

CURCULUM VITAE



A. PERSONAL DETAILS

1. Name : Ilyani Akmar Abu Bakar
2. Date of Birth : 30-10-1985 Place: Kuala Lumpur, Malaysia, Malaysia
3. Sex : Female
4. Office Address : Faculty of Civil Engineering, University Teknologi Mara, 40450 Shah Alam, Selangor, Malaysia
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B. ACADEMIC QUALIFICATION

No.	Name of Institution	Degree/Qualification	Date awarded
1.	Universiti Sains Malaysia	Master Of Science In Structural Engineering	2004-2005
2.	Universiti Sains Malaysia	Bachelor Of Engineering (Hons) Civil	2000-2004

C. CAREER HISTORY

1.	2005 – Present	Senior Lecturer Universiti Teknologi Mara Shah Alam, Malaysia
2.	2004	Part-Time Tutor Inti College Subang Jaya, Malaysia
3.	2004	Site Engineer Prestasi Asia (M) Sdn. Bhd., Malaysia

D. **SKILLS**

1. **Language skills:** English and Malay
2. **Software skills:** ABAQUS, MATLAB, AUTOCAD

E. **RESEARCH INTEREST**

1. Single- and Multi-objective Optimization (Composite Structures)
2. Sensitivity Analysis (Composite Structures)
3. Tension membrane structures

F. **AFFILIATION AND MEMBERSHIP**

1. **Memberships:** Member of Board of Engineers MALAYSIA, Disaster Mitigation and Prevention Research Group
2. **Journal reviewer:** Frontiers of Structural and Civil Engineering (FSCE); Engineering Geology; KSCE Journal of Civil Engineering; Expert Systems With Applications; Mathematical Problems in Engineering;
3. **External evaluator:** International Symposium on Technology for Sustainability (ISTS)
4. **Consultant:** Sanitary Safety Plan of Municipal Council of Port Dickson

G. **PUBLICATIONS**

1. Bakar, I. A. A., Kramer, O. & Rabczuk, T. (2017). Probabilistic multi-scale optimization of hybrid laminated composites. *Composite Structures* (Accepted).
2. Abu Bakar, I. A., Jaafar, J., Awang, H., & Shamsham Nahar, N. A. (2016). Modelling of mining dragline joint: A sensitivity analysis with sobol's variance-based method. *Jurnal Teknologi*, 78(5-2), 1-8. DOI: [10.11113/jt.v78.8480](https://doi.org/10.11113/jt.v78.8480)
3. Abu Bakar, I. A., Jaafar, J., Awang, H., & Shamsham Nahar, N. A. (2016). Modelling of mining dragline joint: A sensitivity analysis with sobol's variance-based method. *Jurnal Teknologi*, 78(5-2), 1-8. DOI: [10.11113/jt.v78.8480](https://doi.org/10.11113/jt.v78.8480)
4. Akmar, A. I., Kramer, O., & Rabczuk, T. (2015). Multi-objective evolutionary optimization of sandwich structures: An evaluation by elitist non-dominated sorting evolution strategy. *American Journal of Engineering and Applied Sciences*, 8(1), 185-201.

5. Sidek, N., Mohamed, K., Jais, I. B. M., & Abu Bakar, I. A. (2015). Strength Characteristics of Polyurethane (PU) With Modified Sand. In *Applied Mechanics and Materials* (Vol. 773, pp. 1508-1512). Trans Tech Publications.
6. Najib, L. M., Alisibramulisi, A., Amin, N. M., Bakar, I. A. A., & Hasim, S. (2015). The Effect of Rolling Direction to the Tensile Properties of AA5083 Specimen. In *InCIEC 2014* (pp. 779-787). Springer Singapore.
7. N. Sidek, K. Mohamed, I.B.M. Jais, I.A. Abu Bakar, "Strength Characteristics Of Polyurethane (PU) With Modified Sand", *Applied Mechanics and Materials*, Vols. 773-774, pp. 1508-1512, Jul. 2015
8. N. Sidek, S. Abdul-Talib, N. Mohd Zain, N.R.N.A. Rashid, I.A. Abu Bakar, "An Investigation on the Effect of Calcite Bacteria Seeding on Shear Strength of Peat Soil via an Unconfined Compression Test", *Applied Mechanics and Materials*, Vols. 773-774, pp. 1513-1517, Jul. 2015
9. Sidek N., Mohamed K., Mohamed Jais I.B., Abu Bakar I.A., Mazlee M.F, "Simulation Of Plate Bearing Test For Friction Root Ground Support System In Sand Using Plaxis Finite Element", *International Journal of Technical Research and Applications* e-ISSN: 2320-8163, Special Issue 28 (August, 2015), PP.93-97
10. Ahmad Aftas Azman, Mohd Hezri Fazalul Rahiman, Norbaya Sidek, Ilyani Akmar Abu Bakar, "Water Quality Parameter: A Review On Dissolve Oxygen (DO) Control Method", *International Journal of Technical Research and Applications* e-ISSN: 2320-8163, Special Issue 28 (August, 2015), PP. 98-102
11. Sidek N., Mohamed K., Mohd Jais I. B., Abu Bakar I.A., "Polyurethane Foams In Soil Stabilization: A Compressibility Effect", In 3rd International Civil and Infrastructure Engineering Conference (InCIEC2015). Grand BlueWave Hotel, Shah Alam, Malaysia.
12. Akmar, A. I., Lahmer, T., Bordas, S. P. A., Beex, L. A. A., & Rabczuk, T. (2014). Uncertainty quantification of dry woven fabrics: A sensitivity analysis on material properties. *Composite Structures*, 116, 1-17.
13. Latifah Mohd Najib, Anizahyati Alisibramulisi, Norliyati Mohd Amin, Ilyani Akmar Abu Bakar and Sulaiman Hasim, "The Effect of Rolling Direction to the Tensile Properties of AA5083 Specimen", *Proceedings of the International Civil and Infrastructure Engineering Conference (InCIEC2014)*, 28 September – 1 October 2014, Sutera Harbour Resort, Kota Kinabalu, Sabah
14. Sidek N., Mohamed K., M.Jais I.B., and Abu Bakar I.A., "Strength Characteristics of Polyurethane (PU) With Modified Sand", *Proceedings of International Integrated Engineering Summit 2014 (IIES2014)*, 1 – 4 Disember 2014, Universiti Tun Hussein Onn Malaysia.
15. Sidek, N., Abdul-Talib, S., Mohd Zain, N., Rashid, N.R.N.A . and Abu Bakar, I.A., "An Investigation on The Effect of Calcite Bacteria Seeding on Shear Strength of Peat Soil Via An Unconfined Compression Test", *Proceedings of International*

Integrated Engineering Summit 2014 (IIES2014), 1 – 4 Disember 2014, Universiti Tun Hussein Onn Malaysia.

16. Bakar, I. A. A., Kramer, O., Bordas, S., & Rabczuk, T. (2013). Optimization of elastic properties and weaving patterns of woven composites. *Composite Structures*, 100, 575-591.

17. Nguyen-Vinh, H., Bakar, I., Msekh, M. A., Song, J. H., Muthu, J., Zi, G., ... & Lahmer, T. (2012). Extended finite element method for dynamic fracture of piezo-electric materials. *Engineering Fracture Mechanics*, 92, 19-31.

H. **CONSULTATION WORKS**

1.	Project name:	Projek Kerja Penyiasatan Sub-Permukaan dengan Kaedah Pengimejan 2D Resistiviti untuk
		Groundwater Resources di Kedah.
	Client:	Geores Resources, Sub Surface Site Investigation Specialist, Desa Alam, Shah Alam, Selangor.
2.	Project name:	Sanitary Safety Plan for Port Dickson, Negeri Sembilan
	Client:	Port Dickson Municipal Council

