

Joint Summer Workshop on Indoor/Outdoor Air Environment Engineering between the NTUT and SIT in Taipei, 2024

| Date | Place | Partner Organization | Students' Major and Grade | Participants' Information | SIT Instructor |
|---------------------------|--------|--|---|---|---|
| 2024/11/04 ~2024/11/11 | Taiwan | National Taipei University of Technology | •Department of Mechanical Engineering •Undergraduate 4th grade | (SIT) Students 12, Student Staff 2, Professor 2 (National Taipei University of Technology) Students 10, Student Staff 2, Professor 2 | RAJAGOPALAN UMAMAHESWARI (Innovative Global Program), SUWA Yoshihide (Mechanical Engineering Advanced Mechanical Engineering), KAWATA Takuya (Mechanical Engineering Advanced Mechanical Engineering) |



Group photo of all members

The participants were divided into five groups and worked on experiments and simulation tasks in the laboratory of Prof. Shih-Cheng Hu and Prof. Ti Lin at the National Taipei University of Technology (NTUT). The participants also attended lectures by Prof. Lin and Prof. Suwa and visited a manufacturer of high-performance air filters.

The activities assigned to each group were as follows:

- Experiments on airflow and humidity control inside the FOUP (a transport box used in semiconductor manufacturing)
- HEPA (High-efficiency particulate air) filter leak inspection tests
- Visualization of airflow in the air curtain which applies the Coanda effect
- CFD simulation of wide-area pollutant diffusion
- CFD simulation of airflow around a moving object (forklift passing the air curtain)



Welcome party



Attending lectures



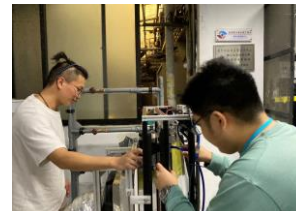
Meeting to discuss the CFD assignment



Creating the experimental device



Experiments in the airflow visualization



Filter leak measurement experiment