


## Curriculum Vitae for XMUM Official Website

	Name	<b>Dr. Tan Jian Ding</b>
	Current Position	Assistant Professor
	Administrative Position	Curriculum Review Committee Student Affairs Committee
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### BIOGRAPHY

A registered member under the Board of Engineers Malaysia (BEM) and the Institute of Engineers, Malaysia (IEM) in the field of electrical and electronic engineering with more than 12 years of teaching and research experience in the field of electrical and electronic engineering. Actively involved in governmental and industrial consultancies on artificial intelligence, control engineering, robotic system, automation, embedded system, microcontroller, renewable energy, and components of Industrial Revolution 4.0.

### RESEARCH INTERESTS

Artificial Intelligence, Robotics, Industrial Automation, Optimization, Heuristic Search, Internet of Things (IoT), Renewable Energy, Embedded Controls.

### EDUCATIONAL BACKGROUND

- PhD, Engineering Faculty, University of Malaya, Malaysia.

### WORKING EXPERIENCE

- Assistant Professor, XMUM.

### RESEARCH EXPERIENCE / GRANTS

- FRGS: A New Detent Torque Reduction Approach for Turbine-Based Green Energy Harvesting Systems via Stator Tooth-Rotor Magnet Paired Modifications (Principal Investigator)
- AAIBE-KETTHA: Development of Autonomous Intelligent Condition Based Maintenance System for Renewable Energy Enabling Technology (Co Researcher)
- TNBR: Wave Pattern Recognition using Artificial Intelligence for Corona, Surface Discharge and Arcing (Co Researcher)
- Effective Optimization of Off-Grid Solar-Wind Hybrid Renewable Energy Harvesting Systems (Principal Investigator)
- Development of High Throughput High Precision Projection 3D Printing System as A First Step to The Micromachining of Advanced 3D Heat Exchange for Power Plant Cooling (Co Researcher)
- Moving Object Tracking Mechanism for Unmanned Aerial Vehicle (Co Researcher)

- Exploration of Charge Collection Mechanism in Graphene-TiO<sub>2</sub> as Electron Transporting Layer for Perovskite Solar Cells (Co Researcher)
- Silicon Micro Ring Resonator as Refractive Index Sensor with THz Generation Application (Co Researcher)
- Investigation of Electromagnetic Power Transfer Efficiency in Batteryless Mouse Using Spiral Resonator (Co Researcher)
- Hand-Held Automated Anti-Power-Fraud Scanner for Malaysian Utility Companies (Co Researcher)
- Power Saving Variable Air Volume (VAV) with PID Control System (Co Researcher)

## REPRESENTATIVE PUBLICATIONS

- Tan Jian Ding, Clifford Choe Wei Chang, Mohammad Arif Sobhan Bhuiyan, Khairun Nisa' Minhad, Kharudin Ali. (2022). Advancements of wind energy conversion systems for low-wind urban environments: A review. *Energy Reports*, Vol. 8, pp. 3406–3414. (ISI: Q1)
- Tan Jian Ding, Mahidzal Dahari, Siaw Paw Koh, Ying Ying Koay, Issa Ahmed Abed. (2017). A new experiential learning electromagnetism-like mechanism for numerical optimization. *Expert Systems with Applications*, vol. 86, pp. 321-333. (ISI: Q1)
- Tan Jian Ding, Mahidzal Dahari, Siaw Paw Koh, Ying Ying Koay, Issa Ahmed Abed. (2017). Analysis of the Effect of Search Step Size on the Accuracy and Convergence Properties of Electromagnetism-Like Mechanism Algorithm. *Journal of Multiple-Valued Logic and Soft Computing*, vol. 48, pp. 429-441. (ISI: Q1)
- Tan Jian Ding, Mahidzal Dahari, Siaw Paw Koh, Ying Ying Koay, Issa Ahmed Abed. (2016). An improved electromagnetism-like algorithm for numerical optimization.
- Mahidzal Dahari, Tan Jian Ding. (2011). Forward and inverse kinematics model for robotic welding process using KR-16KS KUKA robot. 2011 IEEE Fourth International Conference on Modeling, Simulation and Applied Optimization, pp.1-6.

## HONORS/AWARDS

- Ambassador of the Engineering Faculty, University of Malaya (UM).
- Gold medallist in Bright Spark Researcher Award (Renewable Energy).
- Gold medallist in Industrial Research and Invention 2019.
- Gold medallist in Best Pitching Presenter 2019.
- Winner of UNITEN R&D Cutting-Edge Research Award.
- Winner of Best Commercial Potential Research Award 2019.
- Silver medallist in Green and Sustainable Energy Award.
- Founder of a mobile-robot team in the University of Malaya (UM), led to several victories in multiple national-level competitions.
- Founder of the robotic club in Xiamen University Malaysia (XMUM).