E-NEWSLETTER

UiTM CivilEdge



#EMPOWERCEUITM

TABLE OF CONTENTS

2	DEAN'S WELCOMING SPEECH
3	EDITORIAL BOARD
4	FCE TOP MANAGEMENT & FCE INFOMETRIC
5	NEW STAFF, PHD AWARD & STAFF APPOINTMENT
6	PROFESSIONAL QUALIFICATION
7	SUSTAINABLE DEVELOPMENT GOALS ANNUAL REPORT 2024
8	PUBLICATIONS
8	CONSULTATIONS
9	RESEARCH GRANTS
10 - 1	16 ACADEMIC STAFF: NEWS &

RESEARCH HIGHLIGHTS

FCE Raya Celebration Ekspo Selangkah ke UiTM (ESKU2025) Podcast Zaman Now **FKA Townhall Session** Jom Masuk U 2025 Roadshow Best of Gold at EDU-INNOVATE 2025 International Research Mobility Success: The United State



ACADEMIC STAFF: NEWS & 17-24 RESEARCH HIGHLIGHTS

International Educational Visit to Songkhla, Thailand Courtesy Visit from the LLM GeoTrEn Research Highlights WRES Research Highlights STRUcM Research Highlights **CBPM Research Highlights**

STUDENTS: ACADEMIC 25 - 30 **ARCHIEVEMENTS & ACTIVITIES**

Recipient of the President's Award Sakura Science Exchange Program 2025 UiTM Shah Alam Shines at I3SC 2025 From Sticks to Safety: Sadao, Thailand 5th Edition: Nextgen Engineers First-Year Seminars & Experience (FYS)

Delcoming Speech

Assalamualaikum and warm greetings to all,

It is with great honour and optimism that I welcome you to the first edition of our e-Newsletter for 2025. This edition is particularly significant as it marks a new chapter for us — the return of the Faculty of Civil Engineering (FCE) as a distinct entity, following the unmerging from the former College of Engineering.

This transition brings renewed identity and a reaffirmation of our commitment to excellence in civil engineering education, research, and innovation. FCE has a proud legacy of producing competent engineers and contributing meaningful solutions to national and global challenges. As we stand on our own once again, we do so with strengthened resolve and a clear direction for the future.

To our students — you are the builders of tomorrow's infrastructure, and we are honored to support your journey toward shaping a more resilient and sustainable future. Your dedication and perseverance make us proud to be your academic home here at UiTM. To our staff — thank you for your dedication and adaptability throughout this transition. contributions are the backbone of our continued progress. And to our academic and industry partners we look forward to continued collaboration as we move into this exciting phase together.

Let us embrace this opportunity to shape a stronger, more focused FKA — rooted in tradition, driven by innovation, and committed to impact.

> PROF. Ir. Ts. Dr. CHE KHAIRIL IZAM CHE IBRAHIM











PROF IR TS DR CHE KHAIRIL IZAM CHE IBRAHIM





TS. DR. IRMA NOORAZURAH MOHAMAD



IR. TS. DR. RADEN MAIZATUL AIMI MOHD AZAM TS. DR. NUR ILYA FARHANA MD NOH TS. DR. MAZLINA ZAIRA MOHAMMAD IR. DR. FARIZ ASWAN AHMAD ZAKWAN



TS. DR. YAZMIN SAHOL HAMID AMIRUDDIN MIRSHAD



DR. NURUL AINAIN MOHD SALIM DR. NURIZATY ZUHAN MUHAMMAD HAFEEZ OSMAN









FCE

TOP MANAGEMENT



DEPUTY DEAN









Assoc. Prof. Ir. Ts. Dr. Assoc. Prof. Ir. Gs. Dr. Norbaya Hj Sidek Norashikin Ahmad Kamal Che Khairil Izam Mohd Khairul Kamarudin

DEPUTY DEAN (STUDENTS AFFAIRS) (ACADEMIC AFFAIRS)

Prof. Ir. Ts. Dr. Che Ibrahim **DEAN**

DEPUTY DEAN (RESEARCH & INDUSTRY **NETWORK)**

Assoc. Prof. Ir. Ts. Dr.

Armyn Fahmy Mohd Fahmy SENIOR DEPUTY REGISTRAR

FCE











National Professional Bodies Recognition
Construction Industry Development Board (CIDB)
The Institute of Engineers Malaysia (IEM)
Department of Occupational Safety & Health (DOSH)
National Institute for Occupational Safety and Health

Accreditation/Validation International Bodies Singapore Institute of Engineering Technologists Institution of Occupational Safety and Health (IOSH)



	Inte Gr	earch erest oup IG)
13		







Graduate Employability 2024
96.1%

Consultancy Project
Value (2024)
2.0 mil



**	Student Enrolment 2025
19	51

<u>U</u> s	aff nbers
Shah Alam Academician Administrative Technical	123 18 28
Penang Academician Technical	89 11
Sarawak Academician Technical	20 4
Johor Academician Technical	50 4
Pahang Academician Technical	37 9



Total Number of Graduates (Since 2000) 8,451













Gs. Dr. Saiful Anuar Hj Jaafar



Dr. Aawag Mohsen Alawag



Ts. Dr. Nurhidayah Hamzah PhD in Civil Engineering Universiti Teknologi MARA



Dr. Naeem Aziz Memon

STAFF

Appointment_



- Ir. Ts. Dr. Anizahyati Alisibramulasi
 1) Professional Assessment Examination (PAE) Panel, BEM.
- 2) Secretary/Treasurer, Civil and Structural Engineering Technical Division (CSETD), IEM.
- 3) External Examiner The Bachelor of Civil Engineering With Honours, SEGI University.
- 4) Education Committee Malaysian Structural Steel Association (MSSA).
- 5) Associate Editor-In-Chief Journal of Advanced Industrial Technology & Application (JAITA), Malaysia.
- 6) Editorial Team, Journal of Civil Engineering Building and Transportation, Indonesia.
- 7) International Technical Committee, International Civil Engineering and Architecture Conference (CEAC2025), 18-31 March 2025, Tokyo, Japan.
- 8) Committee of International Conference on Innovative Structure and Resilient City (ISRC 2025), 27-29 Sep 2025, Nagoya, Japan.
- 9) JAWATANKUASA Teknikal Steel Bars, Wire Rods and Wire Products (NSC 16/T6), Jabatan Standard Malaysia.



Ir. Ts. Dr. Rusdi Rusli Members of the Government-industry TVET Coordination Body (GITC) Council of Experts



Ts. Dr. Musmuliadi Kamaruding 1) Self Instructional Material (SIM) Writer for Open & Distance Learning (ODL) Programme, DRB Hicom University.

2) Proficiency Certificate for Entrepreneurship Educator, Universiti Teknologi MARA (ProCEEd x UiTM), KPTM







PROFESSIONAL Qualification

PROFESSIONAL ENGINEER (PE)



Prof. Ir. Ts. Dr. Hjh. Wardah Tahir



Ir. Ts. Dr. Rusdi Rusli



Prof. Ir. Ts. Dr. Mohd Hisbany Mohd Hashim



Ir. Dr. Nuryantizpura Mohd Rais

ASEAN CHARTERED PROFESSIONAL ENGINEER (ACPE)



Ir. Gs. Ts. Dr. Rosmawati Mamat

PROFESSIONAL GEOSPATIALIST (GS)



Assoc. Prof. Ir. Gs. Ts. Dr. Jazuri Abdullah



Ir. Dr. Siti Nurbaya **Ab Karim**



Ir. Gs. Ts. Dr. Rosmawati Mamat



Gs. Dr. Saiful Anuar Hj Jaafar









SUSTAINABLE **DEVELOPMENT GOALS ANNUAL REPORT**

FACULTY OF CIVIL ENGINEERING UNIVERSITI TEKNOLOGI MARA



As a leading institution in civil engineering education, the Faculty of Civil Engineering is dedicated to integrating the United Nations' Sustainable Development Goals (SDGs) into its academic programs, research priorities, and operational strategies. This 2024 SDG Report reflects the Faculty's holistic commitment to all 17 SDGs, with particular emphasis on five (5) key areas: SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities), and SDG 17 (Partnerships for the Goals). This edition highlights our continuous efforts and progress in Teaching & Learning, Operations, Research & Publications, Community Engagement, and Student-led Initiatives aligned with the Sustainable Development Goals (SDGs).

MORE INFO: https://rb.gy/0nip3g

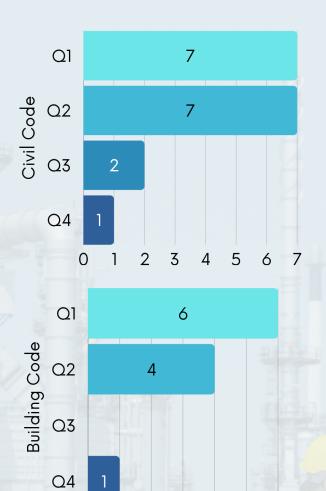
Written by: Ts. Dr. Nurul Elma Kordi

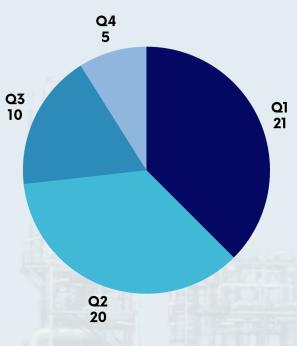






Publications





Total Paper by Quartile

Consultations. Data updated until: April 2025

2

3

5

6

Category	Amount (RM)	
Government	488,065.76	
Private	206,938.93	

Total Amount RM695,004.69

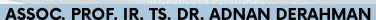






Research Grants Data updated until: June 2025

PRIVATE GRANT



Analisa Kajian Trafik Bagi Tiga (3) Lokasi Kajian Terpilih di Semanjung

Malaysia 🌈

RM 150,000.00



Study on UK-Malaysia Strategic Partnership for Artificial Intelligence

(AI) Growth MiGHT

RM 158,516.87





ASSOC. PROF. TS. DR. NURKAMALIAH MUSTAFFA

Study on Rural Empowerment and Community Help (REaCH) 2.0

Yayasan TM

RM 250,000.00





PROF. IR. TS. DR. **CHE KHAIRIL IZAM CHE IBRAHIM**

 UK- Indonesia-Malaysia Alliance for Occupational Safety and Advancement in Construction (OSH-Advance)



RM 43,036.50

• Improving Design for Occupational Safety and Health in Malaysia via Academic-Industry-Tripartite Government Engagement, Capacity Strengthening and Knowledge





RM 240,191.77



Interceptor Catch Subsampling No. II (OSPAR Protocol)

THE OCEAN **CLEANUP**®

RM 12,600.00

Total Amount RM 854,345.14









FCE RAYA CELEBRATION 2025

📅 Date: 18 April 2025 📍 Venue: Blok 2 (B2-A7-22)

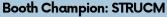
Time: 10:00 AM - 3:00 PM



The School of Civil Engineering joyfully welcomed the month of Syawal with a lively Hari Raya Celebration on 18 April 2025. Held at Blok 2 from 10:00 AM to 3:00 PM, the event brought together academic and administrative staff in a meaningful celebration of togetherness and tradition. In the spirit of collaboration, each division contributed a variety of festive dishes, creating a warm and inclusive Raya gathering for all attendees to enjoy.

Booth Decoration Competition

A highlight of the event was the booth decoration competition, which saw enthusiastic participation from all four divisions: Water Resources & Environmental System (WRES), Construction Business & Project Management (CBPM), Geotechnical & Transportation Engineering (GeoTrEn), and Structural & Material Engineering (STRUCM), each presenting creative and festive displays.



STRUCM stole the spotlight with their captivating "Raya Ala Di Raja -Elegant Dirgahayu Aidilfitri" theme. Their booth exuded royal charm and elegance, earning them the top prize in the friendly competition.



Strengthening Our Civil Engineering Family

Beyond the celebration, the event fostered closer connections, strengthened inter-division camaraderie, and reminded everyone of the values of respect, unity, and gratitude that lie at the heart of the school.

From All of Us... Selamat Hari Raya Aidilfitri, Maaf Zahir & Batin. May the joy of this festive season continue to bring harmony, inspiration, and success to all.















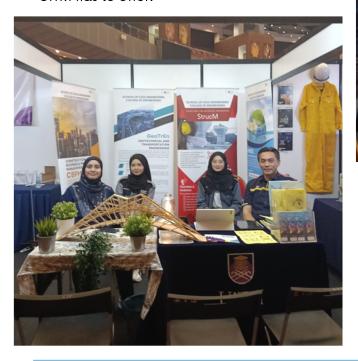




EKPO SELANGKAH KE UITM (ESKU2025)

SHOWCASING FKA'S ENGINEERING EXCELLENCE

The Ekso Selangkah ke UiTM 2025 (ESKU2025) held on 26 and 27 April 2025 was a vibrant and impactful event that welcomed future students and their families to discover what UiTM has to offer.





Visitors to the FKA booth were treated to engaging consultations, interactive displays, and inspiring insights into careers in civil engineering and rail infrastructure. With strong interest shown from both students and parents, the event successfully increased awareness of FKA's role in shaping futureready engineers.





The Faculty of Civil Engineering (FKA) took the opportunity to shine, proudly showcasing two of its flagship programmes:

- Bachelor of Civil Engineering with Honours (CEEC222)
- Bachelor of Civil Engineering Technology (Railway Infrastructure) with Honours (CEEC240)



FKA CONNECTS, ENGAGES, AND INSPIRES AT **ESKU2025**

FKA's participation in ESKU2025 not only strengthened its connection with the community by actively engaging students, parents, and educators, but reinforced UiTM's unwavering commitment to providing accessible, industry-relevant education that prepares future engineers to meet real-world challenges and contribute meaningfully to national development.

Written by: Assoc. Prof. Ir. Ts. Dr. Jezan Md. Diah













"ZAMAN NOW"



CEO @ FACULTY

DATUK IR. TS. HJ. WAN NAZRI HJ. WAN ARA

As part of the ongoing initiative to strengthen academicindustry engagement under the CEO@Faculty Programme, the Faculty of Civil Engineering is proud to highlight the recent involvement of one of our distinguished CEOs, Datuk Ir. Ts. Hj. Wan Nazri Hj. Wan Aria, in the "Zaman Now" Podcast series. This notable appearance served not only as a platform to showcase his extensive industrial expertise but also as an avenue to share invaluable insights drawn from his professional journey. Through the session, Datuk Wan Nazri inspired alumni, current students, and the broader academic community by addressing contemporary industrial challenges and exploring future opportunities within the civil engineering landscape.

The podcast session marks a significant milestone and sets the tone for a series of upcoming collaborative initiatives with our CEO@Faculty participants. These efforts are a core component of the faculty's strategic direction, aimed at bridging the gap between theory and practice. By integrating real-world perspectives into the academic ecosystem, the faculty seeks to enrich student learning experiences, promote industry-informed research, ultimately enhance the employability and industry-readiness of our graduates. engagement underscores continued commitment to cultivating a dynamic academic environment that evolves alongside the demands of the professional world.







Written by: Ts. Dr. Warid Wazien Ahmad Zailani









FKA TOWNHALL SESSION

13TH JUNE 2025

The FKA Townhall Session was successfully conducted to deliver the latest updates on faculty affairs, strategic directions, and to strengthen two-way communication between the management and faculty members. The program began with registration and arrival, followed by a prayer recital and a safety video presentation. The session was officially opened with welcoming remarks by Prof. Ir. Ts. Dr. Che Khairil Izam Che Ibrahim, Dean of FKA, who emphasized the importance of continued collaboration and shared commitment in achieving the faculty's aspirations.



Presentations were delivered by key unit heads as

HEA Unit (Academic Affairs) – Presented by on behalf of the Deputy Dean (Academic), Assoc. Prof. Ir. Gs. Dr. Norashikin Ahmad Kamal covering program updates and academic quality.

HEP Unit (Student Affairs) – Presented by the Deputy Dean (HEP), Assoc. Prof. Ir. Ts. Dr. Norbaya Hj Sidek highlighting student welfare initiatives and support mechanisms.

PJI Unit (Research & Industry Network) – Presented by the Deputy Dean (Research), Assoc. Prof. Ir. Ts. Dr. Mohd Khairul Kamarudin focusing on grants, publications, and industry collaborations.

KUK Unit (Quality, Audit & Curriculum) – Presented by the Head of Unit, Assoc. Prof. Datin Ir. Ts. Dr. Mazidah Mukri discussing PLO monitoring, CQI activities, accreditation readiness.



Laboratory & Facilities Unit - Presented by the Head of Laboratory Unit, Tn. Hj. Mohd Shahir Abd Rahman and with assistant Hazri Othman providing updates on equipment status, safety practices, and upcoming facility upgrades.



The session concluded with a Q&A and photography session, before officially ending at 12:30 PM. terkin This townhall served as an effective platform for transparent communication and collaborative dialogue among the FKA community.





Written by: Ts. Dr. Mazlina Zaira Mohammad







JOM MASUK U 2025 (JMU2025) ROADSHOW

66 Unleashing Potential, Transforming Futures



The Faculty of Civil Engineering (FKA), UiTM, proudly participated in the Jom Masuk U 2025 (JMU2025) national roadshow to promote two of its key undergraduate programmes:

- Bachelor of Civil Engineering with Honours (CEEC222)
- Bachelor of Civil Engineering Technology (Railway Infrastructure) with Honours (CEEC240)





This outreach initiative successfully reached potential students and parents across five major locations:

- 19-20 April 2025 UniSZA, Gong Badak Campus, Terengganu
- 26-27 April 2025 UTeM, Ayer Keroh, Melaka
- 3-4 May 2025 USM Main Campus, Penang
- 10-11 May 2025 UKM, Bangi Campus, Selangor
- 17–18 May 2025 Dewan Merdeka, Manjung Convention Centre, Perak



EXPLORING ENGINEERING FUTURES: FKA CONNECTS WITH STUDENTS AND **PARENTS**

At each stop, FKA showcased its programmes through informative exhibitions, interactive displays, and one-on-one consultations. Visitors had the opportunity to explore exciting career pathways in civil and railway engineering, learn about programme structures, and interact with lecturers and current students.

INSPIRING THE NEXT GENERATION: FKA'S EXCITING JOURNEY AT JMU2025

The positive response and strong engagement at every venue reflected the growing interest in engineering and infrastructure development among Malaysian youth. FKA's participation in JMU2025 reaffirmed its commitment to producing competent, future-ready graduates while strengthening UiTM's visibility and reputation on a national scale.

Written by: Assoc. Prof. Ir. Ts. Dr. Jezan Md. Diah











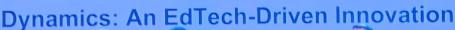
UITM SHAH ALAM CIVIL ENGINEERING TEAM TRIUMPHS WITH BEST OF GOLD AT EDU-INNOVATE 2025

BEST OF GOLD

CATEGORY A

(ACADEMICS, PROFESSIONAL & INDUSTRY PLAYERS)

Gamified Learning Platform for Mastering Engineering





The Faculty of Civil Engineering, UiTM Shah Alam was awarded the prestigious Best of Gold at the EDU-INNOVATE 2025 International Education Innovation Competition, held on 19–20 May 2025 at Universiti Pendidikan Sultan Idris (UPSI). Led by Ts. Dr. Yazmin Sahol Hamid, with team members Ts. Dr. Mohd Raizamzamani Md Zain, Dr. Nurbaiah Mohammad Noh, Dr. Mazlina Mohamad, and Nurul Adhlin Ilyana Rosli, the team impressed the judges with their project:



"GAMIFIED LEARNING PLATFORM FOR MASTERING ENGINEERING DYNAMICS"





The project integrates gamification and EdTech to enhance student understanding of engineering dynamics through interactive learning. This achievement highlights the faculty's commitment to innovation in engineering education. Congratulations to the team for this outstanding accomplishment.



Written by: Ts. Dr. Yazmin Sahol Hamid











INTERNATIONAL RESEARCH MOBILITY SUCCESS STRATEGIC ENGAGEMENTS IN THE UNITED STATES



Ts. Dr. Mazlina Zaira Mohammad has successfully completed an impactful international academic mobility program in the United States from 17 May to 1 June 2025. The visit encompassed a series of high-level engagements across renowned institutions and international organizations, aligning with the objectives of strategic planning, global benchmarking, and research collaboration.

The program began with participation in the prestigious 23rd World Building Congress (WBC2025) held at Purdue University, Indiana, from 19 to 23 May.

This global conference and safety symposium brought together experts and professionals in the construction safety management to explore innovation, sustainable construction, and interdisciplinary collaboration. Dr. Mazlina's presence facilitated academic networking and visibility for Malaysian research contributions on the international stage.

> Following this, the delegation proceeded on a collaborative visit to the Massachusetts Institute of Technology (MIT) and Harvard University in Boston from 26 to 28 May. This engagement explored potential best practices in innovative educational management strategies with two of the world's leading universities.

> > The final leg of the program included a strategic benchmarking visit to the United Nations (UN) Headquarters in New York City on 29 May 2025 and a visit to a highway construction site project under M&J Engineering P.C. on 30 May 2025. The UN visit provided valuable insights into global development goals, sustainability governance, and international policy implementation, critical elements for shaping future academic and research directions. The site visit is led by Project Manager, Sebghat Lodin to show the safety management practice at site.

> > This successful mobility initiative, supported by CIDB strategic planning project funding, reflects Mazlina's commitment to international benchmarking, global engagement, knowledge academic transfer, and excellence. experience will directly enhance international research collaboration, and strategic initiatives at her home institution, Universiti Teknologi MARA (UiTM). Congratulations to Ts. Dr. Mazlina Zaira Mohammad for representing Malaysia and UiTM in this significant research networking milestone!

> > > Written by: Ts. Dr. Mazlina Zaira Mohammad









INTERNATIONAL EDUCATIONAL VISIT AND TALK IN SONGKHLA, THAILAND



On 4 June 2025, the Faculty of Civil Engineering, UiTM Shah Alam, conducted an international educational visit and academic engagement in Songkhla, Thailand, involving a series of interconnected activities designed to enhance global exposure and cross-border academic collaboration. Led by Ts. Dr. Rozaina Ismail (lead advisor) and Dr. Norazlan Khalid (coadvisor), the programme involved five student participants and included three key components: an official visit to the Consulate of Malaysia in Songkhla, an academic talk, and an educational tour of the Civil Engineering Laboratory at Rajamangala University of Technology Srivijaya (RUTS).

The visit began with an official engagement at the Malaysian Consulate in Songkhla, where the delegation was warmly received by consular officials. The session provided valuable insights into the consulate's roles and services, emphasizing the importance of soft diplomacy, international relations, and Malaysia's diplomatic presence in the region. This visit set the tone for the programme by highlighting Malaysia's commitment to global engagement and support for its citizens abroad.

Following the consulate visit, the delegation proceeded to RUTS, where Ts. Dr. Rozaina Ismail delivered an academic talk titled "Seismicity in Malaysia: Current Trends & Research Perspectives in Earthquake Study." The session, attended by RUTS engineering staff, explored Malaysia's seismic characteristics, recent earthquake activity, and ongoing research efforts in earthquake engineering. The talk also emphasized the role of engineers in disaster risk reduction and encouraged collaborative research in geohazards and structural resilience, fostering meaningful academic exchange between UiTM and RUTS.

To further enhance the academic experience, the visit concluded with a tour of the Civil Engineering Laboratory at RUTS. During this session, students and staff from UiTM were introduced to advanced testing equipment and methodologies in structural, geotechnical, and materials engineering. The hands-on exposure provided practical learning opportunities and deepened the participants' understanding of engineering applications in a cross-cultural academic setting.

Overall, this international engagement successfully integrated diplomatic, academic, and technical components, offering a holistic learning experience that supports UiTM's mission of producing globally competent graduates and strengthening international partnerships in education and research.



#EMPOWERCEUITM

Written by: Ts. Dr. Rozaina Ismail

COURTESY VISIT FROM THE MALAYSIAN HIGHWAY AUTHORITY (LLM), 11TH JUNE 2025

The Faculty of Civil Engineering (FKA), Universiti Teknologi MARA (UiTM) Shah Alam, had the honour of receiving a courtesy visit from a distinguished delegation of the Malaysian Highway Authority (Lembaga Lebuhraya Malaysia - LLM) on 11 June 2025 at UiTM Shah Alam.

The delegation was led by Ir. Ts. Azleen binti Jaludin, representing the Director General of LLM, YBhg. Dato' Ir. Sazali bin Harun, who also serves as the 'Owner Committee' for the Road Engineering Association of Asia and Australasia (REAAA).





The primary purpose of the visit was to introduce and promote REAAA through its Malaysian chapter, the Road Engineering Association of Malaysia (REAM). Additionally, the visit aimed to explore potential avenues for strategic collaboration between the highway industry and higher education institutions, particularly in areas related to research, talent development, and knowledge exchange. During the engagement, meaningful discussions were held on the importance of strengthening partnerships between academia and the infrastructure sector to support the nation's development aspirations. The visiting delegates were also presented with an overview of the faculty's academic programmes, research focus areas, and state-of-the-art facilities.

It is hoped that this meaningful engagement will pave the way for a strong and sustainable partnership between the Faculty of Civil Engineering, UiTM, and the Malaysian Highway Authority, contributing to advancements in road and transportation engineering at both national and regional levels.



Written by: Ts. Dr. Warid Wazien Ahmad Zailani





REIMAGINING MOVEMENT: DR.-ING. MASRIA MUSTAFA'S MISSION TO **ENGINEER SAFER. SMARTER AND MORE SUSTAINABLE TRANSPORT SYSTEMS**

By: Assoc. Prof. Dr.-Ing. Masria Mustafa

Assoc. Prof. Dr.-Ing. Masria Mustafa is not merely navigating roads—she is reshaping how Malaysia and the wider region envision mobility. With a doctorate in Civil Engineering from the distinguished Technical University of Munich (TUM), Germany and extensive academic experience across Australasia and Europe, she is a leading figure in transportation engineering at Universiti Teknologi MARA (UiTM). Her passion lies in teaching and guiding students, while also being actively involved in research and projects related to traffic engineering, transport planning and sustainable mobility. She remains committed to contributing to the development of better, more efficient transport systems for Malaysia and the region

From managing traffic flow on congested urban roads to ensuring the safety of school children crossing the road, Dr.-Ing. Masria's research addresses the everyday mobility challenges faced by millions. Her work spans microscopic traffic simulation, intelligent transport systems (ITS), traffic operations and control and the environmental impacts of emerging mobility technologies, including electric and autonomous vehicles, as well as walking and infrastructure. She is also the Head of the Transportation Systems, Infrastructure Intelligent Transport Research Interest Group (TranSIIT RIG), where her team is actively involved in multidisciplinary research consultancy projects aimed at advancina sustainable and intelligent transport solutions. By utilising advanced modelling platforms such as AIMSUN and VISSIM, she recreates complex transport environments to offer decision-makers evidence-based strategies for infrastructure planning, traffic management and emissions reduction.





🚊 WHERE ENGINEERING MEETS **EVERYDAY LIFE**



Dr.-Ing. Masria also actively supports studentled community engagement initiatives and encourages participation in national and international competitions. She has mentored teams in collaborations with global such Shell organisations as #ShellSelamatSampai) and C40 Cities (e.g. C40's Youth Reinventing Cities Programme), apply engineering students knowledge to real-world sustainability and mobility challenges. Her guidance has enabled students to develop innovative solutions, gain international exposure and build networks with industry leaders reinforcing her commitment to nurturing the next generation of socially responsible transport engineers.









PRIORITISING SAFETY IN EVERY **JOURNEY**

Dr.-Ing. Masria strongly believes that safer roads start with better understanding. With the kind support of a grant from the Social Security Organization (PERKESO), she and her team are contributing to the Work-Related Road Safety programme. Through (WRRS) coaching, workshops and collaboration with stakeholders, initiative supports organisations addressing transport-related occupational risks —thanks to PERKESO's continued commitment to improving workplace safety. She is also deeply committed to child safety, advocating for safer school zones. "Every road crash is preventable," she emphasises, "when engineering rigour meets social responsibility." In addition to her national work, Dr. -Ing Masria serves as part of the Co-Chair of the International Outreach Chapter of the Australasian College of Road Safety (ACRS), where she fosters global collaboration and knowledge exchange on road safety research and best practices.

EMPOWERING WOMEN AND INFLUENCING POLICY

As a Malaysian representative to the Women in Transport Leadership Network (WiTL) and a driving force behind the East Asia Society for Transportation Studies (EASTS) 2023 conference, Dr.-Ing Masria is passionate about elevating women's roles in the transport sector. Her policy influence extends nationally. As a member of the Cabinet Committee for Reducing Congestion, chaired by the Deputy Prime Minister, she ensures that academic insight is at the heart of transport policy formulation—from addressing construction-induced traffic jams to improving urban transport governance. She also plays an active role in the Transport Science Society of Malaysia (TSSM), currently serving as Vice President. Given TSSM's affiliation with EASTS, she leverages this extensive regional network to promote knowledge exchange, strengthen institutional collaborations and advance transport research and innovation across Eastern Asia.

BRIDGING RESEARCH, POLICY AND PRACTICE

What sets Dr.-Ing Masria apart is her unique ability to bridge engineering science, urban policy and community impact. Whether through scholarly publications, practitioner training or media commentary, she transforms complex transport data into actionable knowledge. Her long-term vision? "To engineer transport systems that are not only intelligent and efficient, but also equitable, resilient and sustainable for the people who rely on them."











TURNING EMISSIONS INTO ENERGY: **OUR JOURNEY WITH MICROALGAE AND CO2**

By: Ts. Dr. Azianabiha A.Halip @ Khalid





Our project started with a search for the right microalgae species. We screened Chlorella vulgaris, Chlorella sorokiniana, and Coelastrella, exposing them to various CO2 concentrations, from the natural ambient level to 30 % pure CO2. The goal was to find strains that not only survive but thrive in high-CO2 environments. Once we identified our most promising candidates, we focused on fine-tuning the cultivation conditions. We looked at how different CO2 levels affected their growth rates, lipid production, and carbon capture efficiency, aiming to strike the perfect balance between biomass yield and biofuel quality.



At the heart of our research lies a bold question: What if the CO₂ emitted by the oil and gas industry isn't just waste, but a resource waiting to be used? This idea inspired us to explore an unexpected ally in the fight against carbon emissions—microalgae.

The oil and gas sector, a key driver of economic development, also produces massive amounts of CO₂, particularly from flue gases during combustion. In most cases, these emissions are treated as pollutants. But in our lab, we're taking a different approach; one that views these emissions as a valuable input for bio-based innovation. Microalgae, tiny photosynthetic organisms, are capable of fixing carbon dioxide from the air while producing lipids that can be turned into biodiesel. By combining the principles of environmental engineering and biotechnology, we're working to develop a system where waste becomes fuel.

To understand how microalgae respond on a biochemical level, we are also analysing their metabolic changes using techniques like Fatty Acid Methyl Ester (FAME) profiling and FTIR spectroscopy. These methods help us determine which conditions produce the most desirable fatty acid profiles, a key indicator of biofuel quality. This part of the study offers valuable insight into the mechanisms behind lipid accumulation under CO₂-rich environments.

Looking ahead, we plan to test the system under more realistic conditions by introducing typical flue gas pollutants such as sulphur oxides (SOx) and nitrogen oxides (NOx). These compounds are common in actual industrial emissions and may affect microalgae performance. By simulating scenarios, we hope to evaluate how robust our selected strains are in the face of these additional stressors and to assess the system's feasibility for large-scale applications.

What we've observed so far is promising. With the right species and controlled conditions, microalgae can effectively convert industrial CO2 into renewable biomass. This work moves us closer to a future where emissions are not only captured, but productively reused. As we continue our investigations, we remain committed to engineering solutions that support a low-carbon, sustainable future powered by science, and inspired by nature.







STRUCTURAL BEHAVIOUR OF REINFORCED CONCRETE (RC) COLUMN STRENGTHENED WITH SMART MATERIAL OF SHAPE MEMORY ALLOY

By: Ir. Dr. Fariz Aswan Ahmad Zakwan and Ir. Dr. Ruqayyah Ismail

This study examines the axial performance of reinforced concrete (RC) columns strengthened using activated Fe-SMA strips. The shape memory effect induced active confinement, which led to significant improvements in strength, ductility, and energy dissipation. Compared to passive systems, the SMA-based technique enhanced post-peak behavior and self-centering capacity. The experimental results were supported by validated finite element models, which accurately predicted the structural response. The findings highlight the potential of Fe-SMA confinement as a practical and efficient retrofit strategy for enhancing the axial load-carrying capacity and resilience of existing RC columns.

SHAPE MEMORY ALLOYS (SMAS)

Shape Memory Alloys (SMAs) have revolutionized the construction industry by enhancing quality standards, sustainability, efficiency, safety, and preventing issues. They are used in civil engineering to improve seismic performance, retrofit existing structures, and enhance construction techniques. Iron-based SMAs offer corrosion resistance, shape recovery, plastic deformability, and fatigue resistance, making them suitable alternatives. They can be used as prestressing components in reinforced concrete or reinforced existing structures due to their shape memory effect. The construction industry has made significant progress in resolving structural issues and improving construction methods. Therefore, Fe-SMA strips have been used in this study with the dimensions of 745 mm in length, 24 mm in width, and 1.5 mm in thickness that used different connection such clamping and drilling connections.

REINFORCED CONCRETE COLUMN

This study used short circular reinforced concrete columns has a diameter of 200 mm with a length of 1000 mm and will be reinforced with six number of H12 reinforcement with a diameter of 12 mm (500MPa) in the longitudinal direction and six number of H6 link with a diameter of 6 mm (460 MPa) and a spacing of 150 mm in the transverse direction at a center to center but spacing of 170 mm at top and bottom of the columns with a nominal cover of 25 mm at the side of the columns and 30 mm at the top and bottom of the columns as shown in Figure 1. The spacing of Fe-SMA strip is 160 mm with 4 strips used for strengthening the RC columns under axial compression testing as shown in Figure 2 and Figure 3. Ultimately, this methodology is worked on strengthened RC columns with different connections. In this study, the clamping method is more efficient than drilling method on strengthening the RC columns because of the localized crack that occurs in the drilling hole on the RC columns before testing. However, both connections have improved strengthening the RC columns under axial compression testing.

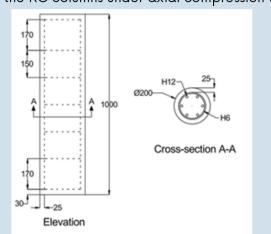


Figure 1. Layout of RC column

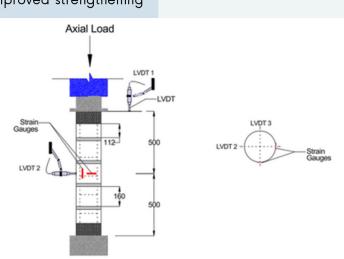


Figure 3. Experimental setup of RC column

Figure 2. Schematics diagram of experimental setup of column









FORGING THE FUTURE: UK-MALAYSIA AI ALLIANCE SPARKS INNOVATION AND IMPACT

By: Assoc. Prof. Ir. Ts. Dr. Eeydzah Aminudin



Cyberjaya, Malaysia – A strategic initiative led by the British High Commission Malaysia opening a new chapter in UK-Malaysia relations through the launch of the UK-Malaysia Al Growth Partnership, aimed at driving transformative socio-economic impact. This ambitious effort is a collaborative venture between the Faculty of Civil Engineering, Universiti Teknologi MARA (UiTM), the Malaysian Industry-Government Group for High Technology (MIGHT), and Leeds Beckett University, UK. The initiative is funded by the UK Foreign, Commonwealth & Development Office (FCDO) and PwC, reinforcing the UK's commitment to advancing digital partnerships in Southeast Asia.

A key component of the initiative is a three-day strategic workshop hosted at MIGHT in Cyberjaya, which gathered stakeholders across five key sectors of AI development in Malaysia: Public Services, Education & Higher Education, Healthcare and Medical, Agriculture, and Smart Cities.

REVOLUTIONISING AI'S NEXT FRONTIER

The programme positions Malaysia as a rising ASEAN hub for artificial intelligence (AI) innovation, forging direct links between the UK's mature AI ecosystem and the dynamic, fast-growing markets of the region. It is underpinned by robust UK-UK-Malaysian trade agreements and forward-looking digital cooperation frameworks. This partnership not only creates a platform for knowledge exchange but also opens access to international funding opportunities and cutting-edge AI tools. These tools are poised to transform teaching, learning, and research, accelerate scientific discovery, and enable institutions and researchers to engage with increasingly complex datasets.



Ultimately, the UK-Malaysia AI Growth Partnership is designed to catalyse a new generation of institutions and innovations, empowering both nations to lead in the ethical and inclusive advancement of AI, and contribute meaningfully to regional and global development. Universiti Teknologi MARA (UiTM) is fully committed and looks forward to deepening this collaboration, particularly in fostering a strategic transformation framework that emphasises talent development and unlocking business opportunities within the AI ecosystem.







STUDENT **ACADEMIC ACHIEVEMENT AND ACTIVITIES**

RECIPIENT OF THE PRESIDENT'S AWARD - BOARD OF ENGINEERS MALAYSIA (BEM)

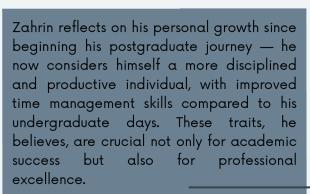


having achieved an outstanding CGPA of 3.92

Driven by a strong desire to complete his PhD on time and contribute to the engineering field, Zahrin acknowledges that the path is far from easy. Yet, the unwavering support from his family, lecturers, and supervisors has been his pillar of strength, empowering him to persevere.



"Never give up. Always seek advice from your seniors and lecturers they've walked the path and are always ready to help."





He draws deep inspiration from his role models: Ir. Salmizi bin Ja'afar, his lecturer for Integrated Design Project, and Ts. Dr. Yazmin Sahol Hamid, who is always approachable and generous with her guidance. Their dedication to teaching, research, and industry engagement has inspired Zahrin to follow a similar path — becoming a lecturer who not only teaches but also contributes meaningfully to the advancement of engineering knowledge. Morzahrin Abd Mazid







SAKURA SCIENCE EXCHANGE PROGRAM 2025 - AKITA





From 8 to 21 June 2025, six students from Universiti Teknologi MARA (UiTM) Shah Alam had the remarkable opportunity to participate in the Sakura Science Exchange Program held in collaboration with Akita Prefectural University, Japan. This international program aimed to foster cross-cultural academic exchange, promote collaborative learning, and explore the integration of civil engineering and architectural practices in Japan and Malaysia.

Throughout the two-week program, students engaged in a wide range of enriching academic and cultural activities. These included an Architectural Conference in Sendai, an idea-sharing session with the President of Akita Prefectural University, and lab tours around the university where students experienced an earthquake shaking table demonstration. The group also participated in a cultural exchange with the university's English Club and collaborated with architectural students to build paper bridges, exchanging engineering ideas and concepts.

The students took part in educational site visits around Akita City, exploring the Kaneko Old House Family, the Red Brick Building, and the Akita Art Gallery, gaining insight into traditional and modern structural design elements. One of the highlights included a guided tour of Mille Has, led by the Head of Design, where students explored innovative building design in real-world contexts. The group was guided and supported by two dedicated faculty members: Assoc. Prof. Dr. Marfiah Ab Wahid and Assoc. Prof. Ir. Ts. Dr. Norliyati Mohd Amin.

- 1. NUR NABILAH BINTI MOHAMAD RADZI
- 2. ADLIN KARMILA BINTI ABDUL WAHID
- 3. MAC DARREL MICHAEL
- 4. AINUR FATIN NADHIRAH BINTI YUSNI
- 5. NUR MAISARAH MOHD AZMIL
- 6. NUR MAISARAH BINTI MOHD NASIR

A key academic highlight of the program was a presentation by UiTM students on notable buildings in Malaysia, delivered to lecturers and students of architecture at Akita Prefectural University. This session sparked meaningful dialogue on cultural design approaches and engineering perspectives between countries.

The Sakura Science Exchange Program 2025 provided students with valuable insights into Japanese engineering education, sustainability and cultural heritage. The collaboration between UiTM and Akita Prefectural University underscored the importance of international academic partnerships in shaping globally aware and future-ready engineers.











UITM SHAH ALAM SHINES AT 13SC 2025 : TEAM ROSEWOOD AND TEAM TIMBER TITAN MAKE THEIR MARK

On 21 June 2025, the International Stable and Sustain Structure Competition (13SC) successfully held at Universiti Malaysia Perlis (UniMAP). The event brought together 25 teams from various universities, including institutions from Indonesia and Thailand. The competition served as a vibrant platform for engineering students to showcase their creativity, technical skills, and commitment to sustainable structural design.





Universiti Teknologi MARA (UiTM) Shah Alam was proudly represented by two teams - Team Rosewood and Team Timber Titan, which comprised ten (10) Part 7 students. The teams were accompanied and guided by three (3) dedicated lecturers: Ir. Ts. Dr. Raden Maizatul Aimi Binti Mohd Azam, Ir. Ts. Dr. Oh Chai Lian, and Dr. Nadiah Saari. the competition, Throughout both teams demonstrated high levels of innovation, structural insight, and teamwork.



- NUR FARAHIN HESNIZA BINTI MOHD GHAZALI
- NUR ASMAHAMIZAH BINTI ZAILANI
- AMERA HAIQA BINTI MOHD YUSOF
- SAIHAH AMNI BINTI MD ARIF
- NURUL NABILAH BINTI A ASMADI



Team Timber Titan

- MUHAMMAD FITRAH BIN BAHARUDDIN
- MUHAMMAD AIDIL BIN MAN
- MUHAMMAD RIZO AMSYAR BIN ROHAIZAD
- MUHAMMAD HAZMAN AZFAR BIN MOHAMAD AKBAL
- MOHAMMAD SHAHRIZAL BIN MEJAN

Team Timber Titan secured a place in the Top 15, impressing the judges with their stable and meticulously designed structural model. Team Rosewood, on the other hand, stood out by clinching the Special Award for Sustainable Structural Integrity - an accolade recognized their eco-friendly and resilient design approach. Demonstrating exceptional performance, Team Rosewood also emerged as the first runner-up, with their structure successfully withstanding a sustained load of 3 kg during the challenge.

The competition not only showcased technical excellence but also emphasized key values such as sustainability, collaboration, and innovative problem-solving. The remarkable achievements of the UiTM Shah Alam teams underscore the university's commitment to producing futureready engineers capable of excelling on the international stage.









FROM STICKS TO SAFETY: EARTHQUAKE EDUCATION THROUGH HANDS-ON LEARNING



Samakeesat Wittaya School, Sadao, Thailand



As part of the Engineer in Society (EIS) course for Semester 8 students under the Bachelor of Civil Engineering with Honors program, an international SULAM (i-SULAM) project titled "From Sticks to Safety: Earthquake Education Through Hands-On Learning" was conducted on 2 June 2024 at Samakeesat Wittaya School, Sadao, Thailand. This initiative aimed to provide early exposure to the scientific and practical aspects of earthquakes to international secondary school students through engaging and interactive activities.

Collaborating with Samakeesat Wittaya School and the Malaysian Meteorological Department (MET Malaysia), this project raised awareness of earthquake-related disasters and emphasized the crucial role of geoscience and engineering in disaster risk reduction. The effort directly supports Sustainable Development Goals (SDGs) 4 (Quality Education) and 11 (Sustainable Cities and Communities), showcasing how engineers contribute to safer and more resilient communities.

The programme comprised four modules designed to educate and engage students on earthquake awareness. The first module explained the causes and effects of earthquakes in a simple and engaging way, introducing basic geological concepts. The second module highlighted the vital role of engineers in earthquake mitigation, emphasizing importance the earthquake-resistant infrastructure. A live earthquake demonstration provided a visual understanding of seismic impacts on buildings, helping students grasp abstract scientific concepts. Lastly, a tower-building competition using sticks challenged students to apply engineering principles creatively collaboratively, testing understanding of structural stability through hands-on experience.







The success of this programme reflects improved awareness among students regarding earthquake causes and safety, a stronger understanding of the engineer's role in disaster preparedness, and enhanced organizational skills among the facilitators at the international level. Led by Ts Dr Rozaina Ismail (lead advisor) and Dr Norazlan Khalid (co-advisor), the programme involved 5 student facilitators, and 24 Thai school students.

For future programmes, the team recommends involving local disaster agencies, utilizing interactive tools like VR (Virtual Reality) and AR (Augmented Reality), and expanding outreach to more schools for greater impact.









NEXTGEN ENGINEERS: EMPOWERING COMMUNITIES EMPOWER TOGETHER FOR KIDS' SAFE, INCLUSIVE AND INNOVATIVE FUTURE 2.0





Interactive Modules:

- A Road Safety Talk
- The Master Road Builder Challenge
- A Traffic Light Coding Workshop

Road safety awareness program was organised by the Faculty of Civil Engineering, UiTM Shah Alam to 50 pupils from five (5) different primary schools in the Seremban district on 21 June 2025. This program was the fifth edition of the Nextgen Engineers program and held at the UiTM Rembau Campus in collaboration with PERKESO (Social Security Organisation) and the Rembau District Education Office (PPD). The five participating schools were SK Pilin, SK Pedas, SK Salak Nama, SK Kampung Batu, and SK Bongek.

The program was conducted under the Service Learning Malaysia – University for Society (SULAM) initiative through course ECC589 and advised by Associate Professor Ir. Dr.-Ing. Masria Mustafa. A total of 31 university student facilitators were involved, including 16 final-year students from the Faculty of Civil Engineering of UiTM Shah Alam and 15 students from UiTM Rembau Campus.





This high-impact educational program offered participants a unique experience of learning in a university setting while being introduced to road safety knowledge and innovative technologies. The closing ceremony was officiated by PERKESO Negeri Sembilan Director, Wan Kefli Hamid.

Since 2020, the Nextgen Engineers program has benefited 200 primary students and trained more than 70 university students to be effective and competitive facilitators. The initiative also aligns with the United Nations Sustainable Development Goals (SDGs), particularly on SDG 4: Quality Education, and SDG 11: Sustainable Cities and Communities.









FIRST-YEAR SEMINARS & EXPERIENCES (FYS) - RAILWAY INFRASTRUCTURE



Future Rail Experts in Action!

On January 23, 2025, the First-Year Seminars and Experiences (FYS) event was successfully conducted at UiTM Shah Alam, bringing together 21 first-year students from the Bachelor of Civil Engineering Technology Infrastructure) program. The event served as an important platform for students to showcase their understanding infrastructure railway integrating knowledge from two key subjects, ETS401: Introduction to Railway Public Infrastructure and ETG400: Transportation System.





5 Thematic Exhibition Booths

Students were grouped into five teams, each presenting a unique component of rail systems:

- Trackwork
- Infrastructure
- Signaling & Communication
- Rolling Stock
- Electrification

These booths showcased students' technical knowledge, creativity, and presentation skills, providing a simulated industry experience.

The event was officiated by Prof. Ir. Ts. Dr. Che Khairil Izam Che Ibrahim, Head of the School of Civil Engineering, who emphasized the importance of railway education and the role of future engineers. It was also attended by several distinguished guests and coordinators, highlighting strong faculty support and academic commitment.

The event was also attended by distinguished guests, including Dr. Nurbaiah Mohammad Noh, Program Coordinator for the Bachelor of Civil Engineering Technology (Rail Infrastructure); Dr. Nuryantizpura Mohamad Rais, Course Coordinator for ETG400; Prof. Madya Ir. Ts. Dr. Norliyati Mohd Amin, Course Coordinator for ETS401; Ir. Ts. Dr. Zaizatul Zafflina Mohd Zaki, Program Coordinator for the Bachelor of Civil Engineering; and Ir. Ts. Dr. Hjh. Siti Nurbaya Ab. Karim, Senior Lecturer.



Impact & Reflection

This FYS 2025 event marked another milestone in preparing future railway professionals. It reflects UiTM's commitment to experiential learning, industry relevance, and educational excellence.

Songratulations to all students, lecturers, and organizers for

by Ir. Dr. Nuryantizpura Mohamad Rais, Course Coordinator for ETG400









Stay Connected

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