finishing machine

Our SDGs

MERIT OF THE TECHNOLOGY

1) Spatiotemporal sliding phenomena analysis technology (granted Japanese patent 2719275)
2) Trace humidity (ppb-ppm) control technology (granted Japanese patent 6052661)
3) Polishing technology (granted Japanese patent 3973962)
4) Novel transmission (granted Japanese patent xxxxxxx)
5) Coating technology (copyright LY2021E07012, MyIPO)

POSSIBLE INDUSTRY APPLICATION

- Lubrication technology development
- Surface modification for tribological use
- Precision humidity (ppb-ppm level) control
- Characterization and analysis of materials and devices

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