



CURRICULUM VITAE

Moshrik Raouf Hamdi

Civil and Infrastructure Engr. Dept./Faculty of Engr. & Technology

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1. Education

- Ph.D. (Water Resources & Environmental Engr.) 1994, Colorado State University, Fort Collins, Colorado, USA

2. Ph.D. Dissertation

Steady State and Transient Transport of Bromide under Field Conditions, Colorado State University, Fort Collins, Colorado, USA.

3. Employment

Academic Positions

- Assistant Professor, Civil & Infrastructure Engr. Dept., Al Zaytoonah University of Jordan, Amman, Jordan Sept., 01, 2015 – Now.
- Senior Water Resources and Environmental Engr. Expert, Engicon, June 2013 – May 2015.
- Assistant Professor, Research Commission, Jordan University, June 2010 – Sept. 2013.



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- Assistant Professor, Hashemite University, Sept. 2000 – Sept. 2009
- Assistant Professor, Mosul University, Department of Water Resources Engr. June. 1995 – Sept. 2000.
- Post-Doctoral Research Associate, Colorado State University, 1992 – 1995.
- Graduate Assistant, Department of Chemical and Agricultural Engineering, Colorado State University, Colorado, Fort Collins, USA, 1990 – 1992.
- Instructor, Department of Water Resources Engineering, Mosul University, Mosul, Iraq, 1983-1986.

Administrative Positions

- Chairman of Civil and Infrastructure Engr. Department, Faculty of Engineering and Technology, Al Zaytoonah University of Jordan, Amman, Jordan – Feb. 2017 – Now.

4. 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.

5. Membership in Scientific Societies and Associations

- Jordanian Engineers Association (Civil Engr.), Amman, Jordan
- Federation of Arab Engineers (Civil Engr.)
- Society of Energy Conservation and Sustainable Environment, Amman, Jordan
- The Royal Society for the Conservation of Nature, Amman, Jordan

6. Honors and Awards

- Awards of Ph.D. research fund by Colorado State University, 1990-1994



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- Research assistant awards, Colorado State University, Fort Collins, USA, 1992-1994
- Teaching assistant award, Colorado State University, Fort Collins, USA, 1990-1992

7. Fellowships and Scholarships

- Scholarship from Mosul University to Colorado State University, USA to pursue higher education leading to the degree of PhD in Water and Environmental Engineering (1988 to 1990).

9. Teaching Experience

- **Graduate Courses**
 - Advanced Engineering Hydrology
 - Flow & Contaminant Transport in Porous Media
 - Advanced Engineering Mathematics
 - Groundwater Hydrology and Hydraulics
 - Water Quality and Contaminant Transport in Porous Media
 - Engineering Applications of GIS
- **Undergraduate Courses**
 - Hydraulic Engineering
 - Design of Water Resources Systems
 - Water Engineering
 - Engineering Hydrology
 - Environmental Hydrology
 - Integrated Watershed Hydrology
 - Environmental Engineering
 - Wastewater Engineering
 - Water Resources Management
 - Environmental Economics
 - Transport of Contaminants in Porous Media
 - Climate Change
 - Computer Applications in Environmental Pollution
 - Engineering Mathematics
 - Environmental Pollution
 - Irrigation and Drainage Engineering
 - Environmental Science and Human Health

10. Supervision of Graduate Research



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- 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.

11. Grants

- Research Grant supported by the Deanship of Scientific Research, Hashemite University, Zarqa-Jordan, 2008.
Title: "Groundwater Pollution by Nitrate in Jordan".
- Study of the "Roman Wells" (ancient cisterns) on the northern Karak Plateau and their environment with special regard to hydrological aspects and water harvesting potential under climate change, 2012.
- Leader of two tasks of the biosolids management initiative/Water reuse and environmental conservation project_ funded by the USAID and implemented by AECOM_(2010-2015)_\$32.6 million.

12. Patents

None

13. Membership of Committees

National and International

- Member of the scientific committee of the 8th International conference on Engineering, Project, and Product Management (EPPM 2017).
- Member of the organizing committee of the 8th International conference on Engineering, Project, and Product Management (EPPM 2017).
- 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.
- Scientific Committee, International Conference and Exhibition on Green Energy & Sustainability for Arid Regions and Mediterranean Countries.

University

- Member of the Faculty of Engineering and Technology council 2015/2016, 2016-2017, 2017-2018, 2018-2019.



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- Member of the examining committee at the Faculty of Engineering and Technology, ZUJ, Jordan, 2017-2018, 2018-2019.

Faculty of Engineering and Technology Level

- Member of ABET self-study report preparation committee.
- Chairman, Civil & Infrastructure Engineering Study Plan.
- The Curriculum Committee, Chairman.
- Member of the Scientific Research Committee.
- Member, in many Postgraduate Examination Committees and supervision, Hashemite University, 2000-2009.
- Member, of many B.Sc. students' graduation projects, Hashemite University, Al-Zaytoonah University of Jordan.
- Member, University Center of Academic Quality Assurance Committee, Hashemite University, 2006-2009.
- Faculty Committee, Postgraduate Programs, 2005-2009.
- Joint Graduate Program with Washington State University-USA Committee, Hashemite University, 2004-2005.
- Member, Department Committee, Curricula Development, 2000-2006, 2008-2009.
- Member, Joint Master Program with Valencia University/Spain Committee
- University Council of the Hashemite University, 2002-2003.
- Member, Web Site Development Committee, Hashemite University, 2004-2008.
- Chairman, Planning, Designing and Conducting Scientific Exhibitions, Hashemite University, 2006-2007.

14. Professional and Scientific Meetings

Scientific Meetings Organized

Provide bulleted or numbered list with name of conference or symposium or workshop etc., place, and date

Participation in Scientific meetings

The Seventh Jordanian International Civil Engineering Conference, Amman, Jordan, 2017.

15. Participation in or organization of curricular and/or extra-curricular activities

- Peer reviewer for several manuscripts submitted to national and international scientific journals, 2003 – Now.

16. Publications



Papers in refereed journals

- 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-Hussin. 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, *Desalinization*, 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.**, 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.
- 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.



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- 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 Proceedings and Presentations

- Abu Salem, Z., Abu Diyah, A., Dabour, L and Hamdi, M.R. 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.



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