

能源與冷凍空調工程系
Department of Energy
and Refrigerating
Air-Conditioning
Engineering

數值模擬與流場可視化
Numerical Simulation and
Flow Visualization

數值模擬與流場可視化實驗室
Numerical Simulation and
Flow Visualization Lab.



O: 綜科 516-1
#3517

L: 綜科 611-8
#3517

施陽正 教授
Prof. Yang-Cheng Shih

美國賓州州立大學
The Pennsylvania State University
USA

f10958@ntut.edu.tw

<http://www.ntut.edu.tw/~f10958/>

■ 研究領域

PIV流場量測、暗影法與
暫態液晶流場可視化、固
液相變過程之熱質傳研究、
氣流模擬分析、計算流力
與熱傳應用、能源應用

■ 近期研究主題

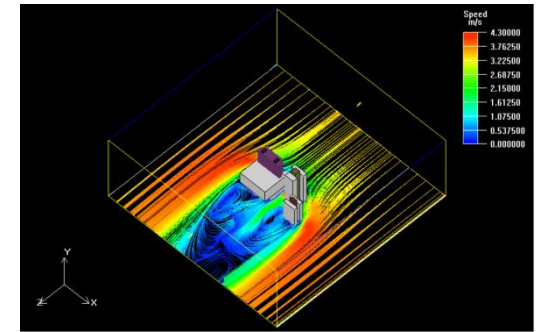
- PIV流場量測應用
- 分離式空調室內機流場
分析
- 潔淨室氣流模擬分析
- 田口法應用於冷凍系統
之優化研究
- 二元溶液凝固過程雙擴
散對流之熱質傳分析
- 室內氣流分佈動態分析

■ Research Area

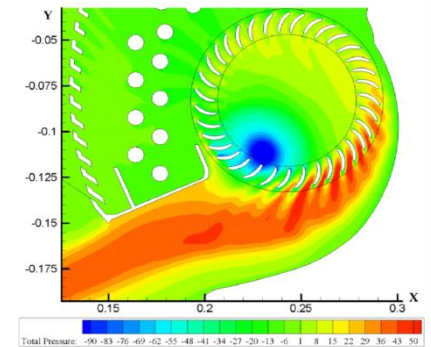
PIV (Particle Image Velocimetry)
measurement, Shadowgraph and
thermochromic-liquid-crystal (TLC)
flow visualization, Heat and mass
transfer analysis during the liquid-
solid phase change process, Airflow
simulation, The application of
computational fluid dynamics and
heat transfer, Energy application

■ Recent Topics

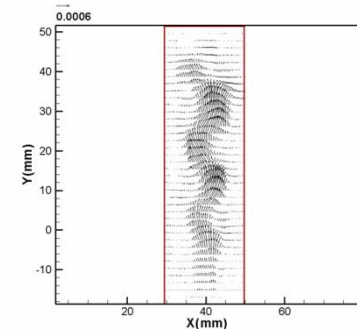
- The application of PIV measurement
- Airflow analysis of indoor unit of the
split-type air-conditioner
- Airflow simulation within cleanroom
- The optimal study on refrigeration
system using Taguchi method
- Heat and mass transfer analysis on
double-diffusive convection of a
binary system during solidification
- Dynamic analysis on indoor airflow
distribution



建築物風場模擬
Airflow simulation around buildings



分離式空調室內機氣流模擬分析
Airflow simulation on indoor unit of a
split-type air-conditioner



PIV流場量測應用
The application of PIV measurement