VISION

To be the center of excellence for the advancement in robotics and industrial automation engineering

MISSION

- **Conducts researches in new technologies, consultations, testing and also new product developments**
- **Supports the post-graduate programs through university-industry collaborations**

OBJECTIVES

- **To encourage smart industry based research through close relationship by applying collaboration in research and development.**
- **To encourage industrial based research through synergetic relationship by co-operative execution of research and development.**
- **To establish ties amongst other research institutions in stabilizing and broadening of research and development center.**
- **To develop advanced and current technology for the advancement of the nation's socio economy.**

NICHE AREAS

FACILITIES

EPS Research Laboratory

1. Programmable DC Power Supply
2. 4x6kW grid-connected photovoltaic systems
3. Weather station with one-second time resolution meteorological data
4. HAEFELY high voltage test equipment
5. OMICRON MPD600 partial discharge measurement system
6. FESTEC tracking and erosion system
7. MEGGER portable oil AC breakdown tester
8. COMSOL Multiphysics software

PED Research Laboratory

1. ANSYS Maxwell software for modelling
2. Experimental setup for motor/generator measurement
3. AC motor design test system
4. Lithium Ion Battery charger and balancing systems
5. High-performance induction motor or BLDC drives
6. Superior microcontrollers (e.g. dSPACE & FPGA)
7. Copper wire winding machine & Infrared IC heater

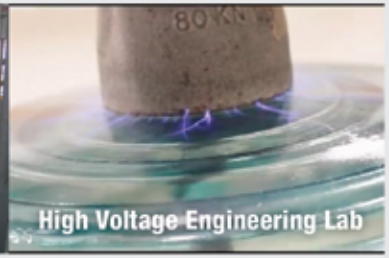
REAT Research Laboratory

1. Surface EMG Sensors and Systems
2. Fluke 435 Power Quality Analyzer
3. PICO PC Oscilloscope
4. Thermal Imaging Camera

RIA Research Laboratory

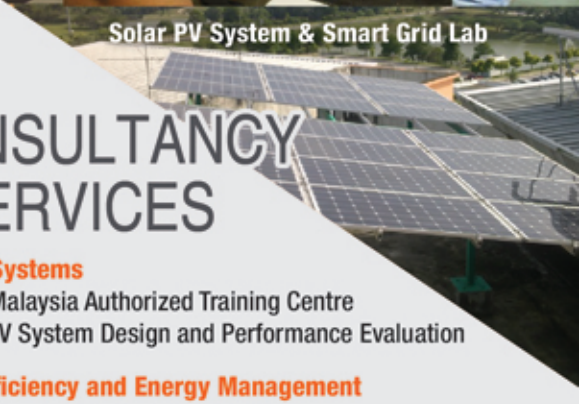
1. KUKA Robot for welding
2. CNC Machine
3. 3D Scanner and Printer
4. Motion Control for Electromagnetic Actuator and Finger system
5. Unmanned Underwater Vehicle

Robotics & Industrial Automation Lab


High Voltage Engineering Lab

Power Electronic Drive (PED) Lab

Electric Machine Design Lab


Solar PV System & Smart Grid Lab

CONSULTANCY & SERVICES

Solar PV Systems

1. SEDA Malaysia Authorized Training Centre
2. Solar PV System Design and Performance Evaluation

Energy Efficiency and Energy Management

1. Certified Energy Auditing Services
2. Energy Policy Formulation
3. Energy Management Consultation
4. Best Energy Saving Practices

High Voltage Engineering

1. Power Transformer Condition Monitoring and Analysis
2. Transformer Oil Analysis
3. Towards Accredited High Voltage Testing Laboratory Status (IEC 17025)

Electrical Machine Design

1. Measurement and testing of electrical motor/generator
2. Fabrication of electrical motor/generator
3. Design of various types of permanent magent machine
4. Motor/Machine winding

Electrical Drive

1. PCB fabrication
2. Short course on AC motor drives
3. PI controller design for DC motor using MATLAB Simulink

Motion Control

1. Real-time control design training workshop
2. Workshop on MATLAB/Simulink for engineering project

RESEARCH GROUP

Research Group	Research Laboratory
Robotics & Industrial Automation (RIA) Dr. Mohd Shahrieel bin Mohd Aras 06-555 2284 shahrieel@utem.edu.my	- Robotics and Industrial Automation - Motion Controls - Underwater Technology
Energy & Power Systems (EPS) Dr. Mohd Hendra bin Hairi 06-555 2325 hendra@utem.edu.my	- Energy & Power Systems - Solar PV System & Smart Grid - High Voltage Engineering
Power Electronic & Drives (PED) Dr. Auzani bin Jidin 06-555 2354 auzani@utem.edu.my	- Power Electronic & Drives - Electric Machine Design - Electric Vehicle Drives
Rehabilitation Engineering & Assistive Technology (REAT) Assoc. Prof. Dr. Mohd Juzaila bin Abdul Latiff 06-2346 6803/6798 juzaila@utem.edu.my	- Rehabilitation Engineering & Assistive Technology - Advanced Digital Signal Processing

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COLLABORATION

stevia industry

PERKESO

MechEnix Sdn.Bhd

MUTIARA SWITCHGEAR

Cervello Tres

suria GIANT HVLS FAN

seda MALAYSIA

INDKOM ENGINEERING SDN. BHD.

Master Tec® Wire & Cable

SAMSUNG

SAMSUNG SDI

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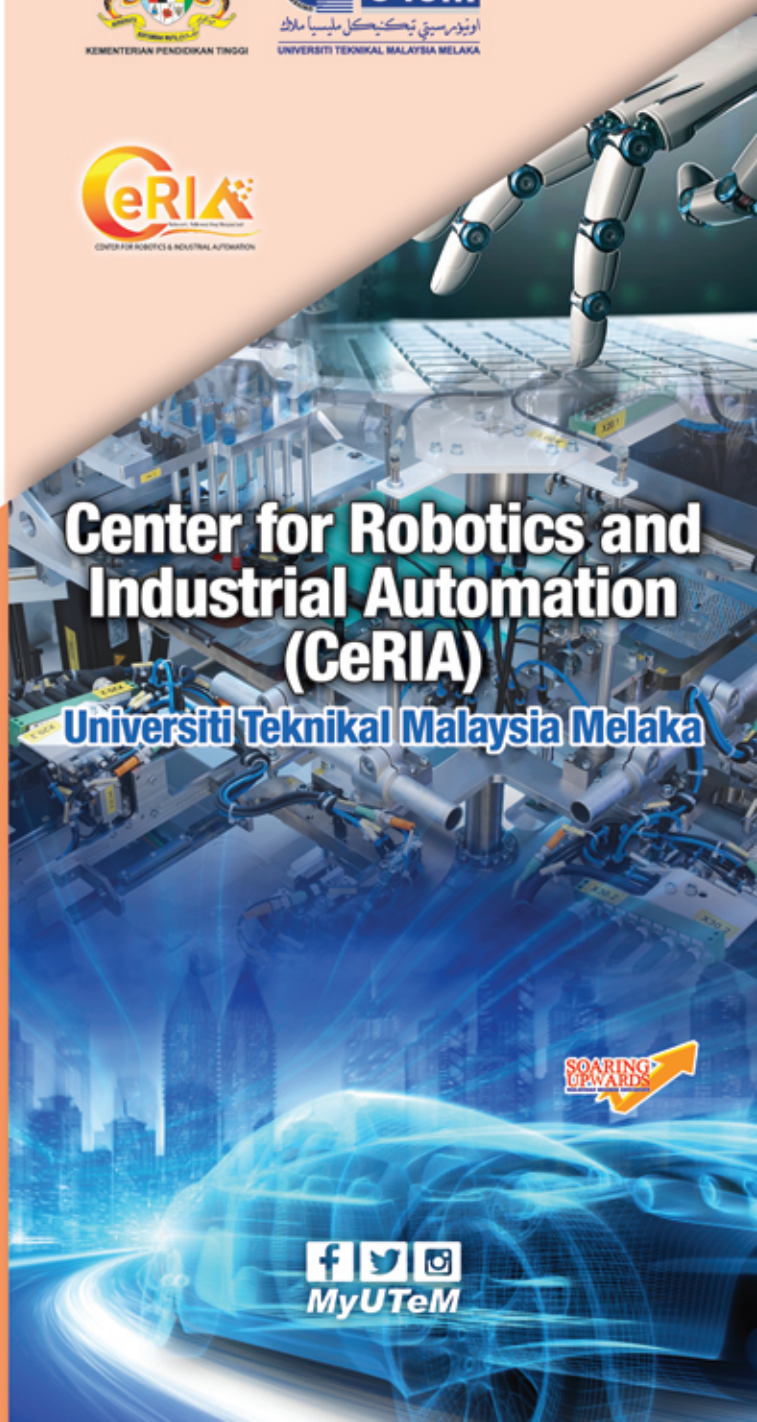
KEMENTERIAN PENDIDIKAN TINGGI

UTeM
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

CeRIA
CENTER FOR ROBOTICS & INDUSTRIAL AUTOMATION



Center for Robotics and Industrial Automation (CeRIA)

Universiti Teknikal Malaysia Melaka

SOARING UPWARDS

MyUTeM