

**RESUME**  
**ABBAS AL- OMARI**



**PERSONAL INFORMATION**

Name: Abbas Al-Omari

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**KEY QUALIFICATIONS**

Dr. Al – Omari is a senior researcher/Full professor at the Water, Energy and Environment Center of the University of Jordan. He received Ph.D. degree from Washington State University in May of 1999 in Civil and Environmental Engineering. His Ph.D. dissertation is in inverse chlorine modeling in municipal water supplies. He earned his master’s degree in 1994 in Civil and Environmental Engineering from the Middle East Technical University in Ankara-Turkey. His master’s thesis is about evaluating different sludge drying alternatives on the bases of their performance and cost. Dr. Al -Omari’s research interests are in drinking water quality modeling in water distribution systems such as modeling the propagation and the decay of constituents found in drinking water supplies i.e. chlorine and tri-halomethanes, river basin modeling (flow and quality), water energy nexus, water, energy food nexus, water allocation, Non Revenue Water, and water resources management.

## EDUCATION

Ph.D. Civil and Environmental Engineering, Washington State University, May, 1999.

M.Sc. Civil and Environmental Engineering, Middle East Technical University, Ankara-Turkey, Jan. 1994.

B.Sc. Civil Engineering, Yarmouk University, Jordan, June, 1985.

### Courses earned towards master's degree

- Advanced Water and Wastewater Treatment,
- Anaerobic Treatment of Wastes,
- Water Quality Management,
- Industrial Wastewater Treatment.
- Hydraulic System Design 1,
- Open Channel Hydraulics, and
- Water Resources System Engineering 1 (optimization techniques: linear programming, dynamic programming, integer programming)

### Title of master's thesis

*Development of a Methodology for Evaluating Sludge Drying Alternatives*

### Courses earned towards Ph.D. degree

- Environmental Engineering Processes,
- Advanced Hydraulic Engineering (Water Quality Modeling),
- Principles of Environmental Engineering,
- Unsteady Closed Conduit Flow,
- Fluid Mechanics,
- Applied Mathematics 1,
- Graduate Seminar, and
- Numerical Modeling in Fluid Mechanics

### Title of Ph. D. dissertation

*Unsteady State Inverse Chlorine Modeling in Pipe Networks*

## SELECTED RELEVANT EXPERIENCE

April 2014 – Now: Senior researcher/Full professor, Water, Energy and Environment Center, the University of Jordan.

Fall of 2018: Professor of Water Resources and Environmental Engineering at Al Albait University (Part time).

Aug. 2016 - June 2017: Visiting Fulbright scholar at Texas A&M University working on water, energy food nexus,

Aug. 2015 - Aug. 2016: Professor of Civil Engineering at Prince Mohammad bin Fahad University, Al Khobar, Saudi Arabia,

February 2012 till Aug. 2015: Director Assistant, Water, Energy and Environment Center, the University of Jordan.

March 2007 – April 2014: Associate researcher/Associate professor, Water, Energy and Environment Center, University of Jordan.

September 2007 – August 2008: Visiting professor at Washington State University working on optimum design of water distribution systems,

Summer 2005 and summer 2006: Visiting professor at Washington State University,

1999 – March 2007: Assistant Researcher/Assistant professor, Water and Environment Research and Study Center, University of Jordan.

1995: Research Assistant, Water and Environment Research and Study Center, University of Jordan.

Feb. 1988 – Jan. 1992: Civil Engineer in road construction projects in Saudi Arabia.

## **TEACHING**

### **Undergraduate courses**

- ✓ Fluid mechanics,
- ✓ Hydraulic Engineering,
- ✓ Water and Wastewater Treatment,
- ✓ Water Resources Engineering,
- ✓ Materials in Civil Engineering, and
- ✓ Statics.

### **Graduate courses**

Dr. Al-Omari has participated in teaching the following courses in the Integrated Water Resources Management Program (IWRM) which is a graduate program taught jointly with Cologne University for Applied Sciences in Germany.

- ✓ Sanitation and Public Health,
- ✓ Water Science (hydrology and water quality), and
- ✓ Water Supply (hydraulics and quality of water distribution systems).

## **SHORT COURSES**

Dr. Al-Omari has also taught the following short courses which are directed to practicing engineers:

- ✓ Drinking Water Supply Systems (Jordan)
- ✓ Wastewater Treatment and Reuse (Jordan)
- ✓ Management of Wastewater Treatment Plants (Jordan)
- ✓ Drinking Water Supply II (USA)
- ✓ Low-scale, Low-cost, Wastewater Treatment for Reuse in Jordan (Jordan)
- ✓ Computer Simulation of Water Networks (Egypt)

- ✓ Operation of wastewater treatment plants (Jordan).

## **FUNDED RESEARCH PROJECTS**

Dr. Al-Omari has participated in the process of obtaining funds, supervised and coordinated among the different parties as well as participated as a researcher in the following funded projects:

### 1. Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries (NAWAMED)

NAWAMED aims at changing the urban water management practices by means of innovative, sustainable, and low-cost treatment technologies, applicable in a decentralized way, to replace the use of high quality potable water for purposes such as irrigation and toilet flushing by non conventional water resources such as treated wastewater. The two nature based technologies that will be implemented in this project are constructed wet land and greywater treatment and reuse. The project is funded by the European Union and will last from October 2019 until October 2022. The lead institute is Province of Latina from Italy, the partners are: IRIDRA which is an engineering firm from Italy, SVI.MED. EuroMediterranean Center for the Sustainable Development from Italy, Centre for Water Research and Technologies from Tunisia, University of Jordan, Energy and Water Agency from Malta, and American University of Beirut from Lebanon. Associate partners are municipality of Tunis, municipality of Jerash from Jordan, municipality of Ferla from Italy and Politecnico di Torino from Italy.

### 2. Innovations in Water Education Programs: Enhancing Water Security and Socio economic development in Eastern Mediterranean Under Climate Change (WaSec)

The project aims at the development of a curriculum for a master's program that meets the market needs and satisfies the enterprises needs in Jordan and Palestine. The goal is to improve water resources management by improving water use efficiency taking into consideration climate change. The project is funded by the ERASMUS+ Program of the European Union. It lasts for three years from Nov. 2019 until November 2022. Palestine Technical University – Kadoorie (PTUK) is the lead institute. Partners are: Jordan University of Science and Technology, Technologiko Ekpedeftiko Idrima Anatolikis Makedonias kai Thrakis (EMaTTech), the Amsterdam Centre for World Food Studies (ACWFS), Al Quds University (AQU), the University of Jordan, the Open University of Cyprus, Universidad Politécnica de Madrid (UPM), Princess Sumaya University for Technology (PSUT), Palestinian Water Authority – (PWA), Applied Scientific Research Fund (ASRF) in Jordan, Creative Thinking Development in Athens, and Hydro-Engineering Consultancy (HEC) in Palestine.

### 3. Development of an MSc. Program in Climate Change, Sustainable Agriculture and Food Security (CCSAFS)

The project is a European Commission ERASMUS plus that aims at capacity building in partner institutions by designing and implementing a multi disciplinary master's program in Climate Change, Sustainable Agriculture and Food Security in accordance with Bologna process. The lead institute of the project is the University of Crete. Other EU partners are University of Padova, Italy and Regional Centre of Expertise on Education for Sustainable Development, Crete. The project includes five partners from Egypt which are: Aswan University, Al Azhar University, Heliopolis University, Suez Canal University, and SEKEM/RCE Cairo, in addition to four partner universities from Jordan which are: Jerash University, Jordan University, Mutah University, and Jordan University of Science & Technology. The project started in early 2017 and will last until end of 2019.

### 4. Sustainable Water Management in Developing Countries (SWINDON)

This project is part of the Higher Education **Excellence in Developing Cooperation (EXCEED)** program funded by the German Academic Exchange Service (DAAD). The strategic goal of EXCEED II is to contribute to the shaping of future subjects and scenarios through active cooperation between developing and industrialized countries. The lead institute of the project is Technische Universität Braunschweig in Germany. The project consortium consists of partners from four regions which are; Middle East and North Africa, South East Asia, Latin America and Sub Sahara Africa. The Middle East and North Africa region includes partners from Turkey (Akdeniz University, Yıldız Technical University, Necmettin Erbakan University, Tubitak Marmara Research Center), Egypt (Ain Shams University, Al Mansoura University) and Jordan (the University of Jordan and Mutah University). Among the project activities are workshops, conferences, joint research projects, faculty exchange and student exchange. The second phase of the project started January 2015 and will last for five years.

5. Capacity building in Water and Renewable Energy Sectors

This project includes two training courses, one in water supply and one in renewable energy resources. It is funded by the United Nations Educational Scientific and Cultural Organization (UNESCO).

6. Decision support system for the management of Zarqa River

This project is funded by the Scientific Research Support Fund at the Ministry of Higher Education in Jordan. The project aims at developing a GIS data base of pollutants to the river. The GIS data base will include information about the polluter, the pollutant, and the concentration. The data base will include both point and non point sources. The project will also develop a water quality model for the river for temperature, Electrical Conductivity (EC) and Chemical Oxygen Demand (COD). The project also aims at assessing the health impacts of the river. The project started on May 5<sup>th</sup> 2011 and will last for 30 months.

7. International master program “Integrated Water Resources Management” for German and Arab young professionals

This project is a joint master’s program between the WERSC of the University of Jordan and the University of Applied Sciences at Cologne (UASC) in Germany. The focus of the program is on Integrated Water Resources Management (IWRM). The students spend the first semester at the WERSC of the University of Jordan (course work). The second semester is in Germany (course work) and the third semester anywhere in Jordan, Germany or a third country where the student work for his thesis. This project is funded by Deutscher Akademischer Austauschdienst (DAAD).

8. MEditerranean Development of Innovative Technologies for integrAted waTer management (MEDITATE).

This project is funded by the EU under the sixth framework program FP6-2002-INCO-MPC-1. The project started on May 1<sup>st</sup> 2004 and lasts till October 31 2007. The lead institute for this project is Bureau de Recherches Géologiques et Minières (BRGM) which is a research institute in France. Other partners in the project are Center for National de la Recherche Scientifique (CNRS) in France, Cranfield University in Britain, Hacettepe University in Turkey, Water & Environment Research & Study Center (WERSC) of the University of Jordan in Jordan, Ministry of energy and water in Lebanon, Atomic energy commission in Syria, and Provectos E Instalaciones de Desalacion sa (PRIDESA), which is a private company in Spain. The project aims at the development of Water Management Support Systems (WMSS) for four basins in Lebanon, Syria, Turkey, and Jordan. The Jordan case study includes three components: the first one is the hydrological modeling of the basin, socio-economic study of the basin and the development of the Water Management Support System (WMSS). BRGM and WERSC are the

lead institutes for the development of the WMSS for the four case studies in this project. A researcher from BRGM and Dr. Al-Omari are the technical leads for the development of the WMSS for the four case studies.

9. Total Maximum Daily Load (TMDL) for Little Spokane River (LSR) in Washington State. This project aimed at the determination of the TMDL for LSR for total Phosphorus, total Nitrogen, temperature and coliform count based on the current levels of these parameters as well as loads received from LSR tributaries. Dr. Al-Omari participated in this project for a short period while visiting at Washington State University in the summer of 2006.
10. Jordan Water Skills Enhancement and Information to Decision – Makers project. This project aimed at improving the skills of the Ministry of Water and Irrigation engineers via training. The project consisted of about thirty five training courses in different subjects like water and wastewater treatment and reuse, water supply systems, irrigation and technology transfer, reservoir management, watershed management, hazardous waste management, desalination, and other subjects of interest to Ministry of Water and Irrigation Engineers. Most of the courses were held in Jordan, However, some courses were held at Washington State University (WSU) or Purdue University. The project was funded by the US Agency for International Development (USAID). The lead institute for the project was Washington State University. Purdue University was a subcontractor from the US. Three universities from Jordan participated in the project, which are University of Jordan as the main contactor in Jordan, Jordan University of Science and Technology and Hashemite University. The original duration of the project was two years (March, 2000 – July, 2002). The project was extended until July, 2004. In addition to the training courses the project included three research activities, which are:
  - Water allocation action training: The objective of this activity is the development of a model that determines the optimum use of available water subject to certain constraints. By the end of the project, MWI engineers were trained on the use of the developed model.
  - Reservoir Management action training: The objective of this activity is the development of operational rules for a series of reservoirs based on optimizing the net profit of these reservoirs subject to certain constraints. MWI engineers were trained on the use of the final product.
  - Zara And Zarqa Ma'in Spring's Study. The objective of this study is the evaluation of the quality and quantity of the water of springs at Zara and Mai'n in order to be used for drinking purposes. The study was completed in July, 2001.
11. Fate of Disinfectants and Disinfectant by Products in Drinking Water Networks. This project aimed at modeling chlorine decay in water supplies as well as studying the formation of chlorine by products such as trihalomethanes in part of Amman water supply. The project was funded by the Higher Council for Science and Technology which is a Jordanian council that supports scientific research. The duration of the project is two years (Nov., 2000 – Nov., 2002). The project was extended for one year.
12. A System Approach to Wastewater Biotreatment for the Protection of Mediterranean Coastal Areas (BIOWATSYST): The project aimed at determining the performance of constructed wetlands, as a low cost technology for treating domestic wastewater for subsequent reuse in irrigation. The project was funded by the European Union (EU) through the Avicenne Initiative. The duration of the project was four years (1997 – 2001).

## PUBLICATIONS IN REFEREED JOURNALS

1. Al-Omari, A., Al-Houri, Z. (2021). Impact of greywater recycle on black water quality. *Desalination and Water Treatment*, in press.
2. Al-Omari, A. and Mohtar, R. (2020). Optimum water allocation for the agricultural sector in South Central Texas. *Fresenius Environmental Bulletin*, 29(9A):8168-8176.
3. Al-Omari, A., Farhan, I., Kandakji, T., Jibril, F. (2019). Zarqa River pollution: Impact on its quality. *Environmental Monitoring and Assessment* 191: 166. <https://doi.org/10.1007/s10661-019-7283-9>.
4. Al-Omari, A., Al-Bakri, J., Hindiyyeh, M., Al-Houri, Z., Farhan, I. and Jibril, F. (2018). Integrated Hydrologic and Quality Model for Zarqa River Basin in Jordan. *Fresenius Environmental Bulletin*, 27(7): 4637-4647.
5. Al-Weshah, R., Saidan, M., Al-Omari, A. (2016). "Environmental Ethics as a Tool for Sustainable Water Resources Management". *Journal of American Water Works Association*, 108(3): E175-E181.
6. Al-Omari, A., Al-Karablieh, E, Al-Houri, Z., Salman, A., Al-Weshah, R. (2015). "Irrigation water management in the Jordan Valley under water scarcity, *Fresenius Environmental Bulletin*, 24(4):1176-1188.
7. Al-Omari, A., Muhammetoglu, A., Karadirek, E., Jiries, A., Batarseh, M., Topkaya, B., and Soyupak, S. (2014). "A review on formation and decay kinetics of trihalomethanes in waters of different qualities". *CLEAN- Air, Soil, Water*, 42(12): 1687–1700.
8. Al-Omari, A., Salman, A., Al-Karablieh, E. (2014). "The red dead canal project: an adaptation option to climate change in Jordan". *Desalination and Water Treatment*, 52: 2833–2840. DOI: 10.1080/19443994.2013.819168.
9. Al-Houri, Z., Al-Omari, A., Saleh, O. (2014). "Frequency analysis of annual one-day maximum rainfall at Amman Zarqa basin, Jordan.", *Civil and Environmental Research*, 6(3):44-58.
10. Al-Omari, A. (2013). "A methodology for the Breakdown of NRW into Physical and Administrative losses". *Water Resources Management*, 27: 1913-1930, DOI 10.1007/s11269-013-0262-y.
11. Al-Omari, A., Al-Houri, Z., Al-Weshah, R. (2013). "Impact of the As Samra wastewater treatment plant upgrade on the water quality (COD, Electrical Conductivity, TP, TN) of the Zarqa River". *Water Science and Technology*, 67(7): 1455-1464.
12. Al-Karablieh, E., Salman, A., Al-Omari, A., Peter, Wolf, H., Al-Assa'd, T., Hunaiti, A., Subah, A. (2012). "Estimation of the Economic Value of Irrigation Water in Jordan". *Journal of Agricultural Science and Technology*, B 2: 487-497.
13. Sawajneh, Z., Al-Omari, A., and Halalsheh, M. (2010). "Anaerobic Treatment of Strong Sewage by Two Stage Systems of AF and UASB Reactors". *Water Science and Technology*. 61(9):2399-2406.
14. Al-Omari, A., Al-Quraan, S., Al-Salihi, A., and Abdulla, F. (2009). "A water management support system for AZB in Jordan". *Water Resources Management*. 23: 3165-3189.

15. Al-Omari, A. and Abdulla, F. (2009). "A model for the determination of residential water demand by the use of tracers". *Advances in Engineering Software*, 40(2):85-94.
16. Al-Omari, A. Fayyad, M., and Jamrah, A. (2008). "Drinking water quality in roof storage tanks in the city of Amman, Jordan". *Water International*, 33(2):189-201.
17. Barber, M. E., Loge, F., Al-Omari, A., and Fayyad, M. (2008). "Water Quality and Quantity in Jordan's Dead Sea Wadis". *Water International*, 33(3):369-379.
18. Abdulla, F. and Al-Omari, A. (2008). "Impact of climate change on the monthly runoff of a semi-arid catchment: Case study Zarqa-River Basin (Jordan). *Journal of Applied Biological Sciences*, 2(1): 43-50.
19. Jamrah, A., Al-Omari A., Al-Qasem, L., and Abdel Ghani, N. (2006). "Assessment of availability and characteristics of grey water in Amman". *Water International*, 31(2): 210-220.
20. Jamrah, A. I., Al-Omari, A. S. and Sharabi, R. (2006). "Evaluation of traffic noise pollution in the city of Amman, Jordan". *Journal of Environmental Monitoring and Assessment*, 120: 499-525.
21. Abdel Qader, A., Al-Omari, A., and Fayyad, M. (2006). "Mathematical modeling of the different trihalomethane species for Zai Water Treatment Plant". *Dirasat I*, 33 (1), 103-114.
22. Al-Omari A. and Jamrah A. (2005). "Calibration of Hazen Williams' coefficient in pipe networks using tracers". *Journal of Water Supply: Research and Technology-AQUA*, 54(5),293-311.
23. Al-Omari, A., Fayyad, M. and Abed Abdel Qader. (2005). "Modeling trihalomethane formation for Jabal Amman water supply in Jordan". *Journal of Environmental Modeling and Assessment*, 9(4), 245-252.
24. Al-Omari, A., Fayyad, M. and Al – Nimer, A. (2004). "Modeling chlorine residuals at Jabal Amman water supply". *Journal of Water Supply: Research and Technology-AQUA*, 53(5), 351-358.
25. Al-Omari, A. & Fayyad, M. (2003). "Treatment of Domestic Wastewater by Sub-Surface Flow Constructed Wetland In Jordan". *Desalination*. 155, 27-39.
26. Al-Omari, A. S. and Chaudhry, M. H. (2001). "Unsteady-state inverse chlorine modeling in pipe networks", *Journal of Hydraulic Engineering*, ASCE, 127(8), 669-677.

#### **PUBLICATIONS IN REFEREED CONFERENCES**

1. Hamaideh, A., Al-Omari, A., Sturm, M. (2013). "Integrated Water Management for Lafarge Cement-Jordan" World Academy of Science, Engineering and Technology, International Conference on Civil, Environmental and Structural Engineering, 82:316-319, October, 14-15, Barcelona, Spain.
2. Al-Omari, A. and Al-Houri, Z. (2012). "Response of King Abdulla Canal Water to the upgrade of As Samra WWTP", *World Academy of Science, Engineering and Technology, International Conference on Environmental, Biological and Ecological Sciences, and Engineering*, 71:25-33, Nov. 14-16, Venice, Italy.



3. Al-Houri, Z. and Al-Omari, A. (2012). "Evaluation of drainage conditions in selected roadways in Amman, Jordan", *World Academy of Science, Engineering and Technology, International Conference on Environmental, Biological and Ecological Sciences, and Engineering*, 71:940-945, Nov. 14-16, Venice, Italy.
4. Al-Karablieh, E., Salman, A, and Al-Omari, A., Wolff, H., Al-Assa'd, T., Subah, A. "Estimation of the economic value of irrigation water in Jordan". *Proceedings of the first Water and Environment International Conference*, 26-29, October, 2011, Marrakech, Morocco.
5. Salman, A., Al-Karablieh, E., Al-Omari, A., Hussein, I., and Al-Assad, T. "Water Allocation Model". *Proceedings of the first Water and Environment International Conference*, 26-29, October, 2011, Marrakech, Morocco.
6. Al-Houri, Z., Al-Omari, A. Ramadan, K., Shakaa. "Quality of Highway Runoff at Two Locations in Amman City: A Preliminary Investigation", *Proceedings of 2011 International Conference on Environment and Bioscience (CCEA 2011)*, Cairo, Egypt, 21-23 October, 2011.
7. Al-Omari, A. and Huber, M. "The Red Sea Dead Sea project: a solution to the water crisis in Jordan". *Proceedings of the International Sustainable Water and Wastewater Management Symposium (USAYS)*. Konya, Turkey 26-28, 10, 2010.
8. M. Barber, C. Pannkuk, M. Fayyad, A. Al-Omari, "Capacity Building within the Ministry of Water and Irrigation in Amman, Jordan: Successes, Failures, and Lessons Learned," Building Capacity for Future Challenges poster session, World Water Week, Stockholm, Sweden, August 2007.
9. Al-Omari, A., Abu-Zant, M. and Fayyad, M. (2006). "Re-use of treated wastewater for irrigation". *Proceedings of the Regional EMWater Project Conference on Efficient Management of Wastewater Treatment and Re-Use in the Mediterranean Countries*, Amman-Jordan, October 30 to Nov. 1, 2006, p. 41.
10. Emad Al-Karablieh, Amer Salman, and Abbas Al-Omari (2006). "The Residential Water Demand Function in Amman-Zarka Basin in Jordan". *Proceedings of the Third International Conference on Water Resources in Mediterranean Basin*, Tripoli, Lebanon, November 1<sup>st</sup> to November 3<sup>rd</sup>, p. 227.
11. Al-Omari, A., Courtois, N., Lanini, S., Al-Fares, W., Al-Charideh, A., Salman, A., Al-Karablieh, E., Ekmekci, M., and Levant, T (2006). "Development of Water Management Support Systems for Mediterranean Countries". *Proceedings of the Third International Conference on Water Resources in Mediterranean Basin*, Tripoli, Lebanon, November 1<sup>st</sup> to November 3<sup>rd</sup>, p. 59.
12. Emad Al-Karablieh, Amer Salman , Abbas Al-Omari, Mohammad Osman & Khaled Al-Zubaidi (2006). "Thematic: Water Allocation Model in Ghor Al-Safi in Jordan". *Proceedings of the Third International Conference on Water Resources in Mediterranean Basin*, Tripoli, Lebanon, November 1<sup>st</sup> to November 3<sup>rd</sup>, p. 160.
13. Halasheh, M., Sawajneh, Z., Salihi, A., Al-Omari, A., and Fayyad, M., (2004). "AF/UASB and UASB/AF systems for strong sewage treatment". *Proceedings of the 10<sup>th</sup> world congress on anaerobic digestion*, Aug. 29 – Sep. 2<sup>nd</sup>, Montreal, Canada.

14. Al-Omari, A. S., & Chaudhry, M. H. (1998). "Inverse Chlorine Modeling in Pipe Networks". *Proceedings of the Annual Water Resources Planning and Management Conference, Water Resources and the Urban Environment* 1998, p 253-259.

## **REVIEWER**

Dr. Al-Omari is a reviewer for the following international journals:

1. Water Supply Research and Technology, AQUA,
2. Journal of the American Water Works Association (JAWWA),
3. International Journal of Hydrology Science and Technology (IJHST),
4. Journal of Environmental Monitoring and Assessment,
5. Water Science and Technology: Water Supply
6. Water resources management, and
7. Journal of Environmental Management.

## **GRADUATE STUDENTS**

Dr. Al-Omari supervised the following graduate students:

1. Application of Hydro Turbines in Water Supply Systems for Energy Recovery in Jordan; A Case Study of Aqaba Water Supply System, by Abdalla Khair, 2013,
2. Analyzing of water loss reduction strategy in Amman, Jordan, towards a pro-poor approach, by Maika Muller, January 2012,
3. Non-Revenue Water reduction by involving the private sector, case study of Madaba, Jordan, by Hani Al-Koli, January 2012,
4. Hydrological balance of the Jeita spring catchment, by Philip Schuler, January 2012,
5. Optimum water allocation in Azraq basin using WEAP system by Ali Al-Hayajneh, January 2011,
6. Non-Revenue water management in Sana'a water distribution system by Taha Al-Washali, January 2011,
7. Towards the prevention of water pollution from industrial activities in the Nahr El-Kalb watershed by Christine bastch, January 2001,
8. The potential of rooftop rainwater harvesting for Sana'a, Yemen, by Musaed Aklan, January 2001,
9. Water demand management as an instrument to reduce the negative water balance in the Damascus basin, Syria by Christian Glaser. January 2011.
10. Modeling sea water intrusion into Rosetta branch, Nile River Delta, Egypt by Mustafa El-Morshdy, January 2011,
11. Integrated water management for Lafarge Cement Jordan by Azzam Hamaideh, January 2010.
12. Adsorption of selected nutrients from wastewater effluents onto Zeolite modified soil by Mohammad Karabsheh, Jan., 2004,

13. Anaerobic treatment of strong sewage by applying combined systems of AF and UASB by Zoulina F. Sawajneh, Aug., 2004.
14. Chlorine decay rate and chlorination efficiency studies for drinking water in Jordan by Aseel A. Al-Nimer, June, 2002,
15. The effect of bromide ion on trihalomethane formation in King Abdulla Canal and Zai water treatment plant by Abed Y. Abdelqader, July, 2002,

## **FACULTY TRAINING**

I attended the following training workshops which aim at updating the different skills of faculty members to enhance their capacity in both teaching and training:

1. Training workshop on *Patent Registration*, November 2019,
2. Training workshop on *Cyber Security*, Feb. 2020,
3. Training workshop on *Camtasia Studio*, March 2020,
4. Training workshop on *Teaching Methodologies*, this workshop was held within the Climate Change, Sustainable Agriculture, and Food Security master program, 29<sup>th</sup> July to 1<sup>st</sup> Aug., 2018, Jordan,
5. Training workshop on *Practicing Methodologies for the Inclusion of Sustainable Development Goals* (SDGs) in course curriculum, this workshop was held within in the Climate Change, Sustainable Agriculture, and Food Security master program, (21-24) February, Jordan.

## **CONFERENCES AND WORKSHOPS**

1. **Water Security and Climate Change conference (WSCC 2021)**, virtual conference, broadcasted from Cologne, Germany, 1<sup>st</sup> to 4<sup>th</sup> of March, 2021.
2. **International Renewable and Sustainable Energy Conference (IRSEC'20)**, virtually via video conferencing, broadcasted from Tetouan-Morocco, 25<sup>th</sup> to 28<sup>th</sup>, November 2020.
3. Webinar on Water, Energy Nexus in the MENA region, October 15 and 21, 2020. Organized by EXCEED/SWINDON project.
4. Regional workshop on: Water Resources and Climate Change: Impacts, Mitigation and Adaptation, 03-07, November, 2019, Amman, Jordan.
5. The fifth IWA international symposium on Water and Wastewater Technologies in Ancient Civilizations: Evolution of Technologies from Pre-History to Modern Times, September 11-13, 2019, Dead Sea, Jordan.
6. SWINDON conference 2019: The Future of Water Resources, October 13-18, 2019, Merida, Mexico.
7. COSIMENA water cluster workshop on Water Resource Management, 24 July, 2019, Amman-Jordan.
8. International conference on Water Security and Climate Change conference. Organized by EXCEED network, (03-06)/12/2018, Nairobi, Kenya.

9. Regional workshop on: Water-Energy-Food Nexus in MEANA region, 11-17, November, 2018, Aswan, Egypt.
10. Regional workshop on: Water Scarcity: Risks and Solutions, 24-27, April, 2018, Sousse, Tunis.
11. The German-Arab Knowledge Transfer Colloquium on Water-Energy-Food Nexus. (26/11 – 8/12), 2017, Duisburg-Germany.
12. Regional workshop on Water Use in MENA countries 2017, (3-8)/11/2017, Marrakech, Morocco.
13. Water, Energy Food Nexus Workshop on Integrated Science, Engineering and Policy: A Multi Stakeholder Dialogue, January 26 - 27, 2017, College Station, TX, United States.
14. 2016 Fulbright visiting scholar enrichment seminar. Democracy at the local level: the role of civil society in making change, December 11-14, 2016, San Diego, California,
15. Franco-Jordanian Forum on Water Sustainability. 18-20, Nov. 2014, Amman-Jordan,
16. Groundwater governance in the Arab World: Taking stock and addressing the challenges, October 29<sup>th</sup>, 2014, Amman-Jordan.
17. International conference on Social Studies in the MENA region. Sep. 28-29, 2014, Amman-Jordan. ***Scientific and organizing committee member,***
18. Exceed regional workshop on Urban Water Management and Demand Management. May 16-19, 2014, Antalya-Turkey,
19. International Conference on Water Resources and Environmental Management. May 13-15, 2014, Antalya-Turkey.
20. Water in the Arab World: Status, Challenges and Opportunities. February, 25-27, 2014, Amman-Jordan. ***Chair of the organizing committee.***
21. Exceed regional workshop, Sustainable Management of Hydrological Systems in Arid and Semi Arid Regions. May, 11-15, 2013, Amman-Jordan. ***Organizing committee member.***
22. International Conference on Civil, Environmental and Structural Engineering, October, 14-15, 2013, Barcelona, Spain.
23. International Conference on Environmental, Biological and Ecological Sciences, and Engineering, Nov. 14-16, 2012, Venice, Italy,
24. Exceed Regional Expert Workshop on Water Losses Management in Water Supply Systems, September 25-29, 2012, Antalya, Turkey,
25. Second WEAP Regional Conference: Applying a Decision Support System as a tool for Integrated Water Resources Management and Climate Change Adaptation. May, 3-5, 2011, Amman, Jordan.
26. The first Water and Environment International Conference, 26-29, October, 2011, Marrakech, Morocco.

27. International Sustainable Water and Wastewater Management Symposium, May 26-28, 2010, Konya, Turkey.
28. Regional Conference: Applying WEAP as a Decision Support System for IWRM, May 25 – 27, 2009, Damascus, Syria.
29. The Third International Conference on Water Resources in Mediterranean Basin, November 1<sup>st</sup> to November 3<sup>rd</sup>, 2006, Tripoli, Lebanon.
30. The Regional EMWater Project Conference on Efficient Management of Wastewater Treatment and Re-Use in the Mediterranean Countries, October 30 to Nov. 1, 2006, Amman-Jordan.
31. The INCO-MED Water Conference, 14-15 June, 2004, Amman-Jordan.
32. The second international conference on Wadi Hydrology, July 1-4, 2003, Amman-Jordan.
33. The Annual Water Resources Planning and Management Conference, Water Resources and the Urban Environment, June 7-10, 1998, Chicago, IL.

## **AWARDS**

1. Fulbright grant for the academic year 2016/2017 to Texas A&M University,
2. USAID full Ph. D. grant through the University of Jordan between 1995-1999,
3. Full scholarship from the Jordan Armed Forces for B.SC. degree in Civil Engineering between 1980-1985,

## **GOOGLE SCHOLAR ADDRESS**

<https://scholar.google.com/citations?hl=en&user=j-MhGswAAAAJ>

## **RESEARCH GATE ADDRESS**

[https://www.researchgate.net/profile/Abbas\\_Al-Omari](https://www.researchgate.net/profile/Abbas_Al-Omari)

## **LANGUAGES**

Arabic – Native language, and  
English – Fluent in speaking and writing.

## **PROGRAMMING LANGUAGES**

Professional FORTRAN 90 programmer, and  
Familiar with Visual Basic

## **SOFTWARE**

*Basic computer skills* (Word, Excel, Power point, internet, etc.)

***WaterCad:*** A software developed by Haestad methods which mainly simulates flows, pressures and different water quality parameters in water supplies,

***EPANET:*** A software that simulates the behavior of water supplies, quantity and quality,

***QUAL2K:*** A software that simulates surface water quality for different selected parameters,

***Water Evaluation And Planning system (WEAP):*** A software developed by the Stockholm Environment Institute. WEAP is an Integrated Water Resources Management software that incorporates hydrologic, water quality and water allocation into one tool,

***General Algebraic Modeling System (GAMS):*** A software that solves different types of constrained optimization problems, linear, dynamic, integer and mixed linear and integer,

***Mini Tab:*** Statistical analysis software.

**Arc GIS:** Familiar with Arc GIS