

CURRICULUM VITAE



A. BUTIR-BUTIR PERIBADI (Personal Details)			
Nama Penuh (Full Name)	Faradiella Binti Mohd Kusin		Gelaran (Title): Dr.
No. MyKad / No. Pasport (Mykad No. / Passport No.)	Warganegara (Citizenship) Malaysia	Bangsa (Race) Malay	Jantina (Gender) Female
Jawatan (Designation)	Senior Lecturer	Tarikh Lahir (Date of Birth)	

Alamat Semasa (Current Address)	Jabatan/Fakulti (Department/Faculty)	E-mel dan URL (E-mail Address and URL)
	Department of Environmental Sciences, Faculty of Environmental Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor. Tel: 03-89468596 Fax: 03-89467463	E-mail: faradiella@upm.edu.my diellakusin@gmail.com URL:

B. KELAYAKAN AKADEMIK (Academic Qualification)			
Nama Sijil / Kelayakan (Certificate / Qualification obtained)	Nama Sekolah Institusi (Name of School / Institution)	Tahun (Year obtained)	Bidang pengkhususan (Area of Specialization)
Doctor of Philosophy (Ph.D)	Newcastle University, UK	2011	Environmental Engineering
Master of Engineering (M.Eng)	Universiti Teknologi Malaysia	2007	Civil-Environmental Engineering
Bachelor of Engineering (B.Eng)	Universiti Teknologi Malaysia	2006	Civil Engineering

C. KEMAHIRAN BAHASA (Language Proficiency)					
Bahasa / Language	Lemah Poor (1)	Sederhana Moderate (2)	Baik Good (3)	Amat Baik Very good (4)	Cemerlang Excellent (5)
English					✓
Bahasa Melayu					✓
Chinese					
Lain-lain (other):					

D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN (<i>Scientific experience and Specialisation</i>)				
<i>Organization</i>	<i>Position</i>	<i>Start Date</i>	<i>End Date</i>	<i>Expertise</i>
SAJ Holdings Sdn Bhd.	Trainee Engineer	Apr 2005	July 2005	Water supply
Department of Environmental Sciences, UPM	Tutor	21 July 2007	7 Sept. 2011	Water treatment
Environmental Forensics Research Centre (ENFORCE), FPAS	Program Coordinator, Environmental Modeling Unit	1 April 2014	1 April 2016	Water & Wastewater treatment

E. PEKERJAAN (<i>Employment</i>)				
<i>Majikan / Employer</i>	<i>Jawatan / Designation</i>	<i>Jabatan / Department</i>	<i>Tarikh lantikan / Start Date</i>	<i>Tarikh tamat / Date Ended</i>
Head Department of Environmental Sciences, Faculty of Environmental Studies, UPM	Senior Lecturer	Department of Environmental Sciences	8 September 2011	Present

F. ANUGERAH DAN HADIAH (<i>Honours and Awards</i>)				
<i>Name of awards</i>	<i>Title</i>	<i>Award Authority</i>	<i>Award Type</i>	<i>Year</i>
<i>Academic Award</i>	JPA Scholarship for Bachelor's Degree	JPA	National	2001-2006
	Dean's Award, UTM 37 th Convocation	Faculty of Civil Engineering	UTM	2006
	JPA Scholarship for Master's Degree	JPA	National	2006-2007
	PhD Scholarship, SLAB/SLAI UPM	Ministry of Higher Education Malaysia (MOHE) & UPM	National & UPM	2008-2011
	Excellent Service Certificate	UPM	University	2012
	Excellent Service Certificate	UPM	University	2013
	Excellent Service Certificate	UPM	University	2014
	Excellent Service Award (APC)	UPM	University	2015
<i>Research Award</i>	Pameran Rekacipta, Penyelidikan Inovasi (PRPI)	UPM	National (Silver medal)	2016
	Advanced Innovation & Engineering Exhibition (AiNEX)	UMP	National (Bronze medal)	2017
	Advanced Innovation & Engineering Exhibition (AiNEX)	UMP	National (Bronze medal)	2017
	Advanced Innovation & Engineering Exhibition (AiNEX)	UMP	National (Bronze medal)	2017
<i>Awards of Merit</i>	International Travel Grant Award	Royal Academy of Engineering, UK	International	2010

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan

tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)

Journal

Citation Indexed Journal (ISI/Scopus)

***First/Corresponding author**

1. **Faradiella Mohd Kusin***, Muhammad Syazwan Abd Rahman, Zafira Madzin, Shamshuddin Jusop, Ferdaus Mohamat-Yusuff, Mariani Ariffin, Mohd Syakirin Md Zahar. (2017) The occurrence and potential ecological risk assessment of bauxite mine-impacted water and sediments in Kuantan, Pahang, Malaysia. *Environ Sci & Pollut Res.* 24(2), 1306-1321. (ISI/Scopus; IF: 2.760; Q1/Q2)
2. Ashton Lim Suelee, Sharifah Munirah Syed Hasan, **Faradiella Mohd Kusin***, Ferdaus Mohamat Yusuff, Zelina Zaiton Ibrahim. (2017) Phytoremediation potential of vetiver grass for removal of heavy metal-contaminated water. *Water, Air & Soil Pollution* 228:158, DOI 10.1007/s11270-017-3349-x. (ISI/Scopus; IF: 1.551; Q2)
3. **Faradiella Mohd Kusin***, Nurul Izzati Mat Akhir, Ferdaus Mohamat-Yusuff, Muhamad Awang. (2017) Greenhouse gas emissions during plantation stage of palm oil-based biofuel production addressing different land conversion scenarios in Malaysia. *Environ Sci & Pollut Res.* DOI: 10.1007/s11356-016-8270-0 (ISI/Scopus; IF: 2.760; Q1/Q2)
4. Muhamad, SN., **Kusin, FM***, Zahar, MSM. (2016) Passive bioremediation technology incorporating lignocellulosic spent mushroom compost and limestone for metal- and sulphate-rich acid mine drainage. *Environmental Technology* DOI: 10.1080/09593330.2016.1244568 (ISI/Scopus; IF: 1.760; Q3)
5. Diami, SM., **Kusin, FM***, Madzin, Z. (2016) Potential ecological and human health risks of mine-impacted sediments in Pahang, Malaysia. *Environ Sci & Pollut Res.* 23(20), 21086–2109. (ISI/Scopus; IF: 2.828; Q1/Q2)
6. **Faradiella Mohd Kusin***, Mohd Syakirin Md Zahar, Siti Nurjaliah Muhammad, Nur Diyana Mohamad, Zafira Madzin, Sharifah Mohd Sharif. (2016) Hybrid off-river augmentation system as an alternative raw water resource: the hydrogeochemistry of abandoned mining pond. *Environmental Earth Sciences.* 75(3), 230, 1-15. (ISI/Scopus; IF: 1.765; Q2)
7. **Faradiella Mohd Kusin***, Mohd Syakirin Md Zahar, Siti Nurjaliah Muhammad, Zafira Md Zin and Sharifah Mohd Sharif. (2016) Assessing the potential use of abandoned mining pool as an alternative resource of raw water supply. *Water Science and Technology: Water Supply.* 16(2), 410-417. (ISI/Scopus; IF: 0.532; Q3)
8. **Faradiella Mohd Kusin***, Siti Nurjaliah Muhammad, Mohd Syakirin Md Zahar and Zafira Md Zin. (2016) Integrated River Basin Management: Incorporating the use of abandoned mining pool and implication on water quality status. *Desalination and Water Treatment.* 57 (60), 29126-29136 (ISI/Scopus; IF: 1.173; Q3)
9. **Kusin, F.M.***, Akhir, N.I.M., Mohamat-Yusuff, F. and Awang, M. (2016) Nitrous oxide emission from nitrogen fertiliser application in oil palm plantation of different stages. *International Journal of Global Warming.* 9(4), 529-541. (ISI/Scopus; IF: 1.043; Q3)
10. Ang Kean Hua, Faradiella Mohd Kusin, Sarva Mangala Praveena (2016) Spatial Variation Assessment of River Water Quality Using Environmetric Techniques. *Polish Journal of Environmental Studies.* 25(6), 2411-2421. (ISI/Scopus; IF: 0.790; Q4)
11. Rahmat, S., **Kusin, F.M.*** and Wan Johari, W.L. (2016) Performance assessment of centrifuge dewatering unit of a centralized sludge treatment facility using multivariate statistical approach. *Desalination and Water Treatment.* 57(9), 3904-3915. (ISI/Scopus; IF: 1.173; Q3)
12. **Kusin, F.M.***, Nurul Izzati Mat Akhir, Mohamat-Yusuff, F and Muhamad Awang. (2015) The impact of nitrogen fertiliser use on greenhouse gas emissions in an oil palm plantation associated with land use change. *Atmosfera.* 28(4), 243-250. (ISI/Scopus; IF: 0.877; Q4)
13. **Kusin, F. M.***, Jarvis, A. P. and Gandy, C. J. (2014) Hydraulic performance and iron removal in wetlands and lagoons treating ferruginous coal mine waters. *Wetlands.* 34(3), 555-564. (ISI/Scopus; IF: 1.283; Q3)
14. **Kusin, F.M.***(2013) A review of the importance of hydraulic residence time on improved design of mine water treatment systems. *World Applied Sciences Journal.* 26(10), 1316-1322. (Scopus; IF: 0.234)
15. **Kusin, F. M.***, Jarvis, A. P. and Gandy, C. J. (2012) Hydraulic performance assessment of passive coal mine water treatment systems in the UK. *Ecological Engineering.* 49, 233-243. (ISI/Scopus; IF: 3.106; Q1)
16. **Kusin, F. M.***, Jarvis, A. P. and Gandy, C. J. (2010) Hydraulic residence time and iron removal in a wetland receiving ferruginous mine water over a 4 year period from commissioning. *Water Science and Technology.* 62(8), 1937-1946. (ISI/Scopus; IF: 1.092; Q3)
17. **Faradiella Mohd Kusin***, Amirul Azuan Md Joni, Ferdaus Mohamat Yusuff, Ahmad Makmom Abdullah, Latifah Abd Manaf, Sharifah Nur Munirah Syed Hasan. Evaluating capacity building of the local community towards environmental conservation program in Kong Kong Laut, Masai, Johor. *Pertanika Journal of Social Sciences & Humanity.* (Scopus) accepted
18. Nur Najihah Mohd Azani, **Faradiella Mohd Kusin**, Sharifah Nur Munirah Syed Hasan, Nur Aqilah Sulong. Distribution of heavy metals and metalloid in surface sediments of heavily-mined area for bauxite ore and associated risk assessment. *Catena* (ISI/Scopus; IF: 2.612; Q1 under review)
19. Siti Nurjaliah Muhammad, **Faradiella Mohd Kusin***, Zafira Madzin. Coupled physico-chemical and

	<p>bacterial reduction mechanisms for passive remediation of sulfate- and metal-rich acid mine drainage. <i>Int. J. of Environmental Science and Technology (ISI/Scopus; IF: 2.344; Q2 revised)</i></p> <p>20. Norazlina Ab Halim, Faradiella Mohd Kusin*, Khairul Nizam Mohamed. Determination of heavy metals and associated risk assessment of cement produced from co-processing of hazardous waste. <i>Int. J. of Environmental Science and Technology (ISI/Scopus; IF: 2.344; Q2 revised)</i>.</p> <p>21. Mohd Syakirin Md Zahar, Faradiella Mohd Kusin*, Khairul Nizam Mohamed. Treatment of Acid Mine Drainage using industrial by-product: Sorption behavior of steel slag for metal-rich mine water. <i>Desalination and Water Treatment (ISI/Scopus; IF: 1.173; Q3 revised)</i></p> <p>22. Nur Aqilah Sulong, Faradiella Mohd Kusin*, Zafira Madzin, Fatin Nur Atirah Affandi. The hydrochemistry of mine-impacted water in an abandoned iron ore mine, Bukit Besi, Terengganu, Malaysia and implication for agricultural purpose. <i>Environ Sci & Pollut Res. (ISI/Scopus; IF: 2.760; Q1/Q2 under review)</i></p> <p>23. Verma Loretta M. Molahid, Faradiella Mohd Kusin*, Zafira Madzin. Role of Multiple Substrates (Spent Mushroom Compost, Ochre, Steel Slag and Limestone) in Passive Remediation of Metal-containing Acid Mine Drainage. <i>Environmental Technology (ISI/Scopus; IF: 1.760; Q3 revised)</i></p> <p>24. Faradiella Mohd Kusin*, Sharifah Munirah Syed Hasan, Ferdaus Mohamat Yusuff, Zelina Zaiton Ibrahim. Floating Vetiver Island (FVI) and implication for treatment system design of polluted running water. <i>J. water Supply & Tech – Aqua (ISI/Scopus; IF: 0.807; Q3 under review)</i></p> <p>Citation Indexed-Journal (Non-ISI/Scopus)</p> <p>25. Zafira Madzin, Faradiella Mohd Kusin* (2016) Passive in situ remediation using permeable reactive barrier for groundwater treatment: a review. <i>Pertanika Journal of Scholarly Research Reviews</i>, 2(2), 1-11.</p> <p>26. Wong, Siew Yien, Amir, Hamzah Sharaai, Faradiella, Mohd Kusin, & Mohd, Mansor Ismail (2015) Renewable Energy Policy Status and Challenges of POME-Biogas Industry in Malaysia. <i>Pertanika Journal of Scholarly Research Reviews</i>, 1(1), 33-39.</p> <p>27. Mohd Syakirin Md Zahar, Faradiella Mohd Kusin*, Siti Nurjaliah Muhammad (2015) Adsorption of manganese in aqueous solution by steel slag. <i>Procedia Environmental Sciences</i>.</p> <p>28. Siti Nurjaliah Muhammad, Faradiella Mohd Kusin*, Mohd Syakirin Md Zahar, Ferdaus Mohamat Yusuff, Normala Halimoon. (2015) Passive treatment of acid mine drainage using mixed substrates: Batch experiments. <i>Procedia Environmental Sciences</i>.</p> <p>29. Zafira Md Zin, Mohamad Fitri Shai-in, Faradiella Mohd Kusin*. (2015) Comparing heavy metal mobility in active and abandoned mining sites at Bestari Jaya, Selangor. <i>Procedia Environmental Sciences</i>.</p> <p>30. Sharifah Mohd. Sharif, Faradiella Mohd. Kusin, Zulfa Hanan Asha'ari. (2015) Characterization of water quality conditions in the Klang River Basin, Malaysia using self organizing map and K-means algorithm. <i>Procedia Environmental Sciences</i>.</p> <p>31. Nurul Izzati Mat Akhir, Faradiella Mohd Kusin*, Ferdaus Mohamat-Yusuff, Muhamad Awang, Zulfa Hanan Ash'Aari. (2015) Impact of Nitrogen Fertilizer Application on Nitrous Oxide Emission in Oil Palm Plantation. <i>Procedia Environmental Sciences</i>.</p> <p>32. Siti Nurjaliah Muhammad, Faradiella Mohd Kusin*, Mohd Syakirin Md Zahar, Nur Syafika Madzlen, Elizabeth Rinta Gaung. (2015) Passive Treatment of Metal and Sulphate-Rich Acid Mine Drainage (AMD) Using Mixed Limestone, Spent Mushroom Compost and Activated Sludge. <i>International Journal of Scientific Research in Science, Engineering and Technology</i>, 1(4), 234-239.</p> <p>33. Ang Kean Hua, Faradiella Mohd Kusin (2015) A Review of Applied GIS Based in Sustainable Water Resources Management in Malacca River Case Study: An Observation Perspective. <i>International Journal of Scientific Research in Science, Engineering and Technology</i>, 1(3), 157-162.</p> <p>34. Ang Kean Hua, Faradiella Mohd Kusin (2015) Remote Sensing towards Water Quality Study in Malacca River Case Study: A Review Perspective, <i>International Journal of Scientific Research in Science and Technology</i>, 1(2), 9-15.</p> <p>35. Ang Kean Hua, Faradiella Mohd Kusin (2015) Introduction to methodology framework towards water quality assessment case study: A review of Malacca River. <i>International Journal of Scientific Research in Science, Engineering and Technology</i>, 1(4), 25-29.</p> <p>36. Ang Kean Hua, Faradiella Mohd Kusin (2015) Applied GIS in water quality assessment modelling in the Malacca River: Introduction to research study, <i>International Journal of Scientific Research in Science and Technology</i>, 1(3), 70-74.</p> <p>37. Nurul I. M. Akhir, Faradiella M. Kusin*, Ferdaus Mohamat-Yusuff, Muhamad Awang, Farahana Hamka. (2014) Nitrous oxide emission from different land use changes associated with oil palm plantation. <i>Journal of Agriculture and Environmental Sciences</i>. 3(2), 421-431.</p> <p>38. Kusin F.M.*, Siti Nurjaliah Muhammad and Mohd Syakirin Md Zahar (2014) Limestone-based closed reactor for passive treatment of highly acidic water. <i>International Journal of Research in Earth and Environmental Sciences</i>. 1(2), 13-23.</p> <p>39. Faradiella Mohd Kusin*, Azmi Aris and Amiza Shayeeda Ahmad Misbah (2013) A comparative study of anoxic limestone drain and open limestone channel for acidic raw water treatment. <i>International Journal of Engineering and Technology</i>, 13(6), 87-92. (Impact factor: 0.983)</p>
Books/Monographs	1. Faradiella Mohd Kusin (2012) Treatment of Acidic Raw Water – Application of Anoxic Limestone

	<p>System. Lap Lambert Academic Publishing. Saarbrucken, Germany. ISBN: 978-3-659-11305-5</p> <p>2. Wan Lutfi Wan Johari, Faradiella Mohd Kusin, Khairul Nizam Mohamed, Zulfa Hanan Asha'ari (2014) <i>Water Quality and Waste Management</i>. Penerbit UPM. ISBN: 978-967-344-324-6</p>
Chapter in book	<p>1. FM Kusin and A Aris (2014) Anoxic Limestone Drain for Treatment of Highly Acidic Water. <i>Proceedings of the International Conference on Environmental Forensics 2013, From Sources to Solution</i>, 369-373. Springer.</p> <p>2. FM Dali, H Juahir, AZ Aris, ME Toriman, AP Lim, LJ Looi, SBZS Sagoff and FM Kusin (2014) Assessment of Water Quality Using Environmetric Techniques at Johor River, <i>Proceedings of the International Conference on Environmental Forensics 2013, From Sources to Solution</i>, 403-407. Springer.</p>
Conference Proceedings	<p>1. Sharifah Nur Munirah Syed Hasan, Faradiella Mohd Kusin, Ashton Lim Sue Lee, Tony Austin Ukang, Ferdaus Mohamat Yusuff and Zelina Zaiton Ibrahim (2017) Performance of Vetiver Grass (<i>Vetiveria zizanioides</i>) for Phytoremediation of Contaminated Water. <i>MATEC Web of Conferences</i> 103, 06003. (Scopus)</p> <p>2. Zafira Madzin, Faradiella Mohd Kusin, Fasihah Mohd Yusof and Siti Nurjaliah Muhammad (2017) Assessment of Water Quality Index and Heavy Metal Contamination in Active and Abandoned Iron Ore Mining Sites in Pahang, Malaysia. <i>MATEC Web of Conferences</i> 103, 05010. (Scopus)</p> <p>3. Mohd Khairul Nizar Shamsuddin, Faradiella Mohd Kusin, Wan Nor Azmin Sulaiman, Mohammad Firuz Ramli, Mohamad Faizal Tajul Baharuddin and Mohd Shalahuiddin Adnan (2017) Forecasting of Groundwater Level using Artificial Neural Network by incorporating river recharge and river bank infiltration. <i>MATEC Web of Conferences</i> 103, 04007. (Scopus)</p> <p>4. Zafira Binti Madzin, Faradiella Mohd Kusin, Fasihah Binti Mohd Yusof. Water quality monitoring for heavy metal contamination associated with acid mine drainage at abandoned and active mining sites in Pahang. <i>International Conference on Agricultural and Food Engineering (CAFEi 2016)</i>, 23-25 August 2016, Kuala Lumpur.</p> <p>5. Sharifah Nur Munirah Binti Syed Hasan, Faradiella Mohd Kusin, Ferdaus Mohamat Yusuff, Zelina Binti Zaiton Ibrahim. River water quality treatment using phytoremediation of vetiver grass. <i>International Conference on Agricultural and Food Engineering (CAFEi 2016)</i>, 23-25 August 2016, Kuala Lumpur.</p> <p>6. Zafira Binti Madzin, Faradiella Mohd Kusin, Fasihah Binti Mohd Yusof, Siti Nurjaliah Binti Muhammad. Assessment of water quality index and heavy metal contamination in active and abandoned iron ore mining sites in Pahang, Malaysia, <i>International Symposium on Civil and Environmental Engineering (ISCEE 2016)</i>, 5-6 December, Melaka.</p> <p>7. Sharifah Nur Munirah Binti Syed Hasan, Faradiella Mohd Kusin, Ferdaus Mohamat Yusuff, Zelina Binti Zaiton Ibrahim. Performance of vetiver grass (<i>Vetiveria zizanioides</i>) for phytoremediation of contaminated water. <i>International Symposium on Civil and Environmental Engineering (ISCEE 2016)</i>, 5-6 December, Melaka.</p> <p>8. Faradiella Mohd Kusin, Ahmad Zaharin Aris, Nurjaliah Muhammad, Mohd Syakirin Md Zahar and Zafira Md Zin. Assessing the potential use of abandoned mining pool as an alternative source of raw water supply. <i>IWA-Young Water Professionals Conference 2015</i>. The 2nd IWA Malaysia, 17-20 April 2015, Kuala Lumpur.</p> <p>9. Mohd Syakirin Md Zahar, Faradiella Mohd Kusin*, Siti Nurjaliah Muhammad (2015) Adsorption of manganese in aqueous solution by steel slag. <i>International Conference on Environmental Forensics (iENFORCE 2015)</i>, 19-20 August 2015, Putrajaya, Malaysia.</p> <p>10. Siti Nurjaliah Muhammad, Faradiella Mohd Kusin*, Mohd Syakirin Md Zahar, Ferdaus Mohamat Yusuff, Normala Halimoon. (2015) Passive treatment of acid mine drainage using mixed substrates: Batch experiments. <i>International Conference on Environmental Forensics (iENFORCE 2015)</i>, 19-20 August 2015, Putrajaya, Malaysia.</p> <p>11. Zafira Md Zin, Mohamad Fitri Shai-in, Faradiella Mohd Kusin*. (2015) Comparing heavy metal mobility in active and abandoned mining sites at Bestari Jaya, Selangor. <i>International Conference on Environmental Forensics (iENFORCE 2015)</i>, 19-20 August 2015, Putrajaya, Malaysia.</p> <p>12. Sharifah Mohd. Sharif, Faradiella Mohd. Kusin, Zulfa Hanan Asha'ari. (2015) Characterization of water quality conditions in the Klang River Basin, Malaysia using self organizing map and K-means algorithm. <i>International Conference on Environmental Forensics (iENFORCE 2015)</i>, 19-20 August 2015, Putrajaya, Malaysia.</p> <p>13. Nurul Izzati Mat Akhir, Faradiella Mohd Kusin*, Ferdaus Mohamat-Yusuff, Muhamad Awang, Zulfa Hanan Ash'Aari. (2015) Impact of Nitrogen Fertilizer Application on Nitrous Oxide Emission in Oil Palm Plantation. <i>International Conference on Environmental Forensics (iENFORCE 2015)</i>, 19-20 August 2015, Putrajaya, Malaysia.</p> <p>14. Faradiella Mohd Kusin, Nurul Izzati Mat Akhir, Wong Siew Yien, Ferdaus Mohamat Yusuff, Muhamad Awang, Farahana Hamka. Greenhouse gas emissions during agricultural stage of palm oil-based biofuel production associated with land use changes. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>15. Nurul Izzati Mat Akhir, Faradiella Mohd Kusin, Ferdaus Mohamat Yusuff. Estimation of GHG emission from different land use changes associated with oil palm plantation. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>16. Mohd Syakirin Md Zahar, Siti Nurjaliah Muhammad, Faradiella Mohd Kusin, Shamsul Kamal Sulaiman. The efficiency of using manganese dioxide (MnO₂) and limestone in the removal of manganese from acid mine drainage. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>17. Siti Nurjaliah Muhammad, Faradiella Mohd Kusin, Mohd Syakirin Md Zahar, Shamsul Kamal Sulaiman. The potential use of mixed substrates in passive treatment of acid mine drainage: batch experiment. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>18. Nurul Athirah Liyana Abdul Rashid, Ferdaus Mohamat Yusuff, Faradiella Mohd Kusin, Muhammad bin Awang. Estimation of phytomass at highly degraded area and logged over forest of oil palm plantations. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>19. Fathia Alaswad, Ferdaus Mohamat Yusuff, Faradiella Mohd Kusin, Ahmad Bin Ismail, Muhammad bin Awang,</p>

	<p>Syaizwan Zahmir Zulkifl. Tracing carbon and nitrogen fluxes in soil of log-over forest and highly degraded area of oil palm plantations using stable isotope analysis. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 28-29 October, 2014, Putrajaya, Malaysia.</p> <p>20. Nurul 'Izza Abdul Latif, Muhamad Fauzi Ahmad Razali, Syed Badruzzaman Syed Sagoff, Ferdaus Mohamat Yusuff, Faradiella Mohd Kusun, Syaizwan Zahmir Zulkifli. Heavy metals retention in soil of oil palm plantation. <i>Malaysian International Biological Symposium (i-Simbiomas 2014)</i>, 11-12 July, 2014, Putrajaya, Malaysia.</p> <p>21. FM Kusun and A Aris (2013) Anoxic Limestone Drain for Treatment of Highly Acidic Water. <i>International Conference on Environmental Forensics (iENFORCE 2013)</i>, From Sources to Solution, 12-13 November 2013, Putrajaya, Malaysia.</p> <p>22. FM Dali, H Juahir, AZ Aris, ME Toriman, AP Lim, LJ Looi, SBZS Sagoff and FM Kusun (2013) Assessment of Water Quality Using Environmetric Techniques at Johor River, <i>International Conference on Environmental Forensics (iENFORCE 2013)</i>, From Sources to Solution, 12-13 November 2013, Putrajaya, Malaysia.</p> <p>23. Faradiella M. Kusun and Adam P. Jarvis (2011) Hydraulic performance of UK's Coal Authority mine water treatment systems. <i>CWA Annual Conference</i>, 13-14 July, 2011, National Coal Mining Museum, Wakefield UK.</p> <p>24. Faradiella M. Kusun, Adam P. Jarvis and Catherine J. Gandy (2010) Hydraulic performances of wetlands and settlement lagoons for remediation of mine-impacted waters. <i>Proceedings of the UK-Malaysia-Ireland Science Engineering Conference (UMIES)</i>, 23-25 June, 2010, Belfast, Northern Ireland.</p> <p>25. F. M. Kusun, A. P. Jarvis and C. J. Gandy (2010) Effects of residence time on hydraulic performance and iron removal in wetlands and lagoons for remediation of ferruginous coal mine waters. <i>Proceedings of the 12th IWA International Conference on Wetland Systems for Water Pollution Control</i>, 4-7 Oct, 2010, Venice, Italy.</p> <p>26. F. M. Kusun and A. P. Jarvis (2010) Residence time distribution for determination of hydraulic performance of a wetland receiving ferruginous mine water over a 3 year period from commissioning. <i>Proceedings of the 9th IWA International Conference on Sustainable Solutions for Small Water and Wastewater Treatment Systems (S2Small2010)</i>, 19-22 April, 2010, Girona, Spain.</p> <p>27. Faradiella M. Kusun and Adam P. Jarvis (2010) Residence time distribution for determination of hydraulic performance of a wetland receiving ferruginous mine water. <i>11th IWA UK Young Water Professionals Conference</i>, 14-15 April, 2010, Cranfield, UK.</p> <p>28. Faradiella M. Kusun, Natalie Kruse, William M. Mayes and Adam P. Jarvis (2009) A comparative study of hydraulic residence time using a multi-tracer approach at a coal mine water treatment wetland, Lambley, Northumberland, UK. <i>Proceedings of the 8th International Conference on Acid Rock Drainage (ICARD)</i>, 22-26 June, 2009, Skellefteå, Sweden.</p> <p>29. Faradiella M. Kusun, Adam P. Jarvis and Catherine J. Gandy (2010) Hydraulic performances of wetlands and settlement lagoons receiving ferruginous coal mine waters. <i>PGR Conference</i>, 24 June, 2010, School of Civil Engineering and Geosciences, Newcastle University, UK.</p> <p>30. Faradiella M. Kusun and Adam P. Jarvis (2009) A Comparative Study of Hydraulic Residence Time at Multiple Coal Mine Water Treatment Systems, North-East England. <i>PGR Conference</i>, 4 July, 2009, School of Civil Engineering and Geosciences, Newcastle University, UK.</p>
Other publications	<p>1. Tobias Roetting, Faradiella Mohd Kusun and Adam Jarvis (2009) <i>Behaviour of iron in saline waters</i>. Report to the UK Coal Authority Ref KH091418, December 2009.</p> <p>2. Faradiella Mohd Kusun and Ahmad Zaharin Aris (2014) <i>Metal mine-impacted waters in Bestari Jaya, Selangor</i>. Report to the Lembaga Urus Air Selangor (LUAS), Jun 2014.</p>
Computer software	

H. PROJEK PENYELIDIKAN TERDAHULU (Past Research Project)					
Project No.	Project Title	Role	Year	Source of fund	Status
1.05-02-121737RU/ 9330700	Development of cost-effective, sustainable, passive remediation of metal mine-impacted waters	Principal Investigator	2012-2014	Research University Grant Scheme (RUGS) (Initiative 5) RM29,000	Completed
2. 07-01-13-1180FR 5524261	The use of Reducing and Alkalinity-Producing System (RAPS) for passive treatment of acidic and metal-containing mine waters	Principal Investigator	2013-2015	Fundamental Research Grant Scheme (FRGS), MOHE RM90,000	Completed
3. 12-208 RG/ENG/AS_C UNESCO FR: 3240270866	Development of cost-effective, passive in-situ remediation of metal mine-impacted waters	Principal Investigator	2013-2014	UNESCO TWAS-COMSTECH Joint Research Grant USD7,000	Completed
4. GP/IPS/2014/ 9430000	The use of manganese dioxide and limestone (calcite and dolomite) in the removal of manganese from acid mine drainage (AMD)	Principal Investigator	2014-2016	Geran Putra IPS RM15,000	Completed

5. GP/IPS/2014/9438721	Passive Treatment of Acid Mine Drainage (AMD) using Sulphate-Reducing Bioreactor	Principal Investigator	2014-2016	Geran Putra IPS RM15,000	Completed
6. GP/IPM/2014/9433300	Incorporating Bacterial Sulphate Reduction (BSR) and carbon additives in an anoxic bioreactor for remediation of Acid Mine Drainage	Principal Investigator	2014-2016	Geran Putra IPM RM50,000	Completed
7. KTGS/9437505	Program Pemulihan Kualiti Air dan Ekosistem Bakau di Kong Kong laut Johor	Principal Investigator	2015	Knowledge Transfer Grant Scheme KTGS (Community), UCTC RM37,200	Completed
8. GP/IPS/2015/9453700	Performance of Permeable Reactive Barrier (PRB) for Passive Remediation of Contaminants Associated With Bauxite Mining	Principal Investigator	2015-2017	Geran Putra IPS RM20,000	On-going
9. 07-01-13-1180FR/5524757	Remedial strategies and carbon capture potential of mining waste: Passive sequestration of atmospheric carbon from bauxite residue (red mud) deposits,	Principal Investigator	2015-2017	Fundamental Research Grant Scheme (FRGS), MOHE RM105,000	On-going
10. 05-01-12-1667RU/9323700	Development of a Standard Operating Procedure (SOP) for wastewater treatment in UPM	Co-Researcher	2012 - 2014	Research University Grant Scheme (RUGS) (Initiative 2) RM50,000	Completed
11. LRGS/6375401	Estimation of carbon footprint from palm-oil-based biofuel production in Malaysia	Co-Researcher	2011-2014	Long-term Research Grant Scheme (LRGS), MOHE RM329,100	Completed
12. 03-02-12-1859RU/9342900	Analysis and occurrence of monitored and emerging disinfection-by-products in Malaysian Water Treatment Plant	Co-Researcher	2012-2014	Research University Grant Scheme (RUGS) (Initiative 5) RM30,000	Completed
13. KTP/6228139	Pengoptimuman pembiakan dan pengeluaran benih kerang tempatan; Anadara ovalis di Kong Kong Laut, Johor	Co-Researcher	2014-2016	Knowledge Transfer Programme (KTP) Grant Scheme (Community), MOHE RM90,000	Completed
14. 07-01-13-1180FR/5524261	Removal of Endocrine Disrupting Compounds (EDCs) from Aqueous Solution using Marine Carbonate Residues to be Applied in Water Supply Treatment Facilities	Co-Researcher	2015-2017	Fundamental Research Grant Scheme (FRGS), MOHE RM80,200	On-going
15. FRGS/03-01-16-1844FR/5524951	Synthesis of polar hyper-crosslinked microspheres of poly(acrylonitrile-co-divinylbenzene-co-vinylbenzylchloride) as sorbents in solid phase extraction of pharmaceutical residues from domestic wastewater	Co-Researcher	2016-2018	Fundamental Research Grant Scheme (FRGS), MOHE RM88,000,	On-going
16. TRGS/5535713	Modelling Drinking Water Distribution System (DWDS) Vulnerability to Active Pharmaceutical Ingredients (APIs) by Integration of Geospatial-Hydraulic and Water Quality Model	Co-Researcher	2016-2019	Trans-Disciplinary Research Grant Scheme (TRGS), MOHE RM126,000	On-going

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K. PENYELIAAN (<i>Supervision</i>)		
Doctor of Philosophy (PhD)	<p>Main supervisor:</p> <ol style="list-style-type: none"> Ang Kean Hua. Pattern recognition assessment incorporating GIS and remote sensing in the evaluation of water quality in Malacca River Basin. Sharifah Bt Mohammad Sharif. Application of Non-Linear Multivariate Analysis to Characterize Water Quality Conditions in the Rivers of Malaysia. Sharifah Nur Munirah Syed Hassan. Carbon sequestration potential of mining wastes in metallic mining industry for reduction of atmospheric CO₂ <p>Co-supervisor:</p> <ol style="list-style-type: none"> Wong Siew Yin. LCA of carbon footprint of palm oil-based biofuel production in Malaysia. Mohd Khairul Nizar Shamsuddin. Embarking on a groundwater and surface water interactions in the hyporheic zone approach for resource abstraction. Fathia Ahmad M. Alaswad. Evaluating the effectiveness of carbon storage in oil palm plantation using stable isotope analysis. Sara Azuana Khalidah Khalid. Water quality assessment towards cockle development in Kong Kong Laut, Johor. Hazimah Haspi Harun. Development of groundwater quality index for agricultural purposes. 	<p>On-going (2014-2017)</p> <p>On-going (2012-2017)</p> <p>On-going (2016-2019)</p> <p>On-going (2012-2017)</p> <p>On-going (2014-2017)</p> <p>On-going (2014-2017)</p> <p>On-going (2014-2017)</p> <p>On-going (2015-2018)</p>
Master with thesis (MSc)	<p>Main supervisor:</p> <ol style="list-style-type: none"> Nurul Izzati Mat Akhir. Greenhouse gas emissions during plantation stage of palm oil-based biofuel production addressing different land conversion scenarios in Malaysia. Siti Nurjaliah Muhammad. Passive remediation of metal and sulfate-rich acid mine drainage using a sulfate reducing bioreactor Mohd Syakirin Md Zahar. Treatment of Acid Mine Drainage using industrial by-product: Sorption behavior of steel slag for metal-rich mine water. Zafira Madzin. Coupled physico-chemical and bacterial reduction mechanisms for passive remediation of sulfate- and metal-rich acid mine drainage. Noratiqah Masri. The geotechnical, chemical and mineralogical characterization of liner materials in the design of retention system for acid 	<p>(2013-2016) Graduated</p> <p>(2014-2016) Graduated</p> <p>(2014-2017) Graduated</p> <p>On-going (2015-2017)</p> <p>On-going (2016-2018)</p>

	<p>mine drainage treatment.</p> <p>Co-supervisor:</p> <p>7. Faradiah Bt Md. Dali. Environmental Forensic of Spatial and Temporal Characterization of Heavy Metal Using Chemometrics Techniques at Langat River Malaysia.</p> <p>8. Ibrahim Muhammad Sanusi. Vegetation mesocosm study for water quality improvement.</p> <p>9. Nur Diyana Mohamad. Assessment of air pollutant source identification in Kalng valley.</p>	<p>(2012-2015) Graduated</p> <p>On-going (2015-2017)</p> <p>On-going (2014-2016)</p>
Master without thesis (MEnv)	<p>Main supervisor:</p> <p>1. Mohd Khairul Azwan Abdul Hamid. Assessment of Water Quality Status in a river affected by oil palm plantation activities in Kuala Lipis, Pahang</p> <p>2. Nazar Azly Zuberi. Estimation of carbon stock changes in agricultural sector in Malaysia.</p> <p>3. Chong Zhi Ming. Conditions influencing ammonium removal using MAP technique.</p> <p>4. Mohamad Syazwan Abd Rahman. Heavy metal contamination associated with bauxite mining in Pahang. Graduated</p> <p>5. Norazlina Ab Halim. Heavy metal composition of scheduled waste co-processing. Graduated</p> <p>6. Siti Merryan Diami. Health risk assessment of heavy metal contamination associated with mining activities.</p> <p>7. Chalang Shalal Hassan. Evaluation of the performance of sewage treatment plants in Malaysia.</p> <p>8. Sofiah Rahmat. Performance Assessment of a Centralized Wastewater Treatment Plant.</p> <p>9. Mohamad Azfar Hamdan. Temporal analysis of hydrological trends for stormwater management in Klang River, Kuala Lumpur, Malaysia.</p> <p>10. Mohd Reduan Mahmood. Carbon footprint from palm oil mill effluent.</p>	<p>On-going (2017)</p> <p>On-going (2017)</p> <p>Graduated (2016)</p> <p>Graduated (2016)</p> <p>Graduated (2016)</p> <p>Graduated (2015)</p> <p>Graduated (2014)</p> <p>Graduated (2013)</p> <p>Graduated (2013)</p> <p>Graduated (2013)</p>