

Mohammad Nihad Almasri, PhD

Associate Professor

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EDUCATION

Ph.D. Civil and Environmental (2003)Engineering

> **Utah State University** (USU), Logan, Utah, USA

Title: Optimal Management of Nitrate Contamination of Ground Water

- Development of a modeling framework that integrates onground nitrogen loadings from different sources, soil transformations of nitrogen, and groundwater flow and nitrate fate and transport models with emphasis on MODFLOW and MT3D
- Use of simulation and optimization in groundwater management (artificial neural networks and genetic algorithms)
- Multi-criteria decision analysis for the management of nitrate contamination of groundwater

M.Sc. Civil and Environmental

(1997)Engineering

An-Najah National University, Nablus,

Palestine

Title: Design of Optimal Water Distribution Networks: Linking Linear Programming to the Gradient Method with Application to the Nablus Water Supply System

Developed a FORTRAN code for the optimal design of water distribution networks with an application to large-scale water distribution networks

B.Sc. Mechanical Engineering

University of Aleppo, (1993)Aleppo, Syria

Title: A Hydraulic Study of an Axial Irrigation Machine

Constructed an axial irrigation machine and developed a BASIC code for estimating the pressure and flow at each sprinkling nozzle

BIOGRAPHICAL SKETCH

Dr. Mohammad N. Almasri is currently an associate professor in the Department of Civil Engineering at An-Najah National University, Nablus, Palestine and an Adjunct Professor at Utah State University, USA where he graduated from with a PhD degree in Civil and Environmental Engineering. His key qualifications focus on modeling and management of groundwater resources, environmental pollution, assessment of water-related projects, Environmental Impact Assessment studies, and the design of water distribution networks and sewer systems.

At the university level, he teaches surface and groundwater hydrology, water resources management, fluid mechanics, hydraulics, engineering economy, and GIS. Dr. Almasri gave lectures and presentations at numerous national and international symposiums, courses, seminars, workshops and conferences in USA, Scotland, Sweden, Syria, Jordan, Germany, France, United Kingdom, and Slovenia. In addition, he supervised and co-supervised a total of 18 master students in the last seven years in the master programs of water and environmental engineering and environmental sciences at An-Najah National University. The supervised master theses covered a wide range of topics including groundwater vulnerability to contamination, optimal management of groundwater (quantity and quality issues), groundwater recharge, assessment of seawater intrusion in coastal aquifers, and groundwater modeling.

Dr. Almasri coordinated and managed development projects in the field of water and wastewater in the past few years with emphasis on groundwater modeling, management, public awareness, training, and evaluation of project effectiveness. Recent project experience was directed toward carrying out statistical analyses and baseline assessments of groundwater and spring water. Examples of that was the study of the Eastern Aquifer and Master Plan for Bulk Water Supply Systems in the Southern West Bank (in 2010 – 2011) where a groundwater flow model (using MODFLOW) was developed along with a baseline assessment of the existing data of the aquifer (using GIS) including the pumping rates, water level variability, and spring yield. Another similar project experience was the assessment of the springs of Nablus City (in 2010) where baseline surveys for the pollution sources were carried out in the proximity areas of the springs in order to develop relevant protection plans. In addition, a detailed statistical analysis was carried out to understand the temporal trends in spring yield.

PROFESSIONAL EXPERIENCE

June 2004 -

- Faculty member at the Department of Civil Engineering, College of Engineering at ANU
- Assistant professor (2004 2011) | Associate professor (2011 present)
- Coordinator for the Water and Environmental Committee at the Department of Civil Engineering, College of Engineering at ANU (2008 – 2010; 9/2011 – 9/2012)
- Director of Water and Environmental Studies Institute (WESI) at ANU (August 2006 December 2008)
- Coordinator for the Master Programs of Water and Environmental Engineering and Environmental Sciences at ANU (August 2006 – Jan 2008) and (September 2011 – present)
- Visiting researcher (July 2006) at the Department of Earth Sciences University College London (UCL) through TEMPUS Individual Mobility Grants (IMG)
- Instructor for the Euro-Mediterranean University (EMUNI) Doctoral Research Seminar held during Summer 2009 at Portorož, Slovenia
- Adjunct Professor, Utah State University (2006 present): Committee member for the examination of two doctoral students at USU
- Researcher at WESI (2004 2008)
- Member of the Editorial Board of Geography Journal (http://www.hindawi.com/journals/geography/editors/) and the Asian Journal of Geosciences (http://www.hindawi.com/journals/ajg/editors/)
- Member of the Editorial Board of An-Najah University Journal for Research A (Natural Sciences) (2017 –)

Consultant to many engineering and professional firms including House of Water and Environment (HWE), Montgomery Watson Harza (MWH), PALMEC, NCD, and AQUA Consulting Center

September 2000 - May 2004

Utah Water Research Laboratory (UWRL) at Utah State University, Logan, Utah, US

- Graduate student and research associate
- Teaching Assistant for Groundwater Engineering course (CEE 6430)

ATTENDED TRAINING COURSES

- 1. BASIN workshop organized by Utah Water Research Laboratory in 2001 in Logan, Utah, USA
- 2. WEAP (Water Evaluation and Planning Tool): Organized by the Federal Ministry of Education and Research (BMBF) of Germany held in 2005 in Stockholm, Sweden
- 3. WEAP-MODFLOW-GIS training workshop organized by the Federal Institute for Geosciences and Natural Resources (BGR) of Germany and held in 2008 in Amman, Jordan
- 4. Applied Groundwater Flow and Solute Modeling training workshop organized by Schlumberger Water Services and held in 2009 in Dubai, United Arab Emirates

ROJECT EXPERIENCE (JUST KEY PROJECTS	<u>s)</u>	
Inventory and assessment of the	Providing consultancy services for the Palestinian Water	
existing data collection and	Authority (PWA) to assess and identify the existing	
management systems used by	systems at the water service providers level and to	
different service providers (WSPs) to	identify the needs necessary to automate the linkage	
support PWA Water Information	with the WIS	
System (WIS) – WB (2014)		
Data Gathering and Validation	Providing consultancy services for the Palestinian Water	
project (2014)	Authority (PWA) for the collection of all the water-	
	related data available at the different water service providers (WSPs) in the West Bank along with computation of the performance indicators of the major WSPs	
Study and Design for Rehabilitation	Providing consultancy services for study and design for	
of Wadi Zomer in Anabta (2013)	rehabilitation of Wadi Zomer in Anabta	
Review of EIA report for Sewerage Project Nablus-West (2013)	This project is comprised of providing consulting services for the review of EIA report for Sewerage Project Nablus West	
Environmental Impact Assessment	This study is comprised of conducting the	
for Al Hazem Leather Tanning Company (2013)	Environmental Impact Assessment (EIA) for Al Hazem Leather Tanning Company	
Developing GIS System for Maithaloun in Water Sector (2013)	Developing GIS System for Maithaloun town in Water Sector	
Evaluation of UNICEF WASH Program West Bank and Gaza (2012)	Evaluation of the UNICEF Water, Sanitation and Hygiene (WASH) Program	
	A consultancy work carried out for Hijjawi Engineering	
Assessment of the water situation	Center (HEC) as contracted by ANERA. I performed a	
for the villages of Azmout, Deir Al-	comprehensive assessment of the water situation in the	
Hatab and Salim (2011)	three villages and proposed a set of recommended	
riatab ana Sainn (2011)	actions for better managing the water situation in the	
	three villages	

Assessment of the future short and long-term impacts of the development of the Eastern Aquifer Basin (2011)	A consultancy work carried out for Montgomery Watson Harza (MWH). A three-dimensional transient groundwater flow model (MODFLOW) was utilized to assess the impacts of aquifer development (digging new wells) on the drawdown of water table. The model was later utilized in the development of a master plan for the southern part of the West Bank/Palestine	
Study of the Eastern Aquifer and Master Plan for Bulk Water Supply Systems in the Southern West Bank (2010 – 2011)	Consultant with the House of Water and Environment (HWE) with funds from USAID through Montgomery Watson Harza (MWH). A transient groundwater flow model was developed using MODFLOW and GIS for the Eastern Aquifer Basin in Palestine	
Assessment of the Springs of Nablus City (2010)	Funded by GTZ where a groundwater flow model (using MODFLOW and GIS) was developed and a comprehensive assessment (including a baseline analysis) was carried out that covers all related aspects to the springs of the City of Nablus. The groundwater flow model was utilized to assess the impact of drilling new wells on the yield of the springs of the city as part of the management plan of the city's water resources	
GIS Training courses (for engineers at municipality water utilities and university students)	Funded by KFW and the Municipality of Tulkarem. Basic GIS concepts were provided along with the key engineering applications	
Environmental Impact Assessment (2009)	EIA for the construction of the new City of Rawabi in Ramallah District (Palestine)	
DFG (2008 – 2009)	Mapping preferential flow using tracers (brilliant blue and bromide) under different irrigation schemes with different water qualities (freshwater, wastewater, and a mixture of both) using GIS and field/lab experiments on a real case study	
Welfare (2008)	Evaluation of the status of the water distribution networks, wastewater collection systems, solid waste management of the Old City of Nablus (Palestine)	
UNESCO (2005)	Assessment of groundwater vulnerability to contamination of Gaza Coastal Aquifer using GIS and the DRASTIC method	
UNDP/PAPP (2006), CARE (2005, 2006, 2007, 2008), NEF (2005), PARC (2008, 2009)	Evaluation and assessment of projects: a variety of projects to assess the efficacy of projects related to water infrastructure, environment and sanitation. Surveying work through questionnaires. Training and public awareness campaigns. Assessment of water needs for rehabilitation projects	
GLOWA JR III (2009 – 2012) GLOWA JR II (2005 – 2008)	Wastewater reuse and artificial recharge. GIS was utilized to determine the optimal locations for wastewater reuse after the development of groundwater vulnerability and suitability maps	
WRIA 1 Watershed Management Project (2001 – 2004)	Management of groundwater quality in transboundary aquifers (the nitrate contamination problem in Sumas-Blaine Aquifer in British Columbia in Canada and Washington State in the US) using MODFLOW and MT3D. The developed models were utilized to examine different depollution strategies and were part of an integrated management plan of water resources in the area	

ENGINEERING SOFTWARE PROFESSING

The following are the key technical software that I am professional in:

- MODFLOW: the well-known groundwater flow modeling software of USGS
- 2. MODPATH: a groundwater particle tracking software of USGS
- 3. **SEAWAT**: for the assessment of seawater intrusion in coastal aquifers
- 4. MT3D: for the modeling of fate and transport of contaminants in groundwater
- 5. GWM: groundwater management using optimization to assess the optimal extraction rates
- 6. **ArcGIS**: for pre and post processing of data for modeling, baseline assessment, spatial analysis, and cartography
- 7. **EPANET**: for the analysis and design of water distribution networks
- 8. **SWMM**: for the analysis and design of stormwater collection systems
- 9. WaterCAD: for the analysis and design of water distribution networks (preliminary use)
- 10. SewerCAD: for the analysis and design of wastewater collection networks (preliminary use)

PUBLICATIONS IN REFEREED JOURNALS

- 1. SM Shadeed, AME Abboushi and Mohammad N. Almasri, Developing a GIS-based agro-land suitability map for the Faria agricultural catchment, Palestine. International Journal of Global Environmental Issues 16 (1-3), 190-204.
- 2. Atta M. E. Abboushi, Mohammad N. Almasri, Sameer M. Shadeed, 2014. A preliminary investigation of wadiaquifer interaction in the semi-arid watershed of Faria, Palestine using tracer-based methodology. Environmental Earth Sciences. 73 (12), 7861-7872.
- 3. Sarsak, Reem and Mohammad N. Almasri, **2014**. Health of Palestinians, water and coastal aquifer in Gaza Authors' reply. The Lancet, Vol. 383, No. 9924, p1207–1208 (http://dx.doi.org/10.1016/S0140-6736(14)60600-0)
- 4. Sarsak, Reem and Mohammad N. Almasri, **2013**. Seawater intrusion into the coastal aquifer in the Gaza Strip: a computer-modelling study. The Lancet, Vol. 382, No. p S32 (doi:10.1016/S0140-6736(13)62604-5)
- Shadeed, Sameer and Mohammad N. Almasri, 2010. Application of GIS-based SCS-CN method in West Bank catchments, Palestine. Water Science and Engineering, 3(1): 1-13. doi:10.3882/j.issn.1674-2370.2010.01.001
- Haj Hamad, Lubna and Mohammad N. Almasri, 2009. Assessment of nitrate contamination of groundwater using lumped parameter models. Environmental Modelling and Software, 24(9): 1073–1087. doi:10.1016/j.envsoft.2009.02.014
- 7. Anayah, Fathi and Mohammad N. Almasri, **2009**. Trends and occurrences of nitrate in the groundwater of the West Bank, Palestine. Applied Geography, 29(4): 588–601 doi:10.1016/j.apgeog.2009.01.004
- 8. Almasri, Mohammad N. and L. S. McNeill, **2009**. Optimal Planning of Wastewater Reuse Using the Suitability Approach: A Conceptual Framework for West Bank, Palestine. Desalination, 248: 428–435. doi:10.1016/j.desal.2008.05.070
- McNeill, L.S., Mohammad N. Almasri, and N. Mizyed, 2009. A Sustainable Approach for Reusing Treated Wastewater in Agricultural Irrigation in the West Bank – Palestine. Desalination, 248: 315–321. doi:10.1016/j.desal.2008.05.084
- Almasri, Mohammad N., 2008. Assessment of intrinsic vulnerability to contamination for Gaza coastal aquifer, Palestine. Journal of Environmental Management, 88: 577–593. doi:10.1016/j.jenvman.2007.01.022
- 11. Almasri, Mohammad N., 2008. Discussion of "Groundwater Flow and Contaminant Transport Simulation with Imprecise Parameters" by Ram Kailash Prasad and Shashi Mathur. Journal of Irrigation and Drainage Engineering, April 2008, 134(2): 267–268.
- 12. Almasri, Mohammad N. and Said Ghabayen, **2008**. Analysis of Nitrate Contamination of Gaza Coastal Aquifer, Palestine. ASCE Journal of Hydrologic Engineering. 13(3): 132–140
- 13. Almasri, Mohammad N. and Jagath J. Kaluarachchi, **2007**. Modeling nitrate contamination of groundwater in agricultural watersheds. Journal of Hydrology. 343(3-4): 211–229. doi:10.1016/j.jhydrol.2007.06.016

- 14. Almasri, Mohammad N., **2007**. Nitrate contamination of groundwater: A conceptual management framework. Environmental Impact Assessment Review. 27: 220–242. doi:10.1016/j.eiar.2006.11.002
- 15. Khalil, Abedalrazq, Mohammad N. Almasri, Mac McKee, and Jagath J. Kaluarachchi, **2005**. Applicability of statistical learning algorithms in groundwater quality modeling. Water Resources Research (41) W05010. doi:10.1029/2004WR003608
- 16. Almasri, Mohammad N. and Jagath. J. Kaluarachchi, **2005**. Multi-criteria decision analysis for the optimal management of nitrate contamination of aquifers. Journal of Environmental Management (74): 365–381. doi:10.1016/j.jenvman.2004.10.006
- 17. Almasri, Mohammad N. and Jagath. J. Kaluarachchi, **2005**. Modular neural networks to predict the nitrate distribution in ground water using the on-ground nitrogen loading and recharge data. Environmental Modelling and Software (20): 851–871. doi:10.1016/j.envsoft.2004.05.001
- 18. Almasri, Mohammad N. and Jagath. J. Kaluarachchi, **2004**. Assessment and management of long-term nitrate pollution of ground water in agriculture-dominated watersheds. Journal of Hydrology (295): 225–245. doi:10.1016/j.jhydrol.2004.03.013
- 19. Almasri, Mohammad N. and Jagath. J. Kaluarachchi, **2004**. Implications of on-ground nitrogen loading and soil transformations on ground water quality management. Journal of the American Water Resources Association (JAWRA) 40(1): 165–186

PUBLICATIONS IN CONFERENCE PROCEEDINGS

- Lina Hamarshi and Mohammad N. Almasri, 2016. Identification And Assessment Of Potential Environmental Impacts Of Cesspits On Selected Groundwater Wells In Tulkarem District Using Groundwater Modelling. The 4th International Conference on Energy and Environmental Protection in Sustainable Development, Hebron, Palestine, April 6 – 7, 2016.
- Almasri, Mohammad N. and Rana Kharmih, 2014. Optimal Management of Groundwater Pumping The Case of the Eocene Aquifer, Palestine. Second Arab Water Conference, Doha, Qatar, 27 – 29 May 2014.
- 3. Abboushi, A., Mohammad N. Almasri, Sameer Shadeed, **2013**. Developing Quantitative and Qualitative Relationships of Wadi-Aquifer Interaction in the Semi-Arid Watershed of Faria, Palestine. Proceedings "3rd International Conference on Energy & Environmental Protection in Sustainable Development", ICEEP III, P. 237 252. Hebron, Palestine. 9 10 October 2013.
- 4. Sarsak, Reem and Mohammad N. Almasri, **2012**. Modeling of Seawater Intrusion Due to Climate Change Impacts in North Gaza Coastal Aquifer Using SEAWAT. Proceedings "Hydrogeology of Arid Environments", p. 137 140. Stuttgart.
- 5. Juaidi Adel and Mohammad N. Almasri, **2011**. Estimation of groundwater recharge using ArcGIS-ModelBuilder. The Sixth National GIS Symposium in Saudi Arabia, Khobar, Saudi Arabia. 24 26 April 2011.
- Sameer Shadeed and Mohammad N. Almasri, 2007. Statistical analysis of long-term rainfall data for a Mediterranean semi-arid region. The International Conference on Sustainable Development and Management of Water in Palestine, Amman, Jordan. 27-29 August 2007.
- 7. Mohammad N. Almasri, **2007**. Mapping intrinsic vulnerability of Gaza coastal aquifer. The International Conference on Sustainable Development and Management of Water in Palestine, Amman, Jordan. 27-29 August 2007.
- 8. Abdelrahim Abu-Safa, A. M. El-Hamouz, Arafat, H. A. and M. Almasri, **2007**. Assessment of the Spatial Distribution of Chlorine Concentration in Nablus Water Distribution System. The International Conference on Sustainable Development and Management of Water in Palestine, Amman, Jordan. 27-29 August 2007.
- 9. Arafat, H. A., A. M. El-Hamouz, A. Abu-Safa, and M. Almasri, **2006**. Methodology for modelling of disinfectant in drinking water in small middle eastern cities Nablus City (Palestine) as a case study. The 3rd international conference on the water resources in the Mediterranean basin WATMED 3, Tripoli, Lebanon.
- 10. Almasri, M. N., A. Jayyousi, and A. Jarrar, **2005**. Statistical analysis of long-term spring yield in a semi-arid watershed: A case study from Palestine. Water: Values and Rights. Palestinian Academy for Science and Technology, Ramallah, Palestine.

- 11. Almasri, M. N., S. Ghabayen, J. J. Kaluarachchi, A. Jarrar, A. Jayyousi, and M. McKee, **2005**. A conceptual framework for managing nitrate contamination of the Gaza coastal aquifer, Palestine. EWRI Conference, ACSE, Anchorage, Alaska, USA (May 16-19, 2005).
- 12. Almasri, M. N., J. J. Kaluarachchi, S. Ghabayen, A. Jarrar, M. McKee, A. Jayyousi, and A. Aliewi, **2005**. Assessment of groundwater vulnerability to nitrate contamination in Gaza strip, Palestine. EWRI Conference, ACSE, Anchorage, Alaska, USA (May 16-19, 2005).
- Jarrar, A., N. Jayasuriya, M. Othman, M. N. Almasri, A. Jayyousi, J. J. Kaluarachchi, and M. McKee, 2005. Decision support system for integrated water and land management in agriculture-dominated watersheds: A conceptual study to Faria watershed, Palestine. EWRI Conference, ACSE, Anchorage, Alaska, USA (May 16-19, 2005).
- 14. Almasri, M. N. and J. J. Kaluarachchi, **2003**. Regional-scale modeling of nitrate contamination of ground water in agriculture-dominated watersheds. Proceedings of the International Conference on MODFLOW and More 2003: Understanding through Modeling. Golden, Colorado, USA.
- 15. Almasri, M. N. and J. J. Kaluarachchi, **2003**. Regional variability of on-ground nitrogen loading due to multiple land uses in agriculture-dominated watersheds, Proceedings of the 7th International Conference on Diffuse Pollution and Basin Management. Dublin, Ireland. Paper available at http://www.ucd.ie/dipcon/docs/theme10/theme10 12.PDF.
- 16. Almasri, M. N. and J. J. Kaluarachchi, **2002**. Predicting stream-aquifer interaction using artificial neural networks: Methodology, application, and reliability. Proceedings of the 4th International Conference on Calibration and Reliability in Groundwater Modeling: A few steps closer to reality Prague, Czech Republic, 17-20 June 2002.
- 17. Almasri, M. N. and J. J. Kaluarachchi, **2002**. Modeling of nitrogen fate and transport at watershed-scale for management decision-making. Proceedings of the 4th International Conference on Calibration and Reliability in Groundwater Modeling: A few steps closer to reality. Prague, Czech Republic, 17-20 June 2002.
- 18. Almasri, M. N. and J. J. Kaluarachchi, **2002**. Modeling fate and transport of nitrate in the Sumas-Blaine aquifer, Washington, for watershed management planning Acta Universitatis Carolinae, Geologica, vol. 46, no. 2-3, pp. 632–636.
- 19. Almasri, M. N. and J. J. Kaluarachchi, **2002**. Applicability of artificial neural networks in predicting stream-aquifer interaction Acta Universitatis Carolinae, Geologica, vol. 46, no. 2-3, pp. 54–57.

BOOK CHAPTERS AND CONTRIBUTIONS

- 1. Aliewi, A., P.E. O'Connell, and M. N. Almasri, 2013. Implications of climate change in Palestine. Shared Borders, Shared Waters: Israeli-Palestinian and Colorado River Basin Water Challenges. Edited by Sharon B. Megdal, Robert G. Varady & Susanna Eden, The University of Arizona, Tucson, Arizona, USA. Pages 167–185. CRC Press / Balkema.
- 2. Almasri, M. N. and J. J. Kaluarachchi, **2011**. Fate and transport of ground water contaminants. Ground water manual of the American Society of Civil Engineers, ASCE.
- 3. Almasri, M. N. and J. J. Kaluarachchi, **2005**. Best management practices for water resources. Water Encyclopedia: Water quality and resource development. Edited by: J. Lehr, J. Keeley, J. Lehr, and T. B. Kingery III, John Wiley and Sons, Inc. Pages 570–573.
- Almasri, M. N. and J. J. Kaluarachchi, 2005. Groundwater flow and transport process. Water Encyclopedia: Ground water. Edited by: J. Lehr, J. Keeley, J. Lehr, and T. B. Kingery III, John Wiley and Sons, Inc. Pages 514–518.

ATTENDED CONFERENCES AND INTERNATIONAL WORKSHOPS

- 1. **2015**. Workshop on the Water Harvesting and Managed Aquifer Recharge: international state of the art and needed research in Palestine. IGRAC/Unesco IHE Delft, Prinsenkamer, 26th and 27th of October 2015.
- 2. **2015.** PADUCO: Palestinian-Dutch Academic Cooperation Program on Water. Second Conference, , The Hague, The Netherlands, 28 October 2015.
- 3. 2014. The Second Arab Water Conference, Doha, Qatar, 27 29 May 2014.
- 4. **2011**. The GLOWA Final Conference. Limassol, Cyprus.

- 5. **2010**. The ISARM2010 International Conference on "Transboundary Aquifers: Challenges and New Directions", UNESCO, Paris.
- 6. **2009**. ISONITRATE international workshop: "Towards new methods to manage nitrate pollution within the Water Framework Directive", UNESCO, Paris.
- 7. **2008**. Water and Sanitation in International Development and Disaster Relief Workshop, Edinburgh, Scotland, UK.
- 8. **2007**. The International Conference on Sustainable Development and Management of Water in Palestine, Amman, Jordan
- 9. 2005. EWRI Conference, ACSE, Anchorage, Alaska, USA.
- 10. **2003**. International Conference on MODFLOW and More 2003: Understanding through Modeling. Golden, Colorado, USA.

SELECTED TECHNICAL REPORTS

- 1. HWE, **2010**. Protection of Nablus Springs. Final Report, HWE-Springs-2010-04. House of Water and Environment and Nablus Municipality.
- 2. Hafez Shaheen, Mohammad N. Almasri, Anan Jayyousi, Hassan Abu Qaoud, Ammar Jarrar, and Atef Abu Jaish. **2009**. Environmental Impact Assessment for the City of Rawabi. Submitted to Bayti.
- 3. Almasri, Mohammad N., Atef Abu Jaish. 2008. Evaluation of the activities of the project "Water Emergency Project in Salfeet and Nablus Districts, West Bank". Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 4. Almasri, M. N. and A. Abu Jaish, **2007**. Emergency water supply and conservation in rural area impoverished by the wall: A qualitative research study on the water situation in the Tulkarem and Jenin governorates. A report submitted to CARE International. Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 5. Almasri, Mohammad N., Atef Abu Jaish. **2007**. Evaluation of the project "Emergency Water Supply and Conservation in Rural Area Impoverished by the "Wall" in Tulkarm and Jenin Districts". Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- Almasri, M. N., 2006. Regional assessment of groundwater vulnerability to contamination in Gaza Strip. A report submitted to the UNESCO. Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 7. Almasri, M. N. and A. Abu Jaish, **2006**. Evaluation of the environment action project (EAP) in Asira cluster area. A report submitted to the United Nations Volunteers (UNV). Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 8. Almasri, M. N. and A. Abu Jaish, **2006**. Emergency water supply and conservation in rural area impoverished by the wall: A qualitative research study on the water situation in the Tulkarem and Jenin governorates. A report submitted to CARE International. Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- Almasri, M. N. and A. Abu Jaish, 2006. Emergency water supply and conservation in rural area impoverished by the wall: Training Course for Raising Public Awareness. A report submitted to CARE International. Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 10. Almasri, Mohammad N., Atef Abu Jaish. **2005**. Emergency Water Supply and Conservation in Rural Area Impoverished by the "Wall" (In 17 Villages in Tulkarm and Jenin Districts). Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 11. Almasri, M. N. and A. Jarrar, **2005**. A preliminary assessment and characterization study for Asira landfill and technical comments on the report *designing of solid waste dumpsite*. Water and Environmental Studies Institute, An-Najah National University, Nablus, Palestine.
- 12. Kaluarachchi, J. J. and M. N. Almasri, **2004**. User Document for the Nitrate Fate and Transport Model for the Extended Sumas-Blaine Aquifer, Whatcom County, Washington. Utah Water Research Laboratory, Utah State University, Logan, UT.
- 13. Kaluarachchi, J. J., N. K. C. Twarakavi, and M. N. Almasri, **2004**. Heavy Metal Contamination of Ground Water in Water Resources Inventory Area 1, Washington Par-II: Lead, Zinc, Mercury and Manganese. Utah Water Research Laboratory, Utah State University, Logan, UT.

- 14. Kaluarachchi, J. J., N. K. C. Twarakavi, and M. N. Almasri, 2004. Heavy Metal Contamination of Ground Water in Water Resources Inventory Area 1, Washington Part-I: Arsenic, Cadmium, and Chromium. Utah Water Research Laboratory, Utah State University, Logan, UT.
- 15. Kaluarachchi, J. J. and M. N. Almasri, **2004**. Description and assessment of the ground water quality database for Water Resources Inventory Area 1. Utah State University, Logan, Utah, 2004.
- 16. Kaluarachchi, J. J. and M. N. Almasri, **2003**. Conceptual model of fate and transport of nitrate in the extended Sumas-Blaine Aquifer, Whatcom County, Washington, Phase III Report. Utah State University, Logan, Utah.
- 17. Kaluarachchi, J. J., E. Kra, N. Twarakavi, and M. N. Almasri, **2002**. Nitrogen and pesticide contamination of ground water in Water Resource Inventory Area-1. Ground water quality report for WRIA 1, Phase II Report. Utah State University, Logan, Utah.

TEACHING EXPERIENCE

Undergraduate courses

10601100. Introduction to Civil Engineering

10601110. Statics

61100. Introduction to Engineering. Department of Civil Engineering

61351. Environmental Engineering II. Department of Civil Engineering

61441. Hydrology. Department of Civil Engineering

61471. Engineering Economy. Department of Civil Engineering

65301. Engineering Economy and Management. Department of Industrial Engineering

61541. Groundwater. Department of Civil Engineering

61558. GIS Applications in Environmental Engineering

61620. Geographic Information Systems (GIS). Department of Civil Engineering

61676. Water Resources Management. Department of Civil Engineering

61341. Fluid Mechanics. Department of Civil Engineering

61345. Hydraulics. Department of Civil Engineering

64300. Principles of Scientific Research and Technical writing. Department of Chemical Engineering

Graduate courses (Master level)

461643. Groundwater. Water and Environmental Engineering

461620. Geographic Information Systems (GIS). Water and Environmental Engineering

461647. Water Resources Management. Water and Environmental Engineering

400512. Natural Resources Management. Environmental Sciences

461640. Water Resources Planning and Development. Transportation Engineering

SUPERVISION OF MASTER THESIS

ID	Name	Title	Completion
1	Ne'mat Qamhyeh	Assessment of groundwater vulnerability to contamination in the West Bank, Palestine	2006
2	Fathi Anayah	Assessment of nitrate and chloride in West Bank groundwater resources using GIS	2006
3	Abdelhalim Salih	Management of saltwater intrusion in Gaza Coastal Aquifer, Palestine	2007
4	Rana Kharmah	Optimal management of groundwater pumping: The case of the Eocene aquifer, Palestine	2007
5	Mohammad Abu-Bakir	Wastewater Characteristics and the Impact of its Use in Irrigation on Soil: The Case of Faria Catchment	2007
6	Lubna Haj-Hamad	Management of nitrate contamination of Gaza Coastal Aquifer	2007
7	Khalid As-Sadiq [‡]	Optimal design of water distribution networks: Reliability based approach using dynamic programming	2008

ID	Name	Title	Completion
8	Adel Juaidi	GIS-based modeling of groundwater recharge	2008
9	Ahmad Najim	Modeling nitrate contamination of the Eocene Aquifer, Palestine	2009
10	Rahma Abdo°	Water Resources Evaluation at City Level Using WEAP: The Case of Nablus City	2009
11	Yahya Salih ^o	Artificial Groundwater Recharge in Faria Catchment	2009
12	Rema Saleh ^o	Assessment of Treated Wastewater Reuse for Irrigation in Tubas	2009
13	Leen Sanjaq [‡]	The Use of WEAP as a Planning Tool for JWU Service Area	2009
14	Ibrahim Hinde	Benefit Cost Analysis of Solid Waste Management for the City of Qalqilia	2010
15	Noor Atallah	Assessing and Mapping of Groundwater Vulnerability to Contamination Using the PI-Method for the West Bank, Palestine	2010
16	Reem Sarsak	Numerical Simulation of Saltwater Intrusion in Response to Climate Change Impacts in North Gaza Coastal Aquifer Using SEAWAT	2011
17	Leena Hamarshih	Identification and Quantification of Potential Environmental Impact of Cesspits on Selected Groundwater Wells Using Modeling and Risk Analysis Tools	2012
18	Ata Abboushi°	Stream Aquifer Interactions in Arid and Semi-Arid Catchments. A Case Study of Faria Catchment	2013

Co-supervision (I am the major supervisor)

COMMITTEE MEMBER OF PHD DISSERTATION

I served as an external examiner for two PhD dissertations at Utah State University, Utah, US

PEER REVIEWER

I peer reviewed several articles for the following scientific journals:

- Water Resources Research 3 Hydrogeology Journal 5 **Ecological Modelling** Journal of Environmental 7 Management 9 Journal of Arid Environments 11 Natural Resources Research **Agricultural Systems** 13 Journal of Environmental 15 Monitoring ASCE Journal of Irrigation and 17 **Drainage Engineering** 19 Journal of Environmental Quality
- 2 ASCE Journal of Hydrologic Engineering
- 4 Journal of Hydrology
- 6 International Journal of Occupational and Environmental Health
- 8 Journal of Contaminant Hydrology
- 10 Central European Journal of Geosciences
- 12 The Arabian Journal for Science and Engineering
- 14 Journal of Marine Systems
- 16 Environmental Monitoring and Assessment
- 18 Applied Water Science

[‡] Co-supervision (I am the co-supervisor)

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