MAHSA UNIVERSITY
BE MORE

# FACULTY OF ENGINEERING & BUILT ENVIRONMENT

**Volume 2, 2nd Issue | June 2020**

## MESSAGE FROM THE DEAN

### DR. IMAN FARSHCHI

I would like to warmly congratulate the Malaysian Government in their well achieved success of facing the COVID-19 pandemic situation. We as educators at MAHSA University have always fully supported and abided by the orders from the government to ensure and prevent the further spread of this global pandemic.

At Faculty of Engineering and Built Environment, we have done our part in ensuring that MAHSA University remains in a state of readiness to cope with COVID-19 pandemic situation. As a result of the disruption caused by pandemic, education-document based approach is continued through the online consultations and online learning via various education channels.

Following this pandemic situation, I hope the students can continue to focus and give their attention in the various platforms of the learning methods which uses new technology. Consequently, students can be more techno-savvy and also be more creative and productive on-line.

This newsletter aims to distribute and disseminate information to the administration, students and the public about the Faculty's and University development. It is with great pleasure here that I appreciate the key role that educators have been playing in the modernization of online education learning.

In addition, I would also like to acknowledge the previous Dean in the achievement and contribution to the Faculty and University to enrich the programme. Staffs have also given great commitment to achieve this University's objectives and vision.

***DR. IMAN FARSHCHI***

Dean, Faculty of Engineering & Built Environment

## What's Inside

# Ingenious

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# “LET'S FIGHT COVID19 TOGETHER”

## Fight Against COVID-19 by Faculty of Engineering and Built Environment Staff and Students

The whole world has been LOCKDOWN, but all the Frontliners fighting against the Corona Virus, helping us to be safe and alive. MAHSA University, and particularly Faculty of Engineering and Built Environment (FEBE), has done an excellent job in Fighting against COVID-19 together with all fronliners. MAHSA has done various projects and activities in title of "Let's Fight Covid19 Together".





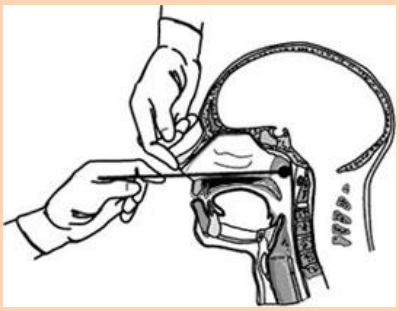
## "LET'S FIGHT COVID19 TOGETHER"

## DESIGN A 3D PRINTED NASAL SWAB FOR CORONA VIRUS TESTING AND 3D FACE MASK

After realising the shortage of the nasopharyngeal swab – commonly known as nasal swab – affecting hospitals nationwide due to the outbreak of the COVID-19 pandemic, MAHSA University's Faculty of Engineering and Built Environment (FEBE) took the initiative to design a 3D printed nasopharyngeal swab by using 3D printing technology. Madam Syazana Syahirah, as a lecturer and coordinator of the Faculty of Engineering and Built Environment engineering club, formed a design team for this particular task. The team is led by FEBE alumni, Sheih Muhammad Buhari, who has developed a few designs of the 3D printed nasopharyngeal swab and 3D printed Face mask.

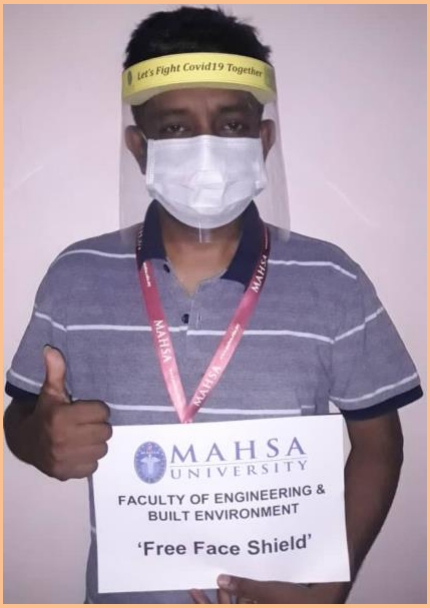
A nasopharyngeal swab is a flexible stick with a head capable of collecting and carrying a sample of the nasal secretions after being inserted through the nostrils about 2.5 inches deep and into the back of the nasal cavity and throat. The collected sample is then analysed to determine whether the patient is infected by the corona virus or other diseases.

The team focused on designing the nasal swab heads in the form of cages in order to trap and carry the sample after being inserted into the nasal cavity, then collected to be tested and analysed, all while maintaining the specific dimensions of the original nasal swab which comprised of 6 inch in total length, 1/2 inch nasal swab head and 1/8 inch nasal swab diameter. Taking in consideration, the swab should not affect the collected sample's RNA (Ribonucleic acid), specific resin-based material is to be used to produce test compatible swabs. The finalised design will be ready for production using 3D technology and machines after recommendation and approval from medical experts.



Nasopharyngeal Swab Design by FEBE Alumni, Sheih Muhammad Buhari

3D printed Face mast by FEBE Alumni, Sheih Muhammad Buhari




**MR SIVA A/L VENGADASALEM**

## "LET'S FIGHT COVID19 TOGETHER"

## PERSONAL PROTECTION EQUIPMENT BY MAHSA ENGINEERING CLUB

In line with the recommendation made by the Minister of Higher Education that encouraged students to get engaged in beneficial activities during the MCO period, in situation of shortage of personal protective equipment (PPE) for health workers in the fight against COVID-19, MAHSA Engineering Club have taken the initiative to produce face shields for various hospitals. MAHSA Engineering Club team has designed and produced the Personal Protection Equipment (PPE) for various hospitals.

There are 2 types of PPE had been produced, first equipment is the face shield to protect the users face and second is the ear connector to hook the face mask's elastic at back of the head, which has been used to protect the users ear. Both PPE were produced using 3D printing technology. These PPE are sent to the frontliner working at the Tapah Hospital in Perak and Hospital Angkatan Tentera Wilayah in Kota Kinabalu. The PPE has been received and the item will be used to protect the doctors and nurses during this pandemic period. MAHSA Engineering Club in charge Madam Syazana Syahirah and her team will continue to support the frontliners to fight against Covid-19 and assist them by providing more PPEs.


## *"LET'S FIGHT COVID19 TOGETHER"*


## FOOT PRESS HAND SANITIZER USING PVC PIPES

Hand washing and the use of hand sanitizers is an essential key for infection prevention. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol.

Therefore Faculty of Engineering and Built Environment in collaboration with FAST Department and MAHSA TECH team took an initiative to create a safe way of using hand sanitizer. This make another successful project by FEBE, which is "Foot Press Hand sanitizer using PVC pipes".

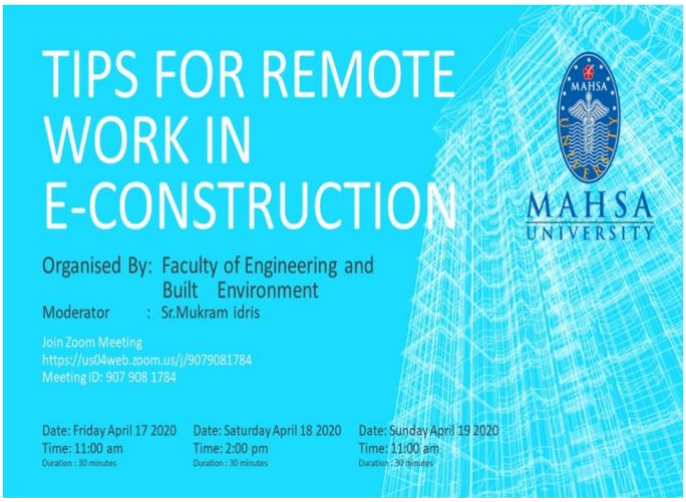
***SAMPLE OF FOOT PRESS HAND SANITIZER USING PVC PIPES***

# E-TALKS AND WEBINARS

Online distance knowledge delivery and conducting numerous E-talk and webinars was another spectacular effort from Faculty of Engineering and built environment lecturers and professors, to keep engaging all the students and researchers even in the hectic situation. Therefore, our eminent and fully dedicated lecturers and professors delivered their lectures to educate students and researchers to sharpen their engineering's minds.


**Are you enthusiastic to know great minds behind the science of construction? In this talk characteristics of engineering minds behind each successful project with giving of example of few top construction projects had been delivered.**


**There's a lot more that goes on behind a completed architecture than the the mixing of cement and binding of steel. Discover what goes on through the people who make it possible in shaping neighborhoods, towns and cities through.**

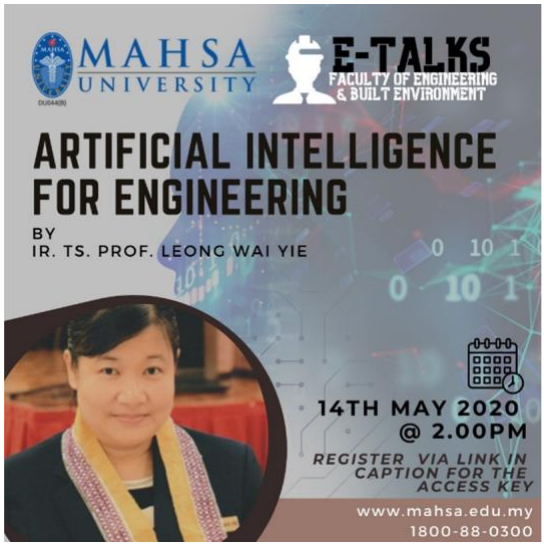




**Prof. Sean and Ir. Kanesh had been given their talks to inspire Engineering ideas on advanced application of engineering knowledge to combat the COVID-19**

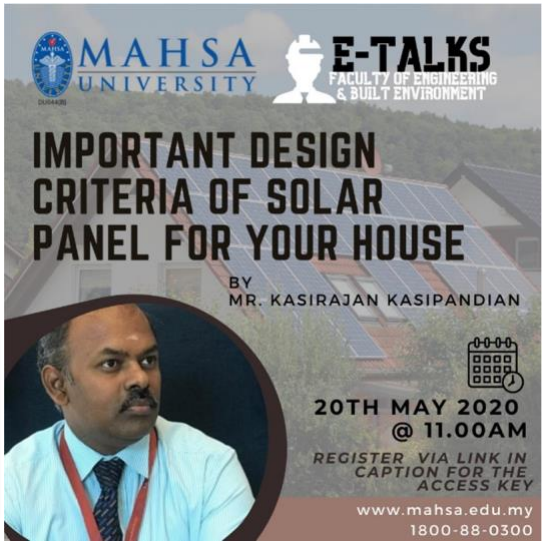
# E-TALKS AND WEBINARS


**Dr.Shinto Amiri delivered a lecture on "Guidance on preparing workplace for COVID-19 on 13th May,2020.**




**Faculty Former Dean Prof.Ir.Dr.Leong Wai Yie delivered an E-Talk on Artificial Intelligence in Engineering on 14th May, 2020.**


**On 14th May Mr.Razmi had given a Hands on activity on Arduino workshop 2020. "**




**Important Design of Solar Panel for Your House" E-Talk was delivered by Mr. Kasipandian Kasirajan on 20th May, 2020.**


**COVID-19 ONLINE BABYSITTING IOT STEM AI was delivered by Miroslav Kostecki on 21st May, 2020**

# FACULTY OF ENGINEERING & BUILT ENVIRONMENT

## FACEBOOK PAGE

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