

## CURCULUM VITAE

### A. PERSONAL DETAILS

1. Name : Dr. Sakhiah Abdul Kudus
2. Date of Birth : 12-04-1988
3. Marital Status : Single
4. Current Position: Senior Lecturer
5. Office Address : T1-13-12A, Faculty of  
Civil Engineering, Universiti Teknologi MARA, 40450  
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<https://scholar.google.com/citations?user=5uYnKCIAAAAJ&hl=en>



<https://www.scopus.com/authid/detail.uri?origin=resultslist&authorId=55561013000&zone=>

### B. BRIEF PERSONAL HISTORY

Sakhiah Abdul Kudus received her Bachelor and Master degree in Civil Engineering (Structure) from Universiti Sains Malaysia (USM) in September 2011 and May 2014 respectively. In March 2018, she completed her PhD at Kyoto University, Japan with major in Adaptive Structural Engineering area. She has been involved in non-destructive technique (NDT) focusing on Acoustic Emission (AE) since 2010 while completing her final year project at USM. She continues with NDT and structural health monitoring (SHM) research area for her PhD study. Since 1<sup>st</sup> April 2019, she is working as a Senior Lecturer at Faculty of Civil Engineering, Universiti Teknologi MARA (UiTM), Malaysia.

She has published numerous articles in international journals, conference proceedings and technical papers. She is an active reviewer of many conferences and international journals. The research area covered several topics in field of structural health monitoring, AE application and analysis, damage assessment, modal analysis, finite element method and application high-speed camera for vibration monitoring. At the present, her research is related to vibration monitoring of concrete and steel bridges in Malaysia. She has collaborated with entities from Japan and Indonesia for her research projects. She has more than 4 years accumulated teaching experience in the domain of structural engineering including numerical analysis, finite element method, reinforced concrete design and engineering survey.

C. **ACADEMIC QUALIFICATION**

No.	Name of Institution	Degree/Qualification	Date awarded
1.	Kyoto University, Japan	PhD in Adaptive Structural Engineering	2018
2.	Universiti Sains Malaysia	MSc in Structural Engineering	2014
3.	Universiti Sains Malaysia	Bachelor of Engineering (Hons.) Civil Engineering	2011

D. **EMPLOYMENT**

Sept 2011- Aug 2013	<b>Graduate Assistant</b> , School of Civil Engineering, Universiti Sains Malaysia
April 2018 – Mac 2019	<b>Post Doctor Research Fellow</b> , Department of Civil and Earth Resources Engineering, Kyoto University, Japan
April 2019 - Present	<b>Senior lecturer</b> , Faculty of Civil Engineering in Universiti Teknologi MARA (UiTM)

E. **RECENT INDICATORS OF PROFESSIONAL ESTEEM**

**Awards & Recognitions:** SILVER Award (Invention, Innovation & Design Exposition (IIDEX 2019))

**Expert reviewer / examiner:** Conference Papers Reviewer, Master Defenses, Technical Advisor for UTHM Industrial Grant

**Teaching Experience:** Engineering Survey (ECG422), Reinforced Concrete Design (ECS559), Statics (ECS416), Numerical Analysis & Finite Element Method (ECS555)

F. **PROFESSIONAL QUALIFICATIONS**

- Graduate Civil Engineer registered with the Board of Engineers Malaysia (BEM ID: 87223A)
- Honorary Secretary of Concrete Society of Malaysia 2020-2022 (CSM ID: M0626)
- Grad. Engr, Institute of Engineer Malaysia (IEM)
- Member of Institute Engineering & Technology, UK (ID:1100919526)

G. **AREA OF RESEARCH**

- Structural Health Monitoring
- Acoustic Emission (AE) Technique in Damage Assessment Evaluation
- Structural Engineering
- Concrete Structure
- Steel Structure
- Non-Destructive Testing and Evaluation
- Finite Element Analysis

H. **PHD THESIS**

Study on damage assessment of steel plated structures based on local vibration characteristics (2018)

## I. **RESEARCH GRANT**

### **Principal Investigator (PI)**

- Derivation of the vibration characteristics from high-speed camera in evaluating and quantifying the damage of steel members. Fundamental Research Grant Scheme RACER (FRGS RACER), Grant Amount: RM51,200 from year 2020-2022, (PI)
- Online Bridge Health Monitoring System in Malaysia. Global Research Reputation (GRR) – UiTM, Grant Amount: RM29,000 from year 2020-2022, (PI)

### **Co-Principal Investigator (Co-PI)**

- Serviceability predictive model of vibrating ultra-high performance concrete structure, Fundamental Research Grant Scheme (FRGS), Grant Amount: 88,500, from year 2019-2020 (Co-PI)
- Structural Health Monitoring of Merah Putih Ambon Cable-stayed Bridges Subjected to Near Fault Earthquakes, Strategic Research Partnership (SRP) – UNNES, Universiti Teknologi MARA, Grant Amount: RM 50,000, from year 2020-2022, (Co-PI)
- Damage Classification In New Advanced Concrete Beam by Agricultural Waste Utilization Using Acoustic Emission Signal Analysis. LESTARI – UiTM, Grant Amount: RM 20,000, from year 2020-2022, (Co-PI).

## J. **PUBLICATION**

1. Siti Shahirah Saidin, **Sakhiah Abdul Kudus**, Adiza Jamadin, Norliyati Mohd Amin (2021), Modal frequency of steel and UHPC U-beam using Finite Element Analysis, Lecture Notes in Civil Engineering (Book of Chapter).
2. Izzani Farhana Baharudin, Nurul Huda Suliman, **Sakhiah Abdul Kudus** and Nuradila Izzaty Halim (2021), Effect of Palm Oil Bottom Ash (POBA) On Concrete Mechanical Properties of Fresh and Hardened Ultra-High-Performance Concrete (UHPC), International Conference on Sustainable Civil Engineering Structures and Construction Materials, Lecture Notes in Civil Engineering.
3. Taqarra Khalida Audi Abdul Razak, **Sakhiah Abdul Kudus** and Adiza Jamadin, Nurul Huda Suliman (2021) Compressive Strength of Ultra High Performance Concrete (UHPC) Containing Palm Oil Mill Effluent (POME), Material Science Forum.

4. Siti Shahirah Saidin, **Sakhiah Abdul Kudus**, Adiza Jamadin, Norliyati Mohd Amin (2021), Comparison of flexural behaviour of composite FRP with UHPC I-beam using finite element analysis, Material Science Forum.
5. **Sakhiah Abdul Kudus** and Kunitomo Sugiura, 2020, Modal Analysis of Corrugated Plate by Finite Element Analysis. International Journal of Integrated Engineering, 12(4), pp. 252-258.
6. **Sakhiah Abdul Kudus**, Adiza Jamadin, Norliyati Mohd Amin, Anizahyati Alisibramulisi, Nurul Huda Suliman, 2020, Damage Assessment Using Acoustic Emission on Concrete Beam, International Journal of Engineering and Advanced Technology (IJEAT).
7. **Sakhiah Abdul Kudus** and Kunitomo Sugiura, 2020, Vibration Test on Existing Steel Sheet Pile, IOP Conference Series: Earth and Environmental Science.
8. **Sakhiah Abdul Kudus**, Kunitomo Sugiura, Yasuo Suzuki and Masahide Matsumura, 2019, Dynamic Response Measurement of Steel Plate Structure Utilizing Video Camera Method, Journal of Civil Structural Health Monitoring 9 (5), 597-605.
9. **Sakhiah Abdul Kudus**, Kunitomo Sugiura, Yasuo Suzuki and Masahide Matsumura, 2018, Vibration measurement by high-speed camera on steel plate, 12<sup>th</sup> Japanese- German Bridge Symposium, Munich, Germany.
10. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2018, The application of high-speed camera for localized inspection on steel plate structure. Proceeding of the 2018 Taiwan-Japan Workshop on Structural and Bridge Engineering, Taipei, Taiwan.
11. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2018, Damage Assessment Based on Sensitivity of Modal Parameter in Plated Structure. Malaysian Construction Research Journal, Vol 24, No. 1, pp. 65-82 [SCOPUS].
12. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2018, Vibration-response due to thickness loss on steel plate excited by resonance frequency, IOP Conference Series: Earth and Environmental Science, Vol 140, No. 1, p. 012123. [SCOPUS].
13. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2018, Damage Assessment Based on Modal Analysis of Pipe Structure, Jurnal Teknologi, Vol 8, No. 5, pp. 37-44. [SCOPUS].
14. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2017, Damage assessment based on modal analysis of plated

structure, (JSCE) Annual Meeting 2017 in Fukuoka Japan. 11-13 September 2017.

15. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2016, Damage Assessment Based on Sensitivity of Mode Shape in Plate Structure, The Twenty-Ninth KKHTCNN Symposium on Civil Engineering December 3-5, 2016, Hong Kong, China
16. **Sakhiah Abdul Kudus**, Yasuo Suzuki, Masahide Matsumura and Kunitomo Sugiura, 2016, Frequency Change Due to Damage in Bridge Girder Corrugated Web, 11th German-Japanese Bridge Symposium , Osaka Japan.
17. Norazura Muhamad Bunnori, Noorsuhada Md Nor, Kenny Goh Teck Jiun and **Sakhiah Abdul Kudus**, 2014, Analysis of failure mechanisms in fatigue test of reinforced concrete beam utilizing acoustic emission, The International Journal of Multiphysics, Vol 8, Number 4, 349- 357 [SCOPUS].
18. **Sakhiah Abdul Kudus**, Norazura Muhamad Bunnori, Siti Ramziah Basri, Shahiron Shahidan, Mohd Nazli Md Jamil and Noorsuhada Md Nor, 2013, An Overview Current Application of Artificial Neural Network in Concrete, Advanced Materials Research, Vol. 626, p. 372-375 [SCOPUS].
19. Siti Ramziah Basri, Norazura Muhamad Bunnori, **Sakhiah Abdul Kudus**, Shahiron Shahidan, Mohd Nazli Md Jamil and Noorsuhada Md Noor, 2013, Applications of Acoustic Emission Technique Associated with the Fracture Process Zone in Concrete Beam – A review, Advanced Materials Research, Vol. 626, p. 147-151 [SCOPUS].
20. **S. Abdul Kudus**, N. Muhamad Bunnori, S. R. Basri, S. Shahidan, M. N. Md Jamil, N. Md Nor, 2012, Reinforced Concrete Beam Monitoring by Utilizing Acoustic Emission Technique, International Proceedings of Computer Science and Information Technology, IPCSIT Press, Singapore, Vol. 32, p. 90-94.
21. S. R. Basri, N. Muhamad Bunnori, **S. Abdul Kudus**, S. Shahidan, M. N. Md Jamil, N. Md Nor, 2012, Evaluation of Reinforced Concrete Damage Using Intensity Analysis in Acoustic Emission Technique, International Proceedings of Computer Science and Information Technology, IPCSIT Press, Singapore, Vol. 32, p. 95-99.
22. Shahiron Shahidan, Norazura Muhamad Bunnori, Neeraj Bhardwaj, Noorsuhada Md Nor, Siti Ramziah Basri, and **Sakhiah Abdul Kudus**, 2012, Intensity Analysis Method for Measurement the Damage Severity of Concrete Structure by Utilizing the Acoustic Emission Technique, International Journal of Applied Physics and Mathematics, Vol.2, No.1, p. 001-004, ISSN:2010- 362X.
23. **Sakhiah Abdul Kudus**, Fairuz Wahida Zulkofli, Norazura Muhamad Bunnori, 2011, Global Monitoring of Reinforced Concrete Beam Using Acoustic

Emission Technique, NDT SPECTRA, ISSN 2231-9891, p. 239-244.  
Technique, NDT SPECTRA, ISSN 2231-9891, p. 239-244.

K. **CONSULTANCY**

- Ipoh City Council, Development of Ipoh Towards Low Carbon City Blueprint, (2020-2021), RM 250,000
- Malaysia Development Bank (BPMB), Data Collection and Management for Research Evaluation and SDG Impact Assessment Framework, Phase II (2020-2021), RM 78,000
- Malaysia Development Bank (BPMB), Data Collection and Management for Research Evaluation and SDG Impact Assessment Framework, Phase I (2019-2020), RM 75,000
- Ipoh City Council (MBI), Development of Blueprint towards Ipoh Low Carbon City. (2019- Ongoing).

L. **NATIONAL / UNIVERSITY APPOINTMENT / COMMITTEE**

**National:**

- Honorary Secretary of Concrete Society Malaysia

**University:**

- Trainer for Career Development Module

**Faculty Committee:**

- Committee of Timetable, FCE Shah Alam, 2019,2020
- Committee of Customer Feedback, FCE Shah Alam, 2019,2020
- Committee of CDIO (Conceive, Design, Implement, Operate), FCE Shah Alam, 2019,2020

M. **INVENTION & INNOVATION COMPETITION**

- Silver Award, IIDEX 2019, Invention, Innovation & Design Exposition, *myCDIO* Skill Progression Monitoring System, Dewan Agung Tuanku Canselor, UiTM Shah Alam, 10-15 September 2019.