

CURRICULUM VITAE

A/Prof. Md Rowshon Kamal, PhD

H-index: 12 Citations: 375 i10-index: 14



Dr Rowshon is an Irrigation & Water Resources Engineer who obtained a B.Sc. Agricultural Engineering Degree in 1996 (**Major: Irrigation and Water Management**) from Bangladesh Agricultural University (BAU). He secured the Best Student Award, University Prize, University Grant Commission Scholarship (UGCS) for his achievement in B.Sc. Agril. Engineering program. Then he completed **MS Irrigation Engineering** in 2001 and **PhD Smart Farming Technology (Field of Study: Irrigation and Water Resources)** in 2006 from Universiti Putra Malaysia (UPM). He worked as a fellow researcher at Hydrology and Water Resources Laboratory, NIRE Japan (June 2006-March 2007). He then served nine months with Malaysia's leading Stormwater Management Consultants Company. He began post-doctoral research at Universiti Putra Malaysia (UPM) and worked for two-and-a-half years. Later, he joined as a senior lecturer in the field of Water Resources Engineering under the School of Civil Engineering of the University of East London (UEL) program (**Franchise B.Eng. Civil Engineering Program of UEL**) at the Linton University College in Malaysia. In April 2012, he joined as a Senior Lecturer in Irrigation and Water Resources under the Department of Biological and Agricultural Engineering at UPM. As a project leader and supervisor, he secured **11 competitive research grants** in which 1 from MOSTI-eScience, 2 FRGS (MOHE) and 8 Putra Grants and produced **14 postgraduate students (9 Ph.D. and 5 MS)** as well as **24 Final Year Project Students** at UPM. He organized department's seminars during 2012-2017 and now, coordinator for postgraduate students in the department. For the last eight consecutive years (2012-2019), he consistently maintains the **KPI (Key Performance Index)** of **95%** and received the University's Excellent Service Recognition.

He is currently serving as a contract Senior Lecturer in the field of Irrigation and Water Resources Engineering under the Department of Agricultural Engineering, UPM. Since 2012, he taught several core courses assigned by the department, namely: for the undergraduate level; **EAB3303** Hydrology, **EAB3304** Hydraulics, **EAB3316** Irrigation and Drainage Engineering, **EAB4304** Soil and Water Conservation Engineering, **EAB4308** Water Quality, **EAB3206** Biosystems Environment, **ECC3011** Engineering Math I and **ECC3012** Engineering Math II. At the postgraduate level; **EAB4220** Soil Water Plant Relationship, **EAB5300** Agricultural Water Management, **EAB5308** Pressurized Irrigation Systems; **EAB5314** Soil Erosion and Control; **EAB5304** Hydraulic Engineering Systems, **EAB5302** Water Resources Systems. His expertise extends to the broad areas of Irrigation & water resources engineering, Modelling and simulation of irrigation & water resources systems, Simulation of crop growth models, Quantification of solutes through agricultural system and Development of GIS-based DSS & Climate-smart DSS for adaptive strategies to ensure Climate Smart Agriculture and food security in a changing climate.

Dr Rowshon is a lead specialist in Irrigation Engineering at UPM since 2015, focusing on a broad spectrum of Irrigation and water resources management for improved performance of irrigation systems, Conjunctive water management, Modeling solute transport through agricultural systems, Crop Growth modelling and simulation, DSS development for Irrigation Management Information System (IMIS) and Climate-smart DSS for the analysis of the impacts of climate change. His recent research contributions include the development of Climate-smart DSS for stochastic weather generator in the impacts of climate change for the assessment of their risks and adaptation to new realities of climate. The eScience project from MOSTI studied to quantify the pollutants load from the paddy production system to river and groundwater systems.

He has acquired adequate knowledge and skills in various aspects of the Planning and Design of Irrigation Systems, Water Resources Management, through higher education and various academic activities in his life. He regularly publishes research papers in peer-reviewed Journals. He also contributed core design Chapters of **DID Manual, Volume 5: Irrigation and Agricultural Drainage Manual under the Ministry of Agriculture (MOA), the Government of Malaysia**. His areas of professional consultancy include the Irrigation project and the Impact assessment of irrigation and water resources projects.

His teaching philosophy is "**Producing industry-oriented graduates, creativity and innovative thinking**" as he believes that this produces individuals who are competent for industry and society. By possessing a robust theoretical background about the core courses allows me not only the substantial support in teaching and research but also aids in facilitating students to make connections in the real-world applications. He is committed to active engagement in teaching and research to ensure the best management practices in Agricultural Hydrology and Irrigation & Water Resources Systems Engineering. His expertise in teaching, consulting and field-based research activities have strengthened its ability and confidence to meet national and international challenges in this field. Therefore, he is delighted to present the academic credentials to an esteemed institution to serve as a competent and skilled professional and contribute significantly to promoting UPM.

I. PERSONAL DETAILS

Full Name	MD ROWSHON KAMAL		Title: Engr. Ts. Dr
Citizenship	BANGLADESH	Religion Islam	Gender: Male
Current Position	Associate Professor	Date of Birth	30 July 1971
Marital Status and Children	Married with two daughters		

Residence Address	Office Address	E-mail and URL
B-6-7 Mutiar residence Jalan Raya 4 Taman Sri Serdang 43300 Seri Kembangan Selangor DE MALAYSIA H/P: +6012 662 7589	Department of Biological and Agricultural Engineering Faculty of Engineering Universiti Putra Malaysia 43400 UPM Serdang Selangor, MALAYSIA Tel: +603-9769 4339 Fax: +603-9769 6425	E-mail: rowshon@upm.edu.my H/P: +6 012 662 7589 Alternative email: rowshon@yahoo.com Researchgate: 28.08 https://www.researchgate.net/profile/M_Rowshon Google Scholar https://scholar.google.com/citations?user=wQPv4YgAAAJ&hl=en

II. ACADEMIC QUALIFICATION

Name Certificate / Qualification obtained	(Name of School / Institution	Year obtained	Area of Specialization
PhD	Universiti Putra Malaysia	2006	Irrigation and Water Resources
MS	Universiti Putra Malaysia	2000	Irrigation Engineering
B.Sc. Agril. Engg. (4 yrs)	Bangladesh Agricultural University (BAU)	1996	Irrigation Engineering

III. LANGUAGE PROFICIENCY

Language	Poor (1)	Moderate (2)	Good (3)	Very good (4)	Excellent (5)
English				√	
Arabic	√				
Bahasa Melayu		√			
Bengali					√

IV. RESEARCH INTEREST AND EXPERTISE

Research Clusters	Areas of Expertise
Irrigation and Water Resources, Modeling and Simulation of Agro-hydrological Systems, Groundwater Modeling, Climate Change Impacts Studies in Water Resources and Agriculture (Climate-smart Agriculture), GIS	Irrigation & Drainage Engineering, Pressurized Irrigation Systems, Hydraulic Engineering Systems, Groundwater, Hydrology & Water Resources Engineering, Irrigation and Hydraulic Structures, GIS Modeling (SDSS), Climate-smart DSS for Water & Food Security and Big Data Applications in Water and Agriculture.

Summary of Research, Publication, Supervision Data and Courses Taught- UPM

Academic Position : Associate Professor

Name : Md Rowshon Kamal

Faculty/Organization : Faculty of Engineering, Universiti Putra Malaysia

Field of Research : Hydraulics, Hydrology, Irrigation and Water Resources, Groundwater, GIS and Climate Change Impacts

H-INDEX	Research Grant (Numbers)		Journal Publication (Numbers)			Other Publications (Numbers)					Supervision of Students (Numbers)					
	Head Research Grant	Member Research Grant	CITED JOURNALS	NON-CITED JOURNALS	Book	Chapters in Book	MODULE/ MONOGRAPH	PROCEEDINGS	Presenting Papers in International Conference	CONSULTANCY	PHD			MASTER		
11	11 Completed 9	4	55	4	2	2	Nil	3	18	5	Chairman	Graduated	9	Chairman	Graduated	5
												ON-GOING	5		ON-GOING	2
											Member	Graduated	4	Member	Graduated	2
												ON-GOING	4		ON-GOING	3

Courses Taught at Universiti Putra Malaysia: Taught more than 90 credit hours till now since April 2012

Undergraduate Level: **ECC3011** Engineering Math I; **ECC3012** Engineering Math II; **EAB3303** Hydrology; **EAB3304** Hydraulics; **EAB3316** Irrigation and Drainage Engineering; **EAB4308** Soil and Erosion Control; **EAB4308** Water Quality and **EAB3306** Biosystems Environment

Postgraduate Level: **EAB4220** Soil Water Plant Relationship; **EAB5300** Agricultural Water Management; **EAB5308** Pressurized Irrigation Systems; **EAB5314** Soil Erosion and Control; **EAB5304** Hydraulic Engineering Systems; **EAB5302** Water Resources Systems

V. APPOINTMENTS		
No.	Position	Duration
1.	Senior Lecturer, Department of Biological and Agricultural Engineering, Faculty of Engineering, Universiti Putra Malaysia	30 April 2012 to 29 April 2020
2.	Senior Lecturer, Department of Civil Engineering (Franchise Degree of University of East London), Linton University College , Negeri Sembilan, Malaysia.	June 2010 to April 2012
3.	Postdoctoral Researcher, Universiti Putra Malaysia	November 2007 to May 2010
4.	Research Fellow, Hydrology and Water Resources Laboratory, National Institute of Rural Engineering (NIRE), Tsukuba, Japan	June 2006 to April 2007

VI. PROFESSIONAL QUALIFICATION/MEMBERSHIP/AFFILIATION	
1.	Member, Board of Engineers Malaysia (BEM), Agricultural Engineering; No: T26258L (21 March 2019)
2.	Member, Institute of Engineers of Bangladesh (IEB), Agricultural Engineering, 2003
3.	Member, Society for Economic and Environmental Development (SEED), Bangladesh, 2003
4.	Member, MANCID (Malaysian National Committee on Irrigation and Drainage), 2010
5.	Member, ASABE (American Society of Agricultural Engineering), 2012
6.	Member, MSAE (Malaysian Society of Agricultural Engineering), 2014

VII. RESEARCH PROJECTS (Awarded 9 Projects)					
Project No.	Project Title	Role	Year	Source of fund	Status
FRGS 2019 5540207	Climate-smart DSS (CSDSS): A New Robust Downscaling Approach for Use in Climate-smart Agriculture (CSA) Practices and Climate Change Studies	Project Leader	Sep 2019 to Aug 2021	FRGS 92,600	On-going
GP-Berimpek 9678600	Modelling Climate-smart DSS for Assessing the Risk of Climate Change on Rice Production (Water & Food Security) in Malaysia	Project Leader	Jul 2019 to Jun 2021	PutraGrant 100,000	On-Going
GP-IPS 2017 9557200	Development of Solute Transport Model for Maize Production in Tropical Climate	Project Leader	2017-2019	PutraGrant 20 K	Completed
GP-IPS-2017 9592000	Development of Climate-Smart Irrigation Scheduling for IADA KETARA Irrigation Scheme	Project Leader	2018-2019	PutraGrant 20 K	Completed
GP-IPS-2017 9524800	Modelling Fertilizers Losses in Paddy Field using 2D Solutes Transport Model	Project Leader	2017-2018	PutraGrant 20 K	Completed
GP-IBT 2013 (9406300)	Development and Application of Climate-smart DSS for On-farm Real-time Irrigation Scheduling and Water Allocation Strategies in paddy.	Project Leader	2013-2015	PutraGrant 98 K	Completed
FRGS 2014 (5524362)	Dry Spells Analysis for Water Shortage and Allocation Scenarios for Paddy with Climate Change.	Project Leader	2014-2016	FRGS 81 K	Completed
GP-IPS 2013 9399805	Impacts of Soil Compaction on Emitter Discharges in Sub-Surface Drip Irrigation System	Project Leader	2013-2014	PutraGrant 12 K	Completed
SF2026 (5450774)	Modelling Optimum Fertilizer Use and Drainage Water Reuse from Two-Dimensional Water Flow and Solute Transport in Rice Production System	Project Leader	2015-2017	eScience 174 K	Completed
GP-IBT-2013	Development and Application of Robust Self Shut-off Semi-solid Sprinklers System for	Project Leader	2013-2016	PutraGrant 144 K	Completed

(9411100)	Improving Irrigation Performance				
GP-IPS-2015 (9446200)	Ensemble Statistical Downscaling of GCM Simulations for Impact Assessment on Irrigation Supply	Project Leader	2015-2017	PutraGrant 11 K	Completed
0942-RU (91487)	Development of a Geospatial Irrigation Water Management System Integrated with Radar-Derived Rainfall for Rice Granary	Member	2012	RUGS	Completed
GP-IPS 2015 9447700	Modelling of Soil Wetting Patterns under Drip Irrigation in Layered Soil Using Magnetized Water.	Member	2015-2016	PutraGrant	Completed
GP-IPS 2015 9452100	Development of a Method to Estimate Rainfall Depth from Doppler Weather Radar Data for Flood Early Warning	Member	2015-2017	PutraGrant	Completed
UM Grant RU001-2017B	Development of a Multi-criteria Decision Support System (for Drought and flood Management in Malaysia using Novel Approaches.	Member	2017-2020	UM Grant	On-Going
VIII. PUBLICATION (<i>List of publications – author (s), title, journal, volume, page and year published</i>)					Type
a. Journal					Index/IF
55	Habibu, I., Rowshon M.K. , Fikri, A.A., Deepak, T.J.. and Lai, S.H. (2020). Modelling Future Streamflow for Adaptive Water Allocation under Climate Change for Tanjung Karang Rice Irrigation Scheme Malaysia. Applied Sciences , 2020, 10-4885. doi:10.3390/app10144885				Q2 2.47
54	Habibu, I., Rowshon M.K. , Fikri, A., Lai, S.H. (2020). <i>Performance of Hydrological Models for Assessing Climate Change Impacts on Streamflow</i> . Pertanika Journal of Science and Teknologi , Vol. 28(3): Accepted.				Q4
53	Habibu, I., Rowshon M.K. , Fikri, A., Mohd M.S.F. (2020) Climate-Smart Agro-Hydrological Model for a Large-scale Rice Irrigation Scheme in Malaysia. Applied Sciences , 2020, 10, 3906; doi:10.3390/app10113906				Q2 2.47
52	Pavitra K., Lai S.H., Wong J.K., Nuruol M., Rowshon M.K. , Haitham A.A., Ali N.A., Mohsen S., Ahmed S. El-Shafie, A. (2020). Analysis and Prediction of Rivers' Nitrogen Compound Status Worldwide Utilizing Artificial Intelligence Model: State-of-the-Art. <i>Sustainability</i> , 12:4359, 1-24. doi:10.3390/su12114359				Q2 2.576
51	Iqbal, M.; Rowshon, M.K. ; M., M.F.; Che Man, H.; et al. (2020). HYDRUS-1D Simulation of Nitrogen Dynamics in Rainfed Sweet Corn Production. Applied Sciences . 2020, 10, 3925; doi:10.3390/app10113925				Q1 2.47
50	Adib, M.N.M., Rowshon M.K. , M.A. Mojid, Habibu, I. (2020) Projected Streamflow in the Kurau River Basin of Western Malaysia under Future Climate Scenarios. <i>Scientific Report</i> , 10: 8336, 1-15. https://doi.org/10.1038/s41598-020-65114-w				Q1 4.12
49	Iqbal, M.; Rowshon, M.K. ; M., M.F.; Che Man, H.; Wayayok, A. (2020). HYDRUS-1D Simulation of Soil Water Dynamics for Sweet Corn under Tropical Rainfed Condition. Appl. Sciences . 2020, 10, 1219. Doi: https://doi.org/10.3390/app10041219 .				Q1 2.47
48	Kenneth I.O., Rowshon, M.K. , Hasfalina C.M. (2020). Advances in the utilization of wastewater in agricultural practice: A Technical Note. <i>Irrigation and Drainage</i> . Accepted in November 2019. Vol 69(1), 149-163. https://doi.org/10.1002/ird.2384				Q2 1.027
47	Husam H.A*, Christopher T.B. S., Ali H.A., Rowshon M.K. , and Roslan I. (2020). Optimization of Silt Pit Dimensions and the Water Supply Period in Oil Palm Plantation by Artificial Neural Network Estimation. <i>Environment Asia</i> , 13(1), 53-66 Doi: 10.14456/ea.2020.5				Q3

46	Rowshon M.K. , N.S. Dlamini, N.S., M.A. Mojid, M.N.M. Adib, M.S.M. Amin, and S.H. Lai. (2019). Modeling climate-smart decision support system (CSDSS) for analyzing water demand of a large-scale rice irrigation scheme. <i>Agricultural Water Management</i> , Vol. 216: 138-152. Doi: https://doi.org/10.1016/j.agwat.2019.01.002	Q1 3.542
44	Jing, L.N., Aziz, S.A., Feng, H.Y., Majid, M., Aimrun, W., and Rowshon, M.K. (2019). Uncertainty analysis of rainfall depth duration frequency curves using the bootstrap resampling technique. <i>J. Earth Syst. Sci.</i> (2019)128: 113. Doi: https://doi.org/10.1007/s12040-019-1154-1	Q2 1.104
44	Rowshon, M.K. , Hadi, H.M., Mojid, M.A., Anlauf, R. and Amin, M.S.M. (2019). Two-dimensional modeling of water distribution under capillary wick irrigation system". <i>Pertanika Journal of Science and Technology. Pertanika J. Sci. & Technol.</i> 27 (1): 205 - 223.	Q4 0.121
43	Galavi, H., Rowshon, M.K. , Mirzaei, M. et al. (2019) Assessing the contribution of different uncertainty sources in streamflow projections. <i>Theoretical Applied Climatology</i> , 137: 1389-1303. https://doi.org/10.1007/s00704-018-2669-0	Q2 2.720
42	Rowshon M. K. , Iqbal M, Mojid M A, Amin M S M, Lai S H. (2018). Optimization of equitable irrigation water delivery for a large-scale rice irrigation scheme. <i>Int J Agric & Biol Eng.</i> , 2018; 11(5): 160–166. DOI: 10.25165/ij.ijabe.20181105.3536	Q2 1.007
41	Abdikani Abdullahi Mo'allim, M.K. Rowshon , H.A. Hadi, M.S.M. Amin, M. A. M. Zawawi, C.M. Hasfalina and W. Aimrun (2018). Assessment of Nutrient leaching in Flooded Paddy Rice Field Experiment Using Hydrus-1D. <i>Water</i> , 10, 785; doi:10.3390/w10060785	Q2 2.524
40	Abdikani Abdullahi Mo'allim, M.K. Rowshon , H.A. Hadi, N.K.E.M. Yahaya, M. A. M. Zawawi, C.M. Hasfalina and W. Aimrun (2018). An Assessment of the Vertical Movement of Water in a Flooded Paddy Rice Field Experiment Using Hydrus-1D. <i>Water</i> , 10, 783; Doi:10.3390/w10050783 .	Q2 2.524
39	Jing Lin Ng, Samsuzana Abd Aziz, Yuk Feng Huang, Aimrun Wayayok, Rowshon M.K. (2018). Generation of a stochastic precipitation model for the tropical climate. <i>Theoretical and Applied Climatology</i> , 1-31. Doi: 10.1007/s00704-017-2202-x	Q1 2.64
38	Jing Lin Ng, Samsuzana Abd Aziz, Yuk Feng Huang, Aimrun Wayayok, Rowshon M.K. (2017). Analysis of annual Maximum rainfall in Kelantan. <i>Acta horticulturae Journal</i> 1152. Doi: 10.17660/ActaHortic.2017.1152.2	Q4 0.20
37	Dlamini N.S., Rowshon M.K. , Amin, M.S.M., Mohd M.S.F., Fikri, A., and Lai S.H. (2017). Modeling Potential Impacts of Climate Change on Streamflow Using Projections of the 5th Assessment Report for the Bernam River Basin, Malaysia. <i>Water</i> 9(3): 226. Doi: 10.3390/w9030226	Q2 2.524
36	Bashir, A.U., Rowshon M.K. , Dibal, J.M. and Kawuyo, U.A. (2017). Evaluation of suitability of tube well water for irrigation in Maiduguri Metropolitan, Borno State, Nigeria. <i>African Journal of Agricultural Research</i> , vol. 12(30): 2452-2460. Doi: 10.5897/AJAR2017.12533	Q3 0.24
35	Al-Ogaidi, A.A.M., Wayayok, A., Rowshon M.K. , and Abdullah, A.F. (2017). Influence of magnetized on soil water dynamics under drip irrigation systems. <i>Water. Agricultural Water Management</i> , 188: 70-77. Doi. org/10.1016/j.agwat.2016.11.001	Q1 3.542
34	Dlamini, N.S., Rowshon, M.K. , A. Fikri, S.H. Lai, and M.S.F. Mohd (2017). Modelling the Streamflow of a river basin using enhanced hydro-meteorological data in Malaysia. <i>Acta horticulturae Journal</i> . 1152. Doi:10.17660/ActaHortic.2017.1151.39	Q4 0.20
33	Fadhil, RMS., Rowshon M.K. , A. Desa. A, Fikhri, and W. Aimrun (2017). A stochastic Rainfall Generator Model for Simulation of Daily Rainfall events in Kurau Catchment: Model Testing. <i>Acta horticulturae Journal</i> ,1152. Doi:10.17660/ActaHortic.2017.1151.1	Q4 0.20

32	Atikah, J.R., Rowshon, M.K. , Dlamini, N.S., and Mohd, M.S.F. (2017). Simulation of Streamflow for Sungai Ketil catchment using SWAT model. Journal of Advanced Research Design , 28(1): 12-20.	Non-CIJ
31	Al-Ogaidi, A.A.M., Wayayok, A., Rowshon M.K. , and Abdullah, A.F. (2016). Modelling Soil Wetting Patterns under Drip Irrigation Using Hydrus3D and Comparison with Empirical Models. Global J. of Engineering and Technology Review . 1 (1) 17 – 25 (2016)	Q4
30	Abdikani, A.M. and Rowshon, M.K. (2016). Methods of Reducing the Fate and Transport of Nutrients from Agricultural Fields. Asian Journal of Applied Science , 4(5): 1186-1197.	Q4
29	Bala, A.K., Ahsan, A., Bari, K and Rowshon M.K. (2016). Chemical Characteristics of Native Soil in Shrimp Gher and Agricultural Land. Engineering Journal , 20(2): 1-15. Doi: 10.4186/ej.2016.20.2.1	Q2 0.79
28	Al-Ogaidi, A.A.M., Wayayok, A., Rowshon M.K. , and Abdullah, A.F. (2016). A Wetting patterns estimation under drip irrigation systems using an enhanced empirical model. Agricultural Water Management , 176: 203–213. Doi: https://doi.org/10.1016/j.agwat.2016.06.002	Q1 3.542
27	Abdikani, A.M. and Rowshon, M.K. , and Aimrun, W. (2016). Utilization of Global Circulation Models for Climate Change Impacts Assessments on Agricultural Water and Crop Production: A Review. <i>Asian Journal of Applied Science</i> , 4(2): 226-240.	Q4
26	Jing Lin Ng, Samsuzana Abd Aziz, Yuk Feng Huang, Aimrun Wayayok, Rowshon M.K. (2017). Stochastic modelling of seasonal and yearly rainfalls with low-frequency variability. Stochastic Environment Research and Risk Assessment , 31(9):1-19. Doi:10.1007/s00477-016-1373-9	Q1/Q2 2.63
25	Dlamini N.S., Rowshon M.K. , Ujjwal Saha, Fikri, A., Lai, S.H. and Mohd M.S.F. (2015). Developing and Calibrating a Stochastic Rainfall Generator Model for Simulating Daily Rainfall by Markov Chain Approach. Jurnal Teknologi , 76(15): 13–19. Doi: http://dx.doi.org/10.11113/jt.v76.5946	Q2 0.46
24	Dlamini N.S., Rowshon M.K. , Fikri, A., Lai, S.H., Fikri, A. and Zubaidi, J. (2015). Simulation of Future Daily Rainfall Scenario using Stochastic Rainfall Generator for a Rice-Growing Irrigation Scheme in Malaysia. <i>Asian Journal of Applied Science</i> , 3(5): 492–506. http://www.ajouronline.com/index.php/AJAS/article/view/3183/1695	Q4
23	Al-Ogaidi, A.A.M., Wayayok, A., Rowshon M.K. , and Abdullah, A.F. (2015). A Modified Empirical Model for Estimating the Wetted Zone Dimensions under Drip Irrigation. Jurnal Teknologi , 76(15): 69–73. Doi: http://dx.doi.org/10.11113/jt.v76.5954	Q2 0.46
22	Jing, L.N., Aziz, S.A., Feng, H.Y., Wayayok, A., and Rowshon, M.K. (2015). Homogeneity Analysis of Rainfall in Kelantan, Malaysia. Jurnal Teknologi , 76(15): 1–6. Doi: http://dx.doi.org/10.11113/jt.v76.5944	Q2 0.46
21	Ahsan, M., Alamgir, M., Imteaz, M., Shams, S., Rowshon, M.K. , Aziz, M.G., Idrus, S. (2015). Municipal Solid Waste Generation, Composition and Management: Issues and Challenges. A Case Study. Environmental Protection Engineering , 41(3), 43-59. Doi: 10.5277/epel50304	Q4 0.616
20	Rowshon, M.K. , Mojid, M.A., Amin, M.S.M., Yazid, M. and Azwan, M.Z. (2014). Improving Irrigation Water Delivery Performance of a Large-Scale Rice Irrigation Scheme. Irrigation and Drainage Engineering , American Society of Civil Engineering (ASCE), 140(8): 04014027-1-13. Doi:10.1061/(ASCE)IR.1943-4774.0000747	Q2 1.98

19	Rowshon M.K. , Amin M.S.M., Mojid, M.A. and Yaji, M. (2014). Estimated Evapotranspiration of Ric-based on Pan Evaporation as a Surrogate to Lysimeter Measurement. <i>Paddy and Water Environment</i> , 12(1): 35-41. Doi: 10.1007/s10333-013-0356-4	Q1/Q2 1.264
18	Rowshon, M.K. , Mbaruk M.M., Marriott, M.J., Amin, M.S.M. Ahsan A. and Loh, E.W.K. (2014). Geospatial Water Quality Assessment System for the Sungai Buloh River Basin in Malaysia. <i>Int. Journal of Water</i> . 8(4): 401-421. Doi: 10.1504/IJW.2014.065795	Q3 0.25
17	Bala, B.K., Arshad, F.M., Alias, E.F., Sidique, S.F., Noh, Rowshon, M.K. , Islam, Q.M.M. and Islam, M.M. (2014). Sustainable Exploitation of Hilsa Fish (<i>Tenulosailisha</i>) Population in Bangladesh: Modeling and Policy Implications. <i>Ecological Modelling</i> . 283(1): 19-30. Doi: 10.1016/j.ecolmodel.2014.03.013	Q1 2.36
16	Ahsan, A., Syuhada, N., Jolhi, E., Darain, K.M., Rowshon, M.K. , Jakariya, M., Shafie, S. and Ghazali, A.H. (2014). Assessment of Distillate Water Quality Parameters Produced by Solar Still for Potable Usage. <i>Fresenius Environmental Bulletin</i> , 23(3):859-866. ISSN: 10184619	Q3 0.34
15	Ahsan, A., Alamgir, M., El-Sergany, M.M., Shams, S., Rowshon, M.K. and Nik Daud, N.N. (2014). Assessment of Municipal Solid Waste Management System in a Developing Country. <i>Chinese Journal of Engineering</i> , (2014): 1-11. Doi: 10.1155/2014/561935	Q3
14	Maina, M.M, Amin M.S.M, Rowshon, M.K. , Aimrun, W., Abd Aziz, S. and Yazid, M. (2014). Effects of Crop Evapotranspiration Estimation Techniques and Weather Parameters on Rice Crop Water Requirement. <i>Australian Journal of Crop Science</i> , 8(4): 495-501. https://www.highbeam.com/doc/1P3-3330546181.html	Q3 0.32
13	Maina, M.M., Amin, M.S.M., Rowshon, M.K. , Aimrun, W., Abd Aziz, S. and M. Yazid (2014). The Water Balance Model and Shallow Water Table Contribution in Irrigated Lowland Rice in Tanjung Karang Irrigation Scheme in Malaysia. <i>Philipp Agric. Scientist</i> . 97(3): 252-256. http://www.pas-uplbca.edu.ph/article.php?id=446	Q3
12	Hasan, A.A.M., Bala, B.K. and Rowshon, M.K. (2014). Thin layer drying of hybrid rice seed. <i>Engineering in Agriculture, Environment and Food</i> , 7(4): 169–175. Doi: org/10.1016/j.eaef.2014.06.002	Q3
11	Rowshon, M.K. , Amin M.S.M. and Shariff A.R.M. (2012). Geospatial Water Productivity Index (WPI) for Rice. <i>Pertanika J. of Science & Technology</i> . 20(2):381–399.	Q4 0.21
10	Rowshon, M.K. , Amin, M.S.M., and Shariff, A.R.M. (2011). GIS User-Interface Based Irrigation Delivery Performance Assessment: A Case Study for Tanjung Karang Rice Irrigation Scheme in Malaysia. <i>Irrigation and Drainage Systems</i> , 25(1): 97-120. Doi: 10.1007/s10795-011-9115-0	Q2 0.91
9	Deepak, T.J., Amin M.S.M., Shariff A.R.M., Ramely M., Rowshon M.K. , and Anusuiya, S. (2011). Web-based Participatory Irrigation Management for Tanjung Karang Irrigation Scheme. <i>Journal of Soil and Water Sciences</i> , Vol. 4 (3): 33-47. https://doi.org/10.31142/ijtsrd19111	Non-cited
8	Rowshon, M.K. and Amin, M.S.M. (2010). GIS-based Irrigation Water Management for Precision Farming of Rice. <i>International Journal of Agricultural & Biological Engineering</i> , 3(3): 27-35. Doi: 10.3965/j.issn.1934-6344.2010.01.027-035	Q2 0.852
7	Rowshon, M.K. , Amin, M.S.M., Lee, T.S., and Shariff, A.R.M. (2009). GIS-integrated Rice Irrigation Management System for a River-fed Scheme. <i>Water Resources Management</i> . 23 (14): 2841-2866. Doi: 10.1007/s11269-009-9412-7	Q1 2.987

6	Rowshon, M.K. , Amin, M.S.M., Hassan, S.M.H., Shariff, A.R.M., and Lee, T.S. (2006). New Performance Indicators for Rice-based Irrigation Systems. <i>Paddy and Water Environment</i> , 4(2):71-79. Doi: 10.1007/s10333-006-0034-x	Q2 0.92
5	Rowshon, M.K. , Amin, M.S.M., Shariff, A.R.M. and Lee, T.S. (2004). Ponding Water Index (PWI): A Methodology for Monitoring Daily Irrigation Supply for Rice. <i>Applied Irrigation Science</i> , 39(2):283-292.	Non-cited
4	Rowshon, M.K. , Kowk, C.Y. and Lee, T.S. (2003). GIS-Based Scheduling and Monitoring of Irrigation Delivery for Rice Irrigation System - Part I: Scheduling. <i>Agricultural Water Management</i> , 62(2): 105-116. Doi:10.1016/S0378-3774(03)00092-1	Q1 3.542
3	Rowshon, M.K. , Kwok, C.Y. and Lee, T.S. (2003). GIS-Based Scheduling and Monitoring of Irrigation Delivery for Rice Irrigation System- Part II: Monitoring. <i>Agricultural Water Management</i> , 62(2):117-126. Doi:10.1016/S0378-3774(03)00093-3	Q1 3.542
2	Rowshon, M.K. , Amin, M.S.M., Sarwar, M.J. and Deepak, T.J. (2003). Monitoring Irrigation Delivery Performance for Precision Farming of Rice. <i>Applied Irrigation Science</i> , 38, 57-67.	Non-cited
1	Rowshon, M.K. , Kwok, C.Y. and Lee, T.S. (2002). Development of a GIS-Based Water Management Tool for a Large-scale Rice Irrigation Scheme. <i>Pertanika J. Science & Technology</i> , 10(2), 209-227.	Q4 0.21

b. Books and Chapters

Books	<ol style="list-style-type: none"> 1. Modeling of Wick Irrigation System. LAMBERT Academic Publishing. 2015, 141 pp Authors: Hadi Hama Aziz and Md Rowshon Kamal ISBN: 3659908622 2. Impacts of Soil Compaction in Subsurface Drip Irrigation Systems. LAMBERT Academic Publishing 2016, 209 pp. Authors: Md Rowshon Kamal, Mohammed Isa, Hadi Hama Aziz ISBN: 3659945951
Chapters in Book	<ol style="list-style-type: none"> 1. Amin, M.S.M., Rowshon, M.K., and Aimrun, W. (2011). Paddy Water Management for Precision Farming of Rice, Current Issues of Water Management, UliUhlig (Ed.), InTech Publication. DOI: 10.5772/28883 · Source: InTech 2. DID Manual, Volume V: Irrigation and Agricultural Drainage, Department of Irrigation and Drainage (Jabatan Pengairan Dan Saliran), Ministry of Agriculture (MOA), The Government of Malaysia. 1171 Pages. Year of Publication: 2009 Chapter 1: Malaysian Perspective, Pages: 1-1 to 1-15 Mohd Amin Mohd Soom and Md Rowshon Kamal Chapter 3: Systems and Technology, Pages: 3-1 to 3-55 Md Rowshon Kamal Chapter 4: Planning Process, Pages: 4-1 to 4-26 Mohd Amin Mohd Soom and Md Rowshon Kamal Chapter 5: Water Demand Estimation, Pages: 5-1 to 1-32 Md Rowshon Kamal Chapter 7: Computer Applications, Pages: 7-1 to 1-21 Md Rowshon Kamal Chapter 8: Water Intake Facilities, Pages: 81 to 8-53 Md Rowshon Kamal Chapter 11: Microirrigation Systems, Pages: 11-1 to 11-99 Md Rowshon Kamal Chapter 12: Sprinkler Irrigation Systems, Pages: 12-1 to 12-46

	<p>Md Rowshon Kamal Chapter 14: Subsurface Agricultural Drainage Systems, Pages: 14-1 to 14-15 Md Rowshon Kamal</p>
	<p>3. Smart Technology for Paddy Cultivation (In Press) Chapter 1: Geospatial Decision Support System (SDSS) for Rice Irrigation Management</p> <p>Chapter 2: Climate-smart Decision Support System (CDSS): A Robust Approach for Analysing the Risk of Climate Change in Rice Cultivation.</p> <p>Chapter 3: ArcGIS Based Geospatial Water Productivity Index (WPI) for Rice Production System</p> <p>Chapter 4: Nutrient Leaching in Flooded Paddy Field Experiment Using Hydrus-1D</p>

c. International Conferences and Workshops

1. **Rowshon, M.K.** and M.N.M. Adib (2020). CSDSS: A Climate-smart Decision Support System for Assessing Agricultural Water Management under Future Climate Change. National Colloquium for Water Resources Research and Development organized by National Hydraulic Research Institute (NAHRIM), Malaysia dated on 27-28 February 2020. **[Invited Speaker]**.
2. **Rowshon M.K.**, Dlamini N.S and Amin, M.S.M. (2018). Climate-smart Decision Support System for Irrigation and Water Management. The 22th MANCID Annual Conference (MANCO) with the theme of "Innovative and Sustainable Agri-water Management: Adapting to a Variable and Changing Climate. The 23 – 24th April 2018 at Kangar, Perlis, Malaysia **[Invited Speaker]**.
3. **Rowshon M.K.** (2018). Climate-smart Decision Support System for Big Data Applications in Irrigation and Water Management. The Final Workshop of the First Phase and the Second Technical Workshop of the Second Phase of the Southeast Asia Regional Climate Downscaling (SEACLIID)/CORDEX Southeast Asia Project. Launching Ceremony of The Southeast Asia Regional Climate Change Information System (SARCCIS). The 7 – 9th May 2018 at Universiti Kebangsaan Malaysia **[Invited Speaker]**.
4. **Rowshon M.K.** and Dlamini N.S (2017). Climate-smart Decision Support System for Adaptive Strategies to the Climate Change Impacts/Climate-smart Agriculture. The paper presented in the International Conference on Big Data Applications in Agriculture (ICBAA2017) held on 5-6 December 2017 at Universiti Putra Malaysia **[Speaker]**
5. **Rowshon M.K.**, Dlamini N.S and Amin, M.S.M. (2017). Climate-smart Decision Support System for Irrigation and Water Resources Management in Rice Production. The 37th International Association of Hydraulic Research, IAHR World Congress in Kuala Lumpur from 13 August to 18 August 2017 **[Speaker]**.
6. **Rowshon M.K.**, Dlamini N.S and Amin, M.S.M. (2016). Development of climate-smart Decision Support System for Water Allocation at Paddy Dominant Agro-hydrological Watershed. The 21th MANCID Annual Conference (MANCO) with the theme of "Modernizing Irrigation and Drainage for a Green Revolution. The 9 – 11th October 2016 at Kuala Terengganu, Malaysia **[Invited Speaker]**.
7. **Rowshon M.K.**, Dlamini N.S and Amin, M.S.M. (2015). Climate-Smart Rainfall Generator for Simulation of Daily Rainfall Scenario for Rice Irrigation Scheme in Malaysia. The 20th MANCID Annual Conference (MANCO) with the theme of "WATER MANAGEMENT IN A CHANGING WORLD. The 4 - 6 October 2015 at Resort World Langkawi, Malaysia **[Invited Speaker]**.
8. Wan, M.W.N. and **Rowshon, M.K.** (2014). Water Security for Smallholder Irrigation Systems. MANCID Annual Meeting and Conference, 12-14 October 2014, held at Grand Paragon Hotel, Johor Bahru, Malaysia **[Invited Speaker]**.
9. Hadi, H.A. and **Rowshon, M.K.** (2015). Hydraulic Characteristics of Capillary Wick Irrigation System. The 7th International Conference on Sustainable Agriculture for Food, Energy and Industry in Regional and Global Context, 7th ICSAFEI2015 held at the Universiti Putra Malaysia from 25 to 27 August 2015.
10. Dlamini, N.S., **Rowshon, M.K.**, Lai, S.H., Fikri, A. and Ujjwal S. (2015). Developing and Calibrating a stochastic Rainfall Generator Model for Irrigation Scheduling. PAWEES-INWEPF Joint International Conference 19-21, 2015 held at Universiti Putra Malaysia.
11. **Rowshon, M.K.** (2010). Building an International Research Agenda on Doctoral Education. Attended in the international conference and seminars for postgraduate supervisors the 2nd International Doctoral Education Research Network (IDERN) held from 19 – 23 April, 2010 at the Universiti Putra Malaysia (UPM).

12. **Rowshon, M.K.** and Amin, M.S.M. (2012)..Water Quality Pollution Risk Assessment Tool for a River Basin. International Conference on Agricultural and Food Engineering for Life (Cafei2012) held at Putrajaya 26-28 November 2012.
13. **Rowshon, M.K.**, Amin, M.S.M. and Shariff, A.R.M. (2010). Geospatial Water Productivity Index (WPI) for Rice. Proceedings of The World Engineering Congress (WEC 2010) held on 02 – 05 August, 2010, Kuching, Sarawak, Malaysia.
14. Amin, M.S.M., Deepak, T.J. and **Rowshon, M.K.** (2009)..Web-based Paddy Irrigation Productivity Assessment (WEBPIPA). The 5th Asian Regional Conference of ICID, 6-11 December, New Delhi, India.
15. Amin, M.S.M., **Rowshon, M.K.** and Masumoto, T. (2006). Rice Irrigation Management Information System for Tanjung Karang Scheme in Malaysia. The 3rd Asian Regional Conference “Transforming Irrigated Agriculture into an Efficient Engine of Growth” in 57th International Executive Council Meeting of ICID held on 10-16 September, PWTC, Kuala Lumpur, Malaysia.
16. **Rowshon, M.K.**, Amin, M.S.M. and Shariff, A.R.M. (2005). New Performance Indicators and GIS for Monitoring Rice Irrigation Systems. The proceedings of the MTREM International Conference, Asian Institute of Technology, Thailand, pp. 627-635, June 2005.
17. **Rowshon, M.K.** and Amin, M.S.M. (2003). GIS-Based Irrigation Water Management for Precision Farming of Rice. Proceeding Conference of Bio Engineering Advanced Technology Congress 2003. Meeting Challenges in Globalization through Advanced Technology. Putrajaya Marriott Hotel, IOI Resort, Organized by Institute of Advanced Technology, University Putra Malaysia, pp.116-123.
18. **Rowshon, M.K.**, Karim, M.M. and Kwok, C.Y. (2000). GIS Application for Monitoring Groundwater Arsenic Contamination in Bangladesh. The International Symposium by the Int. Association for Hydraulic Engineering & Research (IAHR), 8-10, August, 2000, Japan.
19. Attended in the 2nd International Doctoral Education Research Network (IDERN) held from 19–23 April, 2010 at the Universiti Putra Malaysia (UPM). **Conference Theme:** “Building an International Research Agenda on Doctoral Education”.

**** Not listed all. More than 30 papers presented as speaker and invited speaker.**

IX. TAUGHT COURSES (until Semester 2, 2017/2018)

Course Code	Name	Level	Institute	Semester	Year/ Duration	Credit hours /Course	Total Credits
EAB3304	Hydraulics	B. Eng	UPM	1 st	2018- 2019	3	9
EAB3303	Hydrology	B. Eng	UPM	2 rd	2018- 2019	3	6
EAB3308	Hydraulics and Hydrology	B. Eng	UPM	3 rd	2017	3	3
EAB3306 EAB3316	Irrigation and Drainage Engineering	B. Eng	UPM	6 th	2016- 2019	6	18
EAB4310	Water Quality for Agriculture	B. Eng	UPM	8 th	2017	3	3
ECC3001	Engineering Mathematics I	B. Eng	UPM	1 st	2012- 2016	3	15
ECC3002	Engineering Mathematics II	B. Eng	UPM	2 nd	2014- 2017	4	12
EAB3206	Biosystem Environment	B. Eng	UPM	1 st	2012- 2015	3	9
EAB4308	Soil and Water Conservation Engineering	B. Eng	UPM	8 th	2012- 2017	3	9
EAB4302	Applied Hydrology	B. Eng	UPM	8 th	2009	3	3
EAB4220	Soil Water Plant Relationship	MS	UPM	-	2009	3	3
EAB5300	Agricultural Water Management	MS	UPM	-	2012- 2016	3	6
EAB5308	Pressurized Irrigation	MS	UPM	-	2012-	3	6

	Systems				2017		
EAB5314	Soil Erosion and Control	MS	UPM	-	2012-2017	3	6
EAB5304	Hydraulic Engineering Systems	MS	UPM	-	2015-2016	3	6
EAB5320	Water Resources Systems	MS	UPM	-	2015-2016	3	6
CE3205	Water and Environmental Engineering	Undergraduate	UEL	4 th	2010-2012	3	18
CE3261	Final year Project-Research Methods	Undergraduate	UEL	6 th	2010-2012	3	6
CEM001	Hydraulic Structures, Coastal & River Engineering	MSc	UEL	-	2009	3	3

Note: Master in Water Management (**Bold**)

X. CHAIRMAN OF THE SUPERVISORY COMMITTEE OF CURRENT POSTGRADUATE STUDENTS

a. Supervisor for PhD Students

No.	Name	Title	Status	Institute
1.	Nkululeko S. Dlamini	Modeling Climate-smart DSS for Real-time Optimal Irrigation scheduling and Water Allocation for a Rice Irrigation Scheme.	Graduated August 2017	UPM
2.	Hadi Galavi (GS37541)	Uncertainty analysis of Langat River streamflow projections using impact-based multi-model ensemble approaches	Graduated December 2015	UPM
3.	Ali Umar Bashir	Modeling Effects of Irrigation Methods on the Performance of Maize Cultivars in a Semi-arid Environment.	Graduated Dec 2017	UPM
4.	Rasha Mohd Semi Fadhil	Modeling Hydrologic Uncertainty in Reservoir Storage and Water Management under Climate Change Impacts	Graduated August 2018	UPM
5.	Abdikani Abdullahi Mo'allim	Modeling Optimum Fertilizer Use and Drainage Water Reuse from Two-Dimensional Water Flow and Solute	Graduated October 2018	UPM
6.	Najeeb Mohammed Nagee Alheattar	Modeling Hydrologic Response using Machine Learning for the Impact of the Landuse Changes in Upper Bernam River Basin Bernam River Basin	Graduated September 2019	UPM
7.	Abdus Salam	Climate-smart Crop Growth Model for Rice Productivity under Climate Change Impacts	Writing Thesis in Progress	UPM
8.	Mazhar Iqbal	Development of Solute Transport Model for Maize Production Systems	Completed Viva July 2020	UPM
9.	Habibu Ismail	Climate-smart Agro-hydrological Model for the Assessment of Future Adaptive Water Allocation for Tanjung Karang Rice Irrigation Scheme	Graduated May 2020	UPM
10.	Abdurazag Mustafa	Strategies for Maintaining Sustainable Irrigated Crop Root Zones with Saline-Sodic Water.	Writing Thesis in Progress	UPM
11.	Osamah Al-Hajj Mohammed Hamdan	Development of Sustainability Assessment Model for Climates Change Adaptation on Water Availability	Graduated June 2020	UPM
12.	Ali Seifaddini GS36017	A method to enhance quantification of Rainfall Rate from Doppler Weather Radar Data for Hydrologic Modeling in Guess-sparse region.	Writing Thesis in Progress	UPM
13	Javed Shaheen	Assessing Risks of Climate Variability and Impacts Climate Change on Regional Rice Production in Malaysia	On Going	UPM

X. CHAIRMAN OF THE SUPERVISORY COMMITTEE OF CURRENT POSTGRADUATE STUDENTS**a. Supervisor for PhD Students**

No.	Name	Title	Status	Institute
	GS51749			

b. Supervisor for MS Students

No.	Name	Title	Status	Institute
1.	Fatima Tijjani Aliyu	Flood Frequency Analysis for Gauged River Station in the Bernam River Basin	Completed April 2012	(Franchise Degree of UEL, UK)
2.	Mohammed Bammami Isa	Impacts of Soil Compaction on Emitter Performance in Sub-Surface Drip Irrigation System	Completed May 2015	UPM
3.	Hadi Hama Aziz Muhammed	Modeling of Capillary Wick Irrigation System for Potted Plant and Small-scale Plantation.	Completed September 2015	UPM
4.	Javed Shaheen	Development of Scheduling Wick Irrigation for Greenhouse Crop Production	Completed August 2017	UPM
5.	Mohammad Adib Mohd Nasir	Development of Climate-Smart DSS for Irrigation Water Demands Patterns for Kerian Rice Irrigation Scheme	Completed September 2019	UPM
6.	Atikah Jetty	Development, Calibration and Simulation of SWAT Model for Streamflow at MUDA Basin	On Going	UPM
7.	Odoemena Kenneth Ikanna	Assessment of Coconut Fiber-based Treated Wastewater Irrigation for Bayam Vegetable Plants	Submitted for Viva	UPM

c. MS with Without Thesis (Main Supervisor)

No.	Name	Title	Status
1.	Mohammad Fazli Sardi	Assessment of Landslide Disaster Management Operation and Rescue Operation	Completed 2014
2	Nor Hidayah Mohammad	Rainwater Harvesting System for Use for Urban Agriculture in Malaysia	Completed 2016

XI. MEMBER OF THE SUPERVISORY COMMITTEE OF POSTGRADUATE STUDENTS**a. PhD Students**

No.	Name	Title	Completed	Institute
1.	Maina Mohammed Mamodu	Web Geospatial Water Management Decision Support Systems for Tanjung Karang Rice Irrigation Scheme, Malaysia	April 2014	UPM
2.	Ahmed Ali Mohammed	Modeling Wetting Patterns in Various Soil Profiles under Drip Irrigation System using Plain and Magnetized Water	March 2014	UPM
3.	Jing Lin Ng	Development of a Stochastic Rainfall Generator and its Uncertainty Quantification for the Kelantan River Basin	January 2018	UPM
4.	Talal Ahmad Basheer	Simulation of Dam Breaks for Mosul Dam in Iraq	June 2018	UPM

b. MS Student with Thesis

No.	Name	Title	Completed	Institute
1.	Shazelia Ashikin bt Sulaiman	Utilization of Artificial Aquifer Physical Model to Aid Technical Learning of Groundwater Hydrology	May 2015	UPM

XII. EXTERNAL AND INTERNAL EXAMINER FOR POSTGRADUATE STUDIES (MS AND PHD)

No.	Name	Level	Title	Month/Year
1.	Wan 'Alia Husna bt Wan Abdullah	MS-UM	Impacts of System of Rice Intensification Farming to soil and Water: A Case Study on Marginal Soil	May 2015
2.	Waleed M. Abdulwahid	MS-UPM	Landscape Vulnerability and Risk Assessment for Multi-Hazard Scenarios using Airborne Land Scanning Data (LIDAR)	April 2016
3	Mena Ahmed	PhD UPM	Impacts of Spur Dikes on Hydraulics and Morphology of Anabranching Channels	January 2018
4	Nor Farhani binti Yusof	MS UPM	Evaluation of Geological Formation for Potential Groundwater Aquifer Potential by Integrated Geophysical Techniques	April 2018
5	Nur Hidayu binti Abu Hassan	MS UPM	Development of Conceptual Hydrogeological Model for Groundwater Modeling Application at Selangor Basin	April 2018
6	Noorellimia Mat Toridi	PhD UPM	Hydrogeological Implication Framework for Sustainable Groundwater Extraction	May 2018
7	Hamidreza Ahmadzadeh Arazi	PhD UPM	Assessment of Climate Change Impacts on Crop Production Considering Uncertainty of General Circulation Models (GCMs)	December 2018
8	Munirah Hayati bt Hamidon	MS-UPM	Smart Vertical Garden System Design and Performance for Indoor vegetable Production	December 2018
9	Ali Hydar Lafta Ali	PhD UPM	Improving Hydro-Morpho-Dynamics of Rivers Junctions Based on 2D Depth Average Flow Model	July 2019
10	Saima Nauman	MS-UPM	Assessment of Potential Impacts of Climate Change on the Water Resources of Haro River Watershed	May 2019
11	Ahmed Mohammed Sami Ali Al-Janabi	PhD UPM	Modeling Infiltration Capacity of Permeable Channels under Static and Dynamic Hydraulic Conditions	March 2019
12	Norfaezah binti Makzin	MS UPM	Sustainable Groundwater Extraction for Agricultural Use at Bukit Merah, Semanggol Aquifer in Perak	February 2020
13	Muhammad Aidil Hakim bin Mhd Ramzam	MS UPM	Evaluation of Sustainable Groundwater Extraction for Water Intake using Visual Modflow at Tanjung Mas	January 2020

XIII. INVOLVEMENT IN RESEARCH WORKS

Role	Title of the Project	Institute
Researcher	Study on Precision Farming of Rice (MACRES) 2005-2008	UPM
Research Fellow	Development of a model to evaluate the effect of Landuse levels on agricultural inundation and irrigation	NIRE, Tsukuba, Japan
Principle Investigator	GIS Application for Monitoring Arsenic Groundwater Contamination Exposures in Bangladesh". Worked in the project as a component of the joint research projects of Bangladesh with Dainichi Consultant Inc., Japan	UPM & Dainichi Collaboration
Researcher	A Study on Aquifer Characterization and Performance of Deep Tubewell (DTW) within Bangladesh Agricultural University (BAU)	BAU
MS Study Research	Water Management for Kerian Irrigation Scheme using Geographical Information System	UPM
PhD Research	Modeling Water Allocation for a Run-of-the-River Rice Irrigation Scheme using GIS	UPM
Independent Evaluator	Conducting Technology Due-Diligence on CRDF Grant Applicant	MTDC

XIV. CONSULTANCY

1. DID Manual 2009, Volume 5 Irrigation and Agricultural Drainage, Ministry of Agriculture, Malaysia. **RM 45,000**
2. Worked as Irrigation Engineer to Study Flood Mitigation Role by Paddy. Baro Tok Jiring/Batu Rakit Drainage and Flood Mitigation Master Plan, Terengganu. **RM16,000/**
3. Detailed design and rehabilitation of Machang Irrigation Scheme, Kelantan. **RM20,000/**
4. Training Program for Sultan Qabush University. **RM1,000/**
5. Worked as Irrigation Engineer to carry out the detailed design and rehabilitation of Paya Peda Irrigation Scheme in the northern district of Besut in Terengganu State. **RM30,000/**

XV. Research Outcomes- GUI and DSS Development

GUI/DSS	<ol style="list-style-type: none"> 1. CSDSS- Climate-smart DSS for Water and Agriculture under Climate Change Impacts 2. RIMIS- GIS-based DSS Rice Irrigation Management Information System 3. GUI for Assessment of River Water Quality 4. GUI for Arsenic Monitoring in Groundwater
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XVI. COMPUTER PROFICIENCY

1.	Special Software: MapInfo Professional and ArcGIS 10.x, Surfer 8.0, ArcSWAT. HYDRUS 2D/3D, Hydrologic Studio, HEC-HMS, HEC-RAS, Irripro v 4.5.1 (Advanced Level); MODFLOW (Intermediate Level)
2.	Programming: MapBasic 12, Visual Basic, Visual Fortran 90 and MATLAB, Python (Intermediate Level)
3.	Crop Models: CropWat 8.0, AquaCrop 6.1 (Advanced Level)

XVII. ATTENDED Training and Workshop (More than 30 Professional Development Courses)

Conference Theme: Building an International Research Agenda on Doctoral Education

Attended in the international conference and seminars for postgraduate supervisors the 2nd International Doctoral Education Research Network (IDERN) held from 19 – 23 April, 2010 at the Universiti Putra Malaysia (UPM). The following seminars were offered for Supervisors:

1	Dr Suzanne Morris	Negotiating for authorship: An authorship management workshop for researchers	University of Queensland, AUSTRALIA
2	Dr Geoff Hill	Diffraction the practices of research supervision	Queensland University of Technology, AUSTRALIA
3	Dr Liezel Frick	The mystery of the original contribution	Stellenbosch University, SOUTH AFRICA
4	Prof Terry Evans & Dr Peter Macauley	Examining a thesis & writing examiner's reports. What are examiners looking for in a thesis?	Deakin University, AUSTRALIA
5	Prof Anthony Paré	Supervising the dissertation: Speaking about writing	McGill University, CANADA
6	Prof Alistair McCulloch	Supervising doctoral candidates: Professional practice and development for a broader supervisory role	University of Southern Australia, AUSTRALIA
7	Assoc Prof Tom Maxwell & Dr Robyn Smyth	The research matrix: An aid to supervising higher degree research students	University of New England, AUSTRALIA
8	Dr Charles Tulstin	Managing tricky PhD examinations	University of Otago, NEW ZEALAND
9	Prof Lester Goodchild	Tackling the dissertation design and process: Teaching its structure and components	Santa Clara University, California, USA
10	Margot Pearson	Supervising doctoral students to enhance their experience and career development	Australian National University, AUSTRALIA
11	Prof Hasanah Mohamad Ghazali	Research ethics and scholarly integrity	Universiti Putra Malaysia, MALAYSIA

Note: Attended more than 35 training events (**Some listed in ANNEX III**)

XVIII. TRAINER

Title of the Project	Institute/Year
11 th International Course on Irrigation System Management, DID, Ampang, Kuala Lumpur	DID/2007
12 th International Course on Irrigation System Management	DID/2008

Practical Training Courses on Deep Tubewell (DTW), Drilling, Design and Construction of DTW at BAU Campus	BAU/1995
GIS Training (Level – I) and GPS and GIS Course	2001 & 2002

XIX. ACADEMIC AND PROFESSIONAL AWARDS

No.	Name of the Award	Level	Year
1.	Bangabandhu Fellowship 2001 for Higher Educational Training (PhD) on Science and Technology by the Government of the People's Republic of Bangladesh	MST, Bangladesh Government	2001
2.	University Prize 1997 for the Best Student Award in the B.Sc. Agricultural Engineering Examination	University	1996
3.	University Grant Commission (UGC) Scholarship-1991 for Obtaining the Highest Marks in the B.Sc. Agril. Engineering. University Grant Commission (UGC), Government of the People's Republic of Bangladesh.	University Prize	1994
4.	Rampotnath Memorial Scholarship, 1992/93 for Securing First Position in the B.Sc. Agricultural Engineering Examination in 1992 (4-Years), Faculty of Agricultural Engineering and Technology, Bangladesh Agricultural University, Mymensingh-2202.	University Prize	1998
5.	Silver Medal for developing DIMIS (Daily Irrigation Management Information System): A GIS-Based Water Management Tool for Precision Farming of Rice" under Cluster 1: Agriculture, Food and Forestry (AFF) in the Exhibition of Innovation and Research 2003 organized by Research & Management Centre (RMC) at University Putra Malaysia held from July 8-10.	Universiti Putra Malaysia	2003
6.	Silver Medal for exhibiting RIMIS-TK: Rice Irrigation Management Information System for Tanjung Karang Rice Irrigation Scheme in the Exhibition of Innovation and Marketization 2006 organized by Faculty of Engineering at University Putra Malaysia held from March 17-18.	Universiti Putra Malaysia	2006
7	Primary Scholarship in 1982 , Ministry of Education, Government of the People's Republic of Bangladesh	The Government of the Bangladesh	1982

XX. REVIEW AND EDITORIAL SERVICES

No.	Title of the Journal	Publisher
1.	Water Resources Management	Springer
2.	Irrigation and Drainage Engineering	ASCE
3.	Agricultural Water Management	Elsevier
4.	Pertanika Science and Technology Journal	UPM
5	Hydrological Sciences Journal	
6.	Special Issue: Solution for Sustainable Water and Environmental Management,	UTM Press
7.	Member, Editorial Committee on Soil and Water Engineering, CAFEi 2012,2014, 2016, 2018, 2020, Kuala Lumpur	UPM Press
7	Member, Editorial Committee on Modernization of Irrigation and Drainage Schemes, PAWEES-INWEPF Joint International Conference, 2015	PAWEES

XXI. KEY PERFORMANCE INDICATOR (KPI)

SEKSYEN SARAJAN, PRESTASI DAN ELAUN
PEJABAT PENDAFTAR
UNIVERSITI PUTRA MALAYSIA

Slip Markah Penilaian Prestasi

NO STAF : A03917
NAMA : MD ROWSHON KAMAL
JAWATAN : PENYARAH KANAN
PTJ : JABATAN KEJURUTERAAN BIOLOGI DAN PERTANIAN

Markah Penilaian Prestasi Staf

BIL	TAHUN	MARKAH
1.	2012	90.92
2.	2013	93.97
3.	2014	98
4.	2015	95.12
5.	2016	97.60
6.	2017	94.8
7.	2018	92.29

Note: Markah Penilaian Prestasi Staf (*Staff Evaluation Marks*), Tahun (*Year*), Markah (*Marks*)
Obtained Score in 2019 is 96.60

XXII. REFEREES

1	Professor Ir. Dr. Azmi b. Dato' Yahya The Department of Biological and Agricultural Engineering Faculty of Engineering, Universiti Putra Malaysia 43400 UPM Serdang, Selangor MALAYSIA Email: azmiy@upm.edu.my Tel: +(60) 19-216 8335 http://eng.upm.edu.my/biomachinery
2	Professor Ir Dr Mohd Amin bin Mohd Soom (Supervisor in PhD Study and retired Professor of UPM) Crop Production Programme Faculty of Sustainable Agriculture Universiti Malaysia Sabah (UMS) Tel: +(6) 08 924 8100; HP: +(6) 012 293 5853 Email: mohd.amin@ums.edu.my https://www.researchgate.net/profile/M_Amin2
3	Professor Dr Md Abdul Mojid Department of Irrigation and Water Management Faculty of Agricultural Engineering and Technology Bangladesh Agricultural University (BAU), Mymensingh-2202, Bangladesh Email: ma_mojid@yahoo.com , H/P: +(88) 017 1441 8756 https://www.researchgate.net/profile/Professor_Dr_M_Mojid

ANNEX I: Award for the Academic and Professional Services			
SL.	Title	Organizer	Year & Score
1.	Excellent Service Award Certificate	Universiti Putra Malaysia	2012 90.92
2.	Excellent Service Award Certificate	Universiti Putra Malaysia	2013 93.97
3.	Excellent Service Award Certificate	Universiti Putra Malaysia	2014 98
4.	Excellent Service Award Certificate	Universiti Putra Malaysia	2015 95.12
5.	Excellent Service Award Certificate	Universiti Putra Malaysia	2016 97.69
6.	Excellent Service Award Certificate	Universiti Putra Malaysia	2017 94.60
7.	Excellent Service Award Certificate	Universiti Putra Malaysia	2018 92.29
8.	Excellent Service Award Certificate	Universiti Putra Malaysia	2019 96.60

ANNEX II. Session Chairman of the International Conference and Editorial Services			
SL.	Title	Organizer	Duration
1.	The International Conference on Agricultural and Food Engineering for Life 2012 (CAFEi 2012)	KBP-KPM, Faculty of Engineering, Universiti Putra Malaysia	26-28 November 2012
2.	The International Conference on Agricultural and Food Engineering for Life 2014 (CAFEi 2014)	KBP-KPM, Faculty of Engineering, Universiti Putra Malaysia	01-03 December 2014
3.	The International Conference on Agricultural and Food Engineering for Life 2016 (CAFEi 2016)	KBP-KPM, Faculty of Engineering, Universiti Putra Malaysia	23-25 August 2016
4.	PAWEES-INWEPF Joint International Conference, 2015, Kuala Lumpur	KBP-KPM, Faculty of Engineering, Universiti Putra Malaysia	19-21 August 2015
5.	Member, Scientific Committee CAFEi 2012, 2014, 2016, 2018, 2020 & PAWEES 2015	KBP-KPM, Faculty of Engineering, Universiti Putra Malaysia	CAFEi Every two years

ANNEX III: Participant in the Training Courses for the academic and professional development			
SL.	Title	Organizer	Duration
1.	Complete Guide to MATLAB	Solutions4U	25-27 September 2012
2.	Adventure Event	Faculty of Engineering, UPM	28 June 2012
3.	Development of Teaching Portfolio	CADe, Universiti Putra Malaysia (UPM)	01 November 2012
4.	Effective Professional Presentation Course	CADe, Universiti Putra Malaysia	9 May 2012

5.	Advanced hydraulic Structures Design Training Program, 2013	UNESCO-IHE	25-28 November 2013
6.	Integrated Flood Management Training Program 2013	UNESCO-IHE	14-17 May 2013
7.	Abem Terrameter SAS4000 Resistivity Meter	Winpower Corporation Sdn. Bhd.	8-10 October 2013
8.	System Dynamics Training Program, 2013	Prof BK Bala (IKDPM, UPM)	22 April-10 June (3-5 pm. Monday)
9.	Environment Monitoring & Water Management in Agriculture	TMS-DECAGON	8 May 2014
10.	ArcGIS for Server: Sharing GIS Content on the Web	Esri Malaysia	13-14 December 2014
11.	Training Programme on Climate Change Downscaling	Indian Institute of Engineering, Science and Technology (IIST)	27-30 October 2014
12.	How to Apply MSMA2 in KL & Selangor"	Institute of Engineers Malaysia (IEM)	11 April 2014
13.	Malaysia Scilab Users Seminar	Trity Technologies	10 June 2014
14.	Supervising Graduate Students	CADe, UPM	8-9 April 2014
15.	Outcome Based education, Series 2	CADe, UPM	27 March 2014
16.	Course on Log Frame Analysis	CADe, UPM	18 March 2014
17.	Teaching with PutraLMS	CADe, UPM	12-13 February 2014
18.	Teaching PORTFOLIO Development 2014	CADe, UPM	24 June 2014
19.	Innovative Teaching with Technology: An Introduction to WHAT, WHY and HOW	CADe, UPM	11 February 2014
20.	Basic Training in Teaching and Learning	CADe, UPM	21-28 January 2014
21.	Precision in Crop Farming: Concept and Application	Malaysian Society of Agricultural Engineers (MSAE)	12-13 August 2014
22.	Climate Change Vulnerability & Adaptation for Sustainable Water Resources in Research, Planning & Management	National Hydraulic Research Institute Malaysia (NAHRIM)	18 August 2015
23.	Professional Engineer Course	Malaysian Society of Agricultural Engineers (MSAE)	19 March 2015
24.	Modernizing Irrigation & Drainage for a New Green revolution	MANCID	9-11 October 2016
25.	Certified Professional in Erosion and Sediment Control	Malaysian Stormwater Organization (MSO)	17-19 April 2017
26.	Writing a Good Thesis	UPMISA	15,22 and 29 September 2005
27.	SPSS Data Analysis	UPMISA, Prof Dr Bahaman	11 March 2006
28.	Training on Precision Agriculture- Theories and Applications	MSAE-UPM 2017	
29.	Isotope Applications in Hydrology	IAEA & Nuclear Agency Malaysia	2-6 December 2019

ANNEX IV: Achievements by the Students under the Supervision (2012 – 2017)		
Title	Prize/Award	Duration
Estimation of Crop Evapotranspiration using ET Gauge by Norshafiqah (ID: 169968)	Gold Medal for Final Year Project	2016
Development of Prototype Semi-automated Irrigation Delivery System by Yap (ID: 169716)	Gold Medal for Final Year Project	2016
Estimation of Fertilizer Losses based on Solutes Monitoring in a Paddy Field by Nur Aina (ID: 173247)	Silver Medal for Final Year Project	2017
Nutrient Leaching in Flooded Paddy Field Experiment Using Hydrus-1D (180218)	Silver Medal for Final Year Project	2018

ANNEX V: Trainer for International and National Courses			
SL.	Title	Participants/Organization	Duration
1.	11th International Course on Irrigation System Management.	The Department of Irrigation and Drainage (DID) Ampang, Kuala Lumpur	November 2007
2.	12th International Course on Irrigation System Management.	The Department of Irrigation and Drainage (DID) Ampang, Kuala Lumpur	November 2008
3.	Training Courses on Design, Drilling, and Development of DTW at BAU Campus.	Bangladesh Agricultural University, Mymensingh	December 1995
4.	GIS Training (Level – I)	Faculty of Engineering, Universiti Putra Malaysia (UPM)	2-5th October 2001
5.	GPS and GIS Course	Faculty of Engineering, Universiti Putra Malaysia (UPM)	6-8th May 2002