

Research Group Profile

Air – Conditioning Engineering Research (ACER)



NICHE AREA

Thermodynamics & Heat transfer; Heating, ventilation, & air conditioning (HVAC); Indoor air quality (IAQ); Thermal comfort; Solid desiccant air dehumidifier; Two-phase flow; Carbon nanotube nanofluid (CNT); Microchannel heat sink; Environmentally friendly refrigerant; Microfluidics; Lab-on-chip (LOC);
Microelectromechanical System (MEMS); BioMEMS; Biosensor; Fluid Mechanics; CFD analysis

SERVICES & FACILITIES

- Indoor environmental quality – IEQ Bacharach
- Solid desiccant air dehumidifier (SDAD) unit – FFB300
- Digital hygrometer – TES1364
- Particle counter – HPC300
- Pitot tube anemometer – EXTECH HD350
- Hot wire anemometer – HHF SD1

MEET OUR TEAM

RESEARCH GROUP LEADER

Assoc. Prof Ts. Dr. Haslinda
Binti Mohamed Kamar

RESEARCH GROUP MEMBER

Ts. Dr. Wong Keng Yinn

RESEARCH GROUP MEMBER

Dr. Ummikalsom Binti Zainal Abidin

RESEARCH GROUP MEMBER

Dr. Muhammad Faiz Hilmi Bin Ranj

RESEARCH GROUP MEMBER

Ir. Ts. Dr. Mohamad Nur Hidayat
Bin Mat

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ACTIVITIES

HEAT PUMP SYSTEM PROJECT

The Air-conditioning Engineering Research (ACER) together with Waseda University, Tokyo, Japan, are carrying out a research collaboration on a Heat Pump System. Prof. Dr. Kiyoshi Saito leads the project from Waseda University, and Prof. Dr. Normah Mohd Ghazali from UTM (ACER member). An MoA has been established between the two parties. An in-kind of two new units of Heat Pump system by Daikin and instrumentation will be installed and placed (approximately RM400,000 in-kind) in UTM by September 2019. ACER will be responsible for conducting data collection for future system improvement based on the Malaysia climate. In relation with that, Prof. Dr. Normah, AP. Dr. Nazri, and AP. Dr. Haslinda were invited to Waseda University, Tokyo from 6 to 10 August 2018 to witness the heat pump system testing, where Waseda University sponsored the trip.



RESEARCH ACTIVITIES

- International workshop on HVAC&R
- Visit to Nanofluid Thermophysical Pro Lab in IUT Rennes
- Microchannel Heat Sink with UI

ACHIEVEMENTS

Receive research grant approximately RM 400,000 for conducting data collection for future system improvement based on the Malaysia climate.