

CURRICULUM VITAE

Mohamed Mostafa A. Mohamed

Professor of Water Resources and Environmental Engineering

Head of Water Resources Graduate Program

Civil and Environmental Engineering Department

1. Personal Information

1.1. Education

Ph.D. Civil and Coastal Engineering Department, University of Florida, USA, 2001.

- Major: Civil Engineering, Water Resources
- Minors: 1. Environmental Engineering 2. Hydrologic Sciences

M.Sc. Civil Engineering Department, Cairo University, Egypt, 1997. Distinction with honor degree

B.Sc. Civil Engineering Department, Cairo University, Egypt, 1994. Distinction with honor degree

1.2 Work Experience

8/15 – present: Head, Water Resources Graduate Program, UAE University, UAE.

8/05 – present: Assistant, Associate and full Professor, Civil & Environmental Eng. Dept., UAE University, UAE

8/03 – 8/05: Research Associate/lecturer, GPRG, Civil Eng. Dept., University of Sheffield, UK.

8/02 – 8/03: Technical Office Manager, Nile Consultants, Cairo, Egypt

8/03 – 8/15: Assistant, Associate Professor, Civil Eng. Dept., Cairo University, Egypt. (on leave)

8/02 – 8/03: Assistant Professor, Civil Eng. Dept., Cairo University, Egypt.

8/01 – 8/02: Research Associate/lecturer, Civil and Coastal Eng. Dept., University of Florida, Gainesville, FL, USA

8/97 – 8/01: Research Assistant, Civil and Coastal Eng. Dept., University of Florida, USA.

5/00 - 8/00: Research Intern, Desert Research Institute, Las Vegas, NV, USA.

3/96 - 8/97: Sr. Environmental Engineer, Talaat & Imam Consultants, Cairo, Egypt

8/94 - 8/97: Teaching/Research Assistant, Civil Eng. Dept., Cairo University, Egypt.

1.3 Professional Interests

- Groundwater modeling
- Groundwater remediation
- Environmental impact assessment
- Water quality and pollution control
- Water resources management
- Site investigations and assessment tools
- Salt-water intrusion in coastal aquifers
- Stochastic subsurface hydrology

1.4 Awards (since 2015)

- Khalifa Award in Higher Education, 2018
- UAE University Merit Award in Research, 2018
- College of Engineering Excellence Award in Research, UAEU, 2018
- Rashid bin Humaid Award for Culture and Science, First Place, Environmental Sciences, 2017. (With my Post-Doc Dr. Samy Elmahdy.)
- College of Engineering Excellence Award in Teaching, UAEU, 2016

2. Research, Scholarly, and Creative Activities

2.1. Articles in Refereed Journals

J1. Hassan, A. and **Mohamed**, M. "On Using Particle Tracking Method to Simulate transport in Single Continuum and Dual Continua Porous Media", J. Hydrology, 2003 (275), 242-260. [IF=3.882]

J2. **Mohamed**, M. "New Iterative Solution for the Biodegradation Problem in the Subsurface", J. Engineering and Applied Sciences, 2003, 50(6).

- J3. **Mohamed**, M. and Hatfield, K. "Modeling Microbial-Mediated Reduction Using the Quasi-Steady-State Approximation", *Chemosphere*, 2005 (59), 1207-1217. [IF=4.068]
- J4. **Mohamed** M, Hatfield K, and Hassan AE. Monte Carlo evaluation of microbial-mediated contaminant reactions in heterogeneous aquifers, *Advances in Water Resources* 29 (8) 1123–1139, 2006. [IF=4.349]
- J5. **Mohamed** M., Hatfield K. and Perminova I. V. Evaluation of the Biological Parameters in the Subsurface Using Moment Analysis: Theory and Numerical Testing, *Advances in Water Resources* 30 (9), 2007. [IF=4.349]
- J6. **Mohamed**, M. and A. Almualla. Water demand forecasting in Umm Al-Quwain using the constant rate model, *Desalination*, 259, 161–186, 2010. [IF=4.80]
- J7. **Mohamed**, M. and A. Almualla. Water Demand Forecasting in Umm Al-Quwain (UAE) Using the IWR-MAIN Specify Forecasting Model. *Water Resources Management*, volume 24, number 14, pp. 4093-4120, 2010. [IF=2.437]
- J8. **Mohamed**, M., N. Saleh, and M. Sherif. Sensitivity of Natural Attenuation to Variations in Kinetic and Transport Parameters. *Bulletin of Environmental Contamination and Toxicology*, 84(4) 443-449, 2010. [IF=1.191]
- J9. **Mohamed**, M., N. Saleh, and M. Sherif. Modeling In-Situ Benzene Bioremediation in the Contaminated Liwa Aquifer (UAE) Using the Slow-Release Oxygen Source Technique. *Environmental Earth Sciences*, 61(7), 1385-1399, 2010. [IF=1.765]
- J10. **Mohamed**, M., Hatfield K, Hassan AE, and Klammler H. Stochastic Evaluation of Subsurface Contaminant Discharges under Physical, Chemical, and Biological Heterogeneities, *Advances in Water Resources*, Volume 33, Issue 7, 801-812, 2010. [IF=4.349]
- J11. M. Sherif, **Mohamed**, M., A. Kacimov, and A. Shetty. Assessment of groundwater quality in the northeastern coastal area of UAE as precursor for desalination, *Desalination*, 273 (1-2) 436–446, 2011. [IF=4.80]
- J12. M. Sherif, **Mohamed**, M., A. Shetty, and M. Almulla. Rainfall-Runoff Modeling of Three Wadis in the Northern Area of UAE, *J. Hydrologic Eng. (ASCE)* Volume 16, Issue 1, pp. 10-20, 2011. [IF=1.583]
- J13. **Mohamed**, M. and K. Hatfield. Dimensionless Monod parameters to summarize the influence of microbial inhibition on the attenuation of groundwater contaminants. *Biodegradation*, 22:877–896, 2011. [IF=2.208]
- J14. Elmahdy S., and **Mohamed**, M. Geological lineament detection, characterization and association with groundwater contamination in carbonate rocks of Musandam Peninsular using Digital Elevation Model (DEM), *Open Hydrol J* 6 (Suppl 1-M3), 45-51, 2012. [IF=0.75]
- J15. Elmahdy S., and **Mohamed**, M. Topographic attributes controlling groundwater flow and salinity in Al-Ain, UAE: a prediction method using remote sensing and GIS. *Journal of Environment and Earth Science*, Vol. 2, No.8, 2012.
- J16. Samy I.E. and **Mohamed** M.M 2013, Change detection and mapping of mangrove using multi-temporal remote sensing data: a case study of Abu Dhabi, UAE. *Journal of Geomatics* 7 (1), 41-46
- J17. Samy I.E. and **Mohamed** M.M 2013, Mapping Of Major Paleodrainage Systems In The Sand Dune Corridors Of The United Arab Emirates Using Remote Sensing. *Asian Academic Research Journal of Multidisciplinary*, V.1, Issue 12, 2013
- J18. Elmahdy S., and **Mohamed**, M. Remote Sensing and GIS Applications of Surface and Near Surface Hydro-morphological Features", *International Journal of Remote Sensing*, Vol. 34, No. 13, 4715–4735 2013. [IF=1.640]
- J19. Elmahdy S., and **Mohamed**, M. Influence of geological structures on groundwater accumulation and groundwater salinity in Northern UAE. *Geocarto International*. Volume 28, Issue 5, pages 453-472, 2013. [IF=1.380]
- J20. Elmahdy S., and **Mohamed**, M. Natural Hazards Susceptibility Mapping: An Assessment Using Remote Sensing And Geographic Information System (GIS). *Geomatics, Natural Hazards and Risk Journal.*, Volume 4, Issue 1, pages 71-91, 2013. [IF=2.140]

- J21. Elmahdy S., and **Mohamed**, M. Relationship between geological structures and groundwater flow and groundwater salinity in Al Ain, UAE; mapping and analysis by means of remote sensing and GIS. *Arabian J Geosci*, Volume 7, Issue 3, pp 1249-1259, 2014. [IF=1.224]
- J22. Elmahdy S., and **Mohamed**, M. Groundwater potential modeling using remote sensing and GIS: a case study of the Al Dhaid area, United Arab Emirates. *Geocarto International*, 2014. 29 (4), 433-450. [IF=1.380]
- J23. Klammler, H., Hatfield, K., **Mohamed**, M.M., Perminova, I.V., Perlmutter, M., Capture and release zones of permeable reactive barriers under the influence of advective-dispersive transport in the aquifer, *Advances in Water Resources*, V 69, p 79-94, 2014. [IF=4.349]
- J24. Elmahdy S., and **Mohamed**, M. 2014, Landslide modelling and analysis using remote sensing and GIS: A case study of Cameron highland, Malaysia. *Journal of Geomatics*, 8(2), 2014.
- J25. Elmahdy S., and **Mohamed**, M. 2015. Automatic detection of near surface geological and hydrological features and investigating their influence on groundwater accumulation and salinity using remote sensing and GIS. *Geocarto International*. Volume 30, Issue 2, 32-144. [IF=1.380]
- J26. Elmahdy S, MM **Mohamed**, MM Marghany, 2015. Mapping and classification of hydrological parameters from digital terrain data in the Musandam Peninsula, UAE and Oman. *Geocarto International*, 30(3), 330-345. [IF=1.380]
- J27. Elmahdy S., and **Mohamed**, M. Probabilistic frequency ratio model for groundwater potential mapping in Al Jaww plain, UAE. *Arabian Journal of Geosciences* 8 (4), 2405-2416, 2015 [IF=1.224]
- J28. Elmahdy S.I and **Mohamed** M.M.. Remote sensing and geophysical survey applications for delineating near-surface palaeochannels and shallow aquifer in the United Arab Emirates. *Geocarto International*, 30(7), 723-736, 2015 [IF=1.380]
- J29. **Mohamed**, M. and Elmahdy S. Natural and anthropogenic factors affecting groundwater quality in the eastern region of the United Arab Emirates. *Arabian Journal of Geosciences* 8 (9), 7409-7423, 2015 [IF=1.224]
- J30. Elmahdy S., and **Mohamed**, M. Groundwater of Abu Dhabi Emirate: a regional assessment by means of remote sensing and geographic information system, *Arabian Journal of Geosciences*, 8 (12), 11279-11292, 2015 [IF=1.224]
- J31. **Mohamed** M. Towards Sustainable Groundwater Management in the Northeastern UAE. *Journal of Water Resource and Hydraulic Engineering*. Vol. 4 (4), PP. 332-338, 2015.
- J32. **Mohamed** M. Source Zone Characterization Tool for Contaminated Groundwater Aquifers. *International Journal of Environmental Science and Development*, V 6, issue 11, pp 828- 833. DOI: 10.7763/IJESD.2015.V6.707, 2015
- J33. Elmahdy S., and **Mohamed**, M. 2016. Automatic Feature Extraction Module for Change Detection in Al Ain, UAE: Analysis by Means of Multi-temporal Remote Sensing Data, *Journal of the Indian Society of Remote Sensing*, 44(1), 1-10. [IF=0.764]
- J34. Kizhisseri MI and **Mohamed** MM. Fuzzy-based wastewater quality indices for pollution classification: a case study in the United Arab Emirates. *Environment Systems and Decisions*, 36 (1), 62-7, 12016
- J35. Elmahdy S., Marghany MM, and **Mohamed** MM. Application of a weighted spatial probability model in GIS to analyze landslides. *Geomatics, Natural Hazards and Risk* 7 (1), 345-359, 2016 [IF=2.140]
- J36. Elmahdy S., and **Mohamed** MM. Mapping of tecto-lineaments and investigate their association with earthquakes in Egypt: a hybrid approach using remote sensing data. *Geomatics, Natural Hazards and Risk* 7 (2), 600-619. 2016. [IF=2.140]
- J37. Elmahdy S., and **Mohamed**, M. Factors controlling the changes and spatial variability of Junipers Phoenicia in Jabal Al Akhdar, Libya, using remote sensing and GIS. *Arabian Journal of Geosciences*, 2016. DOI: 10.1007/s12517-016-2500-0. [IF=1.224]

- J38. **Mohamed**, M. and Elmahdy S. Remote sensing and information value (IV) model for regional mapping of fluvial channels and topographic wetness. 2016. GIScience & Remote Sensing. 10.1080/15481603.2016.1169741. [IF=2.482]
- J39. **Mohamed** M, N. Al-Suwaidi, A. Ebrahim, and M. Al Mulla. Groundwater Modeling as a Precursor Tool for Water Resources Sustainability in Khatt Area, UAE. 2016. Environmental Earth Sciences, 75, 400-418. [IF=1.765]
- J40. **Mohamed** M. and A. Hassane. Hydrochemistry Assessment of Groundwater Quality in Al Ain City, UAE. 2016. Environmental Earth Sciences, 75, 353-370. [IF=1.765]
- J41. **Mohamed**, M. "New Iterative Solution for the Biodegradation Problem in the Subsurface", J. Engineering and Applied Sciences, 2003, 50(6).
- J42. Rezaul Chowdhury, **Mohamad** M. A. Mohamed, and Ahmed Murad. Variability of Extreme Hydro- Climate Parameters in the North- Eastern Region of United Arab Emirates. Procedia Engineering, 154, 639 – 644, 2016. (IF=0.73)
- J43. **Mohamed** M. Estimation of Bacterial Growth Parameters Using Inverse Analysis. International Journal of Sustainable Water and Environmental Systems (SWES), ISSN: 1923-7537, V8 (1), 41-49, 2016.
- J44. Elmahdy, S. I., **Mohamed**, M. M. Land use/land cover change impact on groundwater quantity and quality: a case study of Ajman Emirate, the United Arab Emirates, using remote sensing and GIS. Arabian Journal of Geosciences, 9(19), 722, 2016.
- J45. **Mohamed** M., A. Murad. And Chowdhury R., Evaluation of Groundwater Quality in the Eastern District of Abu Dhabi Emirate, UAE, Bulletin of Environmental Contamination and Toxicology 98 (3), 385-391, 2017.
- J46. Elmahdy, S. I., **Mohamed**, M. M. (2017). Monitoring and analyzing the Emirate of Dubai's land use/land cover changes: an integrated, low-cost remote sensing approach, International Journal of Digital Earth, 1-19, 2017
- J47. **Mohamed** M., SI Elmahdy.(2017) Fuzzy logic and multi-criteria methods for groundwater potentiality mapping at Al Fo'ah area, the United Arab Emirates (UAE): an integrated approach. Geocarto International 32 (10), 1120-1138, 2017
- J48. **Mohamed** M., SI Elmahdy. Remote sensing of the Grand Ethiopian Renaissance Dam: a hazard and environmental impacts assessment. Geomatics, Natural Hazards and Risk, volume 8, issue 2, 1225-1240, 2017.
- J49. Chowdhury, Rezaul K., Jameelu S. Abaya, Taoufik Tsiksi and **Mohamad** M. **Mohamed**. 2017. Greywater Quality Changes in Laboratory Scale Vegetative Biofiltration Prototypes. Journal of Water Management Modeling 26:C434. <https://doi.org/10.14796/JWMM.C434>.
- J50. S. Sathish and M. **Mohamed**. Feasibility of Aquifer Storage and Recovery in selected sites in Abu Dhabi, Environ Earth Sci, 2018, 77:112.
- J51. Sathish, S., Mohamed, M. & Klammler, H. Regional groundwater flow model for Abu Dhabi Emirate: scenario-based investigation, Environ Earth Sci (2018) 77: 409.
- J52. Chowdhury, Rezaul K., Jameelu S. Abaya, Taoufik Tsiksi and **Mohamad** M. **Mohamed**. 2018. Removal of Heavy Metals in Vegetative Graywater Biofiltration Columns. J. Environ. Eng., ASCE, 2018, 144(11): 04018112.
- J53. MM Mohamed, Parimalarenganayaki, and AA Murad. The use of isotopes in groundwater studies: A review. Environmental Earth Science, in review.
- J54. M. Modou, M. Mohamed, S., Sathish, M. Sherif, 'Modeling the Mitigation of Seawater Intrusion by Pumping of Brackish Water from the Coastal Aquifer of Wadi Ham, UAE. Sustain. Water Resour. Manag. (2018). <https://doi.org/10.1007/s40899-018-0271-3>.
- J55. M. Mahmoud, M. Mohamed, M. Hamouda. Health Risk Assessment of Household Drinking Water in a North Eastern District of Abu Dhabi Emirate. Journal of Environmental Management, accepted.

- J56. M. Mahmoud, M. Hamouda, and M. Mohamed, Spatiotemporal Evaluation of the GPM satellite precipitation products over the United Arab Emirates, Atmospheric Research, accepted.
- J57. M. Liaqat, M. Mohamed, R. Chowdhury, S. Elmahdy. Impact of Land Use/Land Cover Changes on Water Demand in Al Ain Region of the United Arab Emirates Using Remote Sensing and GIS Techniques. Physics and Chemistry of the Earth, under review.
- J58. M. Sakizadeh Mohamed, M. & Klammler, H. Trend analysis of groundwater level using time series and a novel spatio-temporal Algorithm, Water Resources Management, under review.
- J59. G. Nam, M. Mohamed, J. Jung, Enhanced degradation of benzo[a]pyrene and toxicity reduction by microbubble ozonation. Environmental Pollution, under review.
- J60. Qasim Raza Khan, M.Sc.; Edda Kalbus; Dalal M. Alshamsi; Mohamed M. A. Mohamed; Muhammad U. Liaqat. Hydrochemical Analysis of Groundwater in Remah and Al Khatim Regions, United Arab Emirates". Environmental Earth Science, under review.

2.2 Conferences proceedings and presentations

- C1. Mohamed Mostafa Mohamed and Samy Elmahdy. Land Use/Land Cover Changes Monitoring and Analysis of Dubai Emirate, UAE Using Multi-Temporal Remote Sensing Data". EPiC Series in Engineering Volume 3, 2018, Pages 1435-1443. HIC 2018. 13th International Conference on Hydroinformatics
- C2. "Mohamed Mostafa Mohamed. Climate Changes Impacts on Groundwater Recharge in the UAE" EPiC Series in Engineering Volume 3, 2018, Pages 1424-1434. HIC 2018. 13th International Conference on Hydroinformatics
- C3. Mohamed M., Improving the Capacities of UAE Higher Education Institutions in Water Resources Integrated Management, International Center for Sustainable Development of Energy, Water, and Environment, Brazil, Jan 2018.
- C4. Mohamed M., Integrated Water Management Framework for the Emirate of Abu Dhabi, UAE, International Center for Sustainable Development of Energy, Water, and Environment, Brazil, Jan 2018.
- C5. Mohamed M., In-situ biodegradation of contaminated groundwater aquifers using slow-releasing oxygen sources. 6th International Conference on Sustainable Energy, Engineering, and Environment. July 2017, Newcastle Upon Tyne, UK
- C6. Mohamad M. A. Mohamed, Rezaul Chowdhury, and Ahmed Murad. Groundwater Management Under Climate Change in UAE. 8th International Conference on Environmental Science and Technology. August 2017, Bali, Indonesia.
- C7. Mohamed M., Groundwater Management under Climate Change in UAE, the 12th international conference of the Water Science and Technology Association: Gulf Water Conference, March 2017.
- C8. M. Sowe, M. Mohamed and M. Sherif, Modeling and Evaluation of the Groundwater Flow in the Coastal Aquifer of Wadi Ham, UAE. 7th International Conference On Water, Energy & Environment, (ICWEE 2017), American University Of Sharjah, United Arab Emirates, Feb 28-Mar 2, 2017.
- C9. H. Younis. M. Mohamed Water Demand Forecasting Using the IWR-MAIN Constant Use Rates Model. 7th International Conference On Water, Energy & Environment (ICWEE 2017), American University Of Sharjah, United Arab Emirates, Feb 28-Mar 2, 2017.
- C10. S. Sadhasivam M. Mohamed. Evaluation of Artificial Storage and Recovery at the Western part of Abu Dhabi Emirate. 7th International Conference On Water, Energy &

- Environment (ICWEE 2017), American University Of Sharjah, United Arab Emirates, Feb 28-Mar 2, 2017.
- C11. M. Mohamed Appraisal of the Water Resources Master Program at United Arab Emirates University. 8th International Forum on Engineering Education (IFEE2017). University Of Sharjah, United Arab Emirates, 18-20 April 2017.
- C12. Mohamed M., Chowdhury R., and Younis H. Greywater Reuse in UAE as an Alternative Water Source. The World Congress on Recycling, July 2016.
- C13. **Mohamed M**, Ahmed Murad, and Rezaul Chowdhury. Assessment of groundwater natural recharge in Abu Dhabi, International Water Conference, 13-16 March 2016, Muscat, Oman.
- C14. H. Younis and **Mohamed M**. Water demand forecasting in Al-Ain city. UAE 2nd graduate students research conference. Al-Ain, UAE, April 27-28, 2016.
- C15. M. Sowe and **Mohamed M**. Modeling of groundwater flow for management strategy in the coastal aquifer of Wadi Ham, UAE. UAE 2nd graduate students research conference. Al-Ain, UAE, April 27-28, 2016.
- C16. **Mohamed M** and H. Younis. Water demand forecasting in United Arab Emirates. The German-UAE Conference on Energy and Water in the Gulf Cooperation Council Countries (EWGCC). Ras Al Khaimah, UAE, in April 14-15, 2016.
- C17. Chowdhury R., M. **Mohamed**, and A. Murad. Variability of Extreme Hydro- Climate Parameters in the North- Eastern Region of United Arab Emirates. 12th International Conference on Hydroinformatics (HIC 2016) Songdo Convensi, Incheon, Korea, 21-26, 2016.
- C18. Chowdhury R., T. Ksiksi, **M. Mohamed** and J. Abaya. Performance of vegetative bio-retention system for greywater reuse in the arid climates. The 8th International Conference on Environmental Science and Technology, Houston, Texas, USA, June 6-10, 2016.
- C19. Mohamed M., Younis H. and Chowdhury R., Feasibility of Using Treated Wastewater as a Potential Water Source in Al-Ain City, UAE. International Conference on Sustainable Water Processing, September 2016, Sitges, Spain.
- C20. Mohamed M. and Younis H. Water Demand Forecasting in Al-Ain City, United Arab Emirates. World Environmental & Water Resources Congress 2016, May 2016, West Palm Beach, USA.
- C21. Mohamed M. Groundwater Modeling in the Eastern District of UAE. World Environmental & Water Resources Congress 2016, May 2016, West Palm Beach, USA.
- C22. Chowdhury, R. K., Ksiksi, T. S., **Mohamed, M. M.**, and Abaya, J. S. Greywater reuse in arid climate through the water sensitive urban design system. UAEU Annual Research and Innovation Conference 2015. 24-25 November 2015. Al Ain, UAE.
- C23. **Mohamed M**, Rezaul Chowdhury and Ahmed Murad. Water Resources Management in Abu Dhabi Under Climate Change, 3rd International Conference on Global Warming, 5-7 May 2015, RAK –UAE.
- C24. **Mohamed M**. Improving Strategic Groundwater Reserves in UAE via Managed Aquifer Recharge. The XVth IWRA World Water Congress Edinburgh, Scotland, 25 – 29 May, 2015.
- C25. Abaya, J. S. and **Mohamed, M. M**. The study of water supply and energy consumption in Al Ain; the Sustainability perspective. The Third International Conference on Water, Energy and Environment (ICWEE). 24-26 March 2015, Sharjah, United Arab Emirates.
- C26. **Mohamed M**. Estimation of Bacterial Growth Parameters Using Inverse Analysis. The International Conference on Energy, Water & Environmental Sciences (ICEWES). Ras Al Khaimah, UAE, in December 15-17, 2015.

- C27. S. Parimalarenganayaki, MM **Mohamed**, and AA Murad. Utilization of isotopes in hydrogeological studies in UAE: A review. International Conference on Engineering Geophysics, Al Ain, United Arab Emirates, 15-18 November 2015: pp. 236-239, 2015.
- C28. **Mohamed M.** and A. Hassane. Evaluation of Groundwater Quality in the Eastern District of Abu Dhabi Emirate, UAE. 14th International Conference on Environmental Science and Technology, Greece, 3 – 5 September, 2015
- C29. **Mohamed M.** Towards Sustainable Groundwater Management in the Northeastern UAE. The 15th International Conferences on Water Resource and Environment (WRE2015), Beijing, China, 25-28, July, 2015.
- C30. Elmahdy, S. I., and **Mohamed M.M**, (2015). Remote sensing and geophysical investigations of paleochannels and shallow aquifer in the United Arab Emirates INSPIRE-GEOSPATIAL WORLD FORUM, Lisbon, Portugal 25-29, May 2015.
- C31. **Mohamed M.** Source Zone Characterization Tool for Contaminated Groundwater Aquifers. The 4th International Conference on Environment Science and Biotechnology (ICESB 2014), Thailand, 27-28 December, 2014.
- C32. **Mohamed, M.** A Decision Support System for Groundwater Sustainability in the Arid Eastern Abu Dhabi Emirate. Proceedings of the 6th IAHS-EGU International Conference on Integrated Water Resources Management, Bologna, Italy, (IAHS Publ. 364) June, 2014.
- C33. **Mohamed, M.** A. Murad and R. Chowdhary. Climate Change Impacts on Groundwater Recharge in Eastern UAE. The 41st IAH International Congress "Groundwater : Challenges and Strategies" Marrakech, Morocco, 15-19 September, 2014.
- C34. Samy I.E. and **Mohamed M.M** 2014. Weighted Spatial Probability Modeling for groundwater potential zonation: a case study of Al Dhaid, UAE. Middle east Geospatial Forum, Dubai, UAE February 2-4, 2014
- C35. **Mohamed M.**, K. Hatfield, and H. Klammler. In-Situ Bioremediation of Contaminated Groundwater Using Permeable Reactive Barriers and Slow-Release Source Techniques. XX. International Conference on Computational Methods in Water Resources, 10 - 13 June, 2014 Stuttgart, Germany.
- C36. **Mohamed, M.** Assessment of Water Resources Sustainability in Al-Ain City. The 2nd International Conference on "Global Warming: Sustainable Cities Conference, Ras Al Khaimah, UAE. May 5-7, 2013.
- C37. AlQuraan, S. and **Mohamed M**, Least Cost Mapping: An Improved approach for Artificial Recharge site selection, proceedings of the 2013 Geospatial Scientific Summit, Sharjah, 27-28 November 2013.
- C38. El-Mahdy and **Mohamed M**, Application of SAR Data to the Mapping of Paleodrainages underneath Sand Sheets in the United Arab Emirates, proceedings of the 2013 Geospatial Scientific Summit, Sharjah, 27-28 November 2013.
- C39. **Mohamed M.** "Development of a Water Budget Model for Groundwater Sustainability in Abu Dhabi" Proceedings of the 13th International Conference on Environmental Science and Technology (CEST2013) Athens, Greece, September 5-7, 2013.
- C40. **Mohamed M** and M. Maraqa "Assessment of Environmental Engineering Education in the United Arab Emirates" Proceedings of the 13th International Conference on Environmental Science and Technology (CEST2013) Athens, Greece, September 5-7, 2013.
- C41. **Mohamed M.** "A Decision Support System for Groundwater Sustainability in the Arid Eastern Abu Dhabi Emirate". Proceedings of the 8th International European Water

- Resources Association (EWRA) Water Resources Management Conference, Porto, Portugal, June 26-29, 2013.
- C42. **Mohamed M** and S. Elmahdy. Delineation of Groundwater Potential Zones in the Eastern region of UAE, accepted to be presented in the 4th International Conference on Environment (ICENV 2012), Malaysia, December 11-13, 2012.
- C43. **Mohamed, M.** Bioremediation of Groundwater Contaminated by Septic Tanks Effluents. Proceedings of the 6th IAHR International Groundwater Symposium, Kuwait, November 19 - 21, 2012.
- C44. **Mohamed, M.** Assessment of the Factors That Influence Water Consumption in UAE. Proceedings of the Water Convention: Sustainable Water Solutions for a Changing Urban Environment, Singapore, July 4 - 8, 2011.
- C45. **Mohamed M** and N. Saleh. "Bioremediation of Groundwater Contaminated by Oil Spills in the Western Region of Abu Dhabi", Proceedings of the 20th joint GCC-Japan Symposium GCC-JCCP conference, Abu Dhabi, UAE, 2011.
- C46. **Mohamed, M.** Guidelines for Optimal Design of Electron Acceptors Injection Wells to Enhance Bioremediation of Contaminated Groundwater. In Groundwater Quality Management in a Rapidly Changing, IAHS Red Book Series, Publ. 342, p 404-411, Taylor and Francis, London, 2011.
- C47. **Mohamed, M.** Modeling Oxygen Release into Contaminated Groundwater Aquifers to Facilitate Biodegradation. Proceedings of the 7th annual international symposium on managed aquifer recharge, Abu Dhabi, UAE, October 9-13, 2010.
- C48. **Mohamed, M.** and M. Sherif. Do UAE Civil Engineering Graduates Get Comparable Education to Graduates of Western Universities? Proceedings of the 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance, November 2010.
- C49. **Mohamed, M.** and M. Maraqa. Environmental Engineering Education (E3) in the UAE: Survey and Comparative Study. Proceedings of the 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance, November 2010.
- C50. **Mohamed, M.** and A. Almualla. "Modeling Water Demand Forecasting in Umm AlQwain Using IWR-MAIN. Proceedings of the 3rd International Conference on Modeling, Simulation and Applied Optimization; January, 2009.
- C51. **Mohamed, M.** "Monte Carlo Evaluation of Solute Fluxes in Heterogeneous Aquifers". Proceedings of 36th International IAH Congress on integrating groundwater science and human well being, Toyama, Japan, 2008.
- C52. **M. Mohamed**, N. Saleh, and M. Sherif. Sensitivity Analysis of Benzene Plume Migration to Natural Attenuation in Liwa Aquifer, UAE. Proceedings of 36th International IAH Congress on integrating groundwater science and human well being, Japan, 2008.
- C53. I. Jawhar, N. Mohamed, **M. Mohamed, M.** , J. Aziz, "A Routing Protocol and Addressing Scheme for Oil, Gas, and Water Pipeline Monitoring Using Wireless Sensor Networks, Proceedings of the 5th international Conference on Wireless and Optical Comm. Networks, Indonesia, IEEE Comm., 2008. (32 Citations)
- C54. **Mohamed, M.** and Hatfield, K. The impact of microbial inhibition on the design and evaluation of groundwater remediation systems. in Securing Groundwater Quality in Urban and Industrial Environments, 404-411, IAHS Red Book Series Publ. 324, ISBN 978-1-901502-79-4, 566 pp., Taylor and Francis, 2008.

- C55. **Mohamed, M** “Development of large scale tracer test for the estimation of reactive transport properties: Mathematical and Numerical Development”, Proceedings of the 9th United Arab Emirates University Research Conference, Al-Ain, UAE, April, 2008
- C56. **Mohamed, M**, S. Banwart, and N Thomson. “Multiple dipole flow and reactive tracer test”, In Candela et al. (Eds) WATER POLLUTION in natural Porous media at different scales. Assessment of fate, impact and indicators WAPO², ISBN 978-8478406760, pp. 669-675, Barcelona, Spain, 2007.
- C57. N. Saleh. and **Mohamed, M**. “Modeling Hydrocarbons Transport in Liwa Aquifer of Bu Hasa Field, UAE and Evaluation of Remediation Alternatives”, Proceedings of the 6th International Groundwater Quality Conference on Securing Groundwater Quality. Fremantle, Australia, 2007.
- C58. N. Swuidi and **Mohamed, M**, Evaluation of Groundwater Resources in Khatt Spring Area, UAE Using GIS-Based Numerical Modeling. Proceedings of 6th International Groundwater Quality Conference on Securing Groundwater Quality. Fremantle, Australia, 2007.
- C59. **Mohamed, M**. “Development of the Multi-pole flow and reactive tracer test: Mathematical and Numerical modeling”, Proceedings of the 8th United Arab Emirates University Research Conference, Al-Ain, UAE, April, 2007.
- C60. **Mohamed, M**. and Hatfield K. “Development of Simplified Scaling Relationships for the Estimation of Subsurface Biological Parameters”, Proceedings of the International Ground Water Symposium on "Ground Water Hydraulics in Complex Environment, Toulouse, France, June, 2006.
- C61. **Mohamed, M.**, D. Nayagum, N. Thomson, D. McKnight, C. Berryman, and S. Banwart. “The Dipole Flow and Reactive Tracer Test: Initial Field and Modeling results”, In Poeter et al. (Eds) Proceedings of the MODFLOW and More 2006: Managing Ground Water Systems, pp. 205-210, Colorado, USA, 22-24 May 2006.
- C62. **Mohamed, M**, S. Banwart, N. Thomson, McKnight, Thornton S, Wilson R., and Lerner, D. “The Coalition Forces of Science, Engineering, and Technology Attack Site Characterization Drawbacks”, In “Arid Land Hydrogeology: In Search of Solution to a Threatened Resource: Proceedings of the Third Joint UAE-Japan Symposium on Sustainable GCC Environment and Water Resources (EWR2006), Abu Dhabi, UAE 28 - 30 January 2006;” ISBN 0415411270, Taylor and Francis, London, pp. 79-85, 2006.
- C63. D. Nayagum, **Mohamed, M.**, N. Thomson, D. McKnight, C. Berryman, S. Banwart. “An Aquifer Assessment Tool: Model development and Experimentation”, Proceedings of the International Conference on Protection and Restoration of the Environment VIII, Chania, Greece, July 3-7, 2006.
- C64. C. Berryman, D. McKnight, **Mohamed, M.**, N. Thomson, S. Banwart. Using The Dipole Flow and Reactive Tracer Test. Conference on Aquifer contamination and in-situ remediation, British geological survey, Keyworth, UK, March 2006
- C65. D. McKnight, C. Berryman, **Mohamed, M.**, N. Thomson, S. Banwart. A Novel tool for in-situ Aquifer assessment. Britain Younger Engineers Annual Reception and Competition at the House of Commons, UK, Dec. 2005
- C66. **Mohamed M**, N. Thomson, and S. Banwart, “Modeling Reactive Transport in Dipole Flow and Reactive Tracer Test”, EGU 2nd Assembly meeting, Vienna, Austria, April 2005.
- C67. C.J. Berryman, D. McKnight, **M. Mohamed**, A.L. Smalley, S.A. Banwart, S.F. Thornton, R.D. Wilson, N.R. Thompson, D.N. Lerner. The Dipole Flow and Reactive

- Tracer Test as a Novel Aquifer Assessment Tool. 3rd European bioremediation conference, Plantanias, Crete, July 4 – 7, 2005
- C68. **Mohamed M.**, Banwart S.A., McKnight D., Berryman C.J., Thompson N., Thornton S.F., Wilson R.D. and Lerner D.N. "Development of a Numerical Model for the Dipole Flow and Reactive Tracer Test. Cl:AIRE / First Faraday Joint Conference, Birmingham, UK. April 2005.
- C69. McKnight D., Berryman C.J., **Mohamed M.**, Banwart S.A., Thompson N., Thornton S.F., Wilson R.D. and Lerner D.N. "The development of an in-situ Aquifer Assessment Tool – The Dipole Flow Test with Tracer. Cl:AIRE / First Faraday Joint Conference, Birmingham, UK. April 2005.
- C70. **Mohamed M.**, N. Thomson, and S. Banwart, "Interpretation of the Dipole Flow and Reactive Tracer Test Field Parameters Using PEST", proceedings of MODEL CARE 2005: Calibration and Reliability in Groundwater Modeling. From Uncertainty to Decision, Den Hague, Netherlands, 6-9 June 2005.
- C71. McKnight D, Smalley AL, **Mohamed MA**, Banwart SA, Thomsom NR, Thornton SF, Wilson RD and Lerner DN. The dipole flow and reactive tracer test, a novel in situ aquifer assessment tool. In Groundwater Quality: Natural and Enhanced Restoration of Groundwater Pollution, IAHS Special Publication No. 275, pp. 19-22, July 2004.
- C72. McKnight, D., S. A. Banwart, A. Smalley, C. Berryman, **M. Mohamed**, N. R. Thomson, S. Thornton, R. Wilson, D. Lerner, P. Nathanail, M. Ashmore, D. Scott, T. Elliot. Development of an in-situ aquifer assessment tool: The dipole flow and reactive tracer test, Presented at the 4th British Geotechnical Association Geoenvironmental Engineering Conference, Stratford-on-Avon, UK, June 28-30, 2004.
- C73. McKnight, D., A. Smalley, **M. Mohamed**, S. Banwart, N. Thomson, S. Thornton, R. Wilson, D. Lerner. Dipole flow and reactive tracer test – a novel in situ aquifer assessment tool, In Proceedings from the GQ2004 International Conference, Waterloo, ON, July 19-22, 2004.
- C74. Thomson N., A. Smalley, D. McKnight, **Mohamed M.**, and S. Banwart "the Dipole Flow and Reactive Tracer Test: Numerical modeling development and testing", AGU Fall meeting, San Francisco, CA, USA, Dec. 2004.
- C75. Thomson, N. R., **M. Mohamed**, A. Smalley, D. McKnight, S. Banwart, S. Thornton, R. Wilson, and D. Lerner, Development of a Numerical Model for the Dipole Flow and Reactive Tracer Test, In Proceeding of the ENVIROSOFT 2004, Tenth International Conference on Development and Application of Computer Techniques to Environmental Studies, 2 - 4 June 2004, Ancona, Italy.
- C76. McKnight D., A. Smalley, **M. Mohamed**, S. Banwart, N. Thomson, Thornton S F, Wilson R D., and D. Lerner "The Dipole Flow And Reactive Tracer Test: MODFLOW/MT3DMS Breakthrough Curves", In Bruthans (Eds) FEM-MODFLOW Conference, Karlovy Vary, Czech Republic, pp. 47-51, Sep., 2004.
- C77. **Mohamed M** Thomson N., D. McKnight, A. Smalley, and S. Banwart "Development of a Numerical Model for the Dipole Flow and Reactive Tracer Test", EGU 1st Assembly meeting, Nice, France, April, 2004.
- C78. Banwart S., **Mohamed M**, D. McKnight, A. Smalley, and N. Thomson," Monitored Natural Attenuation: Development of Aquifer Assessment Tool" CL:AIRE Annual Conference: Monitored Natural Attenuation, Sheffield, UK, Oct. 2003.
- C79. McKnight D., A. Smalley, **Mohamed M**, S. Banwart, N. Thomson, and D. Lerner "A Novel Aquifer Assessment Tool Using Reactive Tracers", First-Faraday annual meeting, Melton Mowbray, UK, Sep. 2003.

- C80. **Mohamed M.** and K. Hatfield, "Evaluation of Biochemical Parameters in the Subsurface Using Moment Analysis", AGU Spring meeting, Washington D.C., USA, May 2002.
- C81. **Mohamed M** and K. Hatfield, "Source Zone Biological Treatment of Metals in the Subsurface", AGU Spring meeting, Boston, MA, USA, May 2001.
- C82. **Mohamed M.** and K. Hatfield, "An Iterative Solution for Modeling Microbial-Mediated Chromium Reduction", AGU Spring meeting, Boston, MA, USA, May 2001.
- C83. **Mohamed M** Hassan, A. and Hatfield, K. "Evaluation of the Biodegradation Problem in Two-Dimensional Heterogeneous Aquifers" GSA meeting, Reno, USA, Nov 2000.
- C84. Hassan, A. and **Mohamed M.** "Using the Particle Tracking Method to Solve the Solute Transport Problem in Single Continuum and Dual Continua Porous Media, GSA meeting, Reno, NV, USA, Nov. 2000.
- C85. **Mohamed M** and K. Hatfield, "Modeling Metals Biotransformation in the Subsurface", AGU Spring meeting, Washington D.C., USA, May 2000.
- C86. **Mohamed M** and K. Hatfield, "Numerical Solutions for the Biological Reactions in Groundwater", AGU Fall meeting, San Francisco, CA, USA, Dec. 1999.
- C87. Sherif, M., **Mohamed M.** and Amer, A., "Numerical Modeling of Saltwater Intrusion". Changchun, China, 1998.

2.3 Other Articles and Reports

1. Developing a Dynamic Approach to Water Budgeting for the Emirate of Abu Dhabi, final report, 2016.
2. Developing a Dynamic Approach to Water Budgeting for the Emirate of Abu Dhabi, Model User Manual, 2016.
3. Assessment of transboundary water resources in UAE, interim report, 2016.
4. Evaluation of the ASR System and Testing of capacity Expansion, SEWA, part in the Final report, 2015.
5. Development of a Comprehensive Multi-Criterion Multi-Tier Decision Support System for Groundwater Sustainability in Eastern UAE. Interim report, 2015.
6. Assessment of Climate Change Impacts on Groundwater Recharge in UAE. PI, National Water Center, Interim report, 2015.
7. Al-Ain 2030 Water Plan. PI, NRF-UIRC, Interim report, 2015.
8. Water Demand Forecasting in Al-Ain. Final report 2015..
9. An Integrated Approach to Enhance National Strategic Groundwater Reserves via Managed Aquifer Recharge of Recycled Water, final report 2014.
10. GIS-Based Risk Assessment of Groundwater Vulnerability to Contamination by Septic Systems Effluents in Abu-Dhabi Emirate. Final report.
11. Groundwater Rise in Al-Ain: A Threat or Blessing? PI, Emirates Foundation for Science & Technology Program, report 2014.
12. Feasibility Assessment of Aquifer Storage Using Treated Wastewater in Al-Ain, UAE. Final report 2013. .
13. Groundwater Dating For Groundwater Security in UAE. PI, NRF (National Research Foundation of UAE), final report 2013.
14. Understanding the Factors that Influence Water Consumption in Al Ain. PI, UAEU Research Affairs, final report 2010.
15. Sea water intrusion and the effects on groundwater quality and desalination processes considering the effects of climate change and sea level rise. Progress report, British Council, 2010.
16. Groundwater assessment of an industrial city in Al Fayah, UAE, Final report, Dome Oilfield Engineering & Services Inc, 2009.

17. Development of novel procedures to assess natural attenuation and evaluate enhanced bioremediation in subsurface contaminated sites, Final report, Research Affairs, UAEU, 2009.
18. Groundwater and Geotechnical assessment of Jumeira Gardens, UAE, Final report, Dome Oilfield Engineering & Services Inc. 2008.
19. Environmental Site Assessment of the Abu Dhabi Crude Oil Pipeline main oil terminal (MOT) site in Fujairah, UAE, Final report, Dome Oilfield Engineering & Services Inc. 2008.
20. Assessment of Groundwater Contamination for Jebel Hafeet Development Project, report, Dome Oilfield Engineering & Services; 2007.
21. Development of large scale tracer test for the estimation of reactive transport properties: Mathematical and Numerical Development. Final Report, Research Affairs, UAEU, 2007.
22. Development of Source Zone Characterization Tool for contaminated groundwater aquifers: Mathematical and Numerical Modeling Development and Testing, Final Report, Research Affairs, UAEU, 2006.
23. Development of an In Situ Aquifer Assessment Tool with Risk Management Calculator for Natural Attenuation - Final report to EPSRC, UK, 2006.
24. An article on natural attenuation in the research bulletin of CL:AIRE (Contaminated Land: Applications in Real Environments), UK, January 2006.
25. Commercialization potential of the Aquifer Assessment Tool, Article in the research bulletin of CL:AIRE (Contaminated Land: Applications in Real Environments), UK, January 2006.
26. An article on aquifer assessment tools in the research bulletin of CL:AIRE (Contaminated Land: Applications in Real Environments), UK, September 2005.
27. Development of a Novel Aquifer Assessment Tool for Natural Attenuation, Article in the research bulletin of CL:AIRE, UK, January 2005
28. Development of an In Situ Aquifer Assessment Tool with Risk Management Calculator for Natural Attenuation - progress report and quality plan to EPSRC, UK, 2005.
29. Development of a dipole flow tracer test, Article in First-Faraday Newsletter, Dec. 2003.
30. An In Situ Method for Establishing the Presence and Predicting the Activity of Heavy Metal-Reducing Microbes in the Subsurface. Final report, DOE, USA, 2003.
31. Water Supply for Bedouins Settlement in Sinai (WSBSS), Final report, Nile Consultants, presented to Ministry of Water Resources and Irrigation, Egypt, Funded by the Islamic Development Bank, 2003.
32. National Water Quality and Availability Management (NAWQAM), Progress report, Nile Consultants, presented to National Water Resources Center, Funded by the Canadian Government, 2003.
33. Environmental Improvement for the Egyptian Village Project (EIEVP), Progress report, Nile Consultants, presented to Ministry of Water Resources and Irrigation, Nile Consultants, Egypt, 2003.
34. Evaluation of the Water Resources in the Area between Marsa-Alam and Ras-Benas on the Red Sea, Proposal, presented to Ministry of Tourism, Nile Consultants, Egypt, 2003.
35. Integrated Irrigation Improvement and Management Project (IIIMP), report, presented to Ministry of Water Resources and Irrigation, Egypt, 2003.

2.4 Invited talks

1. Water Rise in Al-Ain, the problem and solutions. Experts meeting on groundwater rise in the GCC countries. January 2016.

2. Water demand forecasting in United Arab Emirates. The German-UAE Conference on Energy and Water in the Gulf Cooperation Council Countries (EWGCC). Ras Al Khaimah, UAE, in April 14-15, 2016.
3. Greywater Reuse in UAE as an Alternative Water Source. The World Congress on Recycling, Berlin, Germany, July 2016.
4. Assessment of groundwater natural recharge in Abu Dhabi, International Water Conference, 13-16 March 2016, Muscat, Oman.
5. Water Resources Sustainability in Al-Ain City. The 2nd International Conference on "Global Warming: Sustainable Cities Conference, Ras Al Khaimah, UAE. May 5-7, 2013.
6. Conducted several newspapers interviews to elaborate on recent research activities e.g. <http://www.alittihad.ae/details.php?id=540&y=2012&article=full>;
<http://m.thenational.ae/news/uae-news/water-leak-lands-dubai-family-with-dh54-000-utility-bill>;
and <http://gulfnews.com/news/gulf/uae/environment/al-ain-districts-get-their-recycling-credentials-1.605053>
7. Water Conservation in UAEU campus, presentation to UAEU female students, November 2013.
8. Water Scarcity: future concerns, the American University of Dubai, UAE, 2007.
9. Latest developments in using tracer methods to characterize subsurface environments, Sheffield, UK, 2006.
10. Recent development in aquifer assessment tools, Sheffield, UK, November 2005.
11. Groundwater inverse modeling using PEST "Parameter estimation and optimization", University of Sheffield, UK, 2005.
12. Groundwater flow and contaminant transport modeling using MODFLOW, University of Sheffield, UK, 2004.
13. Principles of groundwater flow and contaminant transport modeling, workshop, the Shared Water Resources Diploma (SWRD) program, Cairo University, Egypt, 2003.

2.5. Original Inventions and/or Software

Developer of METABIOTRANS: A 3-D Finite Element Model for the transport and biotransformation of contaminants in saturated aquifers. METABIOTRANS simulates the transport of multiple solutes in anisotropic, heterogeneous saturated aquifers, as influenced by advection, dispersion, adsorption, and biodegradation/biotransformation. Biodegradation follows the Monod kinetics equations modified to include the effect of electron acceptor availability and inhibition. Solute dissolved in the aqueous phase may adsorb to the solid phase or diffuse into microbial phase where biodegradation occurs.

2.6. Contracts and Grants

- G1. Measurement of Groundwater Contaminant Flux in Fractured-Rock Aquifers Using a Combined System of Passive Flux Meter and Multilevel Sampler. NWC. PI, AED 900 K, 2017-2021. In collaboration with the University of Florida, USA.
- G2. Development of a Novel OHR-MNB Tool for Bioremediation of Contaminated Groundwater, NWC. PI, AED 900 K, 2017-2021. In collaboration with the University of Florida, USA and Korea University, South Korea.
- G3. Optimization of Aerosol Seeding In rain enhancement Strategies (OASIS), UAEREP, 1.5 M USD (5.5M AED), 2017-2020. Collaboration with Finish metrological institute, Finland.
- G4. Assessment of transboundary water resources in UAE, PI, 500K AED, 2016-2020.
- G5. Developing a Dynamic Approach to Water Budgeting for the Emirate of Abu Dhabi, PI, EAD, 1.77M AED. 2015-2016. Funded by the Environmental Agency of Abu Dhabi, UAE.
- G6. Growth of Microalgae for Simultaneous Biodiesel Production and Treatment of Industrial Wastewater, Co-PI, 800K AED, 2016-2020.
- G7. An appraisal of Al Ain's consumers and farmers' acceptance of reclaimed water. Co-PI, 175K AED, 2016-2018.

- G8. Greywater Reuse in Arid Climate through the Water Sensitive Urban Design Systems. Co-PI, National Water Center, 500K AED, 2015-2018.
- G9. Evaluation of the ASR System and Testing of capacity Expansion, funded by Sharjah electricity and water authority, 2014, 240K AED.
- G10. Development of a Comprehensive Multi-Criterion Multi-Tier Decision Support System for Groundwater Sustainability in Eastern UAE. PI, UPAR-NRF, 353K AED, 2014 -2016.
- G11. Assessment of Climate Change Impacts on Groundwater Recharge in UAE. PI, National Water Center, 470K AED, 2014 -2017.
- G12. Al-Ain 2030 Water Plan. PI, NRF-UIRC, AED 200K. 2014-2016. Funded by universities industry research collaboration program at NRF, UAE.
- G13. Bacterial and chemical investigation of the homes' water storage tanks in Abu Dhabi emirate, Co-PI, NRF-UIRC, AED 160,000. 2014-2016. Funded by universities industry research collaboration program at NRF, UAE.
- G14. Water Demand Forecasting in Al-Ain. PI, 20K AED, 2014-2015, UAEU.
- G15. An Integrated Approach to Enhance National Strategic Groundwater Reserves via Managed Aquifer Recharge of Recycled Water, PI, NRF-UIRC, AED 172,500. 2012-2014. Funded by universities industry research collaboration program at NRF, UAE. In collaboration with the Ministry of Environment and Water (now ministry of energy and climate change).
- G16. GIS-Based Risk Assessment of Groundwater Vulnerability to Contamination by Septic Systems Effluents in Abu-Dhabi Emirate. PI, NRF (National Research Foundation of UAE), 500,000 AED, 2011 -2014.
- G17. Feasibility Assessment of Aquifer Storage Using Treated Wastewater in Al-Ain, UAE. PI, 20K AED, 2012-2013, UAEU.
- G18. Groundwater Dating For Groundwater Security in UAE. PI, NRF (National Research Foundation of UAE), accepted and Ranked highly competitive, 913.6K AED, 2010 -2013.
- G19. Groundwater Rise in Al-Ain: A Threat or Blessing? PI, Funded by Emirates Foundation for Science & Technology Program, 200,000 AED, 2010 - 2012.
- G20. Using wireless sensor networks for monitoring oil, gas and water pipeline infrastructures. Co-PI, UAEU Research Affairs, 198,000 AED, 2010 – 2013.
- G21. Sea water intrusion and the effects on groundwater quality and desalination processes considering the effects of climate change and sea level rise, Co-PI, British Council, 40,000 GBP, 2009 – 2011.
- G22. Understanding the Factors that Influence Water Consumption in Al Ain. PI, UAEU Research Affairs, 20,000 AED, 2009 – 2010.
- G23. Development of novel procedures to assess natural attenuation and evaluate enhanced bioremediation in subsurface contaminated sites, PI, UAEU Research Affairs, 20,000 AED, 2008-2009.
- G24. Integrated Water Resources Management Plan for the Emirate of Umm Al-Quwain, PI, UAEU Research Affairs, 30,000 AED, 2007-2008.
- G25. Development of large scale tracer test for the estimation of reactive transport properties: Mathematical and Numerical Development PI, UAEU Research Affairs, 20,250 AED, 2006-2007.
- G26. Commercialization potential for the aquifer assessment tool with a Risk Management Calculator for Natural Attenuation, Co-PI, 10,000 GBP, 2005-2006, EPSRC, UK.
- G27. Development of Source Zone Characterization Tool for contaminated groundwater aquifers: Mathematical and Numerical Modeling Development and Testing, PI, UAEU Research Affairs, 26,250 ADE, 2005-2006.

2.7. Fellowships, Prizes, and Awards Given for Research Achievements

- UAE University Excellence Allowance Award in Research, 2018

- College Excellence Award in Research, UAEU, 2018
- Rashid bin Humaid Award for Culture and Science, First Place, Environmental Sciences, 2017. (With my Post-Doc Dr. Samy Elmahdy.)
- Top 10 international researchers in “contaminant hydrology” (https://scholar.google.ae/citations?view_op=search_authors&hl=en&mauthors=label:contaminant_hydrology)
- Excellent in research in all evaluation cycles since appointment at UAEU (2005) except one very good in 2009.
- Best paper award (third place) in the 8th International Conference on Environmental Science and Technology, Houston, Texas, USA, June 6-10, 2016.
- Certificate of appreciation from JCCP (Japan Cooperation Center, Petroleum).
- Certificate of appreciation from Rashid bin Humaid Award for Culture and Science, 2014.
- Award Certificate from University Industry Research Collaboration (UIRC), UAE.
- Received merit from UAEU for exceptional research, services, hard work and contribution to the success of UAEU, 2007.
- Academic achievement award (four years 1998-2001), University of Florida.
- Research Intern award, summer 2000, Desert Research Institute, Las Vegas, NV, USA.
- Best International Student, 1999, University of Florida.
- Research assistant fellowship, 1998, University of Florida.
- Scholarship award (undergraduate and graduate studies, 1990-1997), Cairo University, Egypt.
- Academic outstanding fellowship (four years 1991-94), Cairo University, Egypt.
- Distinction with honor award, 1994 and 1997, Cairo University, Egypt.

2.8. Editorships, Editorial Boards, and Reviewing Activities for Journals and Other Publications.

- Editorial member, Journal of Bioremediation & Biodegradation 2013-present
- Assistant Editor, 2002-2003, Journal of Engineering, Cairo University.
- Member of the scientific judicial committee of the 30th Rashid bin Humaid Award for Culture and Science.
- Referee in the following international journals
 - Environmental science and technology
 - Advances in Water Resources, Elsevier publications
 - Journal of Hydrology, Elsevier Pub.
 - Ground Water, National Groundwater Association, USA.
 - Environmental Earth Sciences, Springer Pub.
 - Water Resources Management, Springer Pub.
 - Hydrological process, Wiley Inter Science, USA.
 - Hydrogeology, Springer Pub.
 - Desalination, Elsevier Pub.
 - Advances in Civil Engineering, open access journal.
 - University of Sharjah Journal of Pure & Applied Sciences, UAE.
- Refereed papers in the proceedings of the following international conferences
 - The UAE graduate students research conference, April 2016.
 - The 8th International European Water Resources Association (EWRA) Water Resources Management Conference, Porto, Portugal, June 26-29, 2013.
 - The 4th International Conference on Environment (ICENV 2012), Malaysia, December 11-13, 2012.
 - The GQ2010: Groundwater Quality Management in a Rapidly Changing World, Zurich, Switzerland, June 13 - 18, 2010.
 - The 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance, November 2010.

- The 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance.
- The 36th International IAH congress on groundwater and human well being, Toyama, Japan, 2008.
- The GQ2007: the 6th International Groundwater Quality Conference on Securing Groundwater Quality. Fremantle, Australia, 2–7 December 2007.
- The International Conference on Water POLLution in natural POrous media at different scales. WAPO², Barcelona, Spain, April 11-13, 2007.
- The International Ground Water Symposium on "Ground Water Hydraulics in Complex Environment, Toulouse, France, June, 2006
- The 5th MODEL CARE International Conference on Calibration and Reliability in Groundwater Modeling. From Uncertainty to Decision; The Hague, Netherlands, 6-9 June 2005.
- The UAEU 7th, 8th, 9th, 10th annual research conferences.
- Convener in the 1st European Geophysics Union conference, Nice, France, April, 2004.
- Active member in CEE Department research committee.
- Member of the Water Resources Masters Program Examination Committee.

3. Teaching, Mentoring, and Advising

- My average teaching load is 24.0 cr. hrs./academic year.
- Taught Several Courses at universities in UAE, USA, UK, and Egypt

3.1. Course or Curriculum Development.

- As the chair (2015-present) and member (2012-2015) of the Water Resources Master Program (WRMP) committee:
 - Development of the new curriculum of the Program, 2017.
 - Developed a benchmarking study comparing WRMP curriculum against 11 major water resources programs in USA and Canada.
 - Prepared the self-study report, 2017
 - Presented of the program to the external reviewers, 2017.
 - Prepared the annual Program Assessment Reports.
- As member of the college of Engineering curriculum Committee (2007-2012):
 - Evaluated and participated in the development of a proposal for a new program in aerospace engineering, 2009.
 - Contributed to the CEMP, WRMP updates and Ph.D. program development by providing a number of suggested graduate courses with their titles, descriptions, and prerequisites in the area of Water Resources and Environmental Engineering.
 - Proposed changes by all COE programs to meet ABET criteria and satisfy all concerns and comments of ABET review committee, 2009.
- As the chair (2007 -2012) and member (2006-2007 and 2012-2015) of the CEE Department curriculum committee:
 - Contributed to several revisions of the CE Program curriculum.
 - Leader of a task force that prepared the Curriculum section of the ABET self-study report, 2009.
 - Developed a benchmarking study comparing UAEU-CE curriculum against 7 major US civil engineering programs.
 - Leader of a task force developed new basic sciences course required by ABET, 2010.
 - Reviewed and surveyed the High college of TEchnology-to-UAEU transfer policy.

- Participated in preparing a proposal to develop an environmental engineering track in the CEE Department.
 - Chaired a committee to develop a proposal for a minor in environmental water resources engineering in the CEE Department, 2014.
- Prepared Course syllabi and plans for all courses taught in accordance with the university catalog descriptions and ABET criteria.
- Developed course contents for the following Undergraduate courses at UAEU:
 - Introduction to Environmental Engineering.
 - Fluid Mechanics.
 - Chemistry and Engineering Applications.
 - Math and Engineering Applications
 - Linear Algebra and Engineering Application
 - A Capstone Graduation Project
- Developed Course contents for the following graduate courses:
 - Water Resources Management
 - Groundwater Modeling
 - Contaminant Subsurface Hydrology
 - Environmental Microbiology
 - Groundwater Hydrology

3.2. Publications in Education

1. Mohamed M., Improving the Capacities of UAE Higher Education Institutions in Water Resources Integrated Management, International Center for Sustainable Development of Energy, Water, and Environment, Brazil, Jan 2018.
2. M. Mohamed Appraisal of the Water Resources Master Program at United Arab Emirates University. 8th International Forum on Engineering Education (IFEE2017). University Of Sharjah, United Arab Emirates, 18-20 April 2017.
3. Mohamed M. M. and Maraqa M. A., Environmental Engineering Education in the UAE, book chapter in: Advances in Engineering Education in the Middle East and North Africa: Current Status and Future Insights, Eds. Abdulwahed M, Hasna MO, and Froyd JE, 2016.
4. Mohamed M.M. and Maraqa M., Assessment of environmental engineering education in the United Arab Emirates, Proceedings of the 13th International Conference on Environmental Science and Technology, Sep. 5-7, 2013, Athens, Greece.
5. Mohamed M.M. and Maraqa M., Environmental engineering education (E3) in the UAE: Survey and comparative study, Proceedings of the 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance, 23-25 Nov. 2010, Sharjah, UAE.
6. Mohamed, M. and M. Sherif. Do UAE Civil Engineering Graduates Get Comparable Education to Graduates of Western Universities? Proceedings of the 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization and Local Relevance, 23-25 Nov. 2010, Sharjah, UAE.

3.3. Teaching Awards and Other Special Recognition

- Khalifa Award in Higher Education, 2018
- Recipient of the College Excellence Award in Teaching, 2016
- Received “Excellent” grade in teaching in the UAE University in all service years, 2005 – 2017.
- Awarded Best instructor in the international water resources diploma, Cairo University 2003.
- Several Appreciation Certificates from the Civil & Environmental Engineering Student Society (CEESS), UAEU.

3.4. Advising: Other than Research Direction.

- Academic advisor of about 70 undergraduate and 30 graduate students at UAEU
- Supervised more than 50 students during their industrial training.
- Advisor, CEES: chapter of the ASCE.
- Organized and/or supervised about 30 field trips.
- Representative in the UGRU “university general requirements unit” event for junior students
- Served as a Department and College examiner of more than 20 graduation projects.
- Advisor, Recycling campaign in Al-Ain organized by The Center of Waste Management - Abu Dhabi, 13-24/12/09.
- Supervised a group of students participated in the 7th annual clean up UAE campaign
- Supervised a group of students who won the second place in the inter college speaking computation.

4. Service

4.1. Professional

Membership in professional organizations.

- Associate member since 2001, ASCE “American Society of Civil Engineering”
- Member since 1994, Egyptian Syndicate of Civil Engineers
- Member, UAE-Society of Engineers, 2006 -2010
- Member, International Center for Sustainable Development of Energy, Water, and Environment Systems (IC SDEWES)
- Member, IWRA (International Water Resources Association)
- Member 2003-2009, IAHS (international association of hydrologic sciences)
- Member, IAH (International Association of Hydrogeologists)
- Member 2003-2009, EGU “European Geophysical Union”
- Member 2003-2006, First-Faraday “UK Centre of Excellence for Remediation of the Polluted Environment”
- Member 2003-2006, CL:AIRE “Contaminated Land: Application In Real Environments”
- Convener, 2003, EGU “European Geophysical Union”
- Member 1997-2002, AGU “American Geophysical Union”
- Member 1999-2001, ASCE “American Society of Civil Engineering”

Unpaid services to local, state, and federal agencies.

- Reviewer of several proposals in UAEU internal research competitions
- Advisor, recycling campaign in Al-Ain organized by The Center of Waste Management - Abu Dhabi, 13-24/12/09.
- Participated on organizing a workshop on Groundwater rise in the GCC countries, for the National Water Center, (NWC), January 2016.
- Participated in the organization of the NWC celebrations of the World Water Day, March 2016.
- Participated in the organization of NWC post graduate workshop, March 2016.
- Member of the Environmental Design Competition committee (EDC 2006) : planed all aspects of competition including: reviewed abstracts and applications, status of participation teams, select judges and develop judging criteria, develop rules for application to be used in next competitions, design program schedule, logistics (preparing competition venue, renting and ordering are required tools and furniture for all teams, facilitating attendees travel, visa obtaining and accommodation,...etc) , and public relations.
- Participated in the preparation and review of the comprehensive water resources plan of the UAE, 2009.
- Member 2008-2011, technical committee of UAE Society of Engineers
- Assistant Editor, 2001-2003, Journal of Engineering and Applied Science.

Consultancies

- Development of a Dynamic Water Budget Model for the Emirate of Abu Dhabi, 2018.
- Hydrogeological Study for Bridi Park, Sharjah, 2017.
- Evaluation of the ASR System and Testing of capacity Expansion, SEWA, 2017.
- Member of the scientific judicial committee of the 30th Rashid bin Humaid Award for Culture and Science, 2015.
- Groundwater assessment of an industrial city in Al Fayah, UAE, 2009
- Groundwater and Geotechnical assessment of Jumeira Gardens, UAE, 2008.
- Environmental Site Assessment of the Abu Dhabi Crude Oil Pipeline main oil terminal (MOT) site in Fujairah, UAE, 2008.
- Water Resources Development for Bedouins Settlement in Sinai, Egypt, 2003
- Results Based Management and Baseline Study of National Water Quality and Availability Management Project in Egypt, 2003
- Evaluation of the water resources in the area between Marsa-Alam and Ras-Benas, Egypt, 2003.
- Environmental Improvement of the Egyptian Village Project, Egypt, 2002
- Construction of a Farm using Treated Wastewater in Qouss and Qena City, Egypt, 2002.
- Design of a sanitary and storm water system for an industrial city, 1996.
- Design of a storm water system for an industrial city in Uganda, 1995.

4.2. On Campus

- Head, the Water Resources Graduate Program. 2015-present
- Chair, college promotion committee, 2018
- Chair, college Peer Evaluation of Teaching (PET) committee 2016-2018
- Chair, Faculty performance evaluation committee in the college of Engineering 2016-2018
- Member, University Faculty promotion committee, 2018
- Member, the college promotion committee AY 16/17
- Member, the college graduate studies committee, 2015 - present
- Member, the college PET committee 2015-2016
- Member in the Water Resources Master Program (WRMP) committee 2012-2015.
- Member of the committee assigned development of minor in environmental engineering.
- Member, Travel committee AY14-15
- Member of the ipad course development committee.
- Member, College curriculum committee. 2009-2013
- Member, chemistry and engineering application course committee 2007-2010
- Member, College science courses co-teaching committee. 2007-2010
- Member, M.Sc. Degree Examination Committee.
- Member in several GP examining committees.
- Member in several Industrial Training final exam committees.
- Member, the department promotion committee AY15/16 and AY 16/17
- Member, the department curriculum committee 2007-2009; 2013-2015
- Chair, Department curriculum committee.2009-2013.
- Participated in the department efforts to obtain ABET accreditation twice
- Member, Department assessment committee.
- Member of the hiring committee of new faculty members.
- Member, Department Open Day Organizing Committee.
- Member, Department ABET Re-accreditation Committee 2009-2010 and 2013-2014.
- Member of the committee prepared the Criterion 5: Continuous Improvement Section of the ABET report. 2010 and 2015
- Member of the course development committee.
- Member, Department Research Committee:

- Member, the Ad-hoc committee developed the New Edition of the Engineering Catalogue.
- Session Chair in the UAEGSRC conference April 2016.
- Member, organization of the NWC celebrations of the World Water Day, March 2016.
- Member, post graduate seminars organized by the NWC, March 2016.
- Member, university safety committee to ensure that hazardous waste collected from the university is properly disposed by the assigned contractor.
- Member, the Environmental Design Competition committee (EDC 2006) AY 05-06.

4.3 Community, Local, and National.

- Member of the experts group established by Abu Dhabi Quality Control Council to develop standards for Quality standards of Liquid Discharges to Marine environment, 2017. Tasks of the group are reviewing local and international standards related to the subject with the objective of harmonizing and updating the required standard to be agreed by all the relevant entities at the level of Abu Dhabi Emirate.
- Presented a speech on the reasons and mitigation techniques of groundwater rise problem in Al-Ain (e.g. <http://www.araanews.ae/209540> and <http://www.alkhaleej.ae/alkhaleej/page/7e129b9f-436f-4d1c-87a3-ffab10d78a7e>)
- Participated in the implementation process of the recycling campaign in Al-Ain organized by The Center of Waste Management - Abu Dhabi. Tasks of such activities were announced in newspapers <http://gulfnews.com/news/uae/environment/al-ain-districts-get-their-recycling-credentials-1.605053>
- Organized 3 workshops on “Water Budget in Abu Dhabi” at the Environmental Agency of Abu Dhabi, 2015-2016.
- Organized two 4-day short courses on groundwater modeling systems (GMS) and Hydrologic and Hydraulic Modeling with WMS software in collaboration with Continuing Education Center, and Aquaveo, a famous water resources engineering firm. The courses were offered free of charge for UAEU staff. 2013-2014.
- Participated in the Water Resources Stakeholder Meeting organized by the MoEW on 12/11/2009
- Participated in the implementation process of the recycling campaign in Al-Ain organized by The Center of Waste Management - Abu Dhabi, 13-24/12/09.
- Participated in the 7th annual clean up UAE campaign on Sat 12/12/2009
- Initiated collaboration with Faculty of Medicine & Health Sciences (UAEU); to explore possible avenues of improvements of water treatment and distribution in UAE, including quality issues and regulation, also waste water treatment and recycling.
- Organized and supervised twenty field trips for civil engineering students.
- Industrial advisor for undergraduate students; performed two field visits / semester / student and evaluated training progress reports.
- Organized a seminar on construction management for civil engineering students, Oct. 2005.
- Organized a field trip to pre cast factory in Musafah for engineering students, May 2006.
- Supervised a group of students who won the second place in the inter college speaking computation.