



# IEEE DAY 2020 Malaysia Section

## *Leveraging Technology through Humanitarian Activities*



Date: 10 October 2020 (Saturday)

Time: 1100 AM – 1300 PM (GMT +8)

Platform:   **Marriott**  
PUTRAJAYA

Registration: <https://bit.ly/3hGnBBP>

*E-Certificates will be provided to participants*





## IEEE – MySIGHT4Rehab



**Chong Yu Zheng**  
*Lecturer, UTAR*  
*Honorary Treasurer,*  
*IEEE Malaysia Section*

The IEEE-MySIGHT4Rehab was amongst the first IEEE SIGHT group formed in Malaysia. This session will discuss on various outputs of the group since its inception as well as the journey thus far for the group.



10<sup>th</sup> Oct 2020 | 1030 – 1300 (GMT +8) |    YouTube

Registration: <https://bit.ly/3hGnBBP>





## On-Site Communication SOP for Construction Project during COVID-19



Ts. Ir. Dr. Syuhaida Ismail  
Assoc. Prof.,  
CCGRC, UTM KL

The movement control order (MCO) in curbing the COVID-19 has stalled all construction activities in Malaysia. Construction industry, as a labour-intensive industry contributed 7.2 percent of annual growth rate, is impacted with 60 percent decline in the annual turnover. As construction industry is dominated by 93 percent foreign unskilled construction workers from low-income countries who live in the over-crowded workers' quarters, the poor on-site communication breakdown amongst these various nationalities have led to the emergence of construction employees COVID-19 new cluster and the escape of construction employees during COVID-19 swab test at sites. With the fact that 90 percent of construction activities involved communication, thus, this project aims to develop the on-site communication standard operating procedures (SOP) among stakeholders for construction projects in Malaysia during the COVID-19 outbreak to mitigate the communication breakdowns amongst the foreign construction workers. These SOP are crucially needed to ensure that construction activities can be done immediately and safely via clear stakeholders' role in communication management on site by leveraging the Internet of Things (IoT) technologies although construction industry is traditionally known as slow in the IoT adoption at -18 percent growth compared to other industries. This SOP eventually enables the construction industry to keep its momentum during the COVID-19 crisis.



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## COVID-19 Children Awareness & Support Materials for Childcare Center



Practicing new normal such as wearing face mask, frequent hand sanitizing and keeping social distance among children is a challenge. The project proposes the development of awareness and support materials regarding COVID-19 to be used in childcare center. There are several childcare centers begin to start their operation on June 1st. This is primarily to support frontliners and working parents who need to work away from home. The childcare centers that have been closed for nearly 3 months will need support to operate in new setting in compliance with the guidelines and regulations. The children that have stayed at home in the last three months will need adjustments to adapt to the new normal practiced in the center. This project will be implemented to at least five childcare centers in the Shah Alam, Selangor.

**Dr Nur Idora Abdul Razak**  
*Senior Lecturer, FKE UiTM*  
*Executive Committee,*  
*COMSOC/VTS Malaysia Chapter*



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## Dental Aerosol Containment Equipment for the Prevention of COVID-19 in Malaysia



**Dr Fatanah M Suhaimi**  
*Senior Lecturer, AMDI USM*  
*Executive Committee, IEEE*  
*EMBS Malaysia Chapter*

The rapid, widespread COVID-19 affects many activities, including dental treatment services. New SOPs and guidelines have been introduced by the Ministry of Health to allow dental treatment services to continue operating during this season. Since dental treatment requires close contact, a higher level of precautions is needed to avoid COVID-19 infection. Additionally, many dental treatments involve handpieces instruments, which create aerosols from the mixture of water from the handpieces and saliva from the patient's mouth. This would definitely pose a risk of infection to the dental personnel as COVID-19 has been proven to be present in the saliva. Therefore, aerosol containment equipment is needed in dental clinics to prevent aerosols from spreading to a broader area, providing a safer condition for patients and dental personnel. The objective of this project is to prepare dental aerosol containment equipment that can be used by dentists when treating their patients. The structure of the dental aerosol containment equipment is made by using readily available materials and easy to be cleaned and sanitized.



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## Designing an IoT based Disinfectant Gate for Reducing the Reproductive Coefficient of the Novel Coronavirus COVID-19 in Malaysia



Engr Ghulam E Mustafa Abro  
Doctoral Student, UTP  
General Secretary, IEEE UTP  
Student Branch

The novel coronavirus (COVID-19) has almost affected more than two million people and has taken more than one hundred thousand lives around the globe. At this current state, researchers are trying their best level to drive the permanent solution for this menace hence till now social distancing and hygienic lifestyle are the only solutions. This session proposes a smart entrance disinfectant gate based on the sanitizer spray station and ultraviolet irradiation mechanisms. This innovative and embedded system design-oriented gate will firstly capture the image of the entrant, secondly measure the temperature, thirdly spray the sanitizers and lastly, provide the ultraviolet irradiation to make sure that the person entering any space may have fewer chances to carry coronavirus. The feature of IoT helps the government officials to keep the data record of susceptible, exposed, infected and recovered people which will later help to reduce the reproductive coefficient  $R_0$  of COVID-19 within any state of Malaysia.



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