

# MIIEx2017

Melaka  
International  
Intellectual  
Exposition

## PROGRAMME ABSTRACT

AUTISM

INNOVATION

DESIGN

INVENTION

**"Bridging Gaps with Creativity for Future Sustainability"**

# MIIEX2017

The logo for MIIEX2017 features the text 'MIIEX2017' in a bold, black, sans-serif font. The 'I' in 'MIIEX' is stylized as a torch. The '2017' is also stylized, with the '0' and '1' incorporating silhouettes of buildings or structures.

“Bridging the Gaps with Creativity for Future Sustainability”

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AFTI Sdn Bhd

## **PUBLISHED BY:**

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## BLIND AID TOOL (BAT)

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POLITEKNIK MUADZAM SHAH

### Abstract

Blindness is a lack of vision. It may also refer to a loss of vision that cannot be corrected with glasses or contact lenses. Among numerous forms of disability, blindness is one of the most suffering that can strike people of all ages and it affects the victim's life. In 2010, the Welfare Department accounted for 64,000 blind people registered in Malaysia and the estimated number of blind was 4 to 5 times higher. This indicates that the percentage of the blindness person in Malaysia is quite high. In the process of Blind Aid Tool (BAT) fabrication, there are two main parts involved, the internal system and external parts. The internal system contains ultrasonic sensor, micro-controller board (ARDUINO Pro Mini 5), and DC vibrator motor that produce vibration while the external parts are the product casing. The system has one ultrasonic sensor which is to detect obstacles in the user path. The sensors will detect the obstacle and resolve the distance between the obstacle and the user. The output of the sensor will be sent to the micro-controller. The micro-controller receives the output signal from the sensors and processes them. If the output signal is within the programmed three feet range then the micro-controller will activate the indicators. The casing design is created using CAD software (CATIA) and fabrication is using Fused Deposition Modeling (FDM) 3D printer. In conclusion, this Blind Aid Tool can help blind people to move to unfamiliar area without human guidance.

## INTERACTIVE TEACHING KIT

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Palanisamy, & Noor Masyitah Jumahat

UNIVERSITI TEKNOLOGI MARA

### Abstract

As a lecturer and researcher in medical microbiology, I have observed if we do not stimulate inquisitiveness and interest in students, there will be a lack of desire to learn. Due to lack of facility and improper infrastructure, teaching of medical microbiology can be challenging. Hence we have created a teaching kit that can provide a complete experience (visual, hands on and interactive) of learning medical microbiology without having access to any specific requirements or facilities. This kit is made with the intention of making the learning of microbiology simple and easy. The kit comes with organism pictures on culture plate and their microscopic slide in actual petri dish and microscope slide respectively. This will provide a safe learning environment without having to handle the actual pathogenic organism. Users also get the opportunity to have a hands on experience on how bacteria is grown. This kit handbook is coded with interactive features which can be unlocked with any type of smart phone or tablet. Download the free app for ios and Android and experience the live demo and videos.