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**CURRICULUM VITAE**

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|  | **DR. MOHD. SHAHRIZAL B. AB RAZAK**Department of Civil Engineering, Faculty of Engineering, Universiti Putra Malaysia. 43400 Serdang. Selangor |
| **Tel.****E-mail****ORCID****Google Scholar****ResearchGate****Website** |  | : +6039764466: ar\_shahrizal@upm.edu.my: https://orcid.org/0000-0002-4353-100X : Mohd Shahrizal Ab Razak (H-index = 8): Mohd Shahrizal Ab Razak: - |
| **Education** |
| * Ph.D in Coastal Engineering, 2015, Delft University of Technology , Delft, the Netherlands.
* M.Eng in Civil Engineering (Hydraulics and Hydrology), 2009, Universiti Teknologi Malaysia.
* B.Eng. (Hons) in Civil Engineering, 2007, Universiti Tun Hussein Onn Malaysia.
* Diploma in Civil Engineering Technology, 2004, Universiti Tun Hussein Onn Malaysia
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| **Research Interest** |
| * Coastal engineering, coastal morphodynamic modelling, coastal erosion, and coastal protection, morphodynamic of embayed beaches, sediment bypassing processes,analytical models of shoreline change and sand bypassing.
* Fluid mechanics, hydraulics and coastal structures, fluvial hydraulics.
* Sediment transport in coastal and river.
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| **Professional Membership & Learned Society**  |
| * Member, Board of Engineers Malaysia (BEM)
* Society Member for 2014 and 2018 Coastal Education & Research Foundation (CERF)
* Member, International Association of Engineers (IAENG)
* Member, Malaysian Society for Engineer and Technology (MySeT)
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| **Appointments** |
| * Research Assistant, Biological and Agricultural Engineering

Department, Faculty of Engineering, UPM * Tutor, Civil Engineering Department, Faculty of Engineering,

UPM * Senior Lecturer, Civil Engineering Department, Faculty of

Engineering, UPM * Academic Coordinator of Civil Engineering Department, UPM
* Development Coordinator of Civil Engineering Department,

UPM* Head, Hydraulic Laboratory Civil Engineering Department, UPM
* Professional Industrial Trainee at RBM Engineering Consultant,
* Ostia Bangi, Selangor
 | Jan 2007 to Jun 2007 Oct 2007 to Jun 2015 Jun 2015 to dateApril 2016 - March 2019April 2019 – March 2022September 2021 – to dateAugust 2022 – July 2023 |
| **Publications (2019 - current)** |
| * Abdul Rehman Khan, **Mohd Shahrizal Bin Ab Razak**, Badronnisa Binti Yusuf, Helmi Zulhaidi Bin Mohd Shafri, Noorasiah Binti Mohamad (2024). Future prediction of coastal recession using convolutional neural network. *Estuarine, Coastal and Shelf Science* 299(2024)108667
* Nur Ain Fitriah Zamrisham, Syazwani Idrus, Mohd Razif Harun, **Mohd Shahrizal Ab Razak**, Khairina Jaman (2024) Biogas production by integrating lava rock, red clay & ceramic bio ring as support carrier in treatment of landfill leachate with liquidised food waste. *Biochemical Engineering Journal*.204(2024)109221
* Zafreen Elahi, Fauzan Mohd Jakarni, Ratnasamy Muniandy, Salihudin Hassim, **Mohd Shahrizal Ab Razak,** Anwaar Hazoor Ansari (2024) Influence of novel modified waste cooking oil beads on rheological characteristics of bitumen*. Construction and Building Materials*.414(2024) 134829
* Rehman, K. A., **Ab Razak, M. S.,** & Noorasiah, M. (2023). Improving Long-Term Wave Forecasting Through Seasonal Adjustment Based on Seasonal Trend Decomposition Loess and CNN-GRU Network. *Journal of Sustainability Science and Management*, 18(4), 119-137.
* Ali, O., & **Ab Razak, M. S.** (2022). Prediction of shoreline change using a new long-term shoreline evolution model based on the concept of sediment balance. *Jurnal Teknologi,* 84(5). https://doi.org/10.11113/jurnalteknologi.v84.18106
* Nor Azidawati Haron; Badronnisa Yusuf; Mohd Sofiyan Sulaiman; **Mohd Shahrizal Ab Razak;** Siti Nurhidayu (2022) Morphological Assessment of Channel Stability: Review of The Most Influential Parameters. *Sustainability* (ISSN 2071-1050)
* Khan A.R., **Ab Razak, M.S.,** Yusuf B., and Zulhaidi, M.S (2022). Forecasting wave height and wave period with univariate LSTM and GRU neural networks. *Journal of Science and Technology*. Vol. 17, Issue 6 (December 2022) accepted.
* Haron N.A., Yusuf B., Nurhidayu S., Sulaiman M.S., **Razak M.S.A.** (2021) Features and Geomorphic Response of Mountainous River by Reach Scale. In: Mohammed B.S., Shafiq N., Rahman M. Kutty S., Mohamad H., Balogun AL. (eds*) ICCOEE2020. ICCOEE 2021. Lecture Notes in Civil Engineering,* vol 132. Springer, Singapore.
* Zafreen Elahi, Fauzan Mohd Jakarni, Ratnasamy Muniandy, Salihudin Hassim, **Mohd Shahrizal Ab Razak,** Anwaar Hazoor Ansari and Mohamed Meftah Ben Zair. (2021) Waste Cooking Oil as a Sustainable Bio Modifier for Asphalt Modification: A Review. *Sustainability* 2021, 13, 11506. https://doi.org/10.3390/su132011506
* Eddy Herman Sharu and **Mohd Shahrizal Ab Razak** (2020) Hydraulic Performance and Modelling of Pressurized Drip Irrigation System. *Water* 2020, 12, 2295:1-14. doi:10.3390/w12082295
* Tim van Emmerik, Jan Seibert, Barbara Strobl, Simon Etter, Tijmen Den Oudendammer, Martine Rutten, **Mohd Shahrizal bin Ab Razak**, Ilja H.J. van Meerveld (2020). Crowd-based observations of riverine macroplastic pollution. *Frontiers in Earth Science*. 2020.Volume 8, 298 :1-12. doi: 10.3389/feart.2020.00298
* **MS Ab Razak** and AR Khan (2020) Development of a Predictive Closure Depth Equation Using Field Data and Wave Refraction Modelling. *IOP Conf. Ser.: Mater. Sci. Eng. 849 012093*
* ‘Izzat Na’im Ibrahim, **Mohd Shahrizal Ab Razak,** Badronissa Yusof, Safari Mat Desa (2020). The performance of narrow and broad-crested submerged breakwaters in dissipating wave heights. *Jurnal Teknologi (Sciences & Engineering*) Vol. 82:3 May 2020.
* **M.S. Ab Razak,** I.N., Ibrahim, S., Mat Desa, B., Yusuf. (2019). A physical modelling of wave transmission due to low energy porous submerged breakwater. *Malaysia Water Research Journal*. Vol.9 (Bil.1,2019) NAHRIM.ISSN:2232-0016.
* Marlein Geraeds, Tim van Emmerik, Robin de Vries and **Mohd Shahrizal bin Ab Razak** (2019). Riverine Plastic Litter Monitoring Using Unmanned Aerial Vehicles (UAVs). *Remote Sens.* 2019, 11, 2045: 1-18
* Hydar Lafta Ali, Badronnisa Yusuf, Thamer Ahamed Mohammed,Yasuyuki Shimizu, **Mohd Shahrizal Ab Razak**, Balqis Mohamed Rehan (2019) Enhancing the Flow Characteristics in a Branching Channel Based on a Two-Dimensional Depth-Averaged Flow Model. *Water* 2019, 11, 1863:1-25
* Ali, H.L., Yusuf, B., Mohammed, T.A., Shimizu, Y., **Ab Razak, M.S.,** Rehan, B.M. (2019) Improving the Hydro-Morpho Dynamics of A River Confluence by Using Vanes. *Resources* 2019, 8, 9.
* Nor Azidawati Haron, Badronnisa Yusuf, Mohd Sofiyan Sulaiman, **Mohd Shahrizal Ab Razak**, Siti Nurhidayu Abu Bakar. (2019). Assessing River Stability and Hydraulic Geometry of Fluvial River in Malaysia. *International Journal of Integrated Engineering* Vol. 11 No. 6 (2019) 214–223.
 |
| **Conference Proceedings/Academic Talks (2019 – recent in descending order)** |
| * **Mohd Shahrizal Ab,Razak,** Chee Yong Jin, Abdul Rehman Khan (2024).Analytical Prediction of Coastal Recessation due to Sea Level Rise at Headland Bay Beach. *International Workshop on Impacts of Climate Change on Small Island Developing States (SIDS)*. 28-29 February 2024, (Virtual Mode) by Indian Ocean Rim Association (IORA), Mauritius.
* Noor Asiah Mohamad, **Mohd Shahrizal Ab,Razak**, Badronnisa Yusuf, Abd Muhaimin Amiruddin (2022).The Effect of Rock Armour Thickness on Wave Overtopping Performance at Coastal Revetments. *Tropical Ocean and Marine Sciences International* Symposium (TOMSY2022). 6th to 7th November 2022, Kuala Nerus, Terengganu, Malaysia
* **Ab Razak, M.S**. and Khan A.R (2019). Combined Field Data and Wave Refraction Modelling for Development of a Predictive Closure Depth Equation. *4th International Conference on Construction and Building Engineering & 12th Regional Conference in Civil Engineering (ICONBUILD & RCCE 2019)*. 20th – 22nd August 2019, Langkawi, Kedah, Malaysia.
 |
| **Book**  |
| * Hydar Lafta Ali, Badronnisa Yusuf, Thamer Ahamed Mohammed, Yasuyuki Shimizu, **Mohd Shahrizal Ab Razak,** Balqis Mohamed Rehan. (2022) "Hydro-Morpho Dynamics of River Junctions: Characteristics and Advanced Modeling." Flood Handbook Analysis and Modeling (1st Edition), edited by Saeid Eslamian, Faezeh Eslamian, Taylor and Francis Group, 11 April 2022, 640pp. (https://doi.org/10.1201/9780429463938)
* Ab Razak, M.S. (2015). Natural headland sand bypassing: Towards identifying and modelling the mechanisms and processes. Leiden, The Netherlands: CRC Press. 188p. (ISBN:9781138028647)
 |
| **Research Grants** |
| * Quantifying the influence of additional armour layers on mean wave overtopping discharge at rock structures. **(Leader)**
 | PutraGrant, UPM | 16.05.2022 - 16.05.2024 | RM20,000 |
| * An Approach of Coastal Morphology Characteristics Analysis by UAV Photogrammetry with Potential Application for Coastal Erosion Assessment effectiveness of narrow crested submerged breakwater to varying wave conditions **(Member)**
 | FRGS | 2019-2021 | RM80,000 |
| * Channel Stability Index (CSI) For Mountainous Rivers in Malaysia by Incorporating Morphological Approach **(Leader)**
 | PutraGrant, UPM | 1.7.2018-31.7.2021 | RM 25,000 |
| * Sediment Accretion and Wave Dissipation Using Perforated Polymer Concrete Plate (PPCP) as Sediment Trapper and Wave Breaker for Coastal Erosion Control **(Member)**
 | Small GrantScheme,UNIMAS | 1.8.2016-1.8.2018 | RM20,000 |
| **Community or Industry Projects/Grants**  |
| * Projek Detailed Design and Site Supervision for Projek Pengawalan Hakisan Pantai di Pantai Puteri, Daerah Melaka Tengah, Melaka
 | 2023-2024 |
| * Projek Perkhidmatan Perunding Kajian Keberkesanan Prototaip Dinding/Tembok Penahan Banjir di Selangor
 | 2022-2024 |
| * Projek Perkhidmatan Perunding Kajian Keberkesanan Benteng Pantai Selangor Keatas Perubahan Aras Laut
 | 2022-2023 |
| * Projek Perkhidmatan Perunding Kajian Pelan Induk Rancangan Tebatan Banjir Lembangan Sungai Rompin, Pahang
 | 2021-2023 |
| * Projek Perundingan Kutipan Data Pemodelan Ujikaji Hidrodinamik bagi Kerja Pembaikan Muara Sungai Mercang, Terengganu
 | 2020 |
| * Perkhidmatan Ikhtisas Kutipan Data WABCORE 1600 kg/m3
 | 2019 |
| * Project Investigate the mechanism of coastal erosion in reclamation area under the influence of monsoon at the southern part of Johor Malaysia
 | 2020 |
| **Professional Services (Journal Reviewer, editorial works, etc.)** |
| * **Journal reviewer**

Malaysian Journal of Civil Engineering UTMActa Oceanologica Sinica, The Chinese Society of OceanographyJurnal Teknologi, Penerbit UTMEngineering and Applied Science Research, Khon Kaen University, Thailand.Journal of Science and Technology, Pertanika UPMJournal of Hydro-environment Research, Elsevier B.V.Journal of Sustainability Science and ManagementQeiosOcean Dynamics | 201920192020202020222023202420242024 |
| * **Conference reviewer**

International Conference of Road and Airfield Pavement Technology UPM | 2019 |
| **Teaching Experience** |
| * Coastal Engineering
* Sediment Transport
* Hydraulic (Laboratory)
* Fluid Mechanics
* Hydraulic 2 (Laboratory)
* Hydraulic Structures
* River Engineering
* Coastal and Port Engineering
* Hydraulic 2
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