UTHM
Universiti Tun Hussein Onn Malaysia

COR BULLETIN 2020

FACULTY OF CIVIL ENGINEERING AND BUILT ENVIRONMENT

Research and Highlight Activities

Smart Driving Research

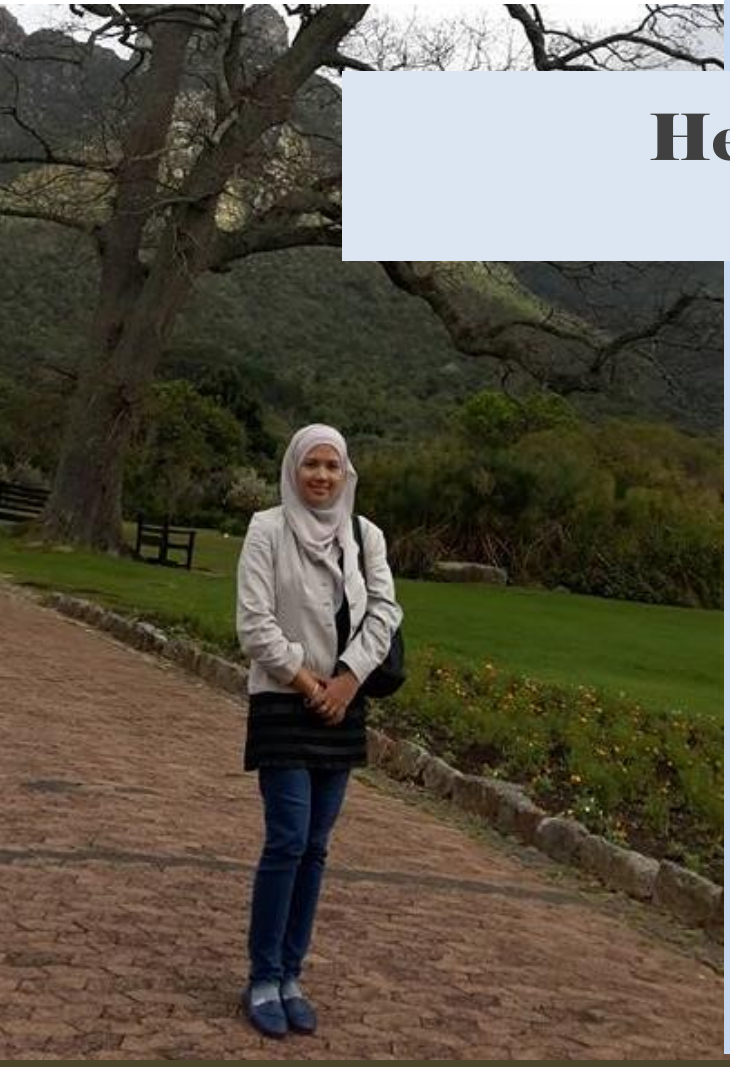
SDRC

FKAAB

CAGeD

JRC

MPRC



Head Editor
Welcoming Speech

It is with great delight to introduce you the COR Bulletin 2020, the bulletin aiming to publish our highlights by our diligent faculty's member. As we know that the year of 2020 has really been a challenging year forcing most people to adapt to new norm. There are, however, challenges can stimulate innovation and many creative ways to fulfil our on-going duty!

I personally thank you to all committee members for their remarkable effort by turning all the memories into this bulletin. Indeed, there are numerous achievements and memories to be kept for our future safe keeping. May all of us will keep safe, motivated and continue to excel during the pandemic era.

Best regards,
Assoc. Prof. Ts. Chm. Dr. Radin Maya Saphira Bte Radin Mohamed

Bulletin Team
COR 2020

Advisor
Prof. Ir. Ts. Dr. Mohd Irwan bin Juki

Chairman
Assoc. Prof. Ts. Dr. Rafidah binti Hamdan

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Assoc. Prof . Ts. ChM. Radin Maya Saphira binti Radin Mohamed

Senior Editor
Assoc. Prof. Sr. Ts. Dr. Mustaffa bin Anjang Ahmad
Dr. Sallehuddin Shah bin Ayop
Dr. Mohammad Nasir bin Mohamad Taher

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Dr. Nur Adila binti Ab. Aziz
Dr. Zalipah binti Jamellodin
Sr. Dr. Nazirah binti Mohamad Abdullah
Encik Khairul Nizam bin Yunus

Chief Graphic Designer
Puan Jalilah binti Md Mohtar

Designer
Puan Norkama Azura binti Dolah

CONTENT

JAMILUS RESEARCH CENTER
sustainable construction

About JRC

Jamilus Reseach Center was officially launched by Tan Sri (Dr) Ir. Jamilus Bin Md Hussin on 27th December 2012. It is named after Tan Sri Jamilus, the Chairman of the Board of Directors, Universiti Tun Hussein Onn. The center is focused on sustainable construction which covers material, integrated design and construction management.

The concept of sustainability embraces the preservation of the environment as well as development-related issues such as the efficient usage of resources. Construction industry has the capacity to make a major contribution to a more sustainable future for the world. Sustainable construction is to seek to minimise the use of natural resources and to ensure the build environment mitigates and resilient to the impact of the climate change. It also protect and enhance biodiversity and green infrastructure as well as providing spaces that are pleasant and healthy for users while ensuring the sustainable sources of material and minimising waste.

Objectives

The objectives of the research center:

(a) To promote research in sustainable construction including alternative material, design method and construction management.

(b) Development of expertise in accordance to new potential of area towards sustainability in construction.

(c) To develop the JRC as centre of excellent in research, consultation and reference and training centre insustainable construction.

Research Cluster

The objectives of the research center:

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(b). Development of expertise in accordance to new potential of area towards sustainability in construction.

(c).To develop the JRC as centre of excellent in research, consultation and reference and training centre insustainable construction.

CLUSTER CHART

JRC RESEARCH CLUSTER CHART

Dean
Profesor Ir. Ts. Dr. Mohd Irwan Bin Juki

Deputy Dean
(Research, Development & Publication)
Prof. Madya Ts. Dr. Rafidah Binti Hamdan

Head of Research Centre
Dr. Sallehuddin Shah Bin Ayop

Construction Technology and Management (ConTeM)	Advanced Construction Materials (AdCoMa)	Repair, Strengthening and Rehabilitation of Structures (RSRS)	Industrialised Building Systems (IBS)	Advanced Technology and Smart Building (ATSB)
				
Prof. Madya Ir. Dr. Noor Yasmin Binti Zainun	Dr. Nor Hazurina Binti Othman	Prof. Madya Dr. Norwati Binti Jamaluddin	Dr Sushilawati Binti Ismail	En Nik Zaini Bin Nik Soh

Area of Expertise

- Composite Structure
- Sandwich Panel System
- Smoothed Particle Hydrodynamics Method
- Finite-discrete Element Method
- Fibre Reinforced Polymer Composite
- Construction Management and Planning
- Industrialised Building System (IBS)
- Acoustic Materials
- Brick Masonry
- Construction Materials
- Biomass
- Dynamic and Seismic Structure Analysis

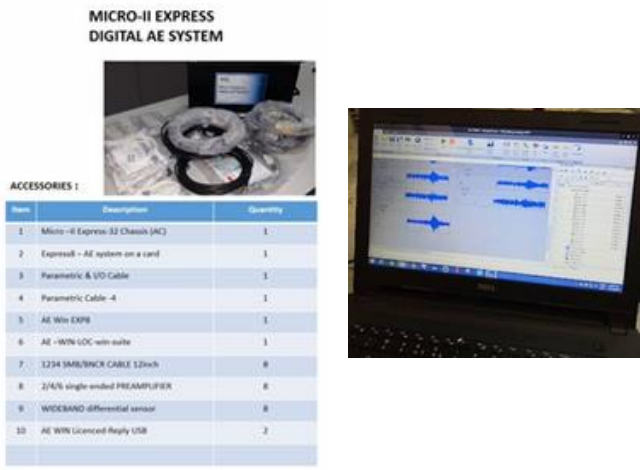
EQUIPMENT

Universal Testing Machine

Compression Machine

Measurement Vibration Data Acquisition System

SAP 200 Software



Aqustic Emmision AE

FOCUS GROUP

1. REPAIR, STRENGTHENING AND REHABILITATION OF STRUCTURES (RSRS)

Research areas :repair and strengthening/building restoration and preservation/forensic/structural assessment /maintenance/new repair materials

Leader: Prof. Madya Dr Norwati binti Jamaluddin

2. CONSTRUCTION TECHNOLOGY AND MANAGEMENT (ConTeM)

Leader: Prof. Madya Ir Dr Noor Yasmin Binti Zainun

3. ADVANCED CONSTRUCTION MATERIAL (AdCoMs)

Leader: Dr Nor Hazurina binti Othman

4. INDUSTRIALISED BUILDING SYSTEMS (IBS)

Leader: Dr Sushilawati binti Ismail

5. ADVANCED TECHNOLOGY AND SMART BUILDING (ATSB)

Leader: En Nik Zaini bin Nik Soh

EQUIPMENT

Portal Frame

Full Scale sample- Static and dinamic test

About MPRC

Micropollutant Research Centre (MPRC) at the Universiti Tun Hussein Onn Malaysia is established in 2013, representing new concepts within water resources and environment conservation. The centre focuses broad range of research on Integrated Water Resources Engineering, Wastewater Treatment and Waste Recovery and Geo-Environmental Engineering.

Objective of MPRC

- To promote micropollutant research in water resources and environmental engineering.
- To provide expertise and development support for new environmental solutions especially for rural area community.
- To make MPRC as a centre of excellent in research an d consultancy for micropollutant in water resources and environmental field.

Functions of MPRC

Built relationship among universities, government agencies and industries in research, consultation and professional development.
Enhance relationship among academician from various field in research and consultation. Deliver knowledge about the technology development for micro-pollutant in wastewater, water, waste and environmental management to the local communities. Resource pools for knowledge, facilities and support service.

Core Competencies

Technology development for waste and water management
Water resources engineering and hydrology
Conversion of waste to energy
Waste management and recovery
Geo-environmental
Urban drainage system
Groundwater engineering
Bioremediation
Fluid mechanics

ORGANIZATION CHART

CLUSTER CHART

Integrated Water Resources Engineering

Prof. Madya Dr. Mohd Adib bin Mohammad Razi (Mentor)
Dr. Hartini bte Kasmin
Profesor Madya Dr. Tan Lai Wai
Dr. Siti Nazahiyah bte Rahmat (Head of Cluster)
Dr. Mohd Azlan Bin Mohd Yusoff
Dr. Muhammad Salleh bin Haji Abustan
Dr. Mohd Hairul bin Khamidun
Dr. Azra Munirah bte Mat Daud
Dr. Siti Hidayah Abu Talib
Noor Aliza bte Ahmad
Zarina bt Md Ali

Wastewater Treatment and Waste Recovery

Prof. Madya Dr. Norzila bte Othman (Mentor)
Prof. Madya Dr. Aeslina bt Abd. Kadir
Prof. Madya Dr. Zawawi bin Daud
Prof. Madya Dr. RafidahHamdan
Prof. Madya Dr. Radin Maya Saphira bt Radin Mohamed
Mohd. Baharudin Ridzuan
Dr. Hjh. Roslinda bte Seswoya (Head of Cluster)
Dr. Nur Shaylinda bte Mohd Zin
Dr. Nur Adila Ab Aziz
Wan Afnizan bin Wan Mohamad
Dr. Adel Ali Saeed
Dr. Wesam A.Y Al-Madhoun

Geo-Environmental Engineering

Profesor Dr. Ahmad Tarmizi bin Abdul Karim (Mentor)
Dr. Sabariah bte Musa (Head of Cluster)
Dr. Mohd Shalahuddin bin Adnan
Dr. Mohd Ariff bin Ahmad Nazri
Dr. Nor Amani Failzah bte Mohd Kamil

Atomic Absorption Spectroscopy (AAS)

Particle Size Analyzer (PSA)

X-ray Fluorescence (XRF)

Scanning Electron Microscope

Inductively Coupled Plasma-Mass Spectrometer (ICP-MS)

Ion Chromatography (IC)

Gas Chromatography -Mass Spectrum (GCMS)

Mapping Your Maps

We are the Centre of Applied Geomatics & Disaster Prevention, mapping and understanding your world

Aims

CAGeD is a research working group, which focuses on integration of technologies in applied geomatics and their use in the environmental sciences, in collaboration with the private sector, government agencies, universities and public.
As a leader in its field, CAGeD aims to spearhead the application of latest technological advancements in applied geomatics for the prevention and management of natural disaster.

Applied Geomatics

Research in applied Geomatics technologies:-
GNSS, GIS, Remote Sensing, UAV, and Geomatics Modeling

Climate Disaster

Coastal Flooding, River Flooding, Storm Surge, High Tide, Coastal Erosion Shoreline, and Delineation

Geologic Disasters

Earthquake (Geodynamics), Tsunami, Landslides, Subsidence, and Floods

Consultations & Services

Flood Risk Mapping, Wetlands Mapping, Shoreline Delineation Mapping, Coastal Erosion & Morphology Mapping, Ocean Wave and Storm Surge Monitoring, Landslide and Subsidence Monitoring, Slope Mapping, Earthquake and Tsunami Risk Mapping.

Training Center

GIS (Application & Operating) Courses, GNSS (Application & Operating) Courses, Remote Sensing (Application & Operating) Courses, UAV (Application & Operating) Courses, Natural Hazard Risk Mapping Courses, Geomatics and Hazard Management Courses, Geomatics Applications for Civil Engineering Courses.

Researchers

Principals Researcher

Assoc. Prof. Sr Ts. Dr. Mustaffa Anjang Ahmad
Assoc. Prof. Sr Dr. Mohd Effendi Daud
Sr Dr. Anuar Mohd Salleh
Sr Dr. Nazirah Mohamad Abdullah
Sr Saifullizan Mohd Bukari
Dr. Hendy Fitrian Suhandri
Sr Abd. Sukor Sarif

Affiliate Researcher

Assoc. Prof. Ts. Hj. Masiri Kaamin
Sr Khairul Nizam Mohd Yunus
Assoc. Prof. Dr. Mohd Adib Mohammad Razi
Dr. Mohd Azlan Mohd Yusof
Dr. Mohd Shalahuddin Adnan
Dr. Muhammad Salleh Haji Abustan
Dr. Siti Hidayah Abu Talib
Pn. Salina Sani

ARCHIEVEMENT 2019

PORTFOLIO CAGeD 2020

Publication

Sr. Dr. Nazirah
Senior Lecturer

- Research
- CSR
- Seminar
- Courses

Visibility

Sr. Ts. Dr Mustaffa
Assoc. Prof.

- Explore & Strengthen COR for Public & Industry

Web Site

Sr. Saifulizam
Lecturer

- Visibility of
  - COR
  - Members
  - Activities
  - Research
  - Consultation

Networking

Sr. Dr. Anuar
Senior Lecturer

- Industry
- University
- Community
- .

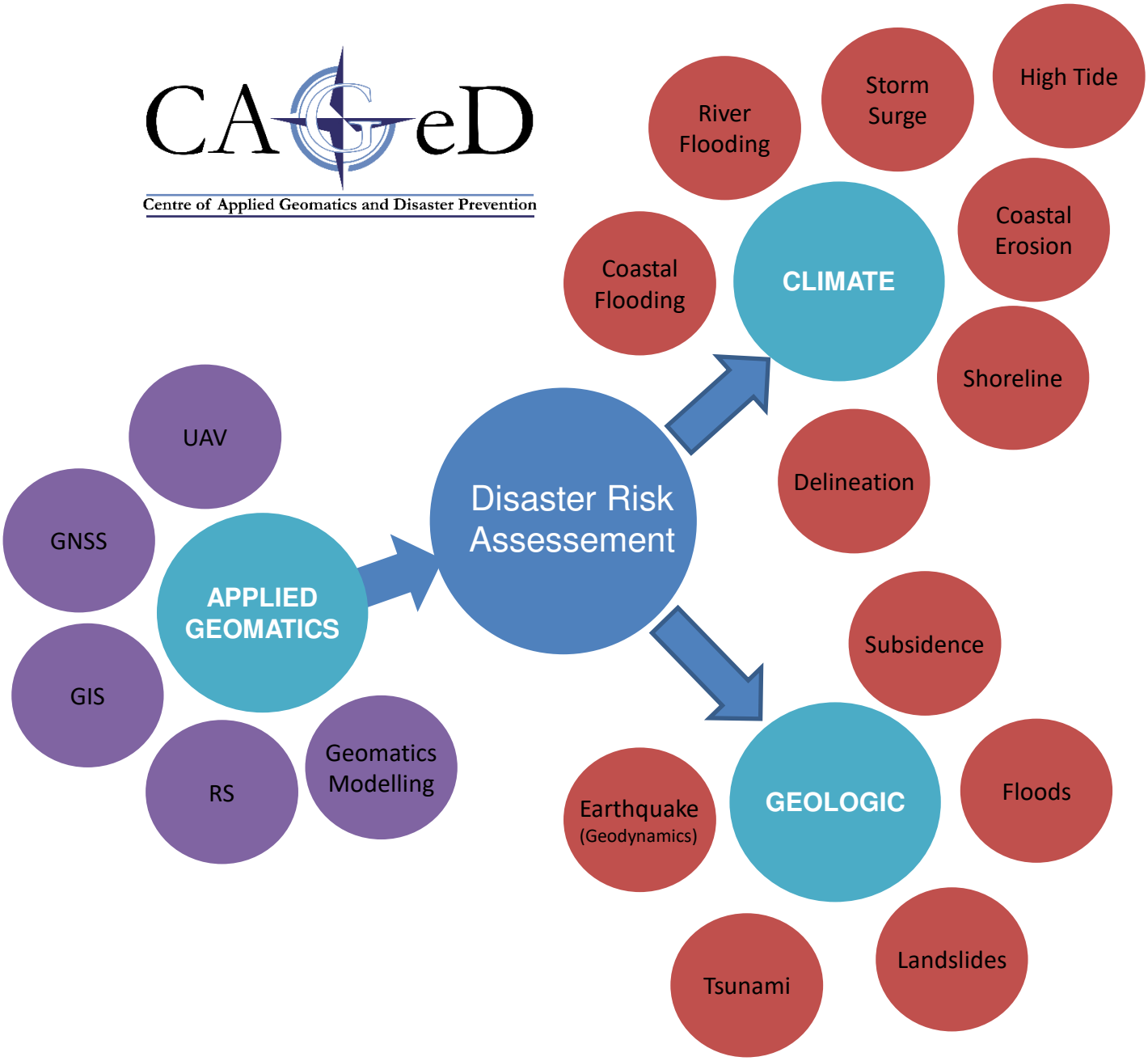
Consultation

Sr. Dr. Mohd Effendi
Assoc. Prof./Head

- Training
- Short Courses
- Seminar
- Lab Testing

FUNCTIONS OF CAGeD

CAGeD
Centre of Applied Geomatics and Disaster Prevention



INSTRUMENT

Total Station

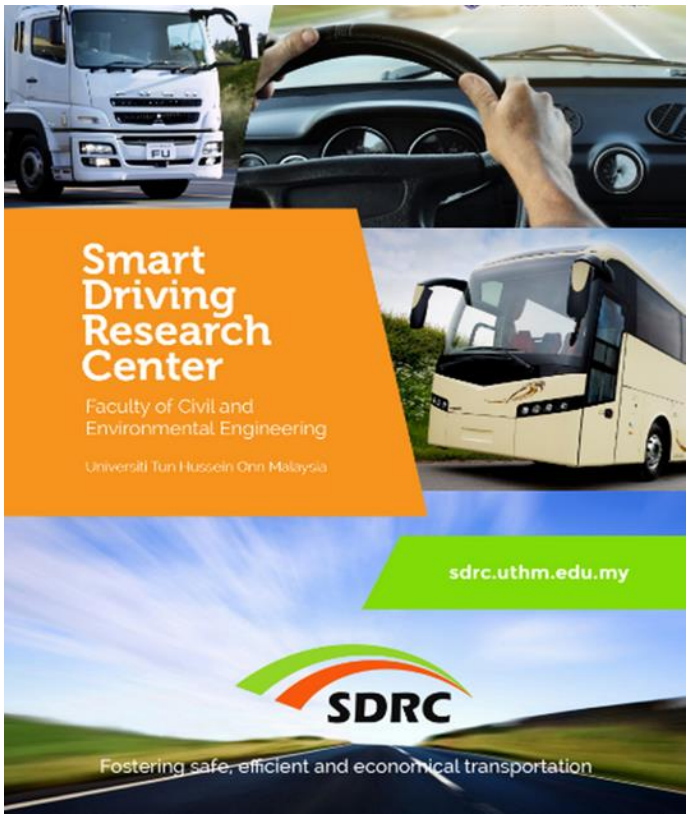
Digital Level

GNSS

Unmanned Aerial Vehicle

ArcGIS Software

MAPIR Camera



About Us

Smart Driving Research Center (SDRC) is one of three centers of research at the Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). Established in 2O13, It is the first-of-its-kind research center in Malaysia that aims to pioneer research and development of support systems for Smart Driving, thus becoming the nation's main referral center for the implementation of Smart Driving.

Our Objectives

To achieve our aforementioned goal, we aspire to:

1. Conduct scientific research in producing human capital and technological systems that support Smart Driving.
2. Embark on collaborative research with transport agencies and the corporate sector.
3. Provide advisory services to the community.

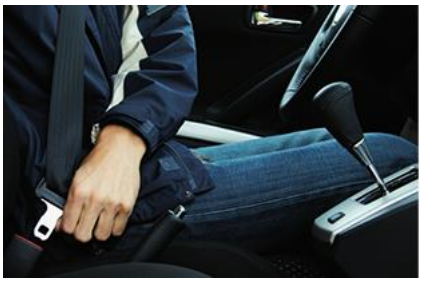
What is Smart Driving?

Smart Driving is a term that describes the art and practice of driving that encourage safe, efficient and economical travel. A smart driver is one who makes wise choices and good decisions when driving. Since the driver relies a lot on the vehicle and the road environment, it is vital for them to function well together to reach the aim of stainable transportation.

Advantage of Smart Driving?

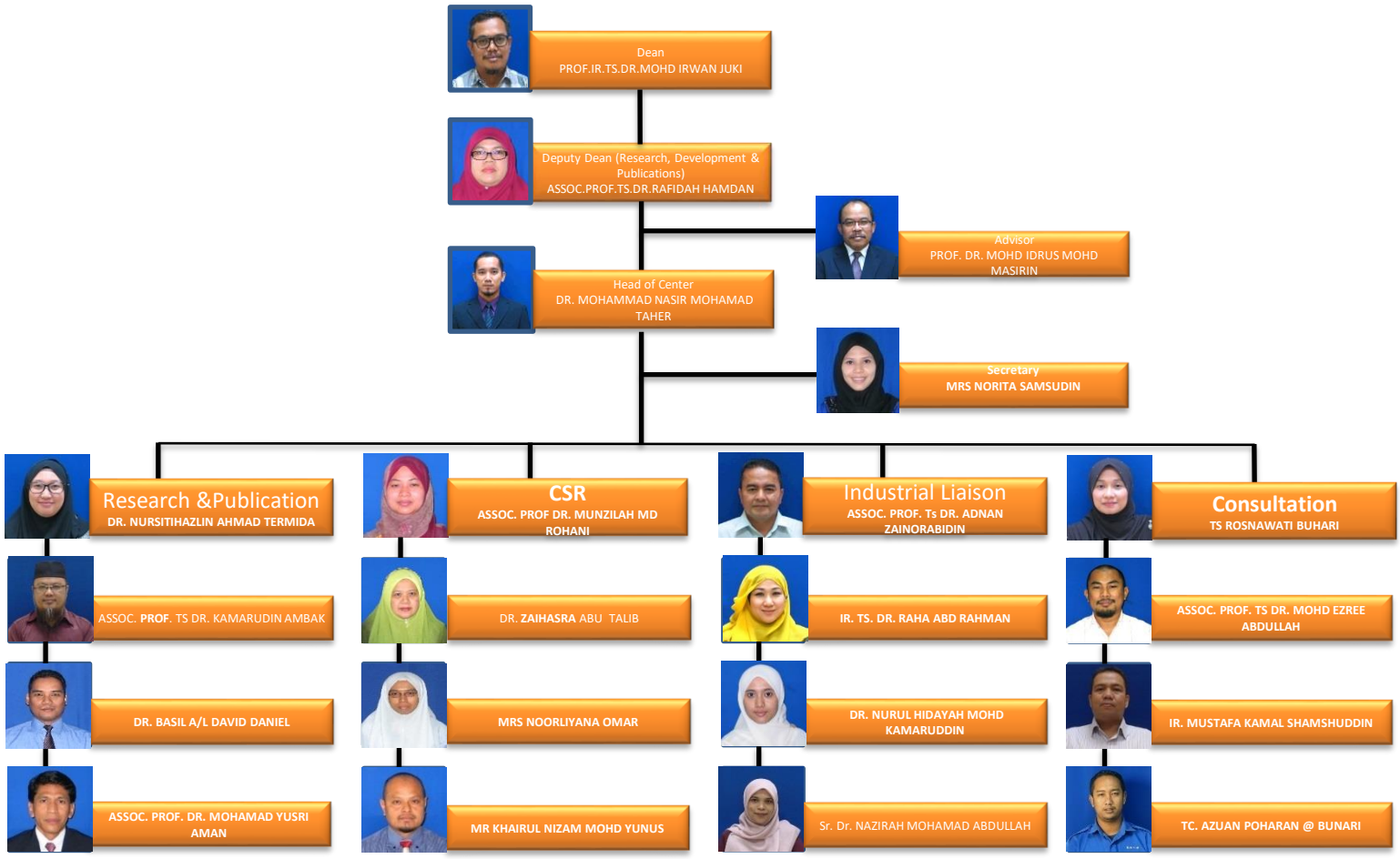
Potential benefits of Smart Driving include:

1. Reducing fuel consumption.
2. Protecting the environment by lowering gas and noise emissions.
3. Enhancing road safety for all users.
4. Promoting cost-effective, safe and comfortable travel.
5. Prolonging the life of the vehicle and its parts.



SDRC ORGANIZATION CHART 2020

FACULTY OF CIVIL ENGINEERING & BUILT ENVIRONMENT



https://sdrc.uthm.edu.my

www.facebook.com/sdrc.uthm

SERVIS & EQUIPMENT

Here at SDRC, our primary function is to continuously disseminate knowledge and share experiences in Smart Driving initiatives through our R&D programs.
Thus, we offer professional consultation, courses and training to our potential clients.

We also provide opportunities for prospective UTHM post-graduate students to conduct their research with us.

Our other services include conducting traffic studies, traffic impact analysis, and asphalt testing.

Our laboratories are well-equipped with some of the latest technologies in data collection methods, testing facilities and software analysis. These include:

- Automatic Traffic Counter
- Intersection Traffic Counter
- Traffic Radar Recorder
- Speed Meter
- Sound Level Meter
- Retroreflectometer
- Telescopic Mast with
- Machine Vision System
- Gyratory Compactor
- Dynamic Shear Rheometer

- GPS Vehicle Tracker
- Road Profiler
- Digital Benkelman Beam
- Asphalt Testing Machine
- HDM-4
- TRAIS Video-Based Traffic Analysis
- SIDRA Intersection
- PTV Visum
- Video Recording System
- Universal Testing Machine

Expertise

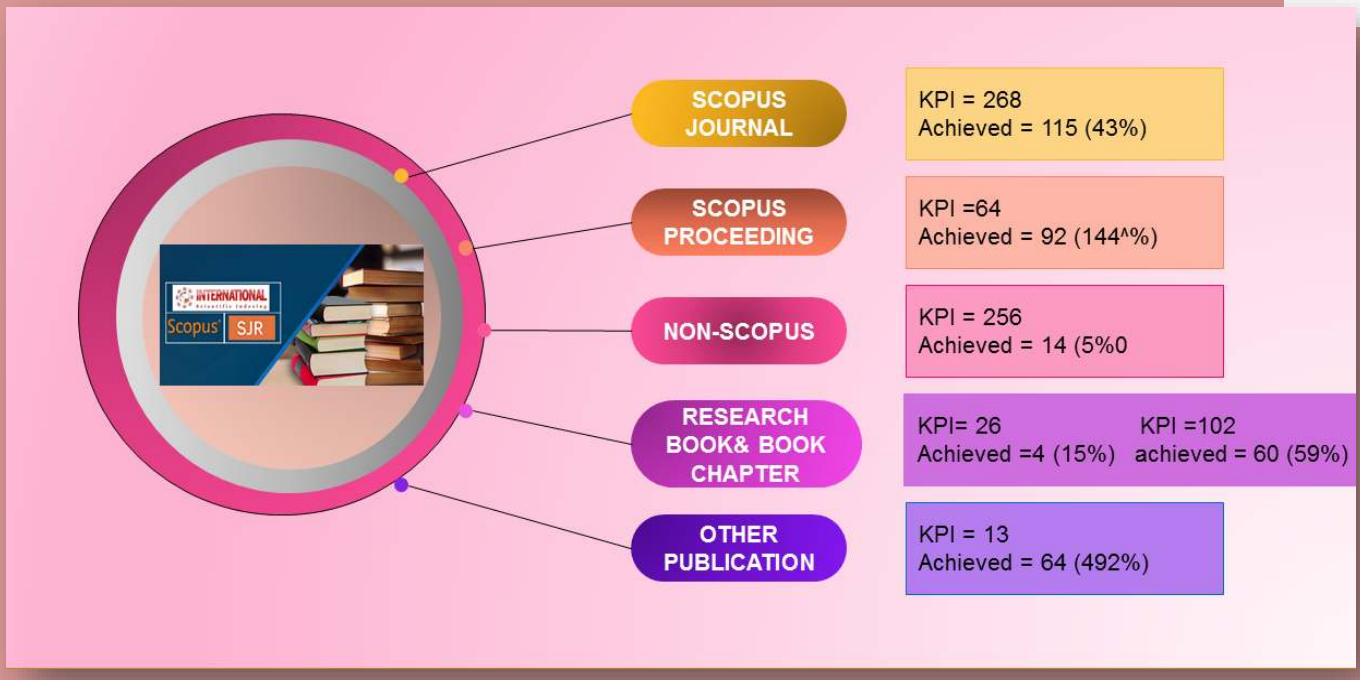
Our researchers are mostly academicians with doctorates from United Kingdom, Germany, Australia, Japan, New Zealand and Malaysia. Our diverse fields of expertise include:

Traffic Operations and Management
Behavioural Safety Science
Vehicle-Infrastructure Integration
Driver Assistance Systems
Eco-driving
Intelligent Transportation Systems
Automotive Engineering
Pavement Technology

ACHIEVEMENT

ACHIEVEMENT FOR 2018 - 2020

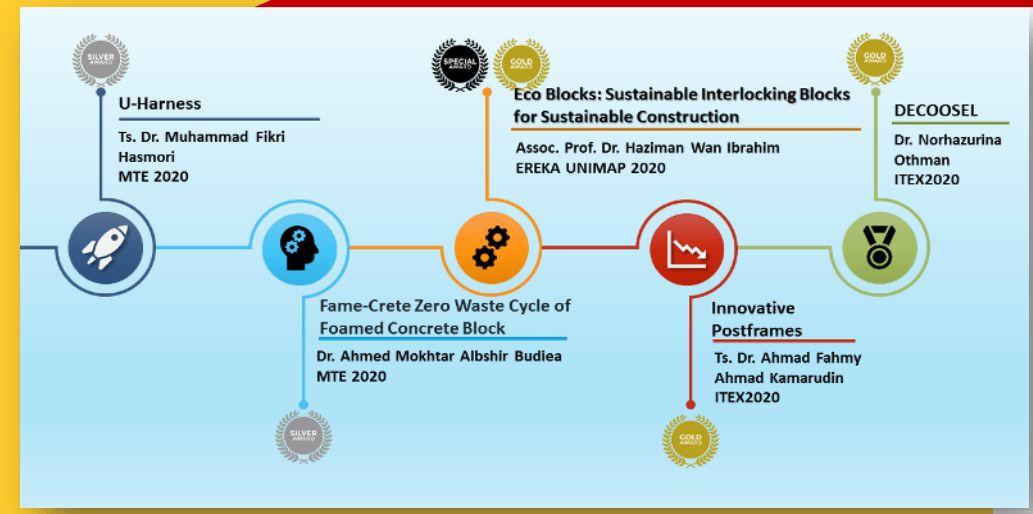
ACHIEVEMENT OF PUBLICATION IN 2020



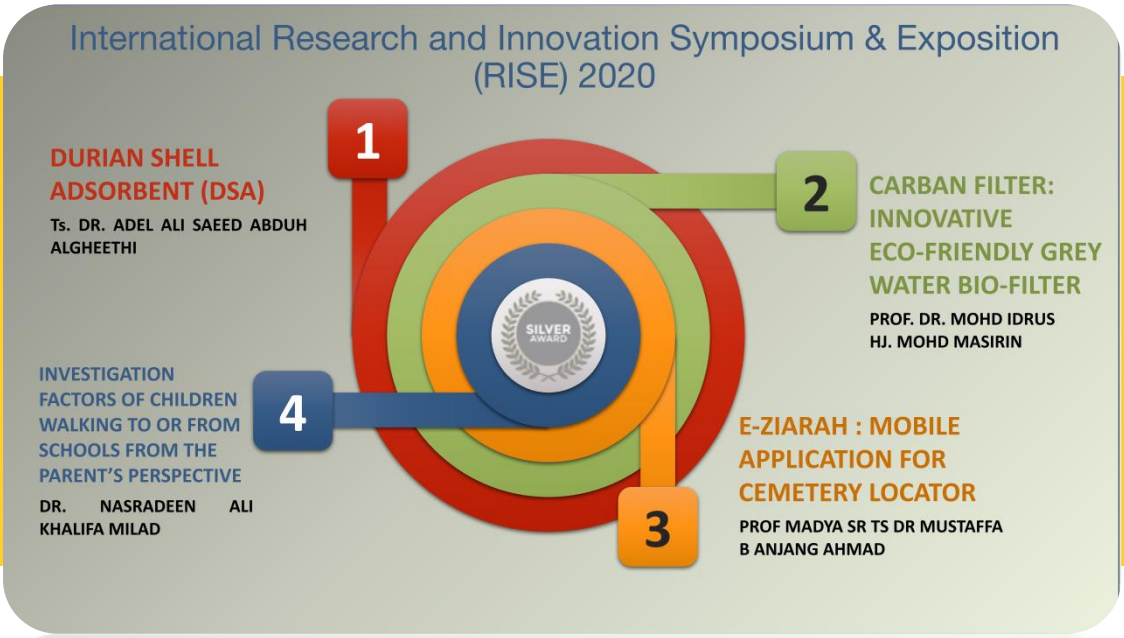
PRODUCTS & INNOVATION

2019

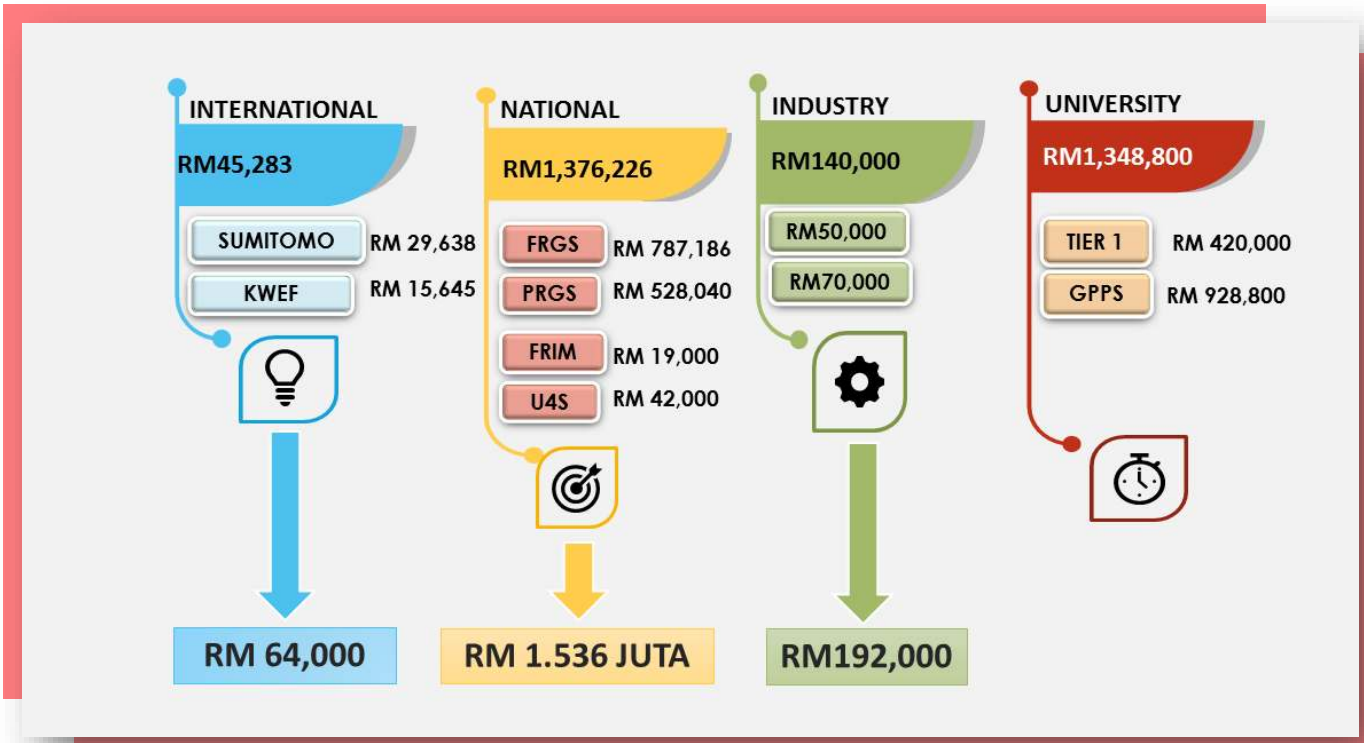
2020



INTERNATIONAL RESEARCH AND INNOVATION



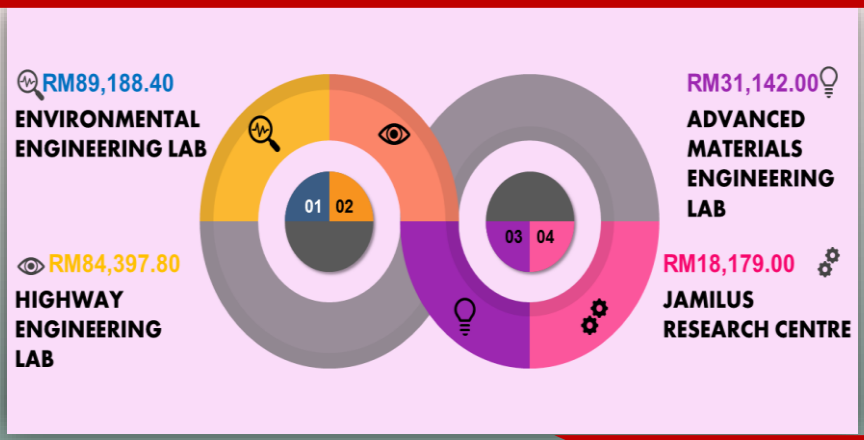
RESEARCH GRANTS FOR 2020



INFOGRAPHIC MPRC 2020

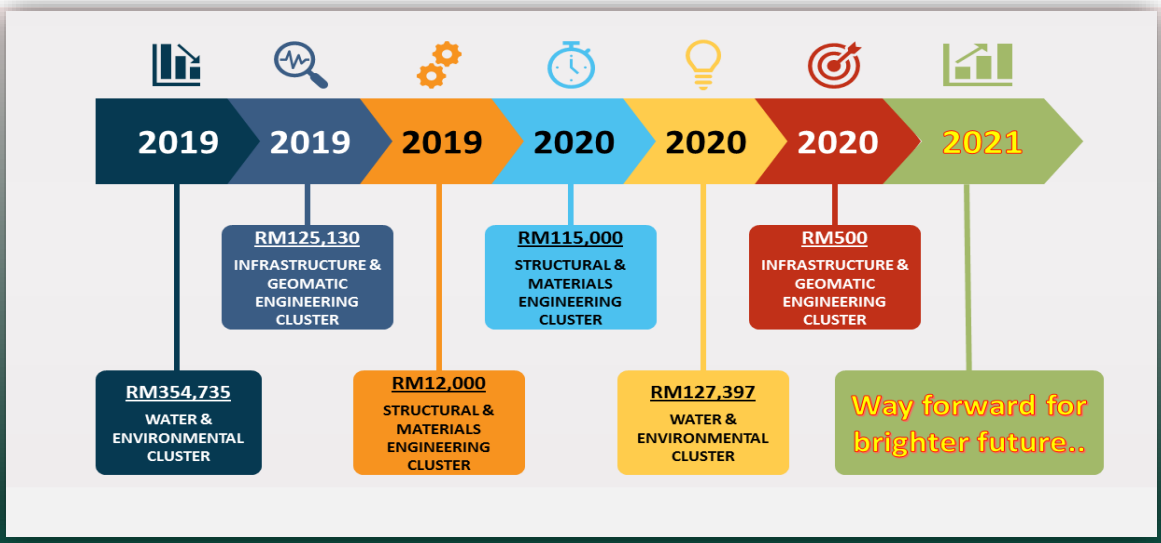
TESTING

2019



2020

CONSULTATION FOR 2019 - 2020



Grant

International Grant


UTHM
FAKULTI KEJURUTERAAN AWAM DAN ALAM BINA
Tahniah
PROF. MADYA TS. DR. AESLINA BINTI ABDUL KADIR
di atas kejayaan menerima
Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020
bertajuk
An Automated Smart Recycle Bin (ASRB)
dengan nilai sebanyak
RM 269,000.00
http://fkaab.uthm.edu.my/
Fkaab UTHM
Fkaab UTHM
Fkaab UTHM Johor Malaysia
FKAAB


UTHM
FAKULTI KEJURUTERAAN AWAM DAN ALAM BINA
Tahniah
PROF. MADYA TS. DR. NORZILA BINTI OTHMAN
di atas kejayaan menerima
Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020
bertajuk
An Upscalling of Coagulation adn Flocculation Process Using Cassava Peel Starch Bio-Coagulant in Removing Wastewater Solids for River Protection
dengan nilai sebanyak
RM 259,040.00
http://fkaab.uthm.edu.my/
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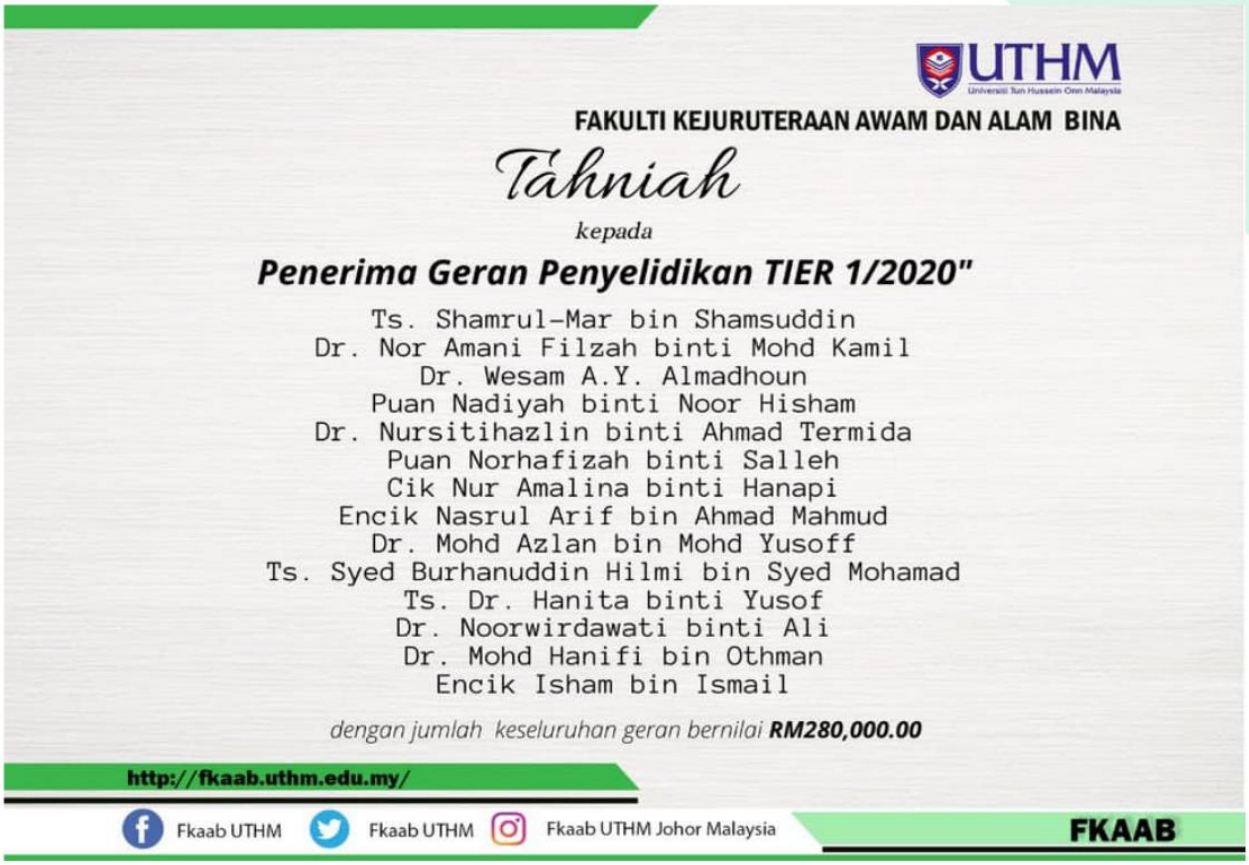
Fkaab UTHM
Fkaab UTHM Johor Malaysia
FKAAB

Fundamental Research Grant Scheme (FRGS)

Forest Research Institute Malaysia (FRIM) Grant

Tier 1 Grant


UTHM
FAKULTI KEJURUTERAAN AWAM DAN ALAM BINA
Tahniah
kepada
Penerima Geran Penyelidikan TIER 1/2020"
Ts. Shamrul-Mar bin Shamsuddin
Dr. Nor Amani Filzah binti Mohd Kamil
Dr. Wesam A.Y. Almadhoun
Puan Nadiyah binti Noor Hisham
Dr. Nursitihazlin binti Ahmad Termida
Puan Norhafizah binti Salleh
Cik Nur Amalina binti Hanapi
Encik Nasrul Arif bin Ahmad Mahmud
Dr. Mohd Azlan bin Mohd Yusoff
Ts. Syed Burhanuddin Hilmi bin Syed Mohamad
Ts. Dr. Hanita binti Yusof
Dr. Noorwirdawati binti Ali
Dr. Mohd Hanifi bin Othman
Encik Isham bin Ismail
dengan jumlah keseluruhan geran bernilai RM280,000.00
http://fkaab.uthm.edu.my/
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Fkaab UTHM
Fkaab UTHM Johor Malaysia
FKAAB

Grant Penyelidikan Pasca Siswazah (GPPS)

UTHM

FAKULTI KEJURUTERAAN AWAM DAN ALAM BINA

Tahniah

kepada

Penerima Geran Penyelidikan Pasca Siswazah Fasa 2/2020

Penyelia: Prof. Madya Ts. Dr. Aeslina binti Abdul Kadir
Pelajar : Nur Fatin Nabila bt Hissham

Penyelia: Prof. Madya Dr. Hilton @ Mohd Hilton bin Ahmad
Pelajar : Izzat Hanif bin Mohd Ismail

Penyelia: Ts. Dr. Mohd Ariff bin Ahmad Nazri
Pelajar : Aqilah Zakiah binti Jahani

Penyelia: Ts. Dr. Nor Azizi bin Yusoff
Pelajar : Muhammad Aiman bin Shahrulkalam

Penyelia: Dr. Nurazuwa binti Md Noor
Pelajar : Rabiatul Adawiyan binti Waliyo

Penyelia: Dr. Nurazuwa binti Md Noor
Pelajar : Mohamad Amirul Qaiyum bin Rashid

Penyelia: Ts. Dr. Roslinda binti Seswoya
Pelajar : Amir Fahim bin Norazman

Penyelia: Prof. Madya Dr. Saiful Azhar bin Ahmad Tajudin
Pelajar : Syazwan Aiman bin Sufiyanussuari

Penyelia: Ir. Dr. Shahrul Niza bin Mokhatar
Pelajar : Abdul Rahman bin Mohd Yusoff

Penyelia: Dr. Goh Wan Inn
Pelajar : Mohamad Sufian bin Kamaruddin

Penyelia: Prof. Madya Dr. Hilton @ Mohd Hilton bin Ahmad
Pelajar : Mohamad Al-Zaim bin Omar

Penyelia: Ts. Dr. Muhammad Fikri bin Hasmori
Pelajar : Nurul Hasanah binti Mohd Taat

Penyelia: Dr. Muhammad Salleh bin Haji Abustan
Pelajar : Mohd Firdaus bin Mohamad Ali

Penyelia: Prof. Madya Ts. ChM. Dr. Radin Maya Saphira binti Radin Mohamed
Pelajar : Muhammad Safwan Miswan

Penyelia: Ts. Dr. Sasitharan a/l Nagapan
Pelajar : Kageishieny a/p Nadarason

dengan jumlah keseluruhan geran bernilai ***RM403,200.00***

http://fkaab.uthm.edu.my/

Fkaab UTHM Fkaab UTHM Fkaab UTHM Johor Malaysia FKAAB

JPT JABATAN PENDIDIKAN TINGGI | KEMENTERIAN PENDIDIKAN MALAYSIA | UTHM

Pecipta'19

22-23 SEPTEMBER 2019
DEWAN SULTAN IBRAHIM
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

Smart Composter Machine


Assoc. Prof. Dr. Noor Yasmin Zainun


Muhammad Qusyairi Abdul


Assoc. Prof. Dr. Munzilah Md. Rohani

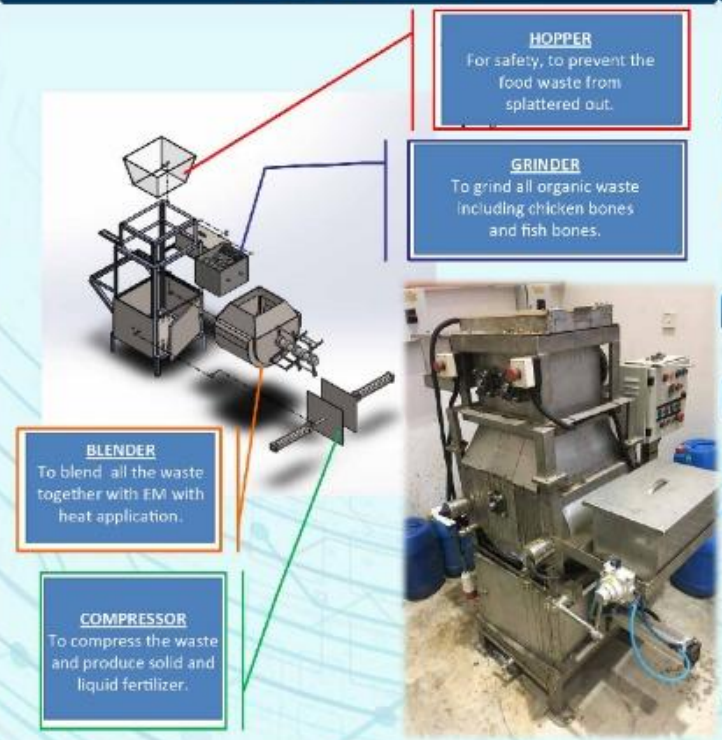

Sr Saifullizan Bin Mohd Bukari

Product Description

The use of on-site compost technology was suggested as a possible solution where having high transportation costs for biodegradable waste treatment. However, due to the extremely small capacity of projects, this application proved to be inefficient at the time, odour problems, maintenance issues, and cost efficiency issues. These previous cases offer us insight and direction for the development of enhanced methodology for determining the viability of alternative composting strategies which is smart composter machine.

The machine was design with 3 compartments arrange from top to below where; (1) grinder – function to grind all food waste including bones such as chicken and fish bones; (2) blender – function to blend all the waste together. In this compartment, 2 containers are place on left and right which contain effective microorganism (EM) and water. While the waste was blended, EM will be sprinkled inside and the heat will be stabilized using water. Digital heat control is provided so that user can set favour temperature. These will speed up the composting process; and (3) compressor- to compressed the waste and have both solid and liquid organic fertilizer as the output. The machine had been successfully commercialized to industry, Sarjani Agro Shop, Malaysia and had increasing the production of the company up to 150%.

Picture of Product



Usefulness

- Shorten up to 94% of composting process
- Change organic waste into solid and liquid fertilizer
- Production of animal booster
- Production of pesticide

Novelty

The only composter machine that have 3 process at 1 machine and reduce 94% of composting process compare to conventional method.

Commercialization

The machine can be commercialized to local authorities and industries such as Municipal Councils, SWCorp and any related parties

Status of Inventition

The machine been successfully used at Sarjani Agro Shop and had increased the company's production up to 150%.

Applicability of The Invention

Protect the environment by reducing waste at landfill and increasing the recycle rate.

IP Protection

AR 2018003583

Publications

1. Baseline for food waste generation (2017), Materials Science and Engineering, Vols. 271, pp 012045.
2. Agile waste Management in UTHM for Laboratory Waste (2016), Technical Paper, Final Year Student UTHM.
3. Mesin Pelupusan Sisa Makanan untuk Menghasilkan Baja Kompos II, Technical report, Diploma Student UTHM.
4. Determination of optimum dosage of effective microorganisms (EM) and temperature for organic fertilizer production (2018), ethesis (Master), UTHM.
5. Improve Compost Machine to Compost Organic Waste in UTHM (2017), ethesis (Degree), UTHM.
6. Penentuan kuantiti, suhu dan masa bagi larutan penapaian dengan nisbah 1:100 bagi mengurai sisa makanan menggunakan mesin kompos, ethesis (Degree), UTHM.
7. Penentuan kuantiti, suhu dan masa bagi larutan penapaian dengan nisbah 1:1000 bagi mengurai sisa makanan menggunakan mesin kompos, ethesis (Degree), UTHM.

Awards Recognition

1.Gold Medal, National Innovation and Invention Competition Through Exhibition 2019 (iCompEx'19)
2. 3rd Innovation Award, Machine Equipment & Manufacturing Process, National Innovation and Invention Competition Through Exhibition 2019 (iCompEx'19).
3. Gold Medal, International Innovation, Creativity & Technology Exhibition 2019 (i2CreaTe)
4. Gold Medal, 3rd International Thailand-Indonesia-Malaysia Symposium on Innovation and Creativity

UTHM Universiti Tun Hussein Onn Malaysia

ITEX'20 31ST INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION, MALAYSIA
KUALA LUMPUR CONVENTION CENTRE, MALAYSIA

INVENTORS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DECooSEL

WALL DECORATION

"Touch the sense of texture"

Intellectual Property Registration No.

PRODUCT DESCRIPTION

DECooSEL WALL DECORATION is a design product that has been introduced for decorative purposes as attraction among viewers. This product may look same as present wall decoration, however method and materials that being used to design this product are different which undergo a simple and affordable process. It was created by using waste materials from fishery sector (Mussel shell) and provide a decorative product same as in market. Thus, DECooSEL does not only act as a decorative wall but also as a sustainable product that provide environmental, social and economic benefits while protecting public health and environment.

IP PROTECTION

Copyright Number : LY2019004509

USEFULNESS & APPLICATION

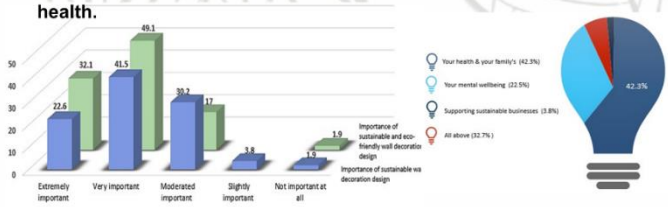
- **Decorative elements in wall**
- **Wall sculptures and emphasizing beautiful architectural features**

NOVELTY & INVENTIVENESS

- **New formulation of plastering paste for decoration using mussel shell**
- **Inventive step of treating mussel shell ash for plastering paste application**

MARKET SIZE AND MARKET DEMAND

- **72.5% of home ownership rate in Malaysia, thus higher demanding of house decoration.**
- **Existing wall decoration design too expensive and use not eco-friendly material (gypsum, fibre)**
- **According to survey, consumers demand on more greener (sustainable and eco-friendly) material and also prioritize their health.**



PICTURES OF PRODUCT

COMMERCIALIZATION POTENTIAL

SUSTAINABLE

DECORABLE

AFFORDABLE

Size	Material	Price (RM)
0.11m² (1 sq. feet)	Green musssel shell powder+ cements	0.80
	Gypsum + Fiber	2.25
	Solid wood	2.88

CONTRIBUTIONS OF THE RESEARCH PROJECT

- **Installation 2X faster**
- **Easy to mould**
- **2X Weightless**

ENVIRONMENTAL FRIENDLINESS

- **33% of mussel species consist from it shells (*Martínez-García et al., 2017*)**
- **Reduce amount of waste generated from mussel production**

INDUSTRY COLLABORATION

ASRABINA ENGINEERING & TRADING

MULIA PERTAMA ENTERPRISE

ACKNOWLEDGEMENT

This research was fully supported by UTHM, Faculty of Civil Engineering and Built Environment (FKAAB), UTHM and Cluster of Advanced Construction Materials, Jamilus Research Centre (JRC).

Faculty of Civil Engineering and Built Environment, Universiti Tun Hussein Onn Malaysia (UTHM) ,86400 Parit Raja, Johor, Malaysia.

UTHM
Universiti Tun Hussein Onn Malaysia

MTE 2020
Malaysia Technology Expo
The 19th International Expo on Inventions and Innovations

INVENTORS

Ts. Dr. Muhammad Fikri Hasmori | Ts. Dr. Sasitharan Nagapan
Ts. Dr Rafikullah Deraman | Ts. Dr Nor Haslinda Abas
Ts. Dr. Tong Yean Ghing | Dr Ahmed Mokhtar Albshir Budlea
Mohd Afiq Mohd Yassin

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LIFE SAVING "U-HARNESS"

WORKER UNIFORM WITH INTEGRATED FULL BODY SAFETY HARNESS AND AUTO-TRIGGERED ALARM DURING FALL EVENT

Intellectual Property Registration No. :
LY2020000447

PRODUCT DESCRIPTION

U-HARNESS is worker uniform with integrated full body safety harness and few other safety features. Designed to be used as a daily outfit or uniform for the worker. Development of this product is in accordance with the Occupational Safety & Health Master Plan 2016-2020, under Strategy 2 – Strenghtening of OSH management at the workplace, Programme number 4 – OSH Innovation. According to the Occupational Safety and Health Act (OSHA) 1994, an employer must provide the workers with the appropriate personal protective equipment to protect their safety.

Harness – Polyester. Widely used by many harness manufacturers. Much more durable material than nylon. Polyester have a higher resistance to abrasion and does not stretch the way that nylon does. It also resists water absorption, which reduces the likelihood of material degradation from mold growth. The average break strength of polyester is between 680 kg and 4536 kg.

Overall Suit – Cotton (40%) and polyester (60%) for more durable fabrics. Having the softness and breathability of cotton, and the desirable durability and flexibility of polyester. Plus, it will absorb more force during fall arrest resulting in lower risk of muscle injury to fall victim. Both cotton and polyester are washable and regularly used as a daily outfit material.

Reflector – for visibility in dark situation

Buckle – Pass-through anti corrosion metal plate. Very popular among workers because of its simple design. It is composed of two metal plates, one passing through the other to create a secure connection while working at heights.

Alarm integrated Lanyard - Shock Absorbing Lanyards fitted with alarm. Designed to keep arresting forces on the body to 4kN or less and alert rescue team during fall event.

Stitching Method – Box X and W pattern with independent reinforcement stitches above and below the stitch pattern.

NOVELTY

- ✓ Serve as a worker uniform with additional very important safety features.
- ✓ Safety features added into the uniform are:
  Reflectors – for visibility in dark
  Full body safety harness – every worker will be ready for working at height each time they go for work.
  Alarm Integrated Lanyard – automatically triggered during fall event to alert others because the victim only have 10 minutes before passing out due to suspension trauma which may lead to dizziness, nausea, heart palpitation or even death.
- ✓ Helps to alleviate the company image by portraying the importance of safety aspect imposed by the company with regards to safety & health.
- ✓ Covers 7 out of 10 outline in the standard of PPE Management
- ✓ Reduce trauma and muscle injury by spreading forces to much larger area
- ✓ Easy, convenient, less hustle, faster and comfortable to wear

MARKET SIZE, DEMAND & POTENTIAL

Estimated 200 million construction workers worldwide, with 75% in developing countries and 12% (40million) in developed countries.

Integration with Geographic Information System (GIS) system that will automatically alert the rescue team during fall event.

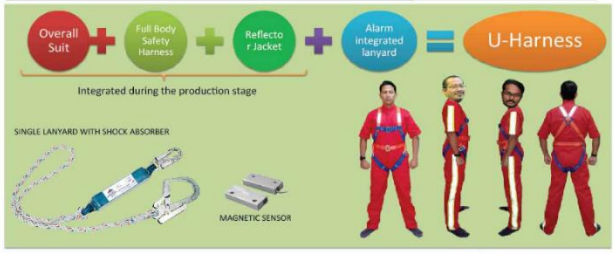
1 % of 40million is 400,000 & that's only construction workers.

Enforcement by the policy maker & regulator (such as DOSH & CIDB) to reduce FFH fatalities involving 767,563 construction workers in Malaysia.

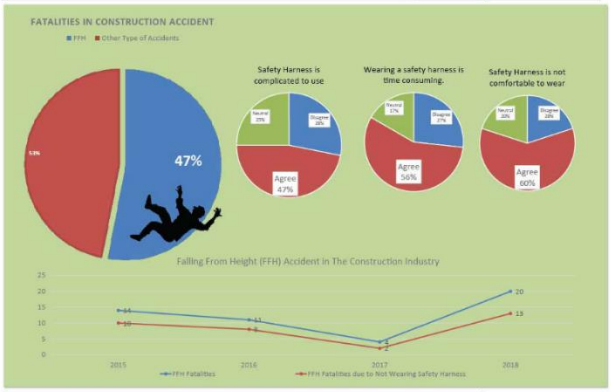
The idea can be used by fire & rescue team and other industries such as oil & gas, shipyard, mining, manufacturing & infrastructure.

1. Commercialization – targeting developed countries such as US, UK, Dubai, Abu Dhabi & United Arab Emirates which particularly concern about construction safety and love new idea and new technology.
2. Developing countries and underdeveloped countries might adopt this idea in 10-30 years from now. For instance, full body safety harness was only created in the 90's.

PICTURES OF PRODUCT



CONTRIBUTIONS OF THE RESEARCH PROJECT



FEEDBACK FROM THE INDUSTRY

".....It really solve many difficulty in the use of the harness. In particularly, from the view of safety factors that affecting the use of Personal Protective Equipment, ***your innovated harness mode cover four major elements of in the use of PPE which are Training, Selection of PPE, Use of PPE and maintenance / storage of PPE****..... I hope this Innovated Full body Harness to successful come to the commercial stage so we can recommend it to be used in Construction Industry immediately."*

Mr Ameir Mohamed Medani Abdalla
Emergency Management Officer
Business Sustainability Department
Municipal Operations Sector Offices

DEPARTMENT OF URBAN PLANNING AND MUNICIPALITIES
ABU DHABI CITY MUNICIPALITY

"It is with much enthusiasm that I'm writing to express **my positive feedback** *on the product....This is why* ***I strongly support this innovative idea of integrating the safety harness with the workers daily outfit and later on will be used as their uniform for work."***

Mr Kannan A/L Marimuthoo
Health, Safety & Environment Manager
GIANT LEAP CONSTRUCTION SDN BHD

GIANT LEAP
FOREST CITY MALAYSIA

".....I believe that the idea of integrating full body safety harness is brilliant and should be implemented in all type of construction involving working at height.
.....I truly support your idea and subsequently to be promoted in every construction industries."

Mr Ahmad Huzairie Johar
Senior Executive – Project Management
CYBERVIEW SDN BHD

CYBERVIEW
Tech Hub Enabler

IP PROTECTION

Copyright: : LY2020000447 Industrial Design: In Progress Patent: In Progress

Acknowledgement:
Innovation & Commercialization Centre (ICC), Universiti Tun Hussein Onn Malaysia

Faculty of Civil Engineering & Built Environment, Universiti Tun Hussein Onn Malaysia (UTHM), 84600 Batu Pahat, Johor, Malaysia;
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UTHM
Universiti Tun Hussein Onn Malaysia

ITEX'20
31ST INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION, MALAYSIA
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INVENTORS

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- *Dr. AHMED MOKHTAR Albshir Budiea*
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INNOvative PostFrames

Intellectual Property Registration No. :
LY2020002685

PRODUCT DESCRIPTION

PostFrames is an innovative steel prefabricated product used for rapid construction of temporary structures.It consists of slotted-bolted connectors with hollows section beam elements. **PostFrames** encompass many structural functions and reduces complexity of steel fabrication construction.

PICTURES OF PRODUCT

NOVELTY & INVENTIVENESS

- ✓ **Unique slotted-bolted connections type** for structural assemblage and dismantle
- ✓ **Geometrically friendly** for structural applications
- ✓ **Plug and play installation** concept

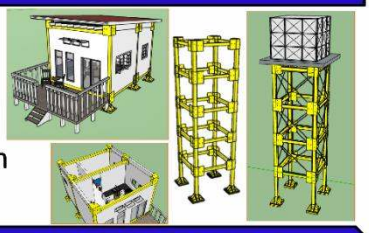
CONTRIBUTIONS OF THE RESEARCH PROJECT

- ✓ Paper Publications in **Scopus Journals and Proceeding**
- ✓ **GOLD AWARD** in Research and Innovation Symposium and Exposition (RISE 2019)
- ✓ **RM20K of short term grant**
- ✓ **Human capital** for Meng. & Beng.

Indexed by Scopus

USEFULNESS & APPLICATION

- ❑ Tower
- ❑ Storage cabin
- ❑ Space frames
- ❑ Accommodation
- ❑ Recreational structures



IP PROTECTION

Copyright No. : **LY2020002685**
Progressing for **product pattern**

COMMERCIALIZATION POTENTIAL

DIY & **NO SKILLED** labour
EASY mob/demob
COST effective
RAPID construction
MULTI geometry
HIGH strength and durable

ENVIRONMENTAL FRIENDLINESS

- **Sustainable** and **reusable** product
- Significantly **reduce** the constructional wastes

MARKET SIZE AND MARKET DEMAND

- ❖ Malaysian's Authorities
- ❖ Government sectors
- ❖ Private sectors
- ❖ Tourism sectors
- ❖ NGOs
- ❖ Public User

Shopee
MOSTI
MET Malaysia
TOURISM MALAYSIA

ACKNOWLEDGEMENT

ICC UTHM
TIER 1 Vot. U837 RMC UTHM
JRC JAMILUS RESEARCH CENTER sustainable construction **FKAAB**, UTHM

IKS PARTNERS

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JR0047079-V

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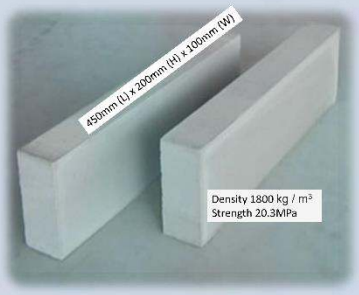
RISE 2020

UTHM
Universiti Tun Hussein Onn Malaysia

PoSell BLOCK



PRODUCT DESCRIPTION

- Innovative lightweight block.
- Eco friendly materials.
- Simple design and cost effective.
- Ready for market.

APPLICATIONS

RESIDENTIAL | REPAIRS | PORTABLE

DESIGN NOVELTY

- New formulated foamed concrete mixture to achieve lightweight block.
- Process of mussel shell ash
- Partial cement replacement using palm oil fuel ash (POFA) and mussel shell ash (MSA)

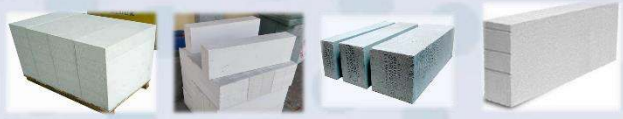
VALUES TO INDUSTRY

Simplicity | Cost effective | Sustainable

MARKET ANALYSIS

Cost & Price / Unit PoSell Block (RM)	
POFA + MSA	0.35
Cement	0.60
Foaming Agent	0.20
Sand	0.15
Miscellaneous	1.70
POTENTIAL marketable price RM3.00	

COMPETITORS



Brand : AKON Lightweight Block Market Price : RM 3.80	Brand : Starken ACC Market Price : RM 3.80	Brand : Connect AAC Market Price : RM 3.50	Brand : GreenCON AAC Market Price : RM 3.35

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TARGET INDUSTRIAL PARTNER

SUZUKA

VODAPRUF

RISE 2020

SafEvac

INTEGRATED REAL-TIME EVACUATION APPS FOR FIRE EMERGENCY

Ts Dr Muhammad Fikri Hasmori, Ts Dr Rafikullah Deraman, Dr Mohd Hanifi Bin Othman. *Fakulti Kejuruteraan Awam dan Alam Bina, UTHM*

INTRODUCTION

Disaster is defined as an incident which occur in a sudden manner and complex in its nature that causes losses of lives, damages to property or natural environment and cause a big impact to local activities. Such incident needs a management that involves extensive resources, equipment, skills and man power from many agencies with an effective coordination, which is possibly demand a complex action and time consuming.

Fire hazard in buildings can be defined as the potential of accidental or intentional fire to threaten life, structural, and property safety in a building. With rapid development across the globe, fire hazard in buildings have undergone significant transformation in terms of severity and versatility and have become a growing concern in recent years.

From 1993 to 2015, a total of 86.4 million fire incidents have caused more than one million fire deaths and cost approximately US$857.9bn lost. (Brushlinsky et al., 2017, GDP, 2018). On average 3.8 million fires caused 44,300 fire deaths every year in developed country. (Brushlinsky et al., 2016). Developing countries such as India and Pakistan suffered highest number of fire causalities (10,000-25,000 per year) and second highest number of fires (100,000-600,000 per year). (Brushlinsky et al., 2016)

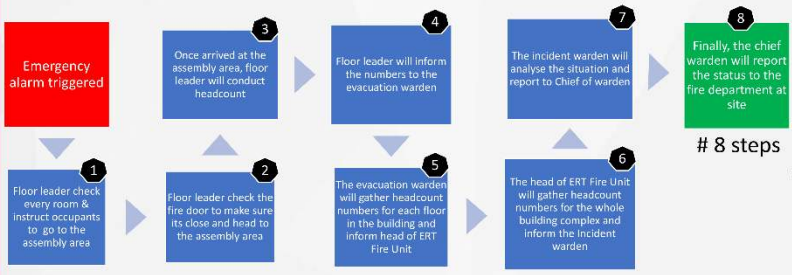
COMMERCIAL VALUE

- ❑ Estimated Production cost: RM 5000.00
- ❑ Selling Price: RM 1.49
- ❑ 1% market share*: 939,372 user
- ❑ **POTENTIAL PROFIT: RM 1,394,664.28**

*based on statistics provided by International Labour Organization (ILO)

THE PROBLEMS

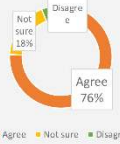
The conventional Building evacuation procedure involves a lot of steps in the line of communication, thus prone to produce multiple error and also time consuming.



Outdated occupant record hinders the effectiveness of current 'headcount' practice

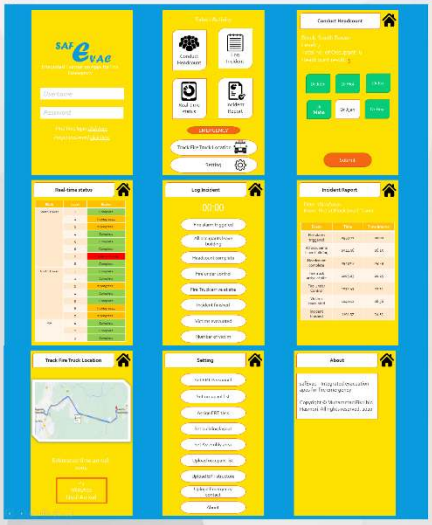
Current 'headcount' practice is time consuming

Current 'headcount' practice tend to cause miscommunication

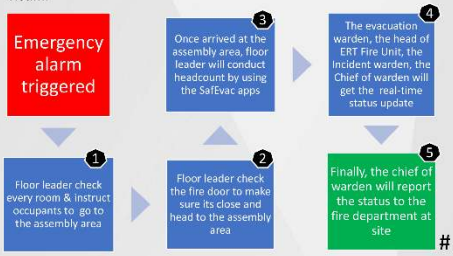


Current 'headcount' practice is resource-demanding (require many personnel on site)

THE PRODUCT



- SafEvac was derived from 'safely evacuated'.
- It main purpose is to provide real-time data to the rescue team in case of fire.
- The first of its kind. Never before invented by others.
- Significantly reduce time required for conventional 'head counting' at the assembly area.
- Significantly eliminate communication error within the Emergency Response Team (ERT) and the fire department.
- Effectively eliminate the use of paper and whiteboard for occupant records and status report.
- Significantly improve the efficiency of the rescue team and therefore increase the survival rate of the victim.



SafEvac replace 3 important steps in the line of communication with real-time data update during building evacuation process without compromising the quality of the information.

PRODUCT NOVELTY

- ✓ Provide real-time data update during building evacuation that can be used for the strategic planning of the rescue team.
- ✓ The first of its kind. Current available safety apps never cover this area.
- ✓ Significantly reduce time consumption and communication error.
- ✓ Significantly increase survival rate of the victim.
- ✓ Easy access to everyone with a smartphone.

PRODUCT POTENTIAL

Potential Sectors	Future Development	Enforcement by The Policy Maker & The Authority	Reducing the Number of Fatalities due to building fire
Manufacturing High-rise Buildings Government Offices Private Offices Construction Universities Involve Large Occupant in a single building	Integration with other standard safety compliance features for Occupational Safety & Health Organisation such as safety audit, safety inspection and incident reporting.	Enforcement by the policy maker & regulator (DOSH & The Government) to reduce building fire fatalities involving millions of workers in Malaysia.	Through implementation of this apps, it is expected that the number of fatalities due to building fire will be reduced.

Product Status:

Invention & Research (TRL 2)
-Technology Concept & Application Formulated

COMMENT FROM THE AUTHORITY

" The apps is practical and suitable for future development. No other similar apps in the market yet, this will be the first. The product have huge potential and could save more lives by significantly reduce time taken for building evacuation procedure."

Tuan Mohamad Shafiee bin Mohamad Masrom
Pegawai Latihan Balai
Jabatan Bomba & Penyelamat Malaysia

Category: Innovation
Cluster: Disaster Management (DM)

- "The Expensive solutions to any kind of problem are usually the work of mediocrity."
- Ingvar Kamprad (IKEA Founder) -

SYSCAMP

(Sistem Pengurusan Peserta Kem Geomatik)

Assoc. Prof. Sr. Ts. Dr. Mustaffa B. Anjang Ahmad

INTRODUCTION

RESEARCH
To develop online registration system

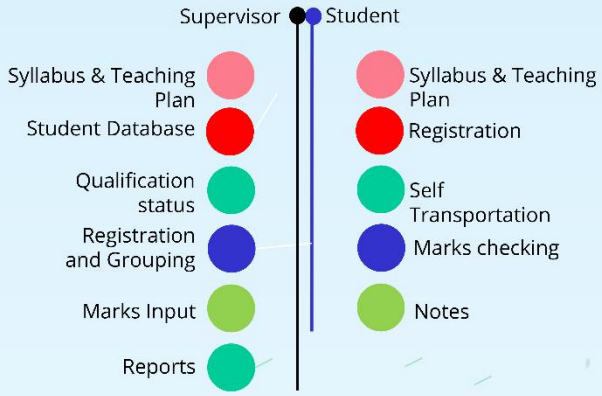
IDEA
To manage registration of SurveyCamp

ASPIRATION
To provides convenience of coordination between Faculty and students.

ACHIEVEMENT
Students satisfied with the quality of content delivery

2014	2015	2016	2017	2018	2019	2020
471 Students 6 Sessions	377 Students 6 Sessions	445 Students 7 Sessions	428 Students 8 Sessions	504 Students 8 Sessions	467 Students 8 Sessions	450 Students 8 Sessions

FRAMEWORK OF *SYSCAMP*



INNOVATION SIGNIFICANT

01 Provide students with a deeper understanding on SurveyCamp

02 Provides the convenience of coordinating students task

03 Easy to manage the students assessments

LEARNING ENVIRONMENT

RESULT

Mean and standard deviation of the level of satisfaction of SysCamp

ITEM	QUESTION	MIN	STD.DEV	RANKING
1	Does SysCamp help in Geomatic camp process	4.372	0.628	1
2	Online SysCamp use is easy and save time	4.343	0.667	2
3	SysCamp have online concept and language in accordance with levels of students	4.196	0.645	6
4	The guideline that implemented in this system are easy to understand	4.323	0.719	3
5	You are satisfied when using SysCamp	4.274	0.733	4
6	The application SysCamp system is very helpful	4.274	0.785	5

EFFECTIVENESS

The development of SysCamp is based on OBE and PBL Implementation by UTHM to enhance the skills and knowledge. SysCamp encourage students to be more responsible and self-reliant to better understand the rules and activities of SurveyCamp

ACKNOWLEDGEMENT

The team members would like to thank CAGeD and Center for Academic Development and Training (CAD), UTHM for their support from grant Vot U229.

Team Members:

1) Sr. Dr. Nazirah Bt. Mohamad Abdullah
2) Sr. Dr. Anuar B. Mohd Salleh
3) Sr. Saifullizan B. Mohd Bukari
4) Sr. Abd. Sukor B. Sarif
5) Sr. Khairul Nizam B. Mohd Yunus

FACULTY OF CIVIL ENGINEERING AND BUILT ENVIRONMENT

VIRTUAL INTERNATIONAL RESEARCH AND INNOVATION SYMPOSIUM AND EXPOSITION RISE 2020

Collaboration Activity: 19-23 JANUARY 2020

1st Regional Policy Dialogue and Network Building of Multi-Stakeholders on Integrated Decentralized Domestic Wastewater Management in ASEAN Countries (PODIWM) is being held from 19th - 23rd January 2020 Century Park Hotel, Jakarta.

Head of consultant from FKAAB and our fellow researcher, UTHM, Assoc Prof. Ts. Dr. Aeslina Abdul Kadir and her co-researcher, Mr. Mohd Ikhmal Haqeem Hassa, participated in this event.

The collaboration was an initiative led by the National Institute of Environmental Studies (NIES), Japan, to discuss domestic wastewater management and the current situation among ASEAN countries.

The Malaysian delegation was led by Dato Ir. Mohd Azmi Ismail (Director Water Resources Management and Hydrology Division, Department of Irrigation and Drainage Malaysia) together with several agencies such as Mr. Wan Abdul Rahim Wan Abdullah (Sewerage Services Department), Mr. Iwan Nazri Mohamad Nordin and Mr. Kishore Kumar Arumugam (SPAN), Mr. Sasidharan Velayutham (IWK), Mr. Che Rasid Che Seman (PLANMalaysia) and Prof. Dr. Azmi Aris (UTM).

Consultation-collaboration Activity: 14 JULY 2020

The Faculty of Civil and Built Environment Engineering (FKAAB), Universiti Tun Hussein Onn Malaysia (UTHM) further strengthens its cooperation network with the National Water Services Commission (SPAN) when it is recognized as the evaluating body to conduct pilot project compliance assessment for water services industry products in Malaysia. This recognition is a follow-up to SPAN's visit to the FKAAB laboratory and facilities on 14th July 2020.

According to Associate Professor Ts. Dr. Aeslina Abdul Kadir's recognition proves that the credibility of the staff, facilities, and services offered by FKAAB is comparable to other accredited agencies and meets SPAN standards.

For the record, SPAN is a technical and economic regulatory body whose role is to supervise and regulate water supply and sewerage services in Peninsular Malaysia and the Federal Territories of Putrajaya and Labuan.

SPAN also regulates all entities in the water and sewerage industry, including public water supply and sewerage service operators, private water supply and sewerage service operators, water supply and sewerage contractors, and permit holders, and product approval for water supply and sewerage.

CONSULTATION-COLLABORATION ACTIVITY

Meeting with the SMART, JPS at the SMART operation center.

2 September 2020

Credit to our fellow researchers, PM Dr Norzila Othman, PM Dr Mohd Adib Mohd Radzi, Dr Mohd Hairul bin Khamidun, Dr Nor Amani Filzah bt Mohd Kamil, Dr Shalahudin Adnan and Dr Mohd Saleh Abustan

CONSULTATION ACTIVITY:

Project: Integrated River Basin Management (IRBM) - Sg Johor River Basin

7th October 2020

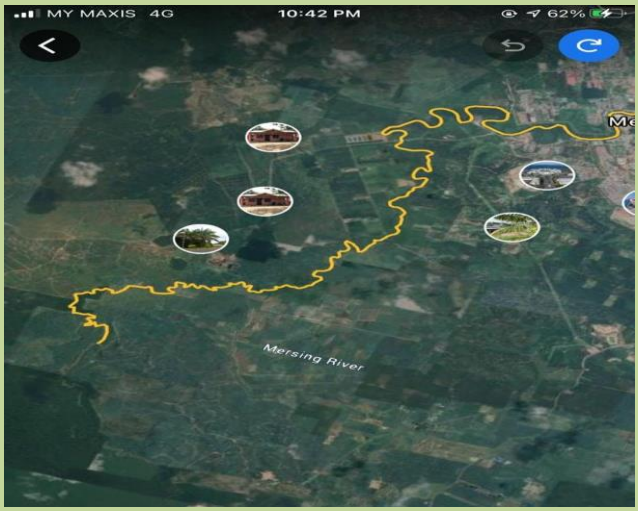
Consultants:

Dr Mohd Azlan Mohd Yusoff, Dr Muhammad Salleh Hj Abustan, Dr Mohd Shalahuddin Adnan and Prof Madya Dr Mohd Adib Muhammad Razi.

Technical supports:

En Azwan Busu and En Bahtiar Basri.

The scope of the project focused on sediment transport capacity for the river basin, which included sediment size distributions and characteristics.



CSR ACTIVITIES

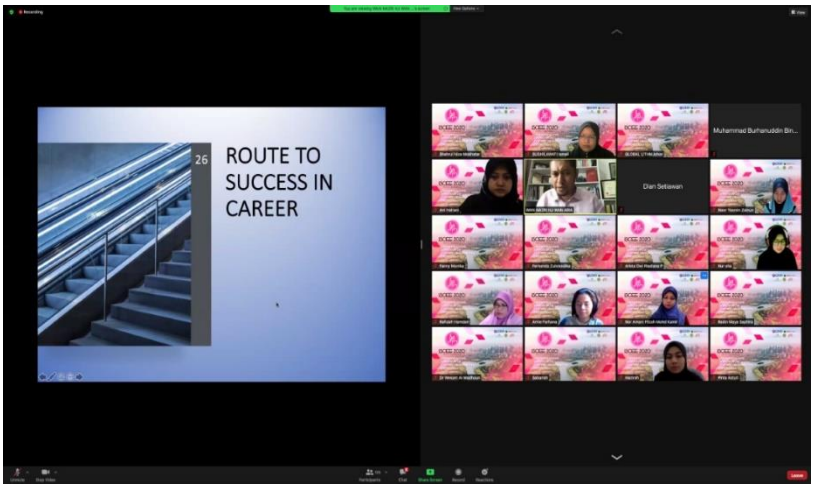
8 OCTOBER 2020

To strengthen the university's relationship with the local community, 30 lecturers and 12 postgraduate students (coordinated by Dr. Nor Hazurina Othman), Universiti Tun Hussein Onn Malaysia (UTHM) participated in implementing a community service program with the concept of environmental sustainability at Seri Rejo National School Sari, Senggarang on October 8, 2020. According to the Project Leader, Ts. Dr. Roslinda Seswoya from FKAAB, this program sponsored by FKAAB, Civil Engineering and Built Environment Postgraduate Society (CiBPS) and Centre of Graduate Studies (CGS) UTHM, involves gotong royong activities to upgrade the fishpond area using concrete block waste, which is waste from research activities FKAAB and used tires.
"The concept of recycling was triggered when we want to make use of the waste so that it is not wasted. Using the 'Waste to Landscape' approach, we recycle the waste material for the use of the school landscaping project," she said.

Apart from gotong-royong, this team also held a sharing session towards loving the environment with teachers to cultivate 3R, reusing, reducing, and recycling to form a sustainable school. The organization of this program benefits the school and provides space for FKAAB staff to interact with the local community and become ambassadors to promote UTHM.
"FKAAB hopes that such a program can be implemented again in other schools around Parit Raja for mutual benefit. This is because, through this program, waste transformation to other products can be done hands-on, in addition to encouraging the culture of waste recycling among the community, in addition to disposing of it at landfills," said Dr. Roslinda.

3rd International Symposium International Symposium On Civil And Environmental Engineering (ISCEE 2020), 1-2 December 2020.

Faculty of Civil Engineering and Built Environment (FKAAB), Universiti Tun Hussein Onn Malaysia (UTHM) has organized the 3rd International Symposium International Symposium On Civil And Environmental Engineering (ISCEE 2020) on 1 to 2 December 2020, with the theme 'Shaping The Future Through Sustainable Engineering and Technology', This symposium was held completely virtual. The original plan for its implementation in Yogjakarta, Indonesia had to be changed in a series of situations during the Covid-19 pandemic.



"Keynote Speaker session with Datuk Ir. Ts. Wan Nazri Hj Wan Aria, CEO Gruppe Dynamic Sdn Bhd, Ex Structural Engineer Royal Mecca Clock Tower"

The symposium was organized in collaboration with Universitas Muhammadiyah of Yogjakarta as a co-organizer, in addition to cooperation with Universitas Airlanggar, Universitas Narotama, Universitas Surabaya, and also Pavement and Transportation Research Group (PTRG), Universiti Teknologi Malaysia (UTM) Skudai.

The research centers under FKAAB; Jamilus Research Center for Sustainable Construction (JRC), Micropollutant Research Center (MPRC), Smart Driving Research Center (SDRC) and Center of Applied Geomatics for Disaster Prevention (CAGeD) have acted as the main movers of this conference led by Associate Professor Ts. Chm. Dr. Radin Maya Saphira Radin Mohamed.

The symposium has provided three conference platforms namely International Conference on Sustainable Construction and Structures (ISUCOS 2020), International Conference on Sustainable Environment and Water Research (ISCWER 2020) and International Conference on Sustainable Infrastructure Engineering (ISCIE 2020). A total of 123 research papers were presented by conference participants locally and international participants from Indonesia, Brunei and Oman.

Keynote speakers were Associate Professor Dr Munzilah Md Rohani and Associate Professor Ts Dr Mohd Haziman Wan Ibrahim who are both from FKAAB, UTHM and Associate Professor Dr. Ir. Jazaul Ikhsan from Muhammadiyah University of Yogjakarta shared about the latest advances in their respective research expertise areas. Datuk Ir. Ts. Wan Nazri Wan Aria, Chief Executive Officer of Gruppe Dynamic Sdn Bhd who is a former structural engineer for the Mecca Clock Tower project has inspired the participants with his career experience in various fields of construction. The two days symposium had run well, and it is anticipated to provide a platform for sharing of knowledge and ideas between practitioners, researchers and scientists from both the academia and the industry on the latest advances in civil engineering.

"Poster announcement for Day 2 ISCEE 2020"

"During the close event meeting of ISCEE 2020"

Deputy Vice-Chancellor (Research and Innovation) Visited CAGED Field Observation Complex, Tanjung Laboh

CAGeD Observation Complex was developed at Tanjung Laboh, by end of December 2018 for researchers from Faculty Civil Engineering and Built Environment to conduct their research on shoreline changing around that area. Meanwhile the Complex also as a benchmarking to prove the ownership of the area as UTHM land. The complex is located within the mini airport compound area of Tanjung Labuh in Pusat Latihan Staff UTHM (PUMAS).

Deputy Vice-Chancellor has visited to the complex to get to know current the readiness of the complex and the potential future research can be done within the area. In addition, current research have been carried out in the CAGED Observation Complex including Boya for sea wave observation, shoreline changing and coastal erosion prevention. Furthermore, Assoc. Prof. Dr. Mohd Adib Mohd. Razi just received the industrial grant from Forest Research Institute Malaysia (FRIM) to conduct a study on the coastal monitoring and research by using mangroves for erosion prevention. In 2019, Lion Club Batu Pahat was conducted a Community Services Responsibility (CSR) activity in the complex compound area to cultivate more than 100 mangroves plant.

LAUNCH CEREMONY OF KIDSAFE PROGRAMME 2020

SMART DRIVING RESEARCH CENTRE

UTHM Kidsafe Program, 10 thousand school students receive benefits.To further increase the awareness of the local community regarding road safety, Universiti Tun Hussein Onn Malaysia (UTHM) took the initiative to share knowledge with about 10,000 school students around the state of Johor through a program called Kidsafe UTHM.

The program led by Associate Professor Dr. Munzilah Md Rohani was held for the first time in 2011 and is fully managed by the academic staff of the Infrastructure and Geomatics Engineering Cluster, Faculty of Civil and Built Environment (FKAAB). According to Dr. Munzilah, this program initially only involved pre-school children, then further expanded its implementation by involving national primary and secondary school students around the state of Johor.

He added that initially this program was implemented with initiatives and financial resources from FKAAB lecturers, but now Kidsafe UTHM is starting to get help and support from various parties including the industry, the community and even politicians. As a result this year, more than 3000 copies of the Road Safety Guide book have been successfully published for free distribution to school students. "Because Batu Pahat is one of the areas that recorded the highest number of fatal accidents in the country, we are called to help raise public awareness to overcome the problem," he explained.
For the record, Kidsafe was once selected as the high-impact UTHM program 2018 besides being selected as a high-impact community project under the University Initiative for Society (U4S) by the Public University.

The series, a launch of the Kidsafe 2020 Program and Road Safety Handbook for School Students was held on February 17 at the Tunku Tun Aminah Library, main campus.

The launching ceremony organized by Smart Driving Research Center (SDRC) was officiated by the Deputy Minister of Federal Territories and Member of Parliament for Sri Gading, YB Datuk Dr. Shahruddin Md Salleh, who is also the biggest contributor to the implementation of this program.

Also present at the event, Assistant Vice Chancellor (Strategic Planning and Corporate Relations), Professor Ts. Dr. Ahmad Tarmizi Abdul Karim as the official representative of the Vice Chancellor of UTHM, representatives of schools and industry as well as Senior Officers of the university.

The UTHM Kidsafe team contributed road safety signs to six schools

The Smart Driving Research (SDRC), Universiti Tun Hussein Onn Malaysia (UTHM) through the KidSafe team has contributed road safety signboards to six selected schools around Batu Pahat district to further increase community awareness.

According to her team leader, Associate Professor Dr. Munzilah Md Rohani from the Faculty of Civil Engineering and Built Environment, this signboard was donated to Sekolah Kebangsaan (SK) Parit Bingan, SK Pintas Puding, SK Pintas Raya, SK Bukit Soga and Sekolah Menengah Kebangsaan Tun Aminah.

She added that this contribution is an extension of the 'Road Safety Book for School Students' program which was launched last February and distributed to schools around Batu Pahat district.

SDRC is once again working with the Seri Gading Parliament, the Transport Science Society of Malaysia (TSSM) and the Batu Pahat Municipal Council to produce special signboards to provide reminders and tips related to road safety.
The signboard designed by Dr. Basil David Daniel was donated in the hope that public awareness can be increased from time to time thus reducing the risk of road accidents.

CSR Activities

The KidSafe CSR program which held on 26 August 2020 is successful organised between SDRC in collaboration with CIBPS, FKAAB. This activity were involve the FKAAB students, SDRC members and community at Kemas Parit Hakim Kindergarten in conjunction with independence month.

Project: Proposed Pavement Periodic Works Using Micro Surfacing From KM 166.0 To KM 168.10, North Bound, Section S2, North South Expressway

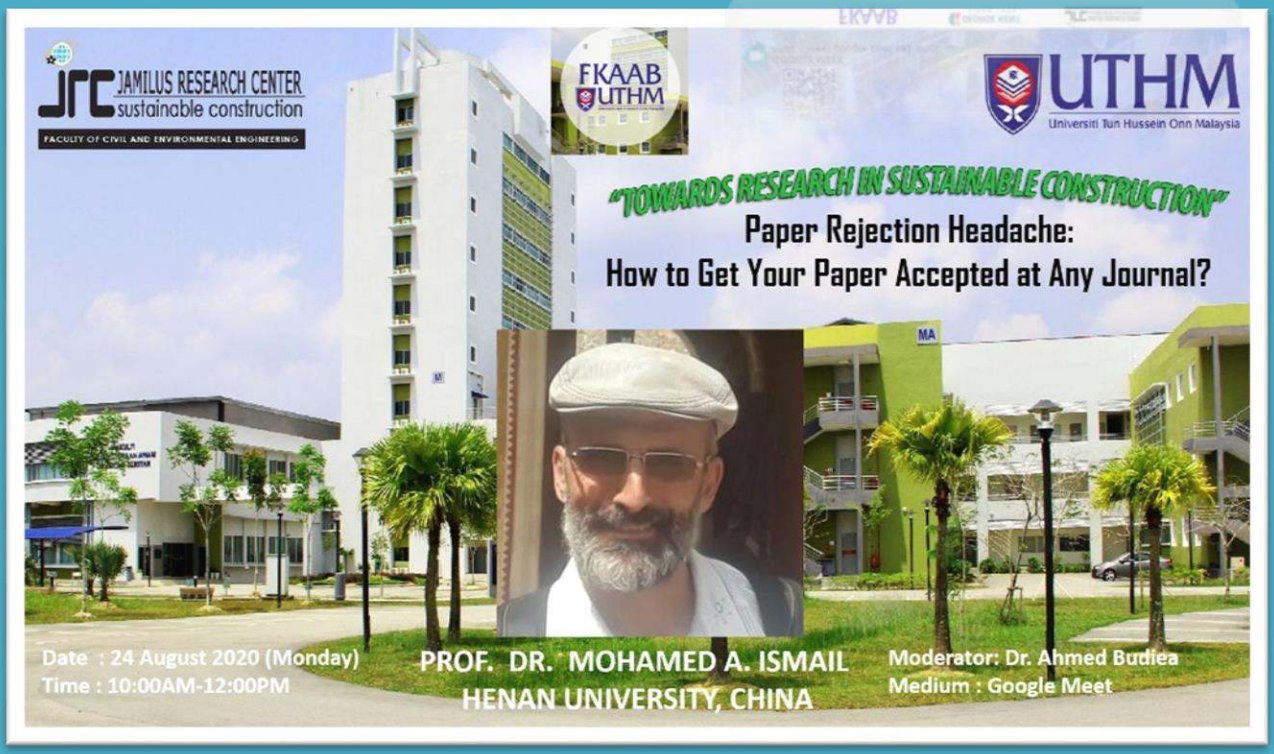
Dr Mohammad Nasir Bin Mohamad Taher
Assoc Prof Dr Adnan Bin Zainorabidin
Assoc Prof Dr Munzilah Binti Md Rohani

Technical supports:
Tc Azuan Bin Poharan
Tc Afandi Bin Abu Bakar
Mr Mohd Khairi Bin Zainal

The field and laboratory test were carried out to investigate the cause of pavement defect using micro surfacing with mill & pave treatment from KM 166.00 to KM 168.10, North Bound, Section S2, North-South Expressway. A total number of 17 core samples approximately 300mm depth and material trial pit taken from the site and tested at Advanced Highway Engineering Laboratory, UTHM. The assessment to identify the cause of pavement defects is divided into three (3) section. Section 1 is from KM 166.15 to KM 166.58, section 2 from KM 166.58 to 167.90 and section 3 is from KM 166.90 to KM 168.10. The tests involved were:

i. Resilient Modulus Test (ASTM D4123)
ii. Dynamic Creep Modulus Test(EN 12697-25)
iii. Bitumen Content and Gradation (ASTM D 2172-75)
iv. Dynamic Cone Penetrometer Test (AASHTO T165/ASTM D1075)
v. Pavement Thickness Test

HIGHLIGHTS JRC ACTIVITIES 2020



Lawatan daripada Koperasi Barisan Usahawan Berhad (KOPBARIS)

Lawatan daripada CIDB Johor

Lawatan daripada JKR

Lawatan JRC ke Unversitas Mercu Buana, Jakarta

COR BULLETIN 2020

FACULTY OF CIVIL ENGINEERING AND BUILT ENVIRONMENT