



**Name:** Professor Dr. Aminuddin Ab. Ghani

**Date & Place of Birth:** 4<sup>th</sup> November 1966;  
Pekan, Pahang



**Hometown Address:** BT 15, Kampung Baru, Nenas Darat, **26680 PEKAN**, Pahang

**Present Occupation:** Deputy Director (2001 - 2018)  
River Engineering & Urban Drainage Research Centre (REDAC)  
*Higher Institution Centre of Excellence (HICoE) for Services*

**USM Senate Member** representing **Centre of Excellence (2017 – 2020)**

**Office Address:** REDAC  
USM Engineering Campus  
14300 Nibong Tebal  
MALAYSIA

**Telephone:** +604-5995463  
**HP:** +6012 589 5680

**Fax:** +604-599 6926

**Email:** redac02@usm.my, aminabghani@gmail.com

**Academic Qualifications:**

1989 B.Sc (Civil Engineering), Columbia University, New York City, USA

1990 M.Sc (Hydraulic Engineering), University of Newcastle upon Tyne, UK

1993 PhD (Sediment Transport), University of Newcastle upon Tyne, UK

**Working Experience:**

1994 Lecturer, School of Civil Engineering, Universiti Sains Malaysia

2002 Associate Professor, REDAC, Universiti Sains Malaysia

2007 Professor (VK7), REDAC, Universiti Sains Malaysia

2015 Senior Professor (VK6), REDAC, Universiti Sains Malaysia

### **Teaching Experience:**

Undergraduate: Fluid Mechanics, Hydraulics, Hydrology, River Engineering, Advanced Water Resources Engineering, Hydraulic Design, River Conservation & Rehabilitation

Postgraduate: Sediment Transport Engineering, Sustainable Drainage System, River Management

### **Research and Consultancy Areas**

- Sediment Transport
- Flood Risk Management
- Sustainable Urban Stormwater Management

### **Membership of Professional Organizations:**

1995 Graduate Member, Board of Engineers (**BEM**), Malaysia

1998 Graduate Member, Institution of Engineers (**IEM**), Malaysia

1996 Associate Member, Malaysian National Chapter on Irrigation and Drainage (**MANCID**)

1991 Member, International Association for Hydro-Environment Engineering and Research (**IAHR**)

1997 Member, International Association of Hydrological Sciences (**IAHS**)

### **Professional Contributions**

2017/2019 Co-Opted Leadership Team Member, **IAHR** Flood Risk Management Committee

2016/2017 Chair, Scientific Committee, 37<sup>th</sup> **IAHR** World Congress 2017, Kuala Lumpur, 13<sup>th</sup>-18<sup>th</sup> August 2017

2015 Associate Editor, Water Science and Technology Journal, International Water Association (**IWA**)

2014 2013 Outstanding Reviewer Recognition Award for the Journal of Pipeline Systems Engineering and Practice, American Society of Civil Engineers (**ASCE**)

2014 Invited Speaker, Workshop on Urban Stormwater Management Manual for Malaysia (**MSMA**), 2<sup>nd</sup> Edition

- 2014 Contributor, Malaysian Standard MS 2526-11:2014 Urban Stormwater Management - Part 11: Water Quality Ponds and Wetlands
- 2014 Contributor, Malaysian Standard MS 2526-12:2014 Urban Stormwater Management - Part 12: Erosion and Sediment Control
- 2012 Contributor, Urban Stormwater Management Manual for Malaysia (MSMA), 2<sup>nd</sup> Edition, Department of Irrigation and Drainage (**DID**) Malaysia
- 2012 Guest Editor, International Journal of River Basin Management: Special Issue on Sustainable Solutions for Global Issues of Flooding, Pollution and Water Scarcity, **Vol. 10 (2)**
- 2012 - Expert Evaluator Panel, Research, Development & Commercialization Fund, Ministry of Science, Technology and Innovation (**MOSTI**), Malaysia
- 2011- Editorial Board, International Journal of River Basin Management, **IAHR**
- 2009-2014 Executive Committee Member, Asia Pacific Division (APD), **IAHR**
- 2003-2011 Advisory Board, International Journal of River Basin Management, **IAHR**
- 1996-2016 Committee Member, Sewer Systems and Processes Working Group (SS&PWG) of **IWA/IAHR** Joint Committee on Urban Drainage
- 2009 - Associate Editor, Malaysian Journal of Civil Engineering
- 2009 Guest Editor, Water Management Journal: Special Issue on River Modelling and Flood Mitigation: Malaysian Perspectives, **Vol. 162 (1)**
- 2010 Contributor, Erosion and Sediment Control Guideline, **DID** Malaysia
- 2009 Contributor, River Sand Mining Management Guideline, **DID** Malaysia
- 2005 Guest Editor, International Journal of River Basin Management: Special Issue on Managing Rivers in the 21<sup>st</sup> Century, **Vol. 3 (3)**
- 2004 Guidelines for Design and Construction of Bio-Ecological Drainage System (**BIOECODS**), **DID** Malaysia
- 2003 Contributor, River Sediment Transport Measurement and Analysis Guideline, **DID** Malaysia
- 2000 Invited Speaker, Workshop on Urban Stormwater Management Manual for Malaysia (MSMA), 1<sup>st</sup> Edition

## Research Grants

No.	Project Title	Sponsor	Amount (RM)	Duration
1.	Development Of HEC – Series Program To Predict Sediment Movement For Rivers In Malaysia.	IRPA RM-7	497, 400.00	1/04/1997 - 1/10/2000
2.	Peak Flow Attenuation Study Using Infiltration Engineering System and Storage Tanks at USM Tronoh Engineering Campus	Department of Irrigation & Drainage (DID) Malaysia	800,000.00	1/12/1998- 31/12/2000
3.	Feasibility Study and Drainage Improvement Study for Taman Sentul, Taman Sentul Jaya, Taman Pinang, Taman Mangga, Juru, Seberang Perai Tengah, Pulau Pinang	MPSP	128,000.00	15/12/1999- 15/05/2000
4.	Application of Bio-Ecological Drainage Systems (BIOECODS) for Malaysia	DID Malaysia	2,900,000.00	1/08/2000- 1/03/2003
5.	Experimental Work For Atlantis Ecological Drainage Component	Tai Hoe Trading Sdn. Bhd.	53,000.00	15/09/2000- 15/12/2000
6.	River Sediment Data Collection And Analysis	DID Malaysia	412,000.00	1/11/2000- 1/04/2002
7.	Development Of A Rainfall-Runoff Model For Malaysia Incorporating Infiltration Capacity	IRPA RM-7	163, 000.00	1/10/2000- 30/09/2003
8.	Flood Risk Mapping For Rivers in Malaysia Incorporating Sediment Transport in River Channel: Case Study of Pari River, Ipoh, Perak	IRPA RM-8	126, 000.00	1/04/2002- 31/03/2005
9.	Development of Engineered Sediment Trap for Conventional Drainage System	IRPA RM-8	147, 000.00	1/04/2002- 31/03/2005
10.	Hydraulic Capacity of Ecological Drainage System	IRPA RM-8	143, 900.00	1/04/2002- 31/03/2005
11.	Development of Soil Classification With Respect to Infiltration Capacity for Major Cities in Malaysia	IRPA RM-8	172, 100.00	1/04/2002- 31/03/2005
12.	Feasibility Study and Detailed Design of Flood Mitigation and Drainage Improvement in Perai Industrial Complex	MPSP	149,128.75	1/08/04- 1/05/04
13.	Feasibility Study on Flood Mitigation and Drainage for Kampung Tersusun, Juru.	MPSP	86,030.50	1/08/04- 1/01/04
14.	Ecological Drainage System for Forensic Ward at Bahagia Hospital, Ulu Kinta, Ipoh.	Public Work Department	30, 000.00	1/06/02 – 1/09/03

15.	Rehabilitation of Existing Wetlands and Mining Ponds as an Ecological Park at DID's Mechanical Section, Ipoh	DID Malaysia	209,000.00	14/03/05-14/07/05
16.	Ecological Drainage System for Taiping Town Clinic, Perak	Public Work Department	168,000.00	2005
17.	Accredit Checker for Urban Drainage System Design, Kolej Sains Kesihatan Bersekutu, Johor Bahru	Public Work Department	220,000.00	2005
18.	Drainage Master Plan for Tanjung Malim	Majlis Daerah Tanjung Malim	430,548.70	2006
19.	Design Options of the Flood Mitigation Plan of River Muda, Kedah	DID Malaysia	200,000.00	2006
20.	Evaluate the Proposed Flood Preventive Works to be Taken Subsequent to the Dec2006 – Jan 2007 Floods	EPU, JPM	205,717.47	2006
21.	Stormwater Management and Drainage Master plan Study for the Town of Tanah Merah, Kelantan	DID Malaysia	1,000,000.00	2007
22.	Study on River Sand Mining Capacity in Malaysia	DID Malaysia	947,000.00	2007
23.	Preparation of Design Guides for Erosion and Sediment Control in Malaysia	DID Malaysia	1,000,000.00	2008
24.	River Inventory and Monitoring Program (RIMP)	Sarawak Rivers Board (SRB)	300,000.00	2008
25.	Digital Flood Mapping: Case Study of 2007 Sungai Pahang Flood	USM	92,000.00	2009
26.	Urban Water Cycle Processes, Management and Societal Interactions: Crossing from Crisis to Sustainability	Ministry of Higher Education	6,000,000.00	2011
27.	Stormwater Management and Drainage Master plan for Daerah Barat Daya, Pulau Pinang	DID Penang	450,000.00	2012
28.	Hydraulic Assessment Of Bioengineering Techniques For Stable Stormwater Drainage System	USM	165,628.00	2014
29.	Integrated Assessment of Extreme Rainfall-Runoff on Flood Hazard, Water Quality and Microbial Variability, and Enhancement of SOP for Flood Disaster Awareness: Case Study of Sg Pahang River Basin	KPM TRGS Flood Disaster Management 2015	660,360.00	2015
30.	Model-Based Morphological Prediction for Large Scale River Basin in Raising Flood Protection Level for Sg Pahang	KPM TRGS Flood Disaster Management 2015	150,000.00	2015

## Postgraduate Research Supervisions

### (a) PhD (USM Candidates)

No.	Candidate	Year Completed	Main Supervisor	Co-Supervisor	Thesis Title
1.	Shanker Kumar a/l Sinnakaudan	2003	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof. Dr. Mohd Sanusi S. Ahamad	Sediment Transport Modeling and Flood Risk Mapping in GIS
2.	Junaidah Ariffin	2004	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Development of Sediment Transport Models for Selected Rivers in Malaysia Using Regression Analysis and ANN
3.	Rabie A A Hussein	2010	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria Assoc. Prof. Dr. Mohd Sanusi S. Ahamad	Flood Hazard and Risk Assessment through Incorporating GIS with Hydrodynamic Modeling: Case Study of Muda River
4.	Reza Mohammadpour Ghalati	2013	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Md H. Azmathullah	Effect of Foundation Geometry on Short Abutment Scour
5.	Zahra Zangeneh Sirdari	2013	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Zorkeflee Abu Hasan	Bed Load Transport of Small Rivers in Malaysia
6.	Charles Bong Hin Joo	2014	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Lau Tze Liang	Self-Cleansing Urban Drain Using Sediment Flushing Gate Based on Incipient Motion
7.	Husna Takajudin	2016	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Lau Tze Liang Prof. Nor Azazi Zakaria	Hydraulic Conductivity Study in Engineered Soil Media for Stormwater Runoff Treatment in Bioretention Facility
8.	Mazlina Alang Othman	2017	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr. Foo Keng Yuen	Determination of Water Quality Volume in Stormwater Facilities
9.	Chang Chun Kiat	2017	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Puay How Tion	Prediction of Inundation Areas with or without Sediment Transport for Sg Pahang River Basin
10.	Ahmad Bakri Abdul Ghaffar	2018	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Lau Tze Liang	Determination of Flow Resistance Coefficient Through Genetic Programming
11.	Khairul Rahmah Ayub	On-Going	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr. Foo Keng Yuen	Feasibility and Practicality of Green Roof for Stormwater Management in Malaysia
12.	Muhammad Faiz Bin Abdullah @ Hashim	On-Going	Dr Puay Huay Tion	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Substrate Selection Studied For Constructed Wetland
13.	Muhammad Kashfy Zainalfikry	On-Going	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Dr Puay Huay Tion	Urban Flood Risk and Hydrodynamic Modelling in Selected Urban Areas in Malaysia

**(b) PhD (Other Candidates)**

No.	Candidate	Year Completed	Main Supervisor	Co-Supervisor	Thesis Title
1.	Lariyah Mohd Sidek	2005	Prof. Kaoru Takara (Kyoto University, Japan)	<b>Prof. Dr. Aminuddin Ab. Ghani</b>  Prof. Dr. Mohd Nor Desa	Bio-Ecological Drainage System (BIOECODS) for Effective Storm water Control in the Tropics
2.	Nur Asmaliza Mohd Noor	2014	Prof. Lariyah Mohd Sidek (UNITEN)	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Evaluation on Hydrologic and Environmental Performance of Three Constructed Wetlands in Malaysia
3.	Muhammad Mujahid Muhammad	2017	Assoc. Prof. Khamaruzaman. Yusof (UTP)	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Hydraulic Modelling of Flow Through Bioengineering Channels: Applications to Urban Stormwater Drainage Systems
4.	Mena Ahmed	2018	Assoc. Prof. Abdul Halim Ghazali (UPM)	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Impacts of Spur Dikes on Hydraulics and Morphology of Anabranching Channels

**(c) MSc**

No	Candidate	Year Completed	Main Supervisor	Co-Supervisor	Thesis Title
1.	Zorkeflee Abu Hasan	1998	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof .Dr. Rozi Abdullah	Evaluation of Scour and Deposition in Malaysian Rivers Undergoing Training Works: Case Studies of Pari and Kerayong Rivers
2.	Ahmeda M. Saleem	1998	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof .Dr. Rozi Abdullah	Incipient Motion of Sediment Particles Over Loose Deposited Beds in A Rectangular Channel
3.	Nasehir Khan E. M Yahaya	1999	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof .Dr. Rozi Abdullah	Development of Total Bed Material Transport Rating Curves for Rivers in Malaysia: Case Studies of Pari River, Kerayong River and Kulim River
4.	Noor Azman Ibrahim	2002	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Evaluation & Development of Sediment Transport Equations for Kinta River, Kulim River, and Kerayong River Basins
5.	Ahmad Darus	2002	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Conservation and Restoration of Urban Rivers: Case Studies of Raia River and Pari River
6.	Sharifah Abdullah	2002	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Simulation of Muda River Bed Changes Undergoing Sand Mining Operations
7.	Yip Hing Wai	2002	Assoc. Prof .Dr. Rozi Abdullah	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Flood Runoff Estimation of Ungauged Catchments Using Soil Conservation Service (SCS) Method
8.	Anita Ainan	2003	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	An Evaluation of Bio-Ecological Drainage System (BIOECODS) As An Application of Urban Storm Water Management in Malaysia

9.	Ahmad Bakri Abdul Ghaffar	2003	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Determination of Manning's Flow Resistance Coefficient for Kinta River Basin
10.	Mahadzir Kassim	2005	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Sediment Deposition in A Rigid Monsoon Drain: A Case Study of Raja River, Alor Setar
11.	Abdul Jalil Hassan	2006	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	River and Floodplain Modelling for the Development of Flood Risk Map: A Case Study of Sg. Selangor
12.	Chang Chun Kiat	2006	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof .Dr. Rozi Abdullah	Sediment Transport in Kulim River
13.	Baharuddin Ahmad Nasir	2009	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Assoc. Prof .Dr. Rozi Abdullah	Peak Flow Attenuation using Dry Pond for Existing Housing Schemes
14.	Asnol Adzhan Abd Manap	2009	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Efficiency of Swale and Dry Pond for Storm water Management
15.	Liew Yuk San	2010	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Performance of Urban Stormwater Drainage System Through Dry Detention Pond: Case Study of Kota Damansara
16.	Nur Asmaliza Mohd Noor	2010	Assoc. Prof .Dr. Rozi Abdullah	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Water Quality Modeling of Constructed Wetlands in Malaysia: Case Study BIOECODS, USM
17.	Zahra Zangeneh Sirdari	2010	<b>Prof. Dr. Aminuddin Ab. Ghani</b>		Effect of Channelization on the Stability of Sg. Kulim
18.	Arniza Fitri	2011	Zorkeflee Abu Hasan	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Determining the Effectiveness of Harapan and Aman Lakes as Flood Ponds at USM
19.	Beh Chun How	2014	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Nor Azazi Zakaria	Water quantity and quality assessments of stormwater purification in BIOECODS
20.	Rayhana Sarento Pangilan	2014	Dr Lau Tze Liang	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Flood Mitigation Assessment of Sungai Maka, Tanah Merah, Kelantan
21.	Nor Azura Ishak	2017	Assoc. Prof. Dr Mohd Sanusi S. Ahamad	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Study on Influence and Sensitivity of Multiple Criteria Decisions Towards Flood Hazard and Risk Mapping Model
22.	Syafiq Shaharuddin	On-Going	<b>Prof. Dr. Aminuddin Ab. Ghani</b>	Prof. Wan Maznah Wan Omar	Evaluation of Biodiversity Performance in the New Design of Stormwater Constructed Wetland: Case Study of Universiti Sains Malaysia



## Selected Research Publications

### Invited Presentation, Guidelines & Books

**Ab. Ghani, A.** (2017) Managing Water for Sustainable Development – Learning from the Past for the Future, Chief Editor, Proceedings of the 37<sup>th</sup> IAHR World Congress, 13 – 18 August, Kuala Lumpur, ISSN 2521-7119 (Print); 2521-716X (Online).

**Ab. Ghani, A.,** Chun Kiat, C., Puay, H. T., & Ismail, W.R. (2016). Flood Inundation Analysis for Large Scale River using Hydrodynamic and Sediment Transport Model – Case Study of Sungai Pahang's December 2014 Flood, *2014 Flood Study Conference*, Putrajaya, Malaysia, 4<sup>th</sup> – 6<sup>th</sup> April

**Ab. Ghani, A.** (2015). Sediment Management and Control Plan in River Basin, National Hydraulic Research Institute Malaysia (NAHRIM), 7<sup>th</sup> May 2015

**Ab. Ghani, A.** Charles, B.H.J. & Liang, T.L. (2013) Sediment Flushing using Tipping Flush Gate in an Open Storm Concrete Drain – A Case Study in Nibong Tebal, Penang, Malaysia. 35<sup>th</sup> IAHR World Congress, Chengdu, China, 8 – 13 September

**Ab. Ghani, A.,** Zakaria, N.A., Abdullah, R., & Mohd Sidek, L., Editors. (2003). *River Sediment Transport Measurement and Analysis Guideline*, Department of Irrigation and Drainage Malaysia, Kuala Lumpur, 35 pp. ISBN: 9833067034

Zakaria, N.A., **Ab. Ghani, A.,** Abdullah, R., Lau, T.L., Sinnakaudan, S.K. & Mohd Sidek, L. Editors. (2003). *Guidelines for Design of Infiltration Tank System*, Department of Irrigation and Drainage Malaysia, Kuala Lumpur, 14 pp. ISBN: 9833067069

**Ab. Ghani, A.,** Zakaria, N.A., Abdullah, R., Mohd Sidek, L., Lau, T.L., Wong, L.P. & Chang, C.K. (2004). *Guidelines for Design and Construction of Bio-Ecological Drainage System (BIOECODS)*, Department of Irrigation and Drainage, 82 pp. ISBN 9833067158

**Ab. Ghani, A.** & Zakaria, N.A. (2005). Case Study: The Bio-Ecological Drainage System Project, Malaysia, in: J. Parkinson and O. Mark, *Urban Storm water Management in Developing Countries*, pp. 116-120, IWA. ISBN: 1843390574

**Ab. Ghani, A.** (2008). *Sustainable River Management: from the sediment transport and river equilibrium perspectives*, USM Professorial Talk Series, ISBN: 9789838613828 (*In Malay*)

**Ab. Ghani, A.,** Zakaria, N.A., Chang, C. K., Abu Hasan, Z., Lai S.H., & Azamathullah, H.Md. (2009). *River Sand Mining Management Guideline*. Department of Irrigation and Drainage Malaysia, Kuala Lumpur, 50 pp. ISBN: 978-983-3067-34-3

Chun Kiat, C. and **Ab. Ghani, A.** (2011). Sediment Transport in Kulim River, Kedah, Malaysia, *Sediment transport*, Silvia Susana Ginsberg (Ed.), ISBN: 978-953-307-189-3, <http://www.intechopen.com/articles/show/title/sediment-transport-in-kulim-river-kedah-malaysia> (Chapter 9)

Johari, N.E., Abdul-Talib, S., Ab. Wahid, M. & **Ab. Ghani, A.** (2016). Trend of Total Phosphorus on Total Suspended Solid Reduction in Constructed Wetland under Tropical Climate, *ISFRAM 2015*, Chapter 22, ISBN: 978-981-10-0499-5

## **International Journal**

1. Nalluri, C., **Ab. Ghani, A.**, and El-Zaemey, A.K.S. (1994). Sediment Transport over Deposited Beds in Sewers. *Water Science and Technology*, Vol. 29, No. 1-2, pp. 125-133. ISSN 0273-1223 (2016 ISI Impact Factor: 1.197)
2. Nalluri, C. and **Ab. Ghani, A.** (1996). Design Options For Self-Cleansing Storm Sewers. *Water Science and Technology*, Vol. 33, No. 9, pp. 215-220. ISSN 0273-1223 (2016 ISI Impact Factor: 1.197)
3. **Ab. Ghani, A.**, Zakaria, N.Z., Kassim, M., & Ahmad Nasir, B.(2000). Sediment Size Characteristics of Urban Drains in Malaysian Cities, *Urban Water Journal*, Vol. 2, No.4, pp. 335-341. ISSN 1573-062X (2016 ISI Impact Factor: 2.658)
4. Sinnakaudan, S., **Ab Ghani, A.**, S. Ahmad, M. S., & Zakaria, N. A. (2003). Flood Risk Mapping for Pari River Incorporating Sediment Transport. *Journal of Environmental Modeling and Software*, Vol. 18, No. 2, pp. 119-130. ISSN 1364-8152 (2016 ISI Impact Factor: 4.404)
5. Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R., Mohd Sidek, L. & Ainan, A. (2003). Bio-Ecological Drainage System (BIOECODS) For Water Quantity And Quality Control, *International Journal of River Basin Management*, Vol. 1, No. 3, pp. 237-251. ISSN 1571-5124 (SCOPUS/ISI)
6. **Ab. Ghani, A.**, Zakaria, N.A., Abdullah, R. & Ahamad, M.S.S. (2005). *Managing Rivers in the 21<sup>st</sup> Century - Issues and Challenges*, *International Journal of River Basin Management*, Vol. 3, No.3, pp. 145-146, ISSN: 1571-5124 (SCOPUS/ISI)
7. Chang, C. K., **Ab. Ghani, A.**, Zakaria, N. A., Abu Hasan, Z. & Abdullah, R. (2005). Sediment Transport Equation Assessment for Selected Rivers in Malaysia, *International Journal of River Basin Management*, Vol. 3, No.3, pp. 203-208. ISSN 1571-5124 ((SCOPUS/ISI)
8. Sinnakaudan, S. K., **Ab. Ghani, A.**, Ahmad, M. S. S., & Zakaria, N.A.(2006). Multiple Linear Regression Model for Total Bed Material Load Prediction, *Journal of Hydraulic Engineering*, American Society of Civil Engineers, Vol. 132, No. 5, May, pp. 521-528. ISSN 0733-9429 (2016 ISI Impact Factor: 2.183)
9. **Ab. Ghani, A.**, Zakaria, N.A., Chang, C.K., Ariffin, J., Abu Hasan, Z. & Abdul Ghaffar, A.B. (2007). Revised Equations for Manning's Coefficient for Sand-Bed Rivers, *International Journal of River Basin Management*, Vol. 5, No.4, pp. 329-346. ISSN 1571-5124 (SCOPUS/ISI)
10. **Ab. Ghani, A.**, Zakaria, N.A. & Kassim, M. (2008). Sediment Deposition in a Rigid Monsoon Drain, *International Journal of River Basin Management*, Vol. 6, No.1, pp. 23-30, ISSN 1571-5124 (SCOPUS/ISI)
11. Chang, C. K., **Ab. Ghani, A.**, Abdullah, R. & Zakaria, N.A. (2008). Sediment Transport Modeling for Kulim River: A Case Study. *Journal of Hydro-Environment Research*, Vol. 2, No.1, pp. 47-59, ISSN: 1570-6443 (2016 ISI Impact Factor: 1.429)
12. Lai S.H., Bessaih N., Law P.L., **Ab. Ghani, A.**, Zakaria, N.A & Mah Y.S. (2008). A Study of Overbank Flow Hydraulic Characteristics in Equatorial Natural Rivers, *International Journal of River Basin Management*, Vol. 6, No.3, pp. 213-223. ISSN 1571-5124 (SCOPUS/ISI)
13. **Ab. Ghani, A.**, Zakaria, N.A. & Falconer, R.A. (2009). *River Modeling and Flood Mitigation: Malaysian Perspectives*, *Proceedings of the Institution of Civil Engineers-Water Management*, Vol. 162, No.1, pp. 1-2, ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)
14. Leow, C.S., Abdullah, R., Zakaria, N.A., **Ab. Ghani, A.** & Chang, C.K. (2009). Modelling Urban River Catchment: A Case Study in Malaysia. *Proceedings of the Institution of Civil Engineers-Water Management*, Vol. 162, No.1, pp. 25-34. ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)
15. Azamathulla, H.Md., **Ab. Ghani, A.** & Zakaria, N.A. (2009). ANFIS-Based Approach to Predicting Scour Location of Spillway, *Proceedings of the Institution of Civil Engineers-Water Management*, Vol. 162, No. 6, pp. 399-407. ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)

16. Azamathullah, H.Md., Chang, C.K. **Ab Ghani, A.**, Ariffin, J., Zakaria, N.A., & Abu Hasan, Z. (2009). An ANFIS-Based Approach for Predicting the Bed Load for Moderately-Sized Rivers. *Journal of Hydro-Environment Research*, Vol. 3, No. 1, pp. 35-44. ISSN 1570-6443 (2016 ISI Impact Factor: 1.429)
17. **Ab. Ghani, A.**, Ali, R., Zakaria, N.A., Abu Hasan, Z., Chang, C.K. & S. Ahmad, M. S. (2010). A Temporal Change Study of the Muda River System over 22 Years, *International Journal of River Basin Management*, Vol. 8, No.1, pp. 25-37, ISSN 1571-5124 (SCOPUS/ISI)
18. Julien, P., **Ab. Ghani, A.**, Zakaria, N.A., Abdullah, R. & Chang, C. K. (2010). Case Study: Flood Mitigation of the Muda River, Malaysia, *Journal of Hydraulic Engineering*, Vol. 136, No. 4, pp. 251-261. ISSN 0733-9429 (2016 ISI Impact Factor: 2.183)
19. Azamathullah, H.Md. & **Ab. Ghani, A.** (2010). Genetic Programming to Predict River Pipeline Scour, *Journal of Pipeline Systems Engineering and Practice*, ASCE, Vol. 1, No. 3, pp. 127-132. ISSN 1949-1190 (2016 ISI Impact Factor: 1.170)
20. Roshan, R., Azamathullah, H.Md; Marosi, M., Pahlavan, H., Sarkardeh, H. and **Ab. Ghani, A.** (2010). Hydraulics of Stepped Spillways with Different Numbers of Steps. *Dams and Reservoirs Journal*, ICE, UK. Vol. 20, No. 3, pp. 131 –136, ISSN 1346-213X (SCOPUS)
21. **Ab. Ghani, A.** , Azamathulla, H. Md., Lau, T.L., Ravikanth, CH., Zakaria, N.A. Leow, C.S. & Mohd Yusof, M.A. (2011). Flow Pattern and Hydraulic Performance of the REDAC Gross Pollutant Trap, *Journal of Flow Measurement and Instrumentation*, Vol. 22, No. 3, pp. 215-224, ISSN 0955-5986 (2016 ISI Impact Factor: 1.203)
22. **Ab Ghani, A.**, Azamathulla, H.Md., Chang, C.K., Zakaria, N. A., & Abu Hasan, Z.(2011). Prediction of Total Bed Material Load for Rivers in Malaysia: A Case Study of Langat, Muda and Kurau Rivers, *Journal of Environmental Fluid Mechanics*, Vol. 11, No. 3, pp. 307-318, ISSN 1567-7419 (2016 ISI Impact Factor: 1.603)
23. **Ab. Ghani, A.**, & Azamathullah, H.Md. (2011). Gene-Expression Programming For Sediment Transport In Sewer Pipe Systems, *Journal of Pipeline Systems Engineering and Practice*, Vol. 2, No. 3, pp. 102-106, ISSN 1949-1190 (2016 ISI Impact Factor: 1.170)
24. Abu Hasan, Z., Lee, K.H., Azamathulla, H.Md; & **Ab. Ghani, A.** (2011). Flow Simulation for Lake Harapan using CCHE2D - A case study, *International Journal of Modelling and Simulation*, Vol. 31, No. 1, pp 85-89, (SCOPUS)
25. **Ab. Ghani, A.**, Chang, C.K., Leow, C.S. & Zakaria, N.A. (2012). Sungai Pahang Digital Flood Mapping: 2007 Flood, *International Journal of River Basin Management*, Vol. 10, No. 2, pp. 139-148, ISSN 1571-5124 (SCOPUS/ISI)
26. Azamathullah, H.Md. & **Ab. Ghani, A.** (2011). Genetic Programming For Predicting Longitudinal Dispersion Coefficients In Streams, *Water Resources Management*, Vol. 25, No. 6, pp. 1537 –1544, ISSN 0920-4741 (2016 ISI Impact Factor: 2.848)
27. Lau, T.L. & **Ab. Ghani, A.** (2012). Sustainable Solutions for Global Crisis of Flooding, Pollution and Water Scarcity, *International Journal of River Basin Management*, Vol. 10, No. 2, pp. 137-138, ISSN 1571-5124 (SCOPUS/ISI)
28. Liew, Y. S., Selamat, Z., **Ab. Ghani, A.** & Zakaria, N.A. (2012). Performance of a Dry Detention Pond: Case Study of Kota Damansara, Selangor, Malaysia, *Urban Water Journal*, Vol. 9, No. 2, pp. 129-136, ISSN 1573-062X (2016 ISI Impact Factor: 2.658)
29. Chang, C.K., Azamathulla, H.Md., Zakaria, N. A. & **Ab. Ghani, A.** (2012). Appraisal of Soft Computing Techniques in Prediction of Total Bed Material Load in Tropical Rivers, *Journal of Earth System Science*, Vol. 121, No. 1, pp. 125-133, ISSN 0253-4126 (2016 ISI Impact Factor: 0.955)
30. Mujahid, K, Azamathullah, H.Md., Tufail, M. & **Ab. Ghani, A.** (2012). Bridge Pier Scour Prediction by Gene-expression Programming, *Proceedings of the Institution of Civil Engineers-Water Management*, UK, Vol. 165, No. 9, pp. 481-493. ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)

31. Abu Hasan, Z., Hamidon, N., Yusoff, M.S. & **Ab. Ghani, A.** (2012). Flow and Sediment Yield Simulations for Bukit Merah Reservoir Catchment, Malaysia, *Water Science and Technology*. Vol. 66, No. 10, pp. 2170-2176. ISSN 0273-1223 (2016 ISI Impact Factor: 1.197)
32. Shahidan, N.F.N., Abu Hasan, Z.A., Abdullah, M.Z., & Ab. Ghani, A.(2012). Mathematical modelling of flow and sediment pattern at Ijok Intake, Ijok River, Perak, Malaysia, *International Journal of Modelling and Simulation*, Vol. 32, No. 3, pp 165-170 (SCOPUS)
33. Azamathulla, H. Md., **Ab Ghani, A.** & Fei, S.W. (2012). ANFIS-based approach for Predicting Sediment Transport in Clean Sewer, *Applied Soft Computing*, Vol. 12, No. 3, pp. 1227-1230. ISSN 0273-1223 (2016 ISI Impact Factor: 3.541)
34. Mohammadpour, R., **Ab. Ghani, A.**, & Azamathullah, H.Md. (2013). Estimation of Dimension and Time Variation of Local Scour at Short Abutment, *International Journal of River Basin Management*, Vol. 11, No. 1, pp. 121-135. ISSN 1571-5124 (SCOPUS/ISI)
35. Mohammadpour, R., **Ab. Ghani, A.**, & Azamathullah, H.Md. (2013). Prediction of Equilibrium Scour Time around Long Abutments, *Proceedings of the Institution of Civil Engineers-Water Management*, UK, Vol. 166, No.7, pp. 394–401. ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)
36. Mohammadpour, R., **Ab. Ghani, A.**, & Azamathullah, H.Md. (2013). Numerical Modeling of 3-D Flow on Porous Broad Crested Weirs, *Applied Mathematical Modelling*, Vol. 37, Issue 22, pp. 9324-9337. ISSN 0307-904X (2016 ISI Impact Factor: 2.350)
37. Bong, C.H.J, Liang, T.L. & **Ab. Ghani, A.** (2013). Verification of Equations for Incipient Motion Studies for Rigid Rectangular Channel, *Water Science and Technology*. Vol. 67, No. 2, pp. 397-405. ISSN 0273-1223 (2016 ISI Impact Factor: 1.064)
38. Bong, C.H.J, Liang, T.L. & **Ab. Ghani, A.** (2013). Hydraulics Characteristics of Tipping Sediment Flushing Gate, *Water Science and Technology*. Vol. 68, No. 11, pp. 2397-2406. ISSN 0273-1223 (2015 ISI Impact Factor: 1.197)
39. Azamathulla, H.Md., Ahmad, Z. & **Ab. Ghani, A.** (2013) An Expert System for Predicting Manning’s Roughness Coefficient in Open Channels by Using Gene Expression Programming. *Neural Computing and Applications*, Vol. 23, No. 5, pp.1343–1349, ISSN 0941-0643 (2016 ISI Impact Factor: 2.505)
40. Azamathulla, H.Md., Ahmad, Z. & **Ab. Ghani, A.** (2013). Computation of Discharge through Side Sluice Gate using Gene-Expression Programming, *Irrigation & Drainage*, Vol. 62, Issue 1, pp. 115-119, ISSN 1531-0353 (2016 ISI Impact Factor: 0.931)
41. Azamathulla, H.Md., Cuan, Y.C., **Ab Ghani, A.**, & Chang, C.K. (2013). Suspended Sediment Load Prediction of River Systems: GEP Approach, *Arabian Journal of Geosciences*, Vol. 6, Issue 9, pp. 3469-3480, ISSN 1866-7511 (2016 ISI Impact Factor: 0.955)
42. **Ab. Ghani, A.** & Azamathulla, H. Md. (2014) Development of GEP-Based Functional Relationship for Sediment Transport in Tropical Rivers, *Neural Computing and Applications*, Vol. 24, Issue 2, pp 271-276, ISSN 0941-0643, (2016 ISI Impact Factor: 2.505)
43. Bong, C.H.J, Liang, T.L. & **Ab. Ghani, A.** (2014). Sediment Size and Deposition Characteristics in Malaysian Urban Concrete Drains – A Case Study of Kuching City, *Urban Water Journal*, Vol. 11, Issue 1, pp. 74-89. ISSN 1573-062X (2016 ISI Impact Factor: 2.658)
44. Mohammadpour, R., Shahrudin, S., Chang, C.K., Zakaria, N.A. & **Ab Ghani, A.** (2014). Spatial Pattern Analysis for Water Quality in Free-Surface Constructed Wetland, *Water Science and Technology*. Vol. 70, No. 7, pp. 1161–1167. ISSN 0273-1223 (2016 ISI Impact Factor: 1.197)
45. Sirdari, Z.Z, **Ab. Ghani, A.**, & Abu Hasan, Z. (2014). Bed load Transport of Small Rivers in Malaysia, *International Journal of Sediment Research*, Vol. 29, No. 4, pp. 481-490. ISSN: 1001-6279 (2016 ISI Impact Factor: 1.494)

46. Mohammadpour, R., Shaharuddin, S., Chang, C.K., Zakaria, N.A., **Ab Ghani, A.** & Ngai, W.C. (2015). Prediction of Water Quality Index in Constructed Wetlands using Support Vector Machine, *Environmental Science and Pollution Research*, Vol. 22, No. 8, pp. 6208-6219. ISSN: 0944-1344 (2016 ISI Impact Factor: 2.741)
47. **Ab. Ghani, A.** & Mohammadpour, R. (2016). Temporal Variation of Clear-Water Scour at Compound Abutments, *Ain Shams Engineering Journal*, Vol. 7, No. 4, pp. 1045-1052. ISSN: 2090-4479 (SCOPUS/ISI)
48. Bong, C.H.J., Liang, T.L. & **Ab. Ghani, A.** (2016). Potential of Tipping Flush Gate for Sedimentation Management in Open Stormwater Sewer, *Urban Water Journal*, Vol. 13, No. 5, pp. 486 - 498. ISSN 1573-062X (2016 ISI Impact Factor: 2.658)
49. Mohammadpour, R., **Ab. Ghani, A.**, Vakili, M. & Sabzevari, T. (2016). Prediction of Temporal Scour Hazard at Bridge Abutment, *Natural Hazards*, Vol. 80, No. 3, pp. 1891-1911, ISSN 0921-030X (2016 ISI Impact Factor: 1.833)
50. Mohammadpour, R., Shaharuddin, S., Zakaria, N.A., **Ab. Ghani, A.**, Vakili, M. & Ngai, W.C. (2016). Prediction of Water Quality Index in Free Surface Constructed Wetlands, *Environmental Earth Sciences*, Vol. 75, No. 2, pp. 139, ISSN: 1866-6280 (2016 ISI Impact Factor: 1.569)
51. Bong, C.H.J., Liang, T.L. & **Ab. Ghani, A.** (2016). Sediment Deposit Thickness and Its Effect on Critical Velocity for Incipient Motion, *Water Science and Technology*. Vol. 74, No. 8, pp. 1876-1884, ISSN 0273-1223 (2016 ISI Impact Factor: 1.197)
52. Ebtehaj, I., Bonakdari, H., Zaji, A.H., Bong, C.H.J. & **Ab. Ghani, A.** (2016). Design Of A New Hybrid Artificial Neural Network Method Based on Decision Trees for Calculating the Froude Number in Rigid Rectangular Channels, *Journal of Hydrology and Hydromechanics*. Vol. 64, No. 3, pp. 252–260, ISSN: (Online) 0042-790X (2016 ISI Impact Factor: 1.654)
53. Bong, C.H.J., Putuhena, F.J., Lau, T.L. & **Ab. Ghani, A.** (2016). Deposition Thickness and Its Effect on Critical Shear Stress for Incipient Motion of Sediments. *Jurnal Teknologi*, Vol. 78, No. 9-4, pp. 21-30, eISSN 2180–3722 (ISI)
54. Alang Othman, M., Zakaria, N.A., **Ab. Ghani, A.**, Chang, C.K. & Chan, N.W. (2016). Analysis of Trends of Extreme Rainfall Events Using Mann Kendall Test: A Case Study in Pahang and Kelantan River Basins. *Jurnal Teknologi*, Vol. 78, No. 9-4, pp. 63-69, eISSN 2180–3722 (ISI)
55. Takaijudin, H., **Ab. Ghani, A.** & Zakaria, N.A. (2016). Challenges and Developments of Bioretention Facilities in Treating Urban Stormwater Runoff: A review, *Pollutions*. Vol. 2, No. 4, pp. 489-508, ISSN 2383-451X
56. Mohammadpour, R., **Ab. Ghani, A.**, Zakaria, N.A. & Mohammed Ali, T.A. (2017). Predicting Scour at River Bridge Abutments over Time, *Proceedings of the Institution of Civil Engineers-Water Management*, Vol. 170, No. 1, pp. 15-30. ISSN 1741-7589 (2016 ISI Impact Factor: 0.547)
57. Ebtehaj, I., Bonakdari, H., Khoshbin, F., Bong, C.H.J. & **Ab. Ghani, A.** (2017). Development of Group Method of Data Handling (GMDH) based on Genetic Algorithm to Predict Incipient Motion in Rigid Rectangular Storm Water Channel. *Scientia Iranica*. Vol. 24, No. 3, pp. 1000-1009. ISSN 1026-3098 (2016 ISI Impact Factor: 0.454)
58. Chang, C.K., **Ab Ghani, A.**, Zakaria, N.A., & Puay, H.T. (2018). Sediment Transport in Sungai Pahang: Case Study of a large Scale River Basin. *Jurnal Teknologi*, Accepted, eISSN 2180–3722 (ISI)
59. Wan Mohtar, W.H.M., Afan, H., Bong, C.H.J., El-Shafie, A. & **Ab Ghani, A.** (2018). Influence of Bed Deposit in the Prediction of Incipient Sediment Motion in Sewers using Neural Networks, *Urban Water Journal*, Accepted, ISSN 1573-062X (2016 ISI Impact Factor: 2.658)
60. Muhammad, M. M., Khamaruzaman, W. Y., Muhammad Raza, U. M, Zakaria, N. A and **Ab Ghani, A.** (2018). Prediction Models for Flexible Vegetated Channels. *International Journal of River Basin Management*, Accepted. ISSN 1571-5124 (SCOPUS/ISI)

## **International Conference Proceedings**

Nalluri, C. & **Ab. Ghani, A.** (1993). Shape Effect on Bed Load Transport in Pipes. *National Conference on Hydraulic Engineering*, Hydraulic Division, ASCE, San Francisco, USA, Vol. 2, pp. 1200 - 1205, 25 - 30 July. ISBN: 0872629201

Nalluri, C. & **Ab. Ghani, A.** (1993). Bed Load Transport without Deposition in Channels of Circular Cross Section. *6th International Conference on Urban Storm Drainage*, IAHR, Niagara Falls, Canada, Vol. 1, pp. 625-630, 12-17 September. ISBN: 1550562533

Nalluri, C. & **Ab. Ghani, A.** (1994). Sediment Transport in Sewers and Design Implications. *National Conference on Hydraulic Engineering*; Hydraulic Division, ASCE, Buffalo, USA, Vol. 2, pp. 933-938, 1 - 5 August. ISBN: 0784400377

Nalluri, C. & **Ab. Ghani, A.** (1994). Sediment Transport in Sewers with and without Deposited Beds. *9th Congress of Asia-Pacific Division of IAHR*, Singapore, Vol. 2, pp. 27-34, 24 - 26 August. ISBN: 9971623544

Nalluri, C. & **Ab. Ghani, A.** (1995). Sewer Design Options. *International Conference on Sewer Solids-Characteristics, Movements, Effects and Control*, IAHR, Dundee, UK, pp. 223-229, 5 - 8 September. ISBN: 1899796010

**Ab. Ghani, A.** & Nalluri, C. (1996). Development of Pier-Scour Equations using Field Data. *10th Congress of Asia-Pacific Division of IAHR*, Langkawi, Vol.1, pp. 295-302, 26 - 29 August. ISBN: 9839429019

**Ab. Ghani, A.** & Nalluri, C. (1996) Sediment Transport Equations for Self-Cleansing Sewers At Limit Of Deposition. *10th Congress of Asian-Pacific Division of IAHR*, Langkawi, Vol.1, pp. 339-343, 26 - 29 August. ISBN: 9839429019

**Ab. Ghani, A.**, Amran, N., & Mahibol, J. (1996). Control of Erosion and Sedimentation in Malaysian Rivers Using Sediment Transport Relationship. *Regional Seminar on Integrated River Basin Management*; Malaysian Committee on Irrigation and Drainage (MANCID), Malacca, Vol. 3, pp. 4.3.1 - 4.3.15, 2 - 5 September. ISBN: 9839905511

**Ab. Ghani, A.** & Nalluri, C. (1996). Storm Sewer Design Incorporating Graded Sediment Transport. *7th International Conference on Urban Storm Drainage*; IAHR, Hanover, Germany, Vol. 1, pp. 283 - 288, 9 - 13 September. ISBN: 3000008608

**Ab. Ghani, A.**, Salem, A.M., Abdullah, R., Yahaya, A. S., & Zakaria, N.A. (1999). Incipient Motion Of Sediment Particles Over Deposited Loose Beds In A Rectangular Channel, *8th International Conference on Urban Storm Drainage*, IAHR, Sydney, Australia, Vol. 1, pp. 157-163, 30 Aug.– 3 September. ISBN: 0858257181

Fraser, A.G., Ashley, R.M., & **Ab. Ghani, A.** (2000). Inlet and Sewer Traps for Sediment Control in Stormwater Drainage: A Malaysian Case Study, *Joint Conference on Water Resources Engineering & Water Resources Planning and Management*, ASCE, Minneapolis, USA, 30 July - 2 August, Section 39, Chapter 2. ISBN: 0784405174

**Ab. Ghani, A.**, Ariffin, J., Zakaria, N.A., Yahaya, A.S., & Abdul Talib, S. (2002). Error Introduced in Measurements of Bed Load Transport. *13th Asia-Pacific Division Congress of IAHR*, Singapore, Vol. 1, pp. 195-198, August 6-8. ISBN: 9812380906

Sinnakaudan, S., **Ab. Ghani, A.**, Chang, C.K., S. Ahmad., M. S & Zakaria, N, A. (2002). Integrated Triangular Irregular Network (ITIN) Model for Flood Risk Analysis. Case Study: Pari River, Ipoh, Malaysia. *13th Asia-Pacific Division Congress of IAHR*, Singapore, Vol. 2, pp. 656-660, August 6-8. ISBN: 9812380906

Zakaria, N.A., **A. Ab. Ghani**, Abdullah, R., L.M. Sidek , Kassim, A. H. & A. Ainan. (2004). MSMA- A New Urban Stormwater Management Manual for Malaysia. *6th International Conference on Hydroscience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia. ISBN: 0937099120

**Ab. Ghani, A.**, Zakaria, N.A., Abdullah, R., Yusof, M. F., Mohd Sidek, L., Kassim, A. H. & A. Ainan. (2004). Bio-Ecological Drainage System (BIOECODS): Concept, Design and Construction. *6th International Conference on Hydroscience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia.

- Ainan, A., Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R., Mohd Sidek, L., Yusof, M. F. & Wong, L.P. (2004). Peak Flow Attenuation Using Ecological Swale and Dry Pond. *6th International Conference on Hydrosience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia.
- Mohd Sidek, L., Ainan, A., Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R. & Ayub, K. R. (2004). Stormwater Purification Capability of BIOECODS. *6th International Conference on Hydrosience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia.
- Abdullah, R., Zakaria, N.A., **Ab. Ghani, A.**, Mohd Sidek, L., Ainan, A. & Wong, L.P.(2004). BIOECODS Modelling Using SWMM. *6th International Conference on Hydrosience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia.
- Lau, T.L., Zakaria, N.A., **Ab. Ghani, A.**, Yusof, M. F., Abdullah, R., Mohd Sidek, L. & Ainan, A (2004). Application of BIOECODS for a Government Complex: A Case Study. *6th International Conference on Hydrosience and Engineering (ICHE-2004)*, May 30-June 3, Brisbane, Australia.
- Mohd Sidek, L., Takara, K., **Ab. Ghani, A.** & Desa, M. N.(2005). Bio-Ecological Drainage Systems (BIOECODS) for Effective Stormwater Control in the Tropics. *International Conference on Monitoring, Prediction and Mitigation of Water-Related Disasters (MPMD-2005)* Kyoto University, Japan, 12-15 January, pp. 625-632. ISBN: 4902712016
- Chang, C.K., **Ab. Ghani, A.**, Zakaria, N.A., & Abdullah, R. (2005). Sediment Transport in Kulim River, Malaysia. *XXXI IAHR Congress: Water Engineering for the Future - Choice and Challenges*, 11-16 September, Seoul, Korea, pp. 1397-1407. ISBN: 8987898245
- Chang, C.K., **Ab. Ghani, A.** & Lim, H.W. (2007). Development Of Modified Einstein Bed Load Equation For Sandy Stream In Malaysia, *2nd International Conference on Managing Rivers in 21st Century: Solutions towards Sustainable River Basins (Rivers '07)*, Kuching, Sarawak, Malaysia, pp. 533-538, 6th -8th June.
- Ab. Ghani, A.**, Zakaria, N.A., Chang, C.K. & Ainan, A. (2008). Sustainable Urban Drainage System (SUDS) – Malaysian Experiences, *11<sup>th</sup> International Conference on Urban Drainage*, Edinburgh, UK, 31<sup>st</sup> August – 5<sup>th</sup> September.
- Chang, C.K., **Ab. Ghani, A.**, Zakaria, N.A., Yusof, M.F., Ayub, K.R., Lai, S.H., Hasan, A.M.M., Ainan, A. (2008). Rehabilitation of Ex-Mining Pond and Existing Wetland for Integrated Stormwater Management, *11<sup>th</sup> International Conference on Urban Drainage*, Edinburgh, UK, 31<sup>st</sup> August – 5<sup>th</sup> September.
- Liew, Y. S., Selamat, Z. & **Ab. Ghani, A.** (2009). Performance of Stormwater Drainage System through Dry Detention Pond for Medium Size Housing Development using InfoWorks CS (Case Study: Kota Damansara, Selangor, Malaysia), *8<sup>th</sup> International Conference on Urban Drainage Modelling*, Tokyo, Japan, 7<sup>th</sup> – 12<sup>th</sup> September.
- Azamathullah, H.Md., **Ab. Ghani, A.**, Zakaria, N.A.(2009). Prediction of Scour below Flip Bucket using Soft Computing Techniques, *2nd International Symposium on Computational Mechanics (ISCM II), 12th International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC XII)*, Hong Kong - Macau, 30 November - 3 December 2009.
- Jamaluddin, A.F., Abu Hasan, Z. & **Ab. Ghani, A.** (2011). Determining the Effectiveness of Harapan Lake as Flood Retention Pond in Flood Mitigation Effort, *4<sup>th</sup> International Conference on Environmental and Computer Science*, Singapore, September 16-18.
- Ahamad, M.S.S., Ali, R., Zakaria, N.A., **Ab. Ghani, A.** & Chang, C.K. (2011). Flood Loss Assessment of the 2003 Muda River flood, *3<sup>rd</sup> International Conference on Managing Rivers in 21st Century: Sustainable Solutions for Global Crisis of Flooding, Pollution and Water Scarcity (Rivers 2011)*, Penang, Malaysia, pp. 601-606, December 6 – 9.
- Zakaria, N.A., **Ab. Ghani, A.**, Abdul Talib, S., Chan, N.W. & Mohamed Desa, M.N. (2013). Urban Water Cycle Processes, Management, and Societal Interactions: Crossing From Crisis to Sustainability, *World Environmental and Water Resources Congress 2013*, pp. 1240-1246, Cincinnati, Ohio, USA
- Bong, C.H.J., Lau, T.L. & **Ab. Ghani, A.** (2014). Self-Cleansing Design of Rectangular Open Storm Sewer, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014

- Alang Othman, M., **Ab. Ghani, A.**, Foo, K.Y. & Chang, C.K.(2014). Long-Term Rainfall Analysis for Estimating Water Quality Volume for Major Towns in Malaysia, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014
- Mohammadpour, R., **Ab. Ghani, A.**, Shaharuddin, S., Chang, C.K. & Zakaria, N.A. (2014). Nitrogen Removal Assessment by Multivariable Statistical Technique in Free Surface Wetland, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014
- Liew, Y.S., Teo, F.Y. & **Ab. Ghani, A.** (2014). Assessment of the Climate Change Impact on a Dry Detention Pond at Kota Damansara, Malaysia, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014
- Takaijudin, H., **Ab. Ghani, A.**, Zakaria, N.A. & Azamathulla, H.Md. (2014). Preliminary Study on the Impacts of Variation Engineered Soil Composition in Bioretention on Hydraulic Performance, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014
- Johari, N.E., Chang, C.K., A.B. Wahid, M., **Ab. Ghani, A.** & Abdul Talib, S. (2014). Performance of Constructed Wetland on Nutrient Removal in Tropical Climate, *13<sup>th</sup> International Conference on Urban Drainage*, Kuching, Sarawak, Malaysia, 7<sup>th</sup> – 12<sup>th</sup> September 2014
- Mohammadpour, R., **Ab Ghani, A.** & Zakaria, N.A. (2014). Time Variation of Scour Depth around Complex Abutment, *7<sup>th</sup> International Conference on Scour and Erosion*, Perth, Australia, pp. 355-360, 2-4 December 2014
- Bong, C.H.J., Lau, T.L., & **Ab. Ghani, A.** (2015). Effect of Deposition Thickness on the Incipient Motion of Sediments, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July, 2015
- Takaijudin, H., Puay, H.T., **Ab. Ghani, A.**, Zakaria, N.A. & Lau, T.L. (2015). The Influence of Filter Depths in Capturing Nutrient Contaminants for Non-Vegetated Bioretention Column: A Preliminary Study, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July
- Alang Othman, M., **Ab. Ghani, A.**, Foo, K.Y. & Chang, C.K. (2015). Effect of Minimum Inter Event Time on Water Quality Capture Volume, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July
- Johari, N.E., Chang, C.K., Ab. Wahid, M., **Ab. Ghani, A.** & Abdul Talib, S. (2015). Water Quality Level in Stormwater Runoff Through Constructed Wetland under Tropical Climate, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July
- Shaharuddin, S., Chang, C.K., Zakaria, N.A. & **Ab. Ghani, A.** (2015). Effect of Nitrogen and Phosphorus Concentration in the Water of Stormwater Constructed Wetland to Freshwater Phytoplankton Distribution (10 Years Establishment): Case Study in Universiti Sains Malaysia, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July
- Ayub, K.R., **Ab. Ghani, A.**, Zakaria, N.A. & Shaharuddin, S.(2015). Efficiency of Intensive Green Roof in High Intensity Rainfall for Stormwater Treatment: Selection of Vegetation, *36<sup>th</sup> IAHR World Congress*, The Hague, the Netherlands, 28 June –3 July
- Takaijudin, H., **Ab Ghani, A.**, Zakaria, NA. & Lau, T.L. (2016). Performance of Elaeis Guineensis Leaves Compost in Filter Media for Stormwater Treatment through Column Study, *IOP Conference Series: Materials Science and Engineering*. Vol.136: pp. 012049
- Yusoff, M. A. M., Azamathulla, H. Md., **Ab Ghani, A.** (2016). Time Variations of Scour Below Submerged Skewed Pipelines, *IOP Conference Series: Materials Science and Engineering*. Vol.136: pp. 012071
- Nazir, M. H. M., Awang, S., Shaaban, A. J., Yahaya, N. K. E. M., Jusoh, A. M., Arumugam, M. A. R. M. A. & **Ab. Ghani, A.** (2016). Sediment Transport Dynamic in a Meandering Fluvial System: Case Study of Chini River. *IOP Conference Series: Materials Science and Engineering*. Vol.136: pp. 012072
- Muhammad, M. M., Yusof, K. W., Mustafa, M. R., & **Ab. Ghani, A.** (2016). Hydraulic Assessment of Grassed Swale as Bioengineered Channel, *Proceedings of the 3rd International Conference on Civil, Offshore and Environmental Engineering (ICCOEE 2016)*, Malaysia, 15-17 August, pp. 361–364



## **National Journal**

**Ab. Ghani, A.** (1997). Field Data Collection On Sedimentation In Combined Sewer Systems: Overseas Experience, *Bulletin Institution of Engineers Malaysia*, pp. 40-47, November.

**Ab. Ghani, A.**, Kassim, M., Abdullah, R., Mohd. Sidek, L., & Zakaria, N.A. (2001). Sediment Deposition in Storm Drains of Raja Catchment, Alor Setar, *Bulletin Institution of Engineers Malaysia*, pp. 43-48, May.

Abdullah, R., Yip, H.W., & **Ab. Ghani, A.** (2002). Calibration of the Soil Conservation Services (SCS) Method in Peninsular Malaysia using Sungai Chalok Catchment, Negeri Terengganu. *Bulletin Institution of Engineers Malaysia*, pp. 29-34, June

Mohd Sidek, L., Zakaria, N.A., **Ab. Ghani, A.**, & Abdullah, R. (2002). Alternative Solutions to Conventional Drainage Systems using Bio-Ecological Drainage Systems: Design and Concepts, Part 1, *Bulletin Board of Engineers Malaysia*, Vol. 15, No.2, pp. 46-51, June.

Mohd Sidek, L., Zakaria, N.A., **Ab. Ghani, A.**, & Abdullah, R. (2002). Alternative Solutions to Conventional Drainage Systems using Bio-Ecological Drainage Systems: Design and Concepts, Part 2, *Bulletin Board of Engineers Malaysia*, Vol. 15, No. 3, pp. 47-52, September.

Yahaya, A.S., **Ab. Ghani, A.**, & Zakaria, N.A. (2002). Modeling Bridge Pier Scour Equation using Regression Methods, *Journal of Borneo Sciences*, Vol. 11, pp. 23-31

Darus, A., **Ab. Ghani, A.**, Zakaria, N.A. & Abdullah, R. (2005). Natural Stable River Section Design using FLUVIAL-12, *Bulletin Institution of Engineers Malaysia*, pp. 24-27, May.

Mohd Sidek, L., **Ab. Ghani, A.**, Zakaria, N.A., Desa, M. N. & Abdullah, R. (2006). An Assessment of Storm water Management Practices in Malaysia, *Bulletin Institution of Engineers Malaysia*, January, pp 8-19.

Chan, N.W, Koh, H.L & **Ab. Ghani, A.**, (2006). Developing a Model of Flood Hazards on Urban Floodplains in Malaysia. In Abd. Aziz Tajuddin and Lim, K. O. (Editors) *Fundamental Research at USM 2002 – 2005*. Vol. 3, pp. 32-54. Penang: Universiti Sains Malaysia.

## **National Conference Proceedings**

**Ab. Ghani, A.**, Zakaria, N.A., Abdullah, R., Mohd. Sidik, L., Abustan, I., Mohd. Nordin, A., and Wan Hussin, W.M.A.(1999). Water Resources and Conservation – Attenuation of Flood Hydrograph and Increase in Groundwater Replenishment, *National Seminar on World Day for Water '99*, MANCID, Malacca, 21-22 Mac.

**Ab. Ghani, A.**, Abu Hasan, Z., Abdullah, R., and Zakaria, N.A. (1999). Establishment of Flow Rating Curves along Pari River using Loose Boundary Models, *National Conference on Rivers '99*, Universiti Sains Malaysia, Penang, pp. 34-38, 14 – 17 October.

**Ab. Ghani, A.**, Yahaya, N.E.M, Abdullah, R., and Zakaria, N.A. (1999). Establishment of Sediment Size Distribution along Pari River after Completion of A Flood Mitigation Project, *National Conference on Rivers '99*, Universiti Sains Malaysia, Penang, pp. 277-283, 14 – 17 October.

**Ab. Ghani, A.**, Yahaya, N.E.M, Abdullah, R., and Zakaria, N.A. (1999). Development of Sediment Rating Curves for Pari River, *National Conference on Rivers '99*, Universiti Sains Malaysia, Penang, pp. 284-290, 14 – 17 October

**Ab. Ghani, A.**, Zakaria, N.A., Abdullah, R., Mohd Sidek,L., Abustan, I., & Adlan, M.N. (2000). Sistem Saliran Ekologikal: Satu Pendekatan Alternatif ke Arah Penyelesaian Masalah Banjir Kilat di Kawasan Bandar, *Seminar World Day for Water 2000, Pulau Pinang*, 20 Mac

- Mohd Sidek, L., Zakaria, N.A., **Ab. Ghani, A.**, Abustan, I., Abdullah, R., & Ashaari, F.A.H. (2001). Integrating constructed wetland into Bio-Ecological Drainage System (BIOECODS) For Water Quality Improvements, *National Seminar on World Day for Water'2001*, MANCID, Batu Pahat, 23-24 Mac
- Abdullah, R., Zakaria, N.A., **Ab. Ghani, A.**, Mohd Sidek, L., & Abustan, I. (2001). Evaluation of Ecological Drainage System In Malaysia, *National Seminar on World Day for Water'2001*, MANCID, Batu Pahat, 23-24 March.
- Lau, T.L., **Ab. Ghani, A.**, Zakaria, N.A., & Abdullah, R., Mohd Sidek, L. & Kean, S.T.B. (2001). Comparison of Two Subsurface Storage Tank Systems to Attenuate Peak Flow – Case Study in USM Tronoh Campus. *Seminar & Exhibition on Urban Stormwater Management Manual: Principles and Applications*, Kuala Lumpur, 21 – 22 August.
- Mohd Sidek, L., Zakaria, N. A., **Ab. Ghani, A.**, & Abdullah, R. (2001). The Use and Development of Bio-Ecological Drainage Systems (BIOECODS) for USM Engineering Campus. *Seminar & Exhibition on Urban Stormwater Management Manual: Principles and Applications*, Kuala Lumpur, 21 – 22 August.
- Ab. Ghani, A.**, Zakaria, N.A., Darus, A., Abdullah, S., Mohd Sidek, L., & Abdullah, R. (2001). Scour and Deposition in Rivers: Malaysian Perspectives. *National Conference on Hydrology, Hydraulics and Sustainable Water Resources Management – Advances in Research and Management*, 24-26 September
- Mohd Sidek, L., Zakaria, N. A., **Ab. Ghani, A.**, & Abdullah, R. (2001). Application of Bio-Ecological Drainage Systems (BIOECODS). *National Conference on Hydrology, Hydraulics and Sustainable Water Resources Management – Advances in Research and Management*, 24-26 September
- Mohd Sidek, L., Zakaria, N. A., **Ab. Ghani, A.**, & Abdullah, R. (2001). Sustainable Urban Drainage Systems: BIOECODS Experience at USM Engineering Campus, *9<sup>th</sup> MANCID Annual Conference*, Cameron Highlands, 12-13 November.
- Lau, T.L., **Ab. Ghani, A.**, Zakaria, N.A., & Abdullah, R., Mohd Sidek, L. & Kean, S.T.B. (2001). Sustainable Urban Drainage Systems: Substorage Tank System Experience at USM Tronoh Campus, *9<sup>th</sup> MANCID Annual Conference*, Cameron Highlands, 12-13 November.
- Abdullah, R., **Ab. Ghani, A.**, Zakaria, N.A. & Mohd Sidek, L. (2001). Sustainable Urban Drainage Systems: On-Site Detention for Residential Development – Modelling Experience using SWMM, *9<sup>th</sup> MANCID Annual Conference*, Cameron Highlands, 12-13 November.
- Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R., Mohd Sidek, L., Kassim, A.H, & Ainan, A. (2002). Nature Friendly Urban Drainage System as A Part of New Development Landscape: BIOECODS Case Study, *National Seminar on World Day for Water'2002*, MANCID, Kuantan, 25-26 March
- Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R. & Ainan, A. (2002). Water Purification Based On Bio-Ecological Drainage System, *10<sup>th</sup> MANCID Annual Conference on Irrigation & Drainage*, Kangar, Perlis, 16 – 17 December,
- Zakaria, N.A., **Ab. Ghani, A.**, Abdullah, R., Ainan, A. & Peng, W.L. (2003). Performance of Sustainable Urban Drainage System in Malaysia – A Case Study of Bio-Ecological Drainage System in USM Engineering Campus, *Seminar on Urban Stormwater Management Practices*, Shah Alam, 29 July.
- Zakaria, N.A., **Ab. Ghani, A.** & Chang, C.K. (2014). MSMA 2<sup>nd</sup> Edition – Application of Green Infrastructures for Solving Sustainable Urban Stormwater Management Challenges. *National Water Conference 2014 (PAM 2014)*, 4<sup>th</sup> - 6<sup>th</sup> November 2014, Alor Setar, Kedah

## **Awards**

- 2015 Bronze Award for UNIMAS R&D Expo 2015 (Self-CleANsing Design of Open Storm Sewer (SCANDOSS) Application).
- 2014 2013 Outstanding Reviewer Recognition Award for the Journal of Pipeline Systems Engineering and Practice, American Society of Civil Engineers (ASCE)
- 2013 Universiti Sains Malaysia Hall of Fame (Special Award – HICoE Service)
- 2011 Universiti Sains Malaysia Hall of Fame (Journal Publication)
- 2010 Universiti Sains Malaysia Hall of Fame (Journal Publication)
- 2009 Universiti Sains Malaysia Hall of Fame (Journal Publication)
- 2009 Best Poster Award, 8<sup>th</sup> International Conference on Urban Drainage Modelling, Tokyo, Japan (Dry Pond Modelling).
- 2004 Perak State Foundation Excellence in Engineering Research Award (Flood Risk)
- 2003 Universiti Sains Malaysia Excellence Service Award
- 2002 Universiti Sains Malaysia Excellence Service Award
- 2002 Universiti Sains Malaysia Hall of Fame (Innovation)
- 2002 Silver Medal Award, I-TEX 2002 (BIOECODS)
- 2001 Universiti Sains Malaysia Hall of Fame (Innovation)
- 2001 Perak State Foundation Excellence in Engineering Research Award (BIOECODS)
- 2001 CIDB Construction Innovation and Invention Award (BIOECODS)

### **Seminar, Workshop, Short Course and Conference organized:**

- 2017 37<sup>th</sup> IAHR World Congress, Kuala Lumpur, 13<sup>th</sup> – 18<sup>th</sup> August
- 2014 13<sup>th</sup> International Conference on Urban Drainage, Kuching, 7<sup>th</sup> – 12<sup>th</sup> September
- 2011 3<sup>rd</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century (Rivers 2011), Penang, Malaysia, 6<sup>th</sup> – 9<sup>th</sup> December
- 2009 Sediment Transport Modeling Workshop (RiverM-2), 28<sup>th</sup> - 30<sup>th</sup> July
- 2007 2<sup>nd</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century (Rivers'07), Kuching, Sarawak, Malaysia, 6<sup>th</sup> – 8<sup>th</sup> June
- 2007 Stormwater Quality Management Seminar, Penang, 9<sup>th</sup> -11<sup>th</sup> January
- 2005 River Rehabilitation Seminar (RiverM-1), Penang, Malaysia, 24<sup>th</sup> – 26<sup>th</sup> May
- 2005 Urban Storm Water Management Short Course (USWM-2), 26<sup>th</sup> – 28<sup>th</sup> April
- 2004 1<sup>st</sup> International Conference on Managing Rivers in the 21<sup>st</sup> Century (Rivers'04), Penang, Malaysia, 21<sup>st</sup> – 23<sup>rd</sup> September
- 2004 Urban Storm Water Management Short Course (USWM-1), 30 November – 2 December
- 2004 Special Session on Bio-Ecological Drainage System (BIOECODS), 6<sup>th</sup> International Conference on Hydroscience and Engineering (ICHE), Brisbane, Australia, 31<sup>st</sup> May-3<sup>rd</sup> June.
- 2002 Seminar “Hydro-Environmental Modeling of River and Coastal Waters”, 13 August
- 2002 Seminar “Sediment Transport & Recent Development”, 10 August
- 2001 9<sup>th</sup> MANCID National Conference (MANCO), Cameron Highlands, 12-13 November.
- 2001 R & D Colloquium on River Engineering & Urban Drainage, Pulau Pinang, 14-15 August
- 1999 Workshop on River Modeling: Case Studies of Pari and Kerayong Rivers, 16-18 April.
- 1998 International Conf. On Hydrology and Water Resources of Humid Tropic, Ipoh, Malaysia, 24-26 November.
- 1998 Short course “Sediment Transport: Theory and Practice”, 29-30 April.
- 1997 Short course “Urban Drainage: Sedimentation and Best Management Practice”, 1 - 3 April.
- 1996 Short course “Recent Developments in River Engineering”, 24-25 April.
- 1995 Seminar “River Basin Management”, 17 August.