

CURRICULUM VITAE

ALAA HAWARI

Qatar University
College of Engineering
Department of Civil and Architectural Engineering
P.O. Box: 2713 – Doha - Qatar
Tel. : +974 - 3382 - 8895
E-mail: a.hawari@qu.edu.qa

EDUCATION

- **Ph.D in Environmental Engineering (2004)** Dept. of Building Civil and Environmental Engineering, Concordia University, Montreal, Canada.
Dissertation title: Biosorption of lead, copper, cadmium and nickel by anaerobic biomass.
- **Master of Applied Science in Environmental Engineering (2000)** Dept. of Building Civil and Environmental Engineering, Concordia University, Montreal, Canada.
Thesis title: Modelling of the fate of lead due to the removal of corroded sub-marine cables in aquatic environments.
- **Bachelor of Science in Civil Engineering (1996)**, Jordan University of Science & Technology, Jordan.

WORK EXPERIENCE

- **Oct. 2015 – present**
Associate Professor (Qatar University – Doha - Qatar - College of Engineering – Department of Civil and Architectural Engineering).
- **Sept. 2010 – Oct. 2015**
Assistant Professor (Qatar University – Doha - Qatar - College of Engineering – Department of Civil and Architectural Engineering).
- **Sept. 2005 – Aug. 2010**
Assistant Professor (The Hashemite University – Zarqa – Jordan – College of Natural Resources and Environment - Department of Water Management and Environment).
- **Sept. 2004 – Sept. 2005**
Assistant Professor (Applied Science Private University – Amman - Jordan – College of Engineering - Department of Civil Engineering)
- **Sept. 2000 – May 2004**
Recycling Coordinator – (Concordia University – Health and Safety Department - Part time)
- **June 1996 – Oct. 1997**
Site Engineering, Construction Supervision, and Cost Estimation (UR Contracting Est., Amman - Jordan).

PUBLICATIONS

Peer Reviewed Journal Articles:

- Atef A., Zayed T., **Hawari A.**, Khader M., Moselhi O. (2016) Multi-tier method using infrared photography and GPR to detect and locate water leaks, *Automation in Construction*, 61, pp: 162 – 170.
- **Hawari A.**, Du F., Baune M., Thöming J. (2015) A fouling suppression system in submerged membrane bioreactors using dielectrophoretic forces, *Journal of Environmental Sciences*, 29, pp:139 – 145.
- **Hawari A.**, Ramadan H., Abu-Reesh I., Ouederni M. (2015) A comparative study of the treatment of ethylene plant spent caustic by neutralization and classical and advanced oxidation, *Journal of Environmental Management*, 151, pp:105 – 112.
- Benamor A., Al-Marri M., **Hawari A.** (2015) Experimental determination of carbamate formation and amine protonation constants in 3-amino-1-propanol–CO₂–H₂O system and their temperature dependency, *International Journal of Greenhouse Gas Control*, 37, pp:237-242.
- **Hawari A.**, Khader M., Zayed T., Moselhi O. (2015) Non-Destructive Visual-Statistical Approach to Detect Leaks in Water Mains, *International Journal of Environmental, Ecological, Geological and Geophysical Engineering*, 9, pp:167-171.
- Elfaki H., **Hawari A.**, Mulligan C. (2015) Enhancement of multi-media filter performance using talc as a new filter aid material: Mechanistic study, *Journal of Industrial and Engineering Chemistry*, 24, pp: 71-78.
- **Hawari A.** (2014) Application of dried anaerobic digested sewage sludge as phenol biosorbent, *International Journal of Environmental Engineering*, 6, pp: 29 - 42.
- **Hawari A.**, Khraisheh M., Al-Ghouti M. (2014) Characteristics of olive mill solid residue and its application in remediation of Pb²⁺, Cu²⁺ and Ni²⁺ from aqueous solution: Mechanistic study, *Chemical Engineering Journal*, 251, pp:329-336.
- Khraisheh M., Kim J., Campos L., Al-Muhtaseb A., **Hawari A.**, Al Ghouti M., Walker G. (2014) Removal of pharmaceutical and personal care products (PPCPs) pollutants from water by novel TiO₂-Coconut Shell Powder (TCNSP) composite, *Journal of Industrial and Engineering Chemistry*, 20(3), pp:979-987.
- Heibati B., Rodriguez-Couto S., Amrane A., Rafatullah M., **Al Hawari A.**, Al-Ghouti M., (2014) Uptake of reactive black 5 by pumice and walnut activated carbon: chemistry and adsorption mechanisms, *Journal of Industrial and Engineering Chemistry*, 20(5), pp:2939-2947.
- **Hawari A.**, Khader M., El Hasan W., Alijla M., Manawi A., Benamour A., (2014) A life cycle assessment (LCA) of aluminum production process, *International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering*, 8(4), pp: 711 – 717.
- Al-Ghouti M. A., **Hawari A.**, Khraisheh M. (2013) A solid-phase extractant based on microemulsion modified date pits for toxic pollutants, *Journal of Environmental Management*, 130, pp: 80 – 89.
- **Hawari A.**, Rawajfih Z. and Nsour N. (2009) Equilibrium and thermodynamic analysis of zinc ions adsorption by olive oil mill solid residues, *Journal of Hazardous Materials*, 168, pp: 1284-1289.
- Du F., **Hawari A.**, Baune M., Thöming J. (2009) Dielectrophoretically intensified cross-flow membrane filtration, *Journal of Membrane Science*, 336, pp: 71-78.
- **Hawari A.** and Mulligan C. (2007) Effect of the presence of lead on the biosorption of copper, cadmium and nickel by anaerobic biomass. *Process Biochemistry*, 42, pp: 1546 - 1552.
- **Hawari A.** and Mulligan C. (2006) Biosorption of lead, cadmium, copper and nickel by anaerobic granular biomass. *Bioresource Technology*, 97, pp: 692 – 700.
- **Hawari A.** and Mulligan C. N. (2006) Heavy metals uptake mechanisms in a fixed column by calcium-treated anaerobic biomass. *Process Biochemistry*, 41, pp: 187 – 198.

Peer Reviewed Conference Papers (accepted or published):

- **Hawari A.**, Khader M., Zayed T., Moselhi O., (2015) Non-Destructive Visual-Statistical Approach to Detect Leaks in Water Mains, International Conference on Environmental Sciences and Engineering (ICESE 2015), Rome, Italy, March 5-6, 2015.

- **Hawari A.**, Al Kadour F., Zayed T. (2015) Simulation-based condition assessment model for sewer pipelines in Qatar, The Fourth International Conference on Soft Computing Technology in Civil, Structural and Environmental Engineering, September, 1-4, 2015, Prague, Czech Republic.
- **Hawari A.**, Al Kadour F., Zayed T. (2015) An integrated ANP and ER condition assessment model for sewer pipelines, International No-Dig Istanbul 2015 33rd International Conference and Exhibition, Istanbul, Turkey, 28-30 September 2015.
- Karimian F., Elsayah H., Zayed T., Moselhi O., **Al Hawari A.** (2015) Forecasting breakage rate in water distribution networks using Evolutionary Polynomial Regression, The 5th International/11th Construction Specialty Conference, June 8 – 10, 2015, Vancouver, Canada.
- Mohammed A.U., Zayed T., Moselhi O., **Al Hawari A.** (2015) Reliability Analysis of Water Distribution Networks Using Minimum Cut Set Approach, The 5th International/11th Construction Specialty Conference, June 8 – 10, 2015, Vancouver, Canada.
- **Hawari A.**, Khader M., El Hasan W., Alija M., Manawi A., Benamour A., (2014) A life cycle assessment (LCA) of aluminum production process, International Conference on Environmental and Ecological Impacts (ICEEI 2014), Venice, Italy, April 14-15, 2014.
- Elektorowicz M., Kerin B., Pengjie L., **Hawari, A.** (2002) Role of planktonic algae in removal of Zn from constructed wetlands- Modelling of Algae/Plants competitive removal, 37th Central Canadian Symposium on Water Pollution Research, February 4, 2002, Burlington, Ontario, Canada.
- Elektorowicz, M., **Hawari A.** (2001) MFCL model as a tool for assessment of the sediment remediation impact on water quality, CSCE 7th Specialty Conference on Environmental Engineering, Victoria, Canada.
- **Hawari A.**, Elektorowicz M. and Ebadi T. (1999) Modelling of the Fate of Corrosion Products from Sub-Marine Cables, 14th Eastern Canadian Symposium on Water Pollution Research, November 5, 1999, Sherbrooke, Quebec, Canada.

FUNDED PROJECTS

1.	Recovery and Reuse of Municipal and Industrial Wastewater: Development of a novel fouling suppression system in submerged membrane bioreactors using dielectrophoretic forces.	Funded by: Qatar National Research Fund (QNRF) – National Priorities Research Program (NPRP)	\$899,206.0	Jan. 2015 – Jan. 2018	LPI
2.	Non-destructive Evaluation Based Tools for Managing Waste Water Networks (WWN) in Qatar.	Funded by: Qatar National Research Fund (QNRF) – National Priorities Research Program (NPRP)	\$895,646.0	Nov. 2013 – Nov. 2016	Co-LPI
3.	Tools for Value Management of Water Distribution Networks in Qatar.	Funded by: Qatar National Research Fund (QNRF) – National Priorities Research Program (NPRP)	\$1,048,520.0	Nov. 2012 – Nov. 2015	Co-LPI
4.	Environmental life cycle assessment of aluminum production: a case study in Qatar.	Funded by: Qatar National Research Fund (QNRF) – Undergraduate Research Experience Program (UREP) (UREP 12 - 013 - 2 – 002)	\$37,548.0	March 2011 – March 2012	LPI
5.	Modeling of Sand Filters Using Artificial Neural Networks (ANN).	Funded by: Qatar National Research Fund (QNRF) – Undergraduate Research Experience Program (UREP) (UREP 15 - 047 - 2 – 015)	\$58,150.0	March 2014 – March 2015	LPI
6.	The use of Forward Osmosis and Membrane Distillation for desalination &	Funded by: Qatar National Research Fund (QNRF) –	\$60,000.0	Sept. 2013	Co-LPI

	industrial water treatment in Qatar.	Undergraduate Research Experience Program (UREP) (UREP 14 - 055 - 2 - 015)		– Sept. 2014	
7.	Assessment of electrocoagulation for Qatari oil and gas produce industrial water treatment	Funded by: Qatar National Research Fund (QNRF) – Undergraduate Research Experience Program (UREP) (UREP17-005-2-002)	\$60,000.0	May 2015 – May 2016	Co-LPI
8.	Polishing of industrial wastewater using a multi-media filter.	Funded by: Qatar University (Student Grant)	30,000.0 QAR	March 2012 – March 2013	LPI
9.	Treatment of spent caustic produced from an ethylene plant .	Funded by: Qatar University (Student Grant)	26,000.0 QAR	2012/ 2013	LPI

Other Funded Projects:

- **Shelter center initiative**, funded by Qatar Foundation, the research has been done with collaboration between Qatar University, Qatar Red Crescent, Qatar Foundation, and Virginia Common Wealth University in Qatar, 2011 - 2012.
- **Reducing membrane fouling in cross-flow filtration using DEP**, Funded by: Deutsche Forschungsgemeinschaft (DFG), 2008 (3 months), \$9,130.
- **Reducing scaling in micro-membranes using non-homogeneous electric field**, Funded by: Deutsche Forschungsgemeinschaft (DFG), 2009 (3 months), \$9,130.
- **Removal of phenol from aqueous solutions using anaerobic digested sludge**, Funded by: the Hashemite University, Jordan, 2008 (1 year), \$15,000.
- **Removal of heavy metals from aqueous solutions using olive mill solid residues**, Funded by: The Hashemite University, Jordan, 2007 (1 year), \$9,500.
- **Ground water prediction for the Jordanian Petroleum Company**, Funded by: The Jordan Petroleum Refinery Co. – Jordan 2009 (1 year), \$22,000.

AWARDS

- **Dean's Award on Research Assistant Professor Rank (2014-2015)**. Qatar University, College of Engineering, Doha, Qatar.
- **DFG Scholarship for Research Work** - Institute for Environmental Process Engineering (UFT), Bremen University – Bremen - Germany, June – September 2009.
- **DFG Scholarship for Research Work** - Institute for Environmental Process Engineering (UFT), Bremen University – Bremen - Germany, June – September 2008.
- **The Canadian Clean Air Regulatory Agenda (CARA)** – 2001 - Graduate Scholarship - Concordia University, Montreal, Canada.
- **The Canadian Clean Air Regulatory Agenda (CARA)** – 2002 - Graduate Scholarship - Concordia University, Montreal, Canada.

ACADEMIC SUPERVISION

- **Nagla Kamal**, Main supervisor, Master in Environmental Engineering, Qatar University, College of Engineering (2013 – 2015). Thesis title: Influence of high flow rate and temperature on flux behavior in forward osmosis.

- **Mohamed Khader**, Main supervisor, Master in Civil Engineering, Qatar University, College of Engineering (2013 – 2015). Thesis title: A non-destructive methodology for leak detection in water networks using Infrared photography (IR) and Ground Penetration Radar (GPR).
- **Hesan AlFaki**, Main supervisor, Master in Environmental Engineering, Qatar University, College of Engineering (2011 – 2013). Thesis title: Polishing of industrial wastewater using a multi-media filter. The project was done in collaboration with Qatar Chemicals Co. (QCHEM).
- **Hasanat Ramadan**, Main supervisor, Master in Environmental Engineering, Qatar University, College of Engineering (2011 - 2013). Thesis title: Treatment of Spent Caustic from Olefin plants. The project was done in collaboration with Qatar Petrochemical Company (QAPCO).

DEVELOPED AND TAUGHT COURSES AT QATAR UNIVERSITY:

- Physical Chemical Processes in Environmental Engineering (**EEMP 509, Graduate Course, Newly developed**)
- Environmental Transport and Water Resources (**EEMP 505, Graduate Course, Newly developed**)
- Capstone design course/design project (**EEMP 510, Graduate Course, Newly developed**)
- Introduction to Environmental Engineering (CVEN 350)
- Selected Topics in Environmental Engineering (**CVEN 453, Newly developed**)
- Civil Engineering Design Project I (CVEN 401)
- Civil Engineering Design Project II (CVEN 402)
- Engineering Graphics (GENG 111)
- Engineering Economics (GENG 360)
- Probability and Statistics (GENG 200)

SERVICES

Committees (at Qatar University):

- **University Level:**
 - Honors Council [Member] (2012 – present)
 - Environmental Research Boat (Jenan) [Member] (2012)
 - Consumption of Utilities focus study committee [Member] (2015)
 - Technical Committee for the 5th Gas Processing Symposium (2015).
- **College of Engineering Level:**
 - Environmental Engineering Master Program Committee [Member] (2011 – present)
 - Outreach and social activities committee [Member] (2015 – present)
- **Department Level:**
 - Laboratories, Facilities, Space Management, & Safety Committee [Chair]
 - Curriculum Committee [Member]
 - Scheduling - Textbooks Committee [Member]
 - Graduate Program Committee [Member]
 - Hiring committee [Member]

Committees (Outside Qatar University):

- Ministry of Environment (Doha, Qatar). A member in the revision committee for the environmental protection law (30) for the year 2002 [Member].
- Ministry of Environment (Doha, Qatar). Ministry of Environment midway strategic planning review committee- Pollution [Member].
- Ministry of Environment (Doha, Qatar). Doha's Port Environmental Impact Assessment (EIA) review committee [Member].

- Ministry of Environment (Doha, Qatar). Integrated Coastal Zone Management (ICZM) review committee [Member].
- Qatar Green Building Council (QGBC) [Member in the solid waste management committee].

PROFESSIONAL WORKSHOPS AND TRAINING ATTENDED

- Statistical Predictive Analytics Software (SPSS). Attended 12 sessions offered by the Office of Faculty and Instructional Development (OFID) at Qatar University during the academic year 2013/2014 (Introductory and advanced levels).
- Approach to Environmental Challenges. Jointly organized by Japan JCCP, Cosmo Oil and the College of Engineering of Qatar University. Japan from 20/1/2013 to 30/1/2013.
- Energy Saving and Environmental Management. Jointly organized by Japan JCCP, Cosmo Oil and the College of Engineering of Qatar University. Japan from 22/1/2012 to 2/2/2012.
- Water in Gas Industry – Horizon and Challenges a workshop organized by the Gas Processing Center of Qatar University (QU). March 3rd, 2011.
- Reducing Waste for a More Sustainable Future in Qatar, a workshop organized under the Sustainable Development Initiative of QU International Affairs Department. March 8th, 2011.
- Membrane application in Water Treatment-Visualisation and Quantification of Interactive Forces at the Nanoscale, a workshop organized by the Gas Processing Center of QU. May 8th, 2011.
- Grand Engineering Challenges, a workshop with a round table discussion organized by Qatar University and Texas A&M university-Qatar. May 9th, 2011.

PROFESSIONAL SCIENTIFIC SITE VISITS AND STUDENTS' COMPETITIONS

- Qatar Shelter Initiative, several site visits to areas affected by natural disasters in Indonesia (Medan-Meulaboh, Arongan Lambalek, Peuribu village, and Kudu Ganting village). Conducting interviews with heads of villages, head of delegation of International Federation of Red Cross and Red Crescent Societies (IFRC), Head of district Disaster Management Agency, and manager of Habitat for Humanity Indonesia to study the environmental and social impacts of the disaster (9/10/2011 - 14/10/2011).
- Accompanied students to the:
 - 12th (26 – 27 November, 2012)
 - 14th (26 – 27 November, 2014)
 Inter-College Environmental Public Speaking Competition. Dubai – UAE.
- Accompanied Honors students from Qatar University to a visit to Grand Valley State University, Allendale, Michigan, 15 – 23 June, 2013. Introduced students to the Grand Valley State University Honors Program.
- Accompanied graduate and undergraduate students to several scientific site visits:
 - Doha south wastewater treatment plant.
 - Qatar Chemical Company (Q-CHEM) wastewater treatment plant.
 - Ras Laffan Olefins Cracker (RLOC) wastewater treatment plant.
 - Qatar Petrochemical (QAPCO) waste management department.
 - Doha desalination plant (Ras Abu Fentas).

Journals Review (2015/2016:

- The Korean Journal of Chemical Engineering.
- Journal of Environmental Sciences.
- Journal for Undergraduate Research - Science, Engineering & Technology