

ABDELHALEEM I. KHADER

Assistant Professor, Department of Civil Engineering
An-Najah National University, Nablus, Palestine
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EDUCATION

PhD, Civil and Environmental Engineering August 2012
Utah State University, Logan, Utah, USA **GPA 3.90**
Dissertation: “Value of information from groundwater quality monitoring network design under uncertainty in climate and aquifer properties” Advisor: Dr. Mac McKee

M.S, Water and Environmental Engineering April 2007
An-Najah National University, Nablus, Palestine **Average 90.9%**
Thesis: “Impact of Pumping on Saltwater Intrusion in Gaza Coastal Aquifer, Palestine” Advisor: Dr. Mohammad Almasri

B.S, Civil Engineering January 2004
An-Najah National University, Nablus, Palestine **Average 89.1%**
Project: “Seismic and Structural Design of the new Engineering Building, An-Najah National University ” Advisor: Dr. Abdel-Razzaq Touqan

RESEARCH INTERESTS

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|-------------------------------|------------------------------------|
| Monitoring Network Design | Statistical Learning Machines |
| Value of Information Analysis | Surface water/Groundwater Modeling |
| Water/Groundwater Quality | Decision Tree Models |

HONORS AND AWARDS

First Place, J. Paul Riley AWRA-Utah Section Student Water April 10, 2012
Resources Conference and Paper Competition Logan, UT, USA

PROFESSIONAL EXPERIENCE

Assistant Professor 2013- present
Department of Civil Engineering, An-Najah National University Nablus, Palestine
(ABET Accredited)

- Faculty member in the Department of Civil Engineering - Water and Environmental Circle.
- Teaching the following courses:
 - 61610: Engineering Statics
 - 61352: Environmental Engineering I
 - 61452: Environmental Engineering II
 - 61620: Geographical Information Systems (GIS)
 - 61598: Graduation Project I
 - 61599: Graduation Project II
- Supervising several undergraduate senior projects in Civil Engineering
- Supervising graduate students in Water and Environmental Engineering

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Postdoctoral Fellow

2012- 2013

Department of Civil Engineering, McMaster University

Hamilton, ON, Canada

- Main Project: “Decision Support Tool for Integrated Water Monitoring Network Design and Evaluation”
- Estimation of groundwater recharge in southern Ontario, Canada using distributed models and streamflow records approach
- Distributed precipitation-runoff modeling for southern Ontario, Canada using PRMS
- Groundwater monitoring network design using Bayesian multi-objective evolutionary algorithm (ϵ -hBOA)
- Integrated precipitation/surface water/groundwater/water quality monitoring networks design and evaluation

Graduate Student / Research Assistant

2007-2012

Utah Water Research Laboratory, Utah State University

Logan, UT, USA

- Groundwater flow modeling for the Eocene Aquifer, Palestine using MODFLOW
- Nitrate fate and transport modeling for the Eocene Aquifer using MT3DMS
- Uncertainty analysis using Monte Carlo Simulations
- Monitoring network design using statistical learning machines
- Studying the health risk consequences of nitrate pollution
- Value of information analysis for optimal monitoring network design
- Pre-mining Groundwater analysis for potash mining in Lisbon Valley in southeastern Utah (undergoing project)

Instructor, Iraqi Agriculture Extension Revitalization Program

October 2009

Utah State University

Logan, UT, USA

- Conducted lectures in water quality and hydrology
- Prepared tests, grading, and evaluations
- Translated for Arabic speakers and I led discussions in field trips to southern Utah

Master Student, Water and Environmental Studies Institute

2004-2007

An-Najah National University

Nablus, Palestine

- Worked on saltwater intrusion modeling using MODFLOW, SEAWAT, and GWM

Teaching Assistant, Civil Engineering Department

2004

An-Najah National University

Nablus, Palestine

- Instruction, grading, and preparing tests for Construction Materials Lab and Structural Analysis II

Site Engineer, Engineering Works Department

2004-2007

An-Najah National University

Nablus, Palestine

- Worked in supervising the new science building. Total cost of the project: \$8,000,000. Total area: 18,000 m²
- Prepared bills of quantities and as-built maps
- Modified structural designs when needed
- Supervised daily activities of 120 construction workers
- Reviewed monthly bills by the contractor
- Reviewed and signed monthly payments for the contractor

PUBLICATIONS (PEER-REVIEWED)

- Abdelhaleem Khader, David E. Rosenberg, Mac McKee (2012). "[A decision tree model to estimate the value of information provided by a groundwater quality monitoring network](#)." *Hydrology and Earth System Sciences Discussion*, 9(12), 13805-13837.
- Abdelhaleem Khader and Mac McKee (2014). "[Use of a relevance vector machine for groundwater quality monitoring network design under uncertainty](#)" *Environmental Modeling and Software*, Available online 25 March 2014, ISSN 1364-8152, <http://dx.doi.org/10.1016/j.envsoft.2014.02.015>

CONFERENCE PRESENTATIONS

- A.Khader, M. McKee, and David Rosenberg (2012). "Integrated groundwater quality monitoring network design, Case study: Eocene Aquifer, Palestine". Computational Methods in Water Resources, XIX International conference. Urbana-Champaign, IL 2012.
- A.Khader, M. McKee (2010). "Value of information analysis for groundwater quality monitoring network design". American Geophysical Union (AGU) Fall meeting. San Francisco, CA 2010.
- A.Khader, M. McKee (2010). "Groundwater Monitoring Network Design under Uncertainty in Climate and Aquifer Properties". Utah State University Spring runoff conference. Logan, UT 2010.
- A.Khader, M. McKee (2010). "Analyzing the Impacts of Climate Change on Groundwater Monitoring Network Design Using GIS". American water resources association (AWRA) spring specialty conference. Orlando, FL 2010.
- A.Khader, M. Amasri (2008). "Impact of Pumping on Saltwater Intrusion in the Gaza Coastal Aquifer, Palestine". Universities council on water resources (UCOWR) conference. Durham, NC 2008.

TRAINING COURSES

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|---|------------------------------|
| Getting Started as a Successful Proposal Writer and Academician | April 2012 Logan, UT, USA |
| An intensive one-day workshop for beginning concepts in grant writing Office of Research and Graduate Studies, Utah State University | |
| Integrated Water Resources Management (IWRM) | September 2005 |
| Water Studies Institute, Birzeit University, Palestine. | Birzeit, Palestine |
| Seismic Design of Buildings | December 2003 |
| Engineers Association – Jerusalem Center | Nablus, Palestine |

PROFESSIONAL AFFILIATIONS

American Geophysical Union
American Society of Civil Engineers
Jordanian Engineers Association – Jerusalem Center

LANGUAGES

English (fluent)

Arabic (fluent)

COMPUTER SKILLS

MATLAB

R

ArcGIS

PRMS

RORA

RECESS

LINGO

ARCHYDRO

ERDAS

MT3DMS

MODFLOW

SEAWAT

WATERCAD

SEWARCAD

AUTOCAD

MS PROJECT

MS OFFICE