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Assistant Professor and Chair of Civil & Infrastructure Engineering Department
Department of Civil Engineering / Water Resources and Environmental Engineering
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ACADEMIC QUALIFICATIONS

Ph.D. in Water Resources & Environmental Engineering, 1994
Colorado State University, Colorado, USA

PROFESSIONAL EXPERIENCE

Assistant Professor & Chair of Civil and Infrastructure Engineering, *Al-Zaytoonah University of Jordan, Jordan, (9/2015 – present)*

Senior Expert - Engicon, Jordan, (9/2013 – 6/2015)

Research Professor – The University of Jordan, (6/2010 – 9/2013)

Managing Director – SmartIdeas, Jordan, (9/2009 – 6/2010)

Assistant Professor – Hashemite University, Jordan, (9/2000 –9/2009)

Assistant Professor – Mosul University, Iraq, (6/1995 –9/1999)

Postdoctoral Research Associate – Colorado State University, Fort Collins, Colorado

Published: Twenty manuscripts in refereed journals and conferences

RESEARCH INTERESTS

- Biosolids management;
- Engineering applications of green technology;
- Wastewater management and re-use and its environmental impacts;
- Modeling and control of polluted systems (water, air, soil);
- Environmental fate and transport of contaminants in the environment;
- Groundwater Contamination and Remediation;
- Health and Environment;
- Environmental impacts assessment;
- Sustainability and environmental assessment;
- Climate change impact on natural resources;
- Solid & medical waste management;
- Integrated water resources management and water harvesting;
- Environmental impacts of irrigation-drainage projects; and
- M & E of air quality and emissions systems of food industry, animal production, animal waste and plants of organic fertilizers.

INSTITUTIONAL AND PROFESSIONAL SERVICES

o Courses Taught

o Graduate

- Flow & Contaminant Transport in Porous Media
- Advanced Engineering Hydrology
- Advanced Engineering Mathematics
- Groundwater Hydrology and Hydraulics
- Water Quality and Contaminant Transport in Porous Media
- Engineering Applications of GIS

o Undergraduate

- Water Engineering
- Environmental Engineering
- Wastewater Engineering
- Design of Water Resources Systems
- Hydraulic Engineering
- Water Resources Management
- Environmental Economics
- Transport of Contaminants in Porous Media
- Climate Change
- Engineering Hydrology
- Environmental Hydrology
- Computer Applications in Environmental Pollution
- Engineering Mathematics
- Environmental Pollution
- Irrigation and Drainage Engineering
- Integrated Watershed Hydrology
- Environmental Science and Human Health

PROFESSIONAL DEVELOPMENT ACTIVITIES IN THE LAST FIVE YEARS

- Chair of Civil & Infrastructure Engineering Department
- Member of ABET self-study report preparation committee
- Chairman, Civil & Infrastructure Engineering Study Plan
- Member, in many Postgraduate Examination Committees and supervision
- Member, of many B.Sc. students' graduation projects
- Member, College of Engineering Council
- University Center of Academic Quality Assurance Committee
- Scientific Committee, International Conference and Exhibition on Green Energy & Sustainability for Arid Regions and Mediterranean Countries
- Faculty Committee, Postgraduate Programs
- Joint Graduate Program with Washington State University-USA Committee
- Member, Joint Master Program with Valencia University/Spain Committee
- University Council of the Hashemite University

HONORS AND AWARDS

- **Certificate of Completion**, Didactic Training Workshop "Integrated Water Resources Management", IWRM Program, funded by Cologne University, 14 to 15 September 2012, Amman, Jordan.

- **Certificate of Completion**, “Training Course in Teaching Technology and Evaluation”, 8 April to 19 April 2006, Jordan.
- **Certificate of Completion**, “Training Course in e-Learning “, Jordan, July to Sept, 2003 (320 hours).
- **Scholarship recipient** for Bachelor, Master and PhD Degrees.

JOURNAL PUBLICATIONS

- Alrajoula, M.T. , I. Al Zayed, N. Elagib, Moshrik R. Hamdi, 2016. Hydrological, socio-economic and reservoir alterations of Er Roseires Dam in Sudan, *Science of the Total Environment*, 566–567(938–948).
- Hamaideh, A., B. Al-Qarallah, M. R. Hamdi, S.Abu Mallouh, J. Al-Kafawein, M. Alshaa. 2014. Synthesis of Geopolymers Using Local Resources for Construction and Water Purification, *Journal of Water Resource and Protection*, Vol.6(5): 507-513.
- Hamdi, M. R., M. Abu-Allaban, A. Elshaieb, M. Jaber, and N. M. Momani. 2009. Climate Change in Jordan: A Comprehensive Examination Approach, *American Journal of Environmental Sciences*, 5(1): 58-68.
- Mrayyan, B., and M. R. Hamdi. 2006. Management Approaches to Integrated Solid Waste in Industrialized Zones in Jordan: A Case of Zarqa City. *Waste Management*, 26(2): 195-205.
- Hamdi, M. R., A. Bdour, and Z. Tarawneh. 2008. Diesel Quality in Jordan: Impacts of Vehicular and Industrial Emissions on Urban Air Quality, *Environmental Engineering Science*, 25(9): 1333-1343.
- Bdour, A.N., M. R. Hamdi, M. Shawaqfeh, and M. Al-Hussinat. 2008. Enhancing Public Participation in Local Air Pollution Assessment: A Citizen Participation Prototype From Zarqa Governorate, Jordan, *Environmental Engineering Science*, 25(4): 451-459.
- Manghi, F., D. Williams, J. Safely and M. R. Hamdi, 2011. Groundwater Flow Modeling of the Arlington Basin to Evaluate Management Strategies for Expansion of the Arlington Desalter Water Production. *Water Resour Manage*, DOI 10.1007/s11269-011-9899-6.
- Bdour A. N., M. R. Hamdi, and Z. Tarawneh. 2009. Perspectives on Sustainable Wastewater Treatment Technologies and Reuse Options in the Urban Areas of the Mediterranean Region, *Desalination*, 237:162–174.
- Hadadin, N., Zeyad Tarawneh, K. Shatanawi, Q. Banihani, and Moshrik R. Hamdi, 2013. Hydrological Analysis for Floodplain Hazard of Jeddah's Drainage Basin, Saudi Arabia. *Arabian Journal for Science and Engineering*, 38(12): 3275-3287.
- Arwa Hamaideh, Lina Abu Ghunmi, and Moshrik R. Hamdi, 2012. Water options in the Middle East: Current trends and innovations, *Journal of Soil and Water Conservation*;67(3):77A-79A
- Hamdi, M. R. 2005. Transport of Wastewater Constituents in the Subsurface Environment: Modeling under Jordanian Conditions. *Proceeding of the Workshop on Urban Wastewater Technology & Reuse*, Amman-Jordan.
- Hamdi M.R., M. Abu-Allaban M. and Jaber M.(2011). Statistical Examination of Frost Characterization: A Case of Global Warming Impact in Jordan. *Journal of Water Resource and Protection*, 2011, 3, 620-627.
- Bdour, A.N., M. R. Hamdi, M. Shawaqfeh. 2006. Wastewater treatment technologies and reuse in the urban areas of the Mediterranean region. *Proceeding of the Conference of Sustainable Water Management Rational Water Use, Wastewater Treatment and Reuse*, held at Morocco.
- Hadadin, N., S. Shawash, and K. Shatanawi, Q. Banihani, Moshrik R. Hamdi, 2011. Spatial Hydrological Analysis for Water Harvesting Potential Using ArcGIS Model: The Case of Northeastern Desert, Jordan. *Journal of Water Policy*, doi:10.2166/wp.2011.058.
- Tarawneh, Z, Elgaali Elgaali. and M. R. Hamdi. 2009. Bi-site analysis of meteorological drought duration: theoretical modeling and application, *Water Resources Management*, 23:3005-3018.
- Hamdi, M. R., A. S. Aldabagh, and E. M. Ghazal. 2006. Optimal Drainage Design under Iraqi Conditions Using DRAINMOD, *J. Al-Rafidain Engineering*, 14(2): 88-99.

- Fakhri Manghi, Behrooz Mortazavi, Christie Crother, M. R. Hamdi. 2009. Estimating Regional Groundwater Recharge Using a Hydrological Budget Method, *Water Resources Management*, 23:2475-2489.
- Hamdi, M. R., D. Durnford, and J. Loftis. 1994. Bromide transport under sprinkler and ponded irrigation: experimental results. *Journal of Irrigation and Drainage Engineering*, 120(6):1086-1097.
- Tarawneh, Zeyad S., Elgaali A. Elgaali, and M. R. Hamdi. 2008. Severity of Droughts in Arid Regions, *Jordan Journal of Civil Engineering*, 2(3): 228-237.

CONFERENCE PUBLICATIONS

- Abu Salem, Z., Abu Diyah, A., Dabour, L and Hamdi, M. 2017 "Green Low-Cost Housing Units" Proceeding of the seventh Jordanian International Civil Engineering Conference, May 9-11, 2017, Amman-Jordan.
- Bdour, A.N., M. R. Hamdi, M. Shawaqfeh. 2006. Wastewater treatment technologies and reuse in the urban areas of the Mediterranean region. Proceeding of the Conference of Sustainable Water Management Rational Water Use, Wastewater Treatment and Reuse, held at Morocco.
- Hamdi, M. R. 2004. Transport and Fate of Hazardous Waste Constituents in the Subsurface Environment. Proceeding of the 3rd Jordanian Conference on Environment. Yarmouk University, Dec. 14, 2004, Irbid, Jordan.
- Hamdi, M.R. 2005. Potential of Groundwater Contamination of Karstic Aquifers: Modeling Challenges. Proceeding of the Workshop of Aquifer Vulnerability & Risk in Jordan, Amman-Jordan.
- Hamdi, M. R. 2005. Blueprint on Environmental Pollution to include in an Environmental Education publication, Youth and Environment Conference, Al-Ahliyya Amman University & Higher Council of Youth, 22 Dec, 2005, Amman-Jordan.
- Butters G, J.Fleming, W.Bandaranayake and M.R.Hamdi. 1992. Management effect on chemical movement in the unsaturated zone. Hydrology Days Conference 3/30 - 4/2. Colorado State University.
- Hamdi, M. R. 2006. Potential of Groundwater Contamination by Al-Samra Wastewater Effluent: Modeling Approach, Proceeding of the Jordan-German Expert Workshop on Water & Waste, DAAD and Yarmouk University, Irbid, Sept. 10-13, 2006.
- Hamdi, M. R. 2006. Potential of Groundwater Pollution by Diesel in Jordan. A poster Presented at the Hashemite University – Scientific day, Faculty of Natural Resources and Environment, Zarqa, 24th, May, 2006.

REFEREE

Dr. Hamdi is a referee for the following international journals:

1. *Journal of Environmental Monitoring and Assessment*,
2. *Waste Management*,
3. *Weather & Climate Extremes*,
4. *Water resources management*, and
5. *Waste Management and Research*.

POSTGRADUATE SUPERVISION (LAST 3 YEARS)

- Ronza Al Marji, Adaptation to Climate Change with Improved Irrigation Water Management: A case of Jordan Valley. Thesis completed January 2012.

- Hana Baddad, Xeriscaping in Amman: A Sustainable Water Conservation Approach. Thesis completed January 2013.
- Ibrahim Abdallah, Diagnosis and Amendment of the UNEP Aridity Index in the Semi-arid Regions using Land Surface Models: the Case of Central-East Sudan, scheduled completion date, Jan 2014.

THESIS EXAMINED

- Groundwater Protection Zone in Irbid Using MIKESHE, by Ramon Britifur, 2013, Integrated Water Resources Management Program, The University of Jordan.
- Heavy Metals Uptake by Olive Mill Solid Residues, by Fidaa Yousif Fayed, 2009 - Faculty of Natural Resources and Environment-The Hashemite University.
- GIS Based Assessment of Groundwater Vulnerability in the Vicinity of Khirbet As-Samra Wastewater Treatment Area, Zarqa Area by Rana Khaled Abu Isba'a, 2009 - Faculty of Natural Resources and Environment-The Hashemite University.

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

- Jordan Engineers Association (Civil Eng)
- Federation of Arab Engineers (Civil Eng)
- Society of Energy Conservation and Sustainable Environment
- Jordan Environment Society
- The Royal Society for the Conservation of Nature

ORGANIZED CONFERENCES

- Chair of the fourth Conference "Assessment of water resources in the Arab world", 3-5 June, 2013, Amman, Jordan.
- Chair of the third Conference "Assessment of water resources in the Arab world", 16-18 April, 2012, Amman, Jordan.
- Chair of the second Conference "Assessment of water resources in the Arab world", 20-22 Feb, 2011, Amman, Jordan.

TRAINING COURSES

- Designing and conducting of the Training Short Course "Flood Frequency & Forecasting", Muscat, Oman, 30 Mar to 3 April 2013.
- Designing and conducting of the Training Short Course "Quality Control and Quality Assurance of Water Analysis" (Civil, Chemical Engineers from the Ministry of Water Resources/Iraq), 7 -11/11/2012 in Amman.
- Designing and conducting of the Training Short Course "Sustainable Development of Groundwater Aquifers", Muscat, Oman, 29 Oct to 3 Nov 2010.
- Designing and conducting of the Training Short Course "Stochastic Modeling in Hydrology and Water Resources", Muscat, Oman, 25-29 Sept 2010.
- Designing and conducting of the Training Short Course "Applications of Mathematical Modeling in Assessment of Water Resources Pollution", Muscat, Oman, 14-18 of Mar 2009.
- Designing and conducting of the Training Short Course "Mathematical Modeling and its Application in Environmental Systems ", Muscat, Oman, 17-22 of Nov 2007.
- Designing and conducting of the Training Short Course "Occupational Health and Safety", Muscat, Oman, 24-28 of Nov 2007.
- Designing and conducting the Training Short Course " Applications of HYDRUS in Environmental Issues", 18-20 Jan, 2009.
- Designing and conducting the Training Short Course "Environmental Management Systems for Municipalities ", 20-22 Jan, 2008.
- Designing and conducting the Training Short Course "Wastewater Treatment", 16-18 Sept, 2007.

- Lecturer in “Modeling and Applications of Ecohydrology and Phytotechnology for Sustainable Water Resources Management Workshop”, UNESCO Office – Amman, August 7, 2006.
- Lecturer in Training Workshop, Technical Writing & Data Evaluation, 2004.
- Lecturer in “Integrated Water Resources Management: Groundwater Pollution” for Yemenis Engineers, Center for Water and Environmental studies, University of Jordan, August 23, 2006.
- Designing and conducting the Training Short Course “Environmental Impact Assessment”, 13-15 May, 2007.
- Lead Technical Person and lecturer in “Modeling of Environmental Systems using HYDRUS”, a Training Course, 10-14/6, 2006.
- Lecturer & technical lead person in Training Workshop, "Solutions to Environmental Problems using HYDRUS" Amman, Jordan, 4-6/7 2005.
- Lecturer in Training Workshop, Groundwater Pollution & Remediation, (a joint workshop with Washington State University, Jordan University, Jordan University of Science and Technology sponsored by USAID), 2004.
- Lecturing in the Training Workshop, Role of Statistical Tools for Evaluation, Summarizing and Presenting Data, USAID, 2004.
- Lecturing in the Training Short Course “Hazardous Waste Management and Control”, 2003.