



Advanced Thermal-Fluids Measurement

2nd Part

- Lecturer
 - Takushi Saito (Dr. Eng.), Associate Prof. of Dept. of Mech.
 - E-mail: saito.t.ad@m.titech.ac.jp
- Class schedule
 - January 10: Invasive temp. measurement
 - Thermocouples, Resistance temperature detectors
 - January 17: Semi-/Non-invasive temp. measurement
 - Thermochromic liquid, Infrared thermometry
 - January 24: Other temp. measurements and application
 - Use of refractive index and interferometer, Heat flux sensor
 - January 31: Thermal property measurements
 - Physical property measurement, Heat transfer control in polymer processing
- Reference
 - Practical Temperature Measurement by Peter R. N. Childs, Butterworth-Heinemann (2001)
 - Heat Transfer (10th) by Jack P. Holman, McGraw-Hill Companies (2009)





Today's contents

- Brief lecture guide of 2nd part
- Definition of temperature measurement
- Temperature measurement technique
 - Actual circumstances
 - Thermocouples
 - Analysis and knowledge for actual use
 - Resistance temperature detectors
 - Its characteristics and knowledge for actual use
- Small problems for the temperature measurement

