

Research Group Profile

Applied Aerodynamics Research Group (AARG)

NICHE AREAS

- Experimental Aerodynamics & CFD
- Vehicle Aerodynamics, Performance & Stability
- Wind Engineering & Industrial Aerodynamics
- Aircraft Performance, Stability and Control

SERVICES & FACILITIES

- 2.0 m x 1.5 m x 6.0 m Wind Tunnel, Maximum Speed: 288 kph
- Aeronautics Laboratory
- CFD & FEM software
- 6 Component balance
- Particle Image Velocimetry
- Smoke generator, Anemometer, Hotwire

MEET OUR TEAM

RESEARCH GROUP LEADER

Dr. Nik Ahmad Ridhwan
Bin Nik Mohd

RESEARCH GROUP MEMBER

Assoc. Prof Ir. Dr. Shabudin Bin Mat

RESEARCH GROUP MEMBER

Ir. Dr.-ing. Mohd Nazri Bin
Mohd Nasir

RESEARCH GROUP MEMBER

Dr. Mastura Binti Ab Wahid

RESEARCH GROUP MEMBER

Dr. Mohd Fairuz Bin Shamsudin

RESEARCH GROUP MEMBER

Dr. Haris Ahmad Bin Israr Ahmad

RESEARCH GROUP MEMBER

Dr. Iskandar Shah Bin Ishak

RESEARCH GROUP MEMBER

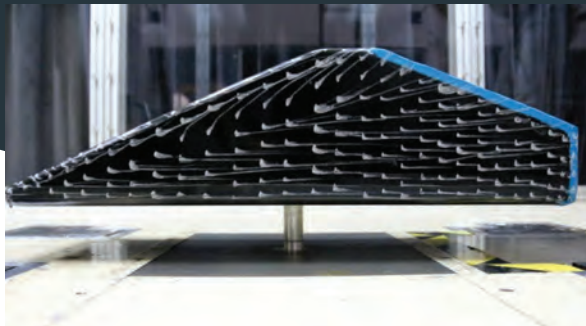
Dr. Muhammad Faruq Foong
Bin Mohamad Faiz Foong

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PROJECT HIGHLIGHTS

- Unmanned Aerial Vehicle UAV
- VTOL UAV
- Aerodynamics of Delta wing
- Active flow control and synthetic jet actuator
- Fluid-Structure interaction
- Wind tunnel and CFD correlations
- Ocean-Thermal Energy turbine



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ACTIVITIES

JAGA DRONE

The deployment of IoT on campus can revolutionize drone technology for a comprehensive campus security and surveillance system. Existing security systems consist of the usage of CCTV and guard patrolling for surveillance which only covers the accessible areas but not the whole campus perimeter as total. There fore, in this project, an IoT-based drone technology is produced. The cloud database management system for the drone comprises a web-browser for live-monitoring, control, and configuration while providing complete visibility of uploaded data in real-time for instant activities reports and logs. Other possible feature are auto return to launching pad, first aid kit transporter, emergency responder (panic button), and perimeter patrolling with geofencing for authorized users. The drone will be equipped with a free carbon emission propulsion system and low-noise electric motors with a maximum range of coverage up to 10 km and it can be deployed in a very confined area.



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RESEARCH ACTIVITIES

